



PLANNING INSPECTORATE ISSUE-SPECIFIC HEARING

on

8 SEPTEMBER 2023

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PRESENT

PLANNING INSPECTORATE

RYND SMITH
JANINE LAVER
KEN PRATT
KEN TAYLOR
DOMINIC YOUNG

CASE TEAM

BART BARTKOWIAK
TED BLACKMORE
SPENCER BARROWMAN
RYAN SEDGMAN

LOWER THAMES CROSSING

ANDREW TAIT KC
TOM HENDERSON
NICK CLARK
[DR EMMA LONG?]
RUSSELL CRYER
ALISON POWELL
ANDREW KAY
STEVE ROBERTS

LOCAL AUTHORITIES

DOUGLAS EDWARDS KC (Thurrock Council)
STEVE PLUMB (Thurrock Council)
CHRIS STRATFORD (Thurrock Council)
MICHAEL HUMPHRIES KC (Kent County Council)
NOLA COOPER (Kent County Council)
TIM BELL (Kent County Council)
MICHAEL BEDFORD KC (Gravesham Borough Council)
VAL HYLAND (Gravesham Borough Council)
DANIEL DOUGLAS (London Borough of Havering)
LYNN BASFORD (London Borough of Havering)
SUE HOOTON (London Borough of Havering)
GARY MACDONNELL (Essex County Council)
SUSAN LINDLEY (Shorne Parish Council)

STATUTORY PARTIES

NICK GRANT KC (Natural England)
KATHLEEN COVILL (Natural England)
SEAN HANNA (Natural England)
JONATHAN BUSTARD (Natural England)
MATTHEW RHEINBERG (Transport for London)
ALEX DILLISTONE (Port of London Authority)
LUCY OWEN (Port of London Authority)
EMILY MCLEAN (Port of London Authority)

INTERESTED PARTIES

AARTI O'LEARY (Franks Farm)
JOHN LAWSON (Franks Farm)
LAURA BLAKE (Thames Crossing Action Group)
NICK JOHANNSEN (Kent Downs Area of Outstanding Natural Beauty)
VICKY ELLIS (CPRE Kent)

1 MS LAVER: Good morning, everybody. Welcome to issue-specific hearing 6 for the
2 Lower Thames Crossing. Before I introduce the Examining Authority, can I
3 check with the case team and the audio-visual staff that we can be heard online
4 and that the recordings and the livestreams have started? Yeah, getting a thumbs
5 up. Before I go onto further introductions, I just want to invite Ms Laura Blake.
6 There's a seat at the table there; would you like to come forward and take fuller
7 part today? Great. Thank you.

8 So, to introductions: as most of you know, I'm Janine Laver, a member of
9 this examining panel for the Lower Thames Crossing. I'm in the hot seat today,
10 but my colleague, Mr Pratt, to my left will also be leading on some of the agenda
11 items. My other fellow panel members you'll now be familiar with – Mr Smith,
12 Mr Young and Mr Taylor – and they will ask questions as and when necessary.
13 I will ask them to say hello to you now, please.

14 MR PRATT: Good morning, everybody. Ken Pratt, panel member.

15 MR SMITH: Good morning, everybody. Rynd Smith, lead member of the Examining
16 Authority.

17 MR YOUNG: Good morning, everybody. Dominic Young, panel member.

18 MR TAYLOR: Good morning, everybody. Ken Taylor, panel member.

19 MS LAVER: Thank you. I would also like to acknowledge our excellent case team who
20 are diligently assisting the panel and the other parties: Bart Bartkowiak, Ted
21 Blackmore, Spencer Barrowman and Ryan Sedgman. And before we hear
22 introductions from the room, from those who've requested to be heard today,
23 I'm reminding everyone that it is being livestreamed, recorded and retained
24 today. So the introductions of those in the room who may wish to speak, I'm
25 going to come to local authorities and statutory parties first, so for Thurrock
26 Council, please.

27 MR EDWARDS: Yes, good morning, ma'am. Douglas Edwards KC for Thurrock
28 Council.

29 MR PLUMB: Steve Plumb for Thurrock Council. I'm the ecologist and landscape
30 representative.

31 MR STRATFORD: Chris Stratford, planner, Thurrock Council.

32 MR HUMPHRIES: Good morning, madam. Michael Humphries, I'm a barrister for
33 Kent County Council, and on my right I've got Nola Cooper, who's a principal
34 transport planner, and behind me I've got Tim Bell, who's responsible for

1 various of the country parks and things. He has a longer title, but he may need
2 to speak. Thank you.

3 MS LAVER: Okay, thank you, so that's Thurrock and Kent. Just give me one second
4 while I go onto my little list. I don't seem to have my mouse. Okay, so can we
5 go on to Gravesham, please? Do we have anybody here for Gravesham today?

6 MR BEDFORD: Morning, madam.

7 MS LAVER: Good morning.

8 MR BEDFORD: Can you hear me? I'm virtual today.

9 MS LAVER: I can. Sorry, I need to learn to speak and look at the screen at the same
10 time.

11 MR BEDFORD: Sorry, it's Michael Bedford, King's Counsel, acting for Gravesham
12 Borough Council. Our team is all remote today, and in addition to me, I think
13 you will be hearing from Val Hyland, who I'll introduce in a moment, but she is
14 a landscape architect who is a landscape consultant engaged by Gravesham
15 Borough Council. The other members of the team I won't introduce at this stage
16 because I don't expect that they'll be making direct contributions, but it'd
17 probably be helpful to you if I could just ask Ms Hyland to switch on her camera
18 and, as it were, visually [inaudible].

19 MS LAVER: Hello.

20 MS HYLAND: Good morning.

21 MS LAVER: We can see you.

22 MS HYLAND: Okay.

23 MR BEDFORD: But we will then wait and obviously interject as and when we get to
24 the various agenda items that we're interested in. Thank you.

25 MS LAVER: Thank you very much. To the London Borough of Havering, please.

26 MR DOUGLAS: Good morning, madam. Good morning, everyone. My name's Daniel
27 Douglas, representing the London Borough of Havering. I'll invite my
28 colleagues, Lynn and Sue to introduce themselves.

29 MS BASFORD: Good morning, everyone. Lynn Basford on behalf of Havering,
30 chartered transport planner and town planner.

31 MS LAVER: Thank you very much

32 MS HOOTON: Good morning, madam. Good morning, everyone. My name's Sue
33 Hooton. I'm an ecologist representing Havering today, thank you.

34 MS LAVER: Thank you. Is that everybody, Mr Douglas, for Havering?

1 MR DOUGLAS: Yes, it is. Thank you.

2 MS LAVER: Okay, great. Are there any other local authorities wishing to speak today
3 that I haven't called out? Okay, so can I ask, do we have a representative for
4 Natural England? Sorry, I can see someone on the screen.

5 MR MACDONNELL: Yeah. Morning, madam. Morning, all. My name's Gary
6 MacDonnell. I'm here today representing Essex County Council.

7 MS LAVER: Thank you very much. I have to say to everybody I'm really sorry. I can't
8 see my own screen unless I wear glasses, but then I can't see the distant screen
9 if I've got the glasses on. As Mr Smith just said, it's the joys of old age, or
10 middle age.

11 MR SMITH: Middle age. Excuse me, I did say middle age.

12 MS LAVER: Sorry, you said middle age. Can I move on, now, to ask if we've a
13 representative from Natural England, please?

14 MR GRANT: Good morning, ma'am. Yes, I'm Nick Grant of counsel, here for Natural
15 England. To my right is Kathleen Covill, principal advisor for complex
16 casework. To my left is Sean Hanna, senior planning advisor, and sat behind
17 me – who will also be substituting in and out – is Jonathan Bustard, another
18 senior advisor.

19 MS LAVER: Wonderful, thank you very much. Do we have representatives for
20 Transport for London?

21 MR RHEINBERG: Good morning, yes. My name is Matthew Rheinberg, major projects
22 and design manager representing Transport for London today.

23 MS LAVER: Is it just yourself, Mr Rheinberg, today?

24 MR RHEINBERG: It is just myself, yes.

25 MS LAVER: Okay, thank you very much.

26 MR RHEINBERG: Thank you.

27 MS LAVER: So I believe we may have a representative from Shorne Parish Council,
28 Ms Lindley, in the room or online.

29 MS LINDLEY: I'm online. Good morning, and thank you very much. Yes, Susan
30 Lindley, councillor for Shorne Parish Council

31 MS LAVER: Thank you very much. Okay, moving on to other interested parties, do we
32 have a [Peter Trevor Foster?] in the room or online? Okay, do we have Aarti
33 O'Leary in the room, please?

1 MS O'LEARY: Good morning, madam. My name is Aarti O'Leary from Lawson
2 Planning Partnership, representing an affected party, Franks Farm in Cranham.
3 To my left is my colleague, John Lawson, who's also from Lawson Planning
4 Partnership.

5 MS LAVER: Thank you, and to Ms Laura Blake, please.

6 MS BLAKE: Thank you very much, Ms Laver. Good morning, everybody, Laura Blake,
7 Thames Crossing Action Group.

8 MS LAVER: Is it just yourself speaking today, Ms Blake?

9 MS BLAKE: It will be, and thank you for inviting me to the table, Ms Laver. Thank
10 you.

11 MS LAVER: Thank you, so onto the Kent Downs AONB unit. Do we have a
12 representative in the room or online?

13 MR JOHANNSEN: Good morning. Yes, Nick Johannsen, I'm director at the Kent
14 Downs Area of Outstanding Natural Beauty.

15 MS LAVER: Is it just yourself?

16 MR JOHANNSEN: It's just myself, yes.

17 MS LAVER: Thank you, and on the CPRE Kent.

18 MS ELLIS: Good morning. Vicky Ellis, general manager and biodiversity lead, CPRE
19 Kent.

20 MS LAVER: Thank you. Now, are there any other interested parties whose names I
21 haven't called out but who believe they registered to speak? Okay, so we'll
22 move back up to the top of the list, please, and over to the applicant.

23 MR TAIT: Thank you, madam. I'm Andrew Tait, King's Counsel. To my right is Mr
24 Tom Henderson of BDB Pitmans. To my left, Mr Nick Clark, the lead ecologist
25 who's dealing with items 3 and 5, and part of 7. To his left, Dr [Emma Long?],
26 who is the environmental design advisor dealing with item 4 and part of item 5.
27 To her left, Mr Andrew Kay, who is the landscape designer dealing with part of
28 item 4, and at the end of the row, Mr Barney Forrest, the environment lead who
29 is also assisting with the visual material, and waiting in the wings behind, Mr
30 Russell Cryer who is the HRA lead, dealing with items 6 and 8, and Ms Alison
31 Powell, who is the population and human health lead who is dealing with part
32 of item 7, recreational impacts.

33 MS LAVER: Okay, thank you.

34 MR TAIT: But they'll move forward as appropriate.

1 MS LAVER: Wonderful, thank you very much, so we're through, therefore, with the
2 introductions.

3 MR SMITH: Ms Laver, can we just check? I do see, I believe, the name of Ms Dillistone
4 for Port of London Authority, and I don't believe they were introduced.

5 MS LAVER: Apologies, you're absolutely right.

6 MR SMITH: And can we also just check – I don't think they're due to be here – but
7 whether or not we have any representation for Port of Tilbury London Ltd, so
8 Ms Dillistone first, please.

9 MS DILLISTONE: Thank you, sir. Alex Dillistone from the Port of London Authority.
10 I'm here today with my colleagues, Lucy Owen and Emily McLean, who's the
11 water technical advisor. We may not need to have them on screen, but I'm just
12 saying because we have them in the background if needed. Thank you, sir.

13 MR SMITH: Thank you very much, and can I just confirm again that we do not have
14 representation today from the Port of Tilbury London Ltd. I don't believe we
15 do, but just a final check. No, thank you.

16 MS LAVER: Thank you very much, Mr Smith. So the purpose of this issue-specific
17 hearing is to explore the applicant's proposals to enhance, mitigate and/or
18 compensate for biodiversity impacts. The panel realises that this wasn't
19 particularly clear when it published the hearing topics, but hopefully the fairly
20 detailed agenda has provided enough clarity about why we're here today.
21 However, that said, I must emphasise that this hearing does not intend to explore
22 habitats regulations assessments, issues, agreements and disagreements in depth
23 at this oral setting. Whilst there is an item on the agenda about habitats
24 regulations assessments, which is item 8, this is primarily to understand the
25 current position of main parties as opposed to debating the merits of arguments.

26 Many of the questions on the agenda are targeted to the applicant in the
27 first instance, so ordinarily they will be invited to speak first before interested
28 parties are approached for comment. However, we will come to interested
29 parties for input at appropriate times in the proceedings. Whenever you begin
30 to speak to an item or a question, please do reintroduce yourself by name and
31 say who you represent. As Mr Taylor mentioned yesterday, while this can seem
32 quite tedious, it does help people on the livestream or watching afterwards to
33 understand who is saying what. Can I also reiterate the need to speak into
34 microphones clearly, and can I make a plea that when a party is referring to a

1 document number, an annex or a paragraph number that they do so slowly? We
2 are making notes, and we're also trying to open documents on our screens when
3 they're being referred to, so it would help us enormously if we could clearly hear
4 those references.

5 As with all the hearings this week, we will naturally include breaks and
6 we'll try to call those at suitable times in the proceedings, so fingers crossed for
7 those rugby fans in the room we'll all get home for France vs New Zealand for
8 8.15 p.m. but I don't want to rush anybody, but that's the goal. Okay, so we'll
9 get onto the main body of the agenda and Mr Pratt, my colleague, is leading
10 agenda item 3, so I'll hand over to him.

11 MR PRATT: Thank you, Ms Laver. Ken Pratt, panel member. I'll be leading on item 3,
12 mitigation, compensation and enhancement. Now, to start off I'll – as Ms Laver
13 said, we'll raise the matter with the applicant, explain its position, and then we'll
14 move on to the other IPs. I think on this one, parts (i) and (ii) can probably be
15 taken together because in the biodiversity assessment, I'm really looking for the
16 applicant to confirm how those terms have been applied, and then we can go on
17 and discuss whether the assessment is explicitly clear about the amount,
18 location, mitigation, compensation, etc. Now, at this point, I'm wanting to hear
19 from the applicant on the various IPs, if the impact of the proposal on the species
20 and habitats is sufficiently detailed in the material provided. Mr Tait, would you
21 like to kick off on this item?

22 MR TAIT: Thank you sir, and I'm going to kick off by introducing Mr Nick Clark, who
23 is the lead ecologist, to start initially with how the terms have been applied in
24 the application.

25 MR CLARK: Good morning, sir. Nick Clark for the applicant. The biodiversity
26 assessment – which is chapter 8, reference APP-146, section 8.5, project design
27 and mitigation – details the embedded good practice and essential mitigation
28 proposed to offset adverse effects from the project on terrestrial biodiversity.
29 Here, the term 'mitigation' is used to – used in relation to mitigation hierarchy,
30 to cover measures to avoid, mitigate or lessen and compensate adverse effects.

31 Within section 8.6 – assessment of likely significant effects, of the same
32 document – the applicant details where measures avoid or mitigate adverse
33 effects through measures secured in the code of construction practice, reference
34 REP1-157, such as those to avoid disturbance and incidental mortality to

1 breeding birds, and the provision and management of land to provide suitable
2 habitat for foraging and roosting birds.

3 Regarding compensation, much of the habitat creation proposed by the
4 applicant compensates for the loss of habitats impacted by the construction and
5 operation of the project. The details of these habitat losses and gains are reported
6 in tables 8.31 and 8.35 of the environmental statement, chapter 8, and again,
7 that's reference APP-146. The works plans detail where ecological habitat
8 creation or receptor sites for protected species are located within the project
9 order limits, and I'll give you the references to that – those drawings now. They
10 are REP3-033, REP3-037, and REP3-039.

11 The applicant's been clear throughout its application in recognising there
12 is a lot of irreplaceable habitat that cannot be mitigated, and has therefore used
13 the term 'compensation' when describing any planting proposals designed to
14 address such habitat loss. Similar terminology has been used for impacts from
15 nitrogen deposition on designated sites and in relation to habitat loss at Shorne
16 and Ashenbank Woods Site of Special Scientific Interest, SSSI.

17 The approach to ancient woodland compensation planting is reported in
18 chapter 8, paragraphs 8.5.31 to 8.5.34. Detail of the mitigation and
19 compensation proposals to address the effects of nitrogen deposition on
20 designated sites is reported in appendix 5.6, project air quality action plan,
21 reference APP-350. A technical note has been provided to Natural England and
22 is appended to the statement of common ground between the applicant and
23 Natural England, reference REP2-008. That technical note is at annex C.9, and
24 this details the location and extent of habitat creation proposed to offset the
25 habitat losses within Shorne and Ashenbank Woods SSI.

26 The project's design has sought to make efficient use of the land within its
27 order limits, so parcels have multiple functions that can be both compensation
28 and mitigation. An example of this is the land at Coalhouse Point, just west of
29 Coalhouse Fort, which provides mitigation for the effects on Thames estuary
30 and marshes, SPA and Ramsar site, and also compensation for the loss of saline
31 ditch habitat around the north portal.

32 With respect to enhancements, section 8.5, project design and mitigation,
33 includes information on enhancement measures within the application at
34 paragraphs 8.5.59 to 8.5.62. These cover habitat enhancements south of the

1 River Thames, which is being designed in conjunction with the RSPB and these
2 measures involve the creation of ditch and pond habitats as well as grassland
3 and scrub to support water voles, great crested newts, and foraging and nesting
4 birds. This is secured in the code of construction practice, reference
5 TEB-022[?]. The applicant has also been involved in water vole conservation
6 with – across Essex County, which has been developed in conjunction with
7 Essex Wildlife Trust as part of their Waterlife Recovery East project designed
8 to increase the range of water voles across the east of England, and that is
9 secured through a legal agreement.

10 It's important to note that no land within the order limits has been included
11 purely for enhancement purposes. Regarding the amount and location of
12 mitigation, compensation and enhancement, the extent of habitat creation
13 proposed by the applicant is detailed in tables 8.13 – sorry, 8.31 and 8.35. Its
14 location is reported and secured by the environmental master plan. However,
15 we recognise that there are a number of documents that need reference and cross
16 reference, so we are happy to provide a brief summary of this at a later deadline
17 to try and summarise all of the information I've just highlighted.

18 MR PRATT: That would be very helpful, thank you very much.

19 MR CLARK: Thank you.

20 MR TAIT: And could I ask Mr Clark to go onto the – Andrew Tait for the applicant –
21 item 3(a)(ii), any notable disparities?

22 MR CLARK: Thank you, Nick Clark – sorry.

23 MR PRATT: Can I just ask one little question at this point? I've noticed that you've
24 detailed – it's Ken Pratt on – panel member. I noticed that there are a number
25 of surveys that you are still looking to undertake to allow the detailed design
26 process to go ahead. Now, with that in mind – and we're talking Rochdale
27 envelope type considerations – where there's surveys still to go ahead, are you
28 content that you're suggesting the compensation and mitigation under the
29 worst-case scenario, if that makes sense?

30 MR CLARK: Nick Clark for the applicant. Yes, that make sense, thank you. The
31 surveys that we are proposing are preconstruction surveys, so they supplement
32 the baseline that already exists. The baseline that we have collected – which is
33 reported in chapter 8 and various technical appendices associated with that – is
34 considered by us to be a robust baseline against which we can make accurate

1 assessments and design a proportionate mitigation strategy, ‘mitigation’ being
2 mitigation and compensation. The preconstruction survey work is required to
3 ensure that the data that we use – predominantly for protected species license
4 applications at the time of construction, should the DCO be granted consent –
5 that information needs to be as up to date as possible within one to two seasons
6 of the impact occurring. So the preconstruction surveys, which are secured
7 through the draft DCO, ensure that that takes place.

8 MR PRATT: Thank you for that clarification. If you would care to carry on to item
9 part (ii), the notable disparities, and obviously the best part of that is are there
10 any potential elements of double-counting? But I’ll let you carry on at this point.
11 Thank you very much.

12 MR CLARK: Thank you. Nick Clark for the applicant. The applicant is clear around
13 the distinction between what constitutes mitigation, compensation and
14 enhancement, and that there are no disparities which could have implications for
15 the Examining Authority’s assessment. In order to ensure that land required for
16 the project is minimised, there are instances where multifunctional mitigation
17 and compensation is proposed. In these cases, the lands being proposed to
18 address this address a specific function. For example, woodland planting to
19 improve connectivity may be proposed, but this function may be compatible
20 with open space provision, walkers, cyclists and horse rider provision, or false
21 cuttings which could provide mitigation for the loss of open space, severance on
22 noise and visual effects. The applicant does not believe that maximising the
23 mitigation potential of land should influence the Examining Authority’s
24 assessment.

25 MR PRATT: Thank you very much for that. At this stage, if the – Mr Tait, if that’s the
26 – your submission on this point...

27 MR TAIT: Yes, sir, so the short answer to (a)(ii) is no.

28 MR PRATT: Thank you very much. In that case, unless any of my colleagues on the
29 bench here have any questions, I would like to invite the floor, so to speak, to
30 make their representations or comments. Being this environmental, I think it’s
31 probably fair to go to Natural England first, and then the councils and other IPs,
32 so Mr Grant, would you care to introduce your speaker or your team?

33 MR GRANT: Thank you, sir. I’ll hand over to Mr Hanna.

1 MR HANNA: Thank you. In terms of the way the definitions have been used, we have
2 no comments to make on those. I think we're satisfied and happy that the
3 applicant's – they've applied them appropriately. I think something that was
4 touched on is it's actually quite difficult with the number of plans to understand
5 what is being compensated for, what impact is being compensated for where,
6 and we do appreciate the map that's been proposed in relation to the Shorne and
7 Ashenbank Woods Site of Special Scientific Interest, and it would be helpful for
8 a similar approach to be taken for all of the impacts. You can then follow
9 through the impact pathway to then actually seeing where the mitigation and
10 compensation is happening, because the plans are quite complex and quite busy,
11 which makes it quite difficult to actually then follow that story through from
12 start to finish.

13 MR SMITH: Mr Pratt, can I just briefly come in on that very point? Rynd Smith, panel
14 lead. I mean, I'd be very interested in any point or advice that Natural England
15 might provide – possibly in writing at the following deadline – on the question
16 of how best, in a tabular form for example, to set out a clear audit mechanism so
17 that we could much more succinctly and easily understand the nature of the
18 relationship between particular parcels of land, the particular mitigation and/or
19 compensation, or indeed enhancement measures sought to be achieved on that
20 land, so that there's a one-stop shop for this. I mean, presumably there would
21 be maybe almost a preferred method that you might use, typically, and would
22 there be something that you would recommend?

23 MR HANNA: Yeah. Sean Hanna for Natural England. I think we can take that away.
24 There's some examples from other schemes that I'm sure we can refer to in the
25 written response.

26 MR SMITH: I think it would be very helpful to see those sorts of examples because
27 frankly, if between yourselves, ourselves and the applicant we can agree a single
28 systematic monitoring tool, it'll be very helpful this stage and I suspect it would
29 be helpful rolling through in the later stages, moving towards the Secretary of
30 State's decision as well. Thank you very much. Sorry, Mr Pratt.

31 MR PRATT: Thank you, Mr Smith. Would you care to continue, or have you completed
32 at this point?

33 MR HANNA: No, that was all I was going to say, thank you.

1 MR PRATT: Just before I let you off the hook, so to speak, I'm presuming that your
2 comments are suggesting that the information that's available is complex in
3 presentation, so therefore at this moment in time, my comment or – for you to
4 consider, or for consideration of potential double-counting or anything, is not
5 really coming forward at this stage.

6 MR HANNA: Yeah. Sean Hanna for Natural England. Yeah, it's more about the
7 presentation, for us to understand what is being delivered for what impact, yeah,
8 rather than the discrepancies as to the impact assessment.

9 MR PRATT: Thank you very much for clarifying that. Okay then, in that case I think it
10 – start off with the councils and I might as well start with the one nearest to us,
11 which is Thurrock. Mr Edwards, would you care to...?

12 MR EDWARDS: Yes, thank you, sir. Douglas Edwards for Thurrock Council, so, so
13 far as agenda item 3(a) is concerned, the council is satisfied with the way in
14 which the biodiversity assessment has been carried out and the robustness and
15 the clarity of that assessment, so we have no points to make in respect to that
16 matter. We do have some points to make about the adequacy of compensation
17 measures north of the river, and some clarification points relating to
18 preconstruction surveys, but I've no doubt we'll come to those later in the
19 agenda, but in respect of the first item, we have no concerns.

20 MR PRATT: Thank you very much. Ken Pratt, panel member. In that case, we'll just
21 go round the table, and it's Kent next. Mr Humphries.

22 MR HUMPHRIES: Thank you, sir, Michael Humphries for Kent County Council. The
23 only thing we wish to add at this point is to endorse the point about what is very
24 often called, in DCO examinations, the mitigation route map. There are in
25 schedule 16 to the DCOs some 55 certified documents. Each of those documents
26 is legally part of the DCO. Breach of any of those documents therefore attracts
27 the same criminal penalties as any breach of an article in the DCO. Nearly all
28 of those 55 documents contain mitigation. Sometimes it's written; sometimes
29 it's just on a plan, the way something is pulled back from a particular
30 environmental feature.

31 At the moment, there is no – so far as I am aware – comprehensive
32 mitigation route map that explains where all of the mitigation is found, and the
33 enforcement mechanisms for achieving that particular mitigation, so for
34 example, the volumes of the environment statement are rule 35 documents.

1 They identify mitigation. How is that to be enforced? What documents, what
2 plans, what articles, what requirements does it relate to?

3 Now this is, for a scheme of this size, a very considerable job. I recognise
4 that, but it's also a very important job and it's an important job for two reasons.
5 One, so that you can probably – properly report on what the mitigation is and
6 where it is to be found and how it is enforced – one of your primary functions –
7 but should the DCO ultimately be made, it's also very important for local
8 authorities, many of whom will have functions relating to the enforcement of
9 mitigation, so that we know, amongst the very large number of documents,
10 where the mitigation is found and what the enforcement mechanism is, whether
11 it's, as I say, requirement, section 106 or whatever.

12 So that task of producing what is, as I say, sometimes called a mitigation
13 route map is, we feel, absolutely central to the task you're performing, and
14 should be a very high priority. Thank you.

15 MS LAVER: Mr Humphries, can I just alert you to examining questions? We did put a
16 question to the applicant of first written questions, one of which is for the
17 applicant to provide a single document, and mitigation route map is exactly what
18 the question was asking for, so the applicant will be addressing that through the
19 response to our written questions.

20 MR HUMPHRIES: Madam, thank you. I applaud the question and simply endorse the
21 point. It is very important.

22 MR PRATT: Thank you very much. Going round the councils, the next one on my list
23 will be Essex County Council. Is that Mr MacDonnell?

24 MR MACDONNELL: Yeah, thank you for – yeah, Gary MacDonnell from Essex
25 County Council. Thank you for the opportunity to speak. There's nothing
26 further we wish to add in relation to this at that this moment in time.

27 MR PRATT: Thank you very much. My apologies, I'm just going down my list. The
28 next one on my list will be Gravesham. Mr Bedford.

29 MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir,
30 in relation to this agenda item, we echo and endorse the points raised by Kent
31 County Council in relation to the need for more clarity on mitigation and how
32 that's integrated. In our local impact report – that's REP1-228, at
33 paragraphs 8.38 to 8.40 – we flagged up what we were wanting to see by way of
34 comprehensive integrated mitigation plans. The applicant's response to that in

1 their comments on our LIR effectively said, 'Well, all the information is there',
2 and presented, as it were, a reference to a patchwork of documents, and with
3 respect, that's not really the answer. So we will be particularly interested to see
4 what the applicant's response is to the Examining Authority's question on
5 exactly the same topic, so that's our area of concern.

6 We do think that further movement is needed from the applicant and not
7 just a regurgitation of the information that's already available, and we absolutely
8 stress the point that Mr Humphries made: that there's an enforcement function
9 to all of this, and that the local authorities are going to have to police these
10 various either requirements directly or the control documents, and they need to
11 have a clear way[?] of doing that that is not disproportionate to them of having
12 to wade through the treacle of – whether it's 55 documents to find out what is,
13 or should be, being done. Thank you, sir.

14 MR PRATT: Thank you very much. Next on my list will be Mr Douglas, the London
15 Borough of Havering.

16 MR DOUGLAS: Daniel Douglas, London Borough of Havering. At this point, sir, if I
17 may I'll invite my colleague, Ms Hooton, to respond on this matter.

18 MS HOOTON: Thank you, sir. Sue Hooton, London Borough of Havering. We support
19 Natural England's suggestion of a process that allows an audit of what is being
20 lost and where the compensation is, sir. That's all we've got to say at the
21 moment. Thank you.

22 MR PRATT: Thank you very much. Next on my – I think that – is that the last of the
23 local authorities, or is there...? Is there anybody else who would like to speak
24 on this point? Can have a show of hands, either in the room or online? Mr
25 Lawson, if you would care to.

26 MR LAWSON: Thank you, sir. Morning, everyone, John Lawson, representing Joan
27 Carver at Franks Farm; this is obviously a very valid and relevant subject we're
28 talking about at the moment. It's a little strategic for us, to be honest, because
29 where we're coming from is a much more site-specific matter that we want to
30 get to, which we'll be pursuing this time next week, I believe, on the slot that
31 we have following the site visit on Thursday. But it's really just, at the moment,
32 just to put a market down that we agree with what's been said. The way the
33 compensation for landscaping, ecological mitigation and so on needs to be

1 secured and what it is actually proposed and how it would be delivered isn't
2 particularly clear to us at the moment. It's all very high-level.

3 When you drill down at the site-specifics – on our side, for example, it's
4 still a 40-hectare site, so it's not insignificant, but it's proportionally very small
5 in relation to the big scheme, of course. It's not clear what is actually being
6 proposed and what actually is achievable, given all the constraints that there will
7 be in this particular neck of the woods, so we're particularly interested in hearing
8 from the applicant on how subsequent stage and level of detail will actually be
9 secured and agreed. Thank you.

10 MR PRATT: Yes, okay. Thank you for that. I see that Mr Johansen from the Kent
11 AONB has his hand up. If you would care to join us at this point in time.

12 MR JOHANNSEN: Thank you very much. I'll try and be brief. Just to support the
13 previous points about the route map, I notice that you framed your question very
14 tightly around habitat and species when considering mitigation, compensation
15 and enhancement, and obviously the agenda talked to landscape as well as
16 biodiversity, so it's just again a marker that landscape is wider than by
17 biodiversity. I don't think there's a hearing on landscape impacts, but there are
18 needs – the landscape impact also cannot be mitigated, and landscape
19 encompasses biodiversity but is not synonymous with biodiversity.

20 MR SMITH: In relation to that last point, I think it is worth observing that we are
21 distinctly only partway through a six-month examination period. This is the
22 second block of hearings that we are holding. We have not yet moved to provide
23 detailed agendas and subject matters for the hearings that will proceed in both
24 October and November hearing windows. As part of that, we are giving careful
25 and detailed consideration – a consequence of the outflows from these processes
26 – to the remaining subject matters that we will deal with orally, and also the
27 remaining subject matters that we will deal with in writing, so don't assume that
28 because so far we have not had a landscapes hearing that we do not intend to.
29 It's part of a consideration about best balance and whether to proceed on that
30 topic in writing or by hearing, but it is still possible that we will conduct a
31 hearing on, or including, landscape effects before the end of the examination. I
32 just thought it was worth making that point clear.

33 MR JOHANNSEN: Yes, thank you very much. I'll leave that point there, then.

1 MR PRATT: Thank you very much. Have I any other person or organisation who wishes
2 to speak on this topic before I invite the applicant to make some remarks? I
3 don't see any hands up either online or in the room, so Mr Tait, it looks as if the
4 floor is yours once again.

5 MR TAIT: Thank you, sir. Andrew Tait for the applicant. Two points: first of all, I
6 appreciate you're not looking for answers to your specific questions in the
7 PD-029, but if I can give a sneak preview of our response, it is that we will be
8 providing a mitigation route map along the lines set out in question 16.1.4.

9 MR SMITH: In that respect, Mr Tait I mean, I've asked if Natural England can give
10 some wisdom on that, and I'm very conscious – and I'm conscious as I cease to
11 speak when I asked him of the potential time disjuncture between when they
12 might provide that advice and when you might usefully use it. Noting deadline 4
13 is the point at which the roadmap response to ExQ1 is going to be received,
14 without placing any undue burden on Natural England, if there were any
15 immediate best practice examples before deadline – we would like to see them
16 at deadline 4 and we would like to publish – but equally, if you were able to
17 assist the applicant before deadline 4, I'm sure the applicant would be very
18 grateful because they've got a question to answer.

19 MR TAIT: Thank you, sir. I was going to draw – Andrew Tait for the applicant – sir, I
20 was going to draw a distinction between that and secondly, the more focused
21 issue under (a)(i) which relates to the biodiversity assessment, mitigation,
22 compensation and enhancement areas. We don't anticipate we will be in a
23 position to have concluded that before deadline 5 because we would like to,
24 precisely, liaise with Natural England to do that, so that's a separate strand as it
25 were.

26 MR SMITH: Yeah. No, I'm very conscious that it is, but I'm also conscious that one of
27 the things we're potentially striving for here is an integrated system that
28 simplifies and presents all of this data in an easily accessible way that enables
29 everybody who needs to both manage the ongoing and work on the project, as
30 an applicant team, respond to it, as a relevant statutory advisor or local authority,
31 or advise the Secretary of State on it has a common information base, so that's
32 what I think we're striving for, and it may take a couple of iterations to get to it,
33 but as long as we've got a focus on that, that, I think, is all to the good.

1 MR PRATT: Thank you, gentlemen. In that case, I think we can go onto item 3(b), and
2 this one's on landscaping, as – which will please one of our last speakers, and in
3 this case, can the applicant describe how the landscape scale strategy for the
4 mitigation, compensation and loss of habitats, etc, is the most appropriate
5 method? And I would also like them to consider its use when there appears to
6 be a disparity between the level of impact on each side of the river, with the
7 mitigation and compensation that's offered. I suppose the question comes down
8 to: should an approach be more localised to reflect where the harm is caused, or
9 potentially caused? I wonder if you could answer that within your comments,
10 Mr Tait.

11 MR TAIT: Thank you, sir. Again, this is Mr Nick Clark.

12 MR CLARK: Thank you, Nick Clark for the applicant. The landscape scale strategy
13 proposed by the applicant for mitigation and compensation measures aligns with
14 the provisions in the Environment Act 2021. Section 8 of the Act requires the
15 Secretary of State to prepare an environmental improvement plan, which was
16 published earlier this year. This document promotes nature recovery networks
17 to support the document's apex goal of creating thriving plants and wildlife.
18 This same is to create wildlife rich habitats outside protected sites, which expand
19 the buffers on those sites and connect up the areas, allowing populations to move
20 and thrive. The national networks national policy statement also promotes
21 landscape scale mitigation through habitat connectivity. At paragraph 5.20, the
22 NN NPS looks to provide biodiversity net gain through establishing more
23 coherent ecological networks which are more resilient to future pressures.

24 The applicant's approach to addressing impacts of habitat loss follows the
25 mitigation hierarchy. Losses have been minimised as far as possible within the
26 project design to avoid impacts, and where habitats are lost, less biodiverse areas
27 such as agricultural land have – has been impacted with losses of – sorry, let me
28 start again. Where habitats are lost, the focus has been on areas of less
29 biodiversity value, such as agricultural land, with an objective to try and avoid
30 some of the more important semi-natural habitats within the order limits.
31 Habitat creation to offset losses has looked to create more diverse habitats than
32 currently exist, and to use this creation of new habitats to link to existing retained
33 similar semi-natural habitats. The extent of the habitats created are reported in
34 the terrestrial biodiversity chapter, chapter 8, and that's APP-146. Again,

1 tables 8.31 and 8.35 provide the extent of this habitat creation, and their
2 locations are shown in the environmental master plan.

3 It's a well-established good practice principle to create more better habitat
4 than which is being lost, addressing issues around time for habitat to establish,
5 concerns around the viability of newly created habitats, and how they will
6 function when compared to those which are impacted. The scale of this project
7 demands large-scale habitat creation proposals to adequately address adverse
8 effects. The design of this habitat creation provides both proportionality in terms
9 of scale with the objective of aligning with government policy and the NN NPS
10 around building coherent ecological networks. Not only does this consider the
11 effects of habitat loss, but also the impacts this has on a range of species that the
12 habitat supports. The creation of high-quality habitats provides not only for
13 breeding, foraging and sheltering opportunities, but also creates green corridors
14 to allow animals to move more freely between fragmented habitats and
15 populations. Examples of key species where this approach of strengthening
16 network connectivity and a landscape scale is beneficial: dormice south of the
17 River Thames and terrestrial inverted assemblages – sorry, the terrestrial
18 invertebrate assemblages – to the north of the River Thames, the former being a
19 European protected species and the latter the focus of Natural England's SSSI
20 scoping study.

21 The landscape scale approach to habitat creation has been integral to the
22 project design from early on, following advice received from the Defra family
23 and continued discussions with Natural England, particularly around
24 compensation for ancient woodland loss and impacts from nitrogen despot ion
25 on designated sites. This is reflected in the statement of common ground
26 between the applicant and Natural England – refence REP2-008, items 2.1.64 –
27 which I'll quote from: 'Natural England considers the proposed compensation
28 measures will be of particular benefit where they help build nature recovery, and
29 Natural England supports the landscape-scale approach that has been taken to
30 identifying the proposed compensation areas, with its aim of enhancing the
31 resilience of the affected sites by strengthening the ecological connectivity
32 between them', and item 2.1.98 RRE, where Natural England says they agree
33 with the principles of underpinning a nitrogen deposition habitat creation being

1 provided as compensation, which include building resilience and improving
2 connectivity at a landscape scale.

3 Although the effects of nitrogen deposition on designated sites would not
4 lead to habitat loss, it would lead to a habitat degradation, and the project is
5 proposing to offset this through landscape scale habitat creation. The
6 justification for this approach is set out in the project air quality action plan,
7 reference APP-350 in section 3, compensation. It's therefore the view of the
8 applicant that the approach proposed to landscape scale habitat creation to offset
9 habitat loss is the correct approach in terms of proportionality and appropriately
10 addressing impacts, aligning with Government policy and efficient use of land
11 within the project's order limits.

12 Sir, to address your secondary question to this, in the design of our
13 mitigation and compensation – and this aligns with guidance such as the
14 Chartered Institute for Ecology of Environment Management guidance – we've
15 tried to locate the provision of mitigation and compensation as close to the area
16 of impact as possible. This has led to differences between the habitat types that
17 we're proposing south and north of the river, but that's because they are
18 proportionate to the impacts that we're having south and north of the river, the
19 two being distinct.

20 MR PRATT: Thank you. Are you finished at this point?

21 MR CLARK: Yes, thank you.

22 MS LAVER: Thanks, Mr Clark. I've got a really leading statement, and I know exactly
23 what you're going to say but it's more to plant a seed for the statutory parties.
24 Is the extent of the order limit sufficient for the level of landscape mitigation
25 required from this scheme? And I'm expecting you to say yes, but I'm expecting
26 that the other parties – to give some thought to that.

27 MR CLARK: I won't say yes immediately. Nick Clark for the applicant. I'll say that if
28 you're asking a landscape question, landscape mitigation or compensation, then
29 I'm not the best person to answer it, but in terms of landscape scale, I believe
30 that the order limits are sufficient to address any adverse effects from the project.

31 MS LAVER: Thank you.

32 MR CLARK: Thank you.

33 MR PRATT: With that in mind, I think rather than, as I did the last time and go to
34 individuals, whether they wanted to speak or not, I think I'll put it up for – if –

1 would anybody who would like to speak on this matter – could you they raise
2 their hands, either in the room or in the virtual room? I notice that Natural
3 England put their hand up almost immediately in the corner, so I will let them
4 speak first and then after that, there's a couple in the virtual room and there's
5 other ones in the actual room, but if – Natural England, if you could – would
6 like to give u your thoughts.

7 MR HANNA: Thank you. Sean Hanna for Natural England. I think given that the
8 project's actually working at a landscape scale – I mean, it is a significant linear
9 infrastructure project – it seems sensible for the consideration of the mitigation
10 and compensation to equally work at the landscape scale, and as the applicant
11 said, the principles of working at a landscape scale came out of a
12 government-commissioned report from Sir John Lawton which then informed
13 the Environment Act which was suggesting principles of bigger, better, more
14 and more joined up habitat, which is a sensible approach for exactly the same
15 reasons as the applicant suggested, that it builds resilience. It allows
16 connectivity; it helps adaptation to climate change and various other matters, so
17 that's why we were supportive of a landscapes scale approach, which builds in
18 much greater benefit.

19 It also has the potential – because if you start looking at landscapes scale,
20 we've got national character areas, so you've the AONB management plan, local
21 character areas, local nature conservation priorities and the emerging nature
22 recovery networks and they all start merging together. So actually, if – you can
23 actually deliver a really great holistic outcome by working at the landscape scale,
24 so that was one of the key reasons that we advocate for landscape scale approach.

25 Thank you.

26 MR PRATT: Thank you very much. Ms Lever.

27 MS LEVER: So can I take you to the question I took to the applicant? And I realise it's
28 possibly a difficult question to answer, but in terms of the biodiversity mitigation
29 and this landscape scale approach, is there enough land in the order limit to do
30 what you think it should do? There's no right or wrong answer.

31 MR GRANT: Nick Grant for Natural England. Ma'am, we've obviously been working
32 within the confines of the order limits as they are, so whether – in short, can we
33 take that away and think about it please?

1 MS LEVER: I'm not expecting you to come back and say the applicant needs to amend
2 their red line boundary and expand the order limits, because obviously there are
3 greater implications for that. It's just whether it – what is proposed is sufficient,
4 in the order limit. So yes, please take it away. Happy to hear back in writing.

5 MR GRANT: Thank you, ma'am.

6 MR PRATT: Right. In that case I will go to the hands as I saw them raised, and the first
7 one is Mr Humphries at Kent County Council. His was up very quickly.

8 MR HUMPHRIES: My finger was hovering, you could see there, just over the red button
9 as well. Michael Humphries for Kent County Council. Sir, our concern – or our
10 principal point on this agenda item is about coherence of the overall strategy.
11 This is a very large scheme. Many people have said this is the largest scheme
12 in geographical area. I mean, it is absolutely enormous, the length of the linear
13 scheme and the landscapes that passes through. The way in which the landscape
14 environment management plan works in the DCO in requirement 5 is that, as it
15 says, 'Each part of the development must be landscaped in accordance with a
16 LEMP which sets out the details', so there has to be a LEMP for each part. Each
17 part, however – each LEMP for each part – has to be substantially in accordance
18 with the outline LEMP. That's the document that you have, and that is a certified
19 document.

20 Of course, with a development of this size, there are likely to be quite a
21 number of different contractors, different parts, different teams working on
22 producing LEMPs. What we are particularly concerned about is that there is not
23 a siloed effect where different landscape teams, working for possibly different
24 contractors in different parts of the project – some north some south of the river,
25 some in different parts of north and south of the river – produce completely
26 inconsistent – or if not completely inconsistent, certainly LEMPs that are not
27 coherent, because for anyone then driving through the landscape or enjoying the
28 landscape, they'll be looking for joined up solutions. At the moment, it seems
29 to us that the outline LEMP does not give a strong enough lead to those who will
30 have to produce the smaller LEMPs for each part of the development.

31 A subsidiary point that we have – but which is also very important – is we
32 feel that there is a lack of clarity at the moment as to the ongoing and long-term
33 management of the landscape areas and the environmental improvement areas.
34 Who is to do it? How is it to be done and how is it to be funded? There's a lot

1 of landscape and other mitigation. We don't criticise that as such, but is this just
2 to be handed to people who then have to take on the responsibility of the ongoing
3 cost of managing National Highways mitigation? And so, as I say, I think what
4 we would like to seek is greater clarity around some of those things. Thank you.

5 MR PRATT: Thank you for that. I will just highlight that later on this afternoon we are
6 supposedly talking about delivery so we'll no doubt come in at that stage and to
7 say to my colleague here who invited the comment from Natural England about
8 the red line boundary, have you any opinions on adequacy on that point?

9 MR HUMPHRIES: We don't have a strong view on that. Others may. We don't have
10 a strong view on that. What I thought you were going to say to me was that Ms
11 Laver will say that there's already a question been asked on exactly that point,
12 and I've missed that one as well, for which I was going to apologise. But no,
13 we don't have a strong view on the red line boundary. Thank you.

14 MS LAVER: Mr Humphries, you mentioned that the OLEMP, the outline landscape and
15 ecology management plan, you feel isn't secure enough because of this issue of
16 when contracts are let at different parts of the site. Does KCC, Kent County
17 Council, have wording that they would like to see within the OLEMP to make it
18 more secure?

19 MR HUMPHRIES: We haven't currently put forward, as far as I'm aware, wording on
20 that. I think we dealt with this in our 'Biodiversity impact J', outline landscape
21 and environment management plan, which is, you'll see that heading or
22 subheading 'Biodiversity impact J' in both our local impact report and our
23 written representations. We haven't suggested wording. We'd be very happy
24 to, I think discuss that with National Highways.

25 It goes back to this rather wider point that I made earlier, that – and indeed
26 on Wednesday – that, although we tend to focus on the words in the DCO, quite
27 rightly because these documents are incorporated, wording in those documents
28 is just as important. So we'd be very happy to work with National Highways on
29 this but I haven't got wording now for you.

30 MS LAVER: No, that's fine. It's just obviously it's a big part of the point you're making
31 today, and it would certainly help the panel, when we're looking through this
32 material as to where we're reaching common ground.

33 MR HUMPHRIES: We're really grateful. We will try and take that forward.

34 MS LAVER: Yes, thank you.

1 MR PRATT: Thank you. Purely on speed, Mr Bedford online was next with his hand
2 up so if you'd like to come forward, Mr Bedford.

3 MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir,
4 as a preliminary point, we would just echo the point raised by the earlier
5 representations in relation to there would be a benefit, in our view, in having an
6 issue-specific hearing, which did deal with landscape matters because we think
7 that there's actually quite a lot that would be usefully explored in such a hearing.
8 So that's just a preliminary point.

9 But, in relation to this agenda item, I'll ask Ms Hyland in a moment to
10 give a brief outline of why we do not consider that the applicant's approach is
11 in substance as opposed to in description [inaudible]. I think we're all in
12 agreement that there should be a landscape-scale strategy but we're not
13 persuaded that, when you look at the reality of what is being proposed, that it is
14 actually sufficiently joined up to amount to a landscape-scale strategy. And, in
15 particular, we don't think that it adequately integrates the biodiversity issues
16 with the effects on landscape, using landscape in its, as it were, landscape sense
17 as well as cultural heritage. And so that's our overarching concern.

18 We would again echo the points made by Kent County Council with regard
19 to coherence. And then, if I can just now invite Ms Hyland to come on screen
20 and if she wants to make any particular comments, particularly by reference to
21 OLEMP.

22 MS HYLAND: Yes, thank you. I think I echo what –

23 MR BEDFORD: Sorry, could you just begin by introducing so that the tape picks it up?

24 MS HYLAND: Sorry, Val Hyland, working as a consultant for Gravesham Borough
25 Council. Apologies. Yes, there's a number of documents provided that describe
26 the mitigation measures but they are across a number of documents and, as
27 someone has already said, the outline landscape and ecology plan, well, it really
28 sets out for a limited area the management and maintenance requirements for
29 landscape and ecology mitigation.

30 But this isn't a landscape-scale strategy. It's really about landscaping and
31 the two are very different. We think landscape-scale would take, as has been
32 said, a much broader, more holistic approach and take account of all components
33 of the landscape. But we've noticed there are limited opportunities to mitigate
34 within the scheme area so we think a broader approach is needed. For example,

1 to make sure that areas that will suffer loss or damage, the mitigation should take
2 place in that area.

3 So we think a landscape-led strategy and a landscape-scale would provide
4 an overarching strategy and it may have to look outside the border limits. I think
5 that would be helpful. Thank you.

6 MR BEDFORD: Thank you Ms Hyland. Sir, those are a lot of comments, in relation to
7 this item. Thank you.

8 MR PRATT: Thank you for that. What might be helpful to us if you could just pass that
9 information onto us by the next deadline as normal because your colleague's IT
10 did sometimes make her a little bit difficult to catch. So if you could just make
11 certain that whatever she said can be – it's clear to us.

12 MR BEDFORD: Yes, absolutely, sir. We'll relay that in the post-hearing submission so
13 there's a bit more clarity. Sorry if there was an IT issue on that. Thank you, sir.

14 MR PRATT: We don't know whether it's at her end, this end, or just in the ether. It
15 could be anywhere. Thank you very much.

16 MR BEDFORD: Thank you, sir.

17 MR PRATT: Mr Douglas, you are – no, Mr Edwards, yes, you were next up.

18 MR EDWARDS: Thank you, sir. Douglas Edwards for Thurrock. Sir, so far as this
19 matter is concerned, I am going to begin and then Mr Plumb is just going to
20 briefly follow. So far as the agenda item is concerned, which is the landscape-
21 scale strategy for mitigating and compensating the loss of habitats, Thurrock
22 Council is content and indeed supports that as an approach to mitigation and
23 compensation and indeed to enhancement opportunities, so far as biodiversity
24 interests are concerned. It has a particular benefit, as you will hear from Mr
25 Plumb in due course, in respect of taking up the opportunities to improve
26 connectivity between habitats north of the river. So, so as far as the approach is
27 concerned, we are content.

28 With regard to the implementation of that approach, Thurrock Council
29 does have concerns that the opportunities presented within the order limits to
30 secure enhancement have not fully and properly been pursued by National
31 Highways and there is a locational specific area of concern close to the Tilbury
32 Viaduct that I was going to propose Mr Plumb address you on under the next
33 agenda item, when we come to biodiversity net gain because that seems the most
34 appropriate place to deal with that specific point.

1 So, in terms of approach, the council is content; in terms of the
2 implementation of that approach, the council is not content. And with regard to
3 the point put by Ms Laver, the council is satisfied that the order limits provide
4 an acceptable and appropriate mechanism to mitigate and to compensate for the
5 loss of habitats. Its concern is the failure to take up fully the opportunities within
6 the order limits and we'll return to that in due course.

7 And can I just put a marker down? Thurrock Council also have similar
8 concerns with regard to the coherence, in terms of monitoring and ongoing
9 maintenance, and we'll come back to that in a later agenda item today. So if I
10 can hand over briefly to Mr Plumb.

11 MR PLUMB: Thank you. Steve Plumb. I'm the ecology and landscape representative
12 for Thurrock Council. As Mr Edwards has pointed out, the general approach to
13 the landscape-scale strategy is considered appropriate within Thurrock. It's an
14 area where there's quite distinct areas of very, very high nationally significant
15 habitat value, as Mr Clark referenced, in particular for terrestrial invertebrates
16 around the area of the north portal or extending towards Coalhouse Fort. And
17 then that links to other emerging habitats to the north, which are outside of the
18 scheme. So there's an opportunity there to achieve some really important,
19 robust, resilient habitats which provide the connectivity that's required.

20 There's also, within the Mardyke Valley, there's quite a lot of area
21 identified for mitigation. In terms of ecological mitigation, yeah, we're certainly
22 happy. Noting the comments referring to landscape, the council did always
23 argue, from a landscape point of view, there was an opportunity to achieve a lot
24 more landscape enhancement within the landscape mitigation within the Valley
25 which would be beneficial to provide better opportunities, in terms of ecological
26 improvements and result in less constrained habitats.

27 As has been introduced, we will bring up the issue of the Tilbury Viaduct,
28 the area within the order limits there, the proposed mitigation is very limited and
29 there is opportunities for bringing in more of that area to achieve and improve
30 connectivity along, heading north from the portal along the route.

31 MR EDWARDS: Thank you, sir.

32 MR PRATT: Thank you so much. Next on my list is Ms Ellis, CPRE.

33 MS ELLIS: Hi, yeah, Vicky Ellis, CPRE, Kent. I just wanted to pick up on a couple of
34 points that the applicant's ecologist mentioned. They're more technical points,

1 really. In creating new habitats, there is always a danger in pushing certain
2 species out and effectively creating different habitat to the one that it's meant to
3 be compensating. And the other thing was what constitutes better habitat?
4 Which habitats would not be good and which habitats would be good and
5 become better habitats? We'd like definition around that, please.

6 MR PRATT: Thank you for that. I will ask Mr Tait to put on his list for when he comes
7 back at the end, if possible. Mr Johannsen.

8 MR JOHANNSEN: Thank you. Nick Johannsen for the Kent Downs Area of
9 Outstanding Natural Beauty. In response to your short question at the front end
10 about how proximal the compensation should be to the impact, the simple
11 response, as the applicant said, is it should be as close as possible. And this is
12 particularly deficient, we think, with regards to nitrogen deposition, which we'll
13 come to later. But just to flag that at this point.

14 I would just like to strongly endorse Gravesham and Kent County
15 Council's point from the AONB perspective. Obviously I won't repeat them.
16 And, in response to your question about order limits, which is a very interesting
17 question, the applicant drew attention to the distinction between landscape-scale
18 and landscape, and the adequacy of that and Gravesham pointed to this as well.
19 And so I won't repeat those points but we will come back in writing around
20 order limits on the basis of – because this item is about landscaping as well as
21 landscape-scale. Thank you.

22 MR PRATT: Thank you very much. Ms Blake, I saw your hand up. Would you care to
23 address us?

24 MS BLAKE: Thank you. Thank you very much, sir. Laura Blake, Thames Crossing
25 Action Group. I will be honest: when I read the agenda and saw a
26 landscape-scale strategy, that is not terminology that I'm familiar with but I am
27 familiar with the fact that our landscape in our local communities includes
28 farmland, agricultural land. And I just want to comment really on the fact that
29 obviously a lot of the mitigation and compensation land that is being taken, if
30 this project goes ahead, would actually be agricultural land. And Ms Laver, I
31 do appreciate there is a written question in regards to the land take on agricultural
32 land.

33 But I just feel it appropriate just to mention here, when we're talking about
34 the most appropriate method for mitigation and compensation – and not in any

1 way belittling the need for the environmental and sustainability for biodiversity
2 – but I think it's important that we all remember that we are part of that
3 biodiversity. And when food security is such an issue, we're talking about the
4 habitat for other creatures. I think maybe we need to remind ourselves that we
5 need to include ourselves in that when we're talking about mitigation and
6 compensation, with the dangers that we have with food security and that
7 escalating with climate change. Thank you.

8 MR PRATT: Thank you very much, Ms Blake. That's all the hands that I have seen up
9 to talk on this particular item. If none of my colleagues have any questions at
10 this juncture, I will pass the baton to Mr Tait for the applicant.

11 MR TAIT: Thank you, sir. Andrew Tait for the applicant. Just two points, if I may.
12 First of all, on the comments made by Mr Humphries about the LEMP and the
13 relationship with the outline LEMP – I appreciate we may come to that later as
14 a separate item – but just to make it clear that the outline LEMP has been
15 prepared on a project-wide basis, not on an internally disconnected basis, and
16 requirement 5 ties it into a number of other principles as well as the outline
17 LEMP, such as the design principles, the REAC and the environmental master
18 plan.

19 And secondly, in relation to the point made by part of the CPRE Kent
20 about what constitutes better habitats, I will ask Mr Clark to respond to that
21 specifically.

22 MR CLARK: Nick Clark for the applicant. Yeah, Ms Ellis raised two points. The first
23 was a question around whether our mitigation or compensation would push out
24 species in existing habitats to replace them with other species. And the second
25 point around what constitutes better habitat. I'll take each in turn.

26 Our application fully assesses impacts on the baseline ecology, the
27 ecology that's there at the present. So, if we are taking habitats and converting
28 them to other habitats, we would fully assess that potential impact. What we
29 have done is focused habitat creation in areas of predominantly agricultural land
30 or land, which is less biodiverse than the type of habitat that we're trying to
31 create. Less biodiverse land is likely to support fewer species and a lesser
32 diversity of species. Habitats that we create are going to be more semi-natural
33 habitat, better quality to support a greater diversity of species. So we would say
34 that we fully assessed that concern in our application.

1 The second point about what constitutes better habitat, if I used the term
2 better habitat, I apologise. It was just loose language. I should have said, ‘More
3 diverse habitat.’ So what we’re looking to do is create habitat, which has a
4 greater biodiversity value than that that we’re losing.

5 MR PRATT: Thank you very much for that. What I intend to do is: so we’ve got one
6 more item under this particular section, and then we go on to biodiversity net
7 gain, and I have a funny feeling that we could be here for quite a while on that
8 particular item. So what I’d like to do is, if we can go through the next item and
9 then we’ll probably take a break at the end of that.

10 So just to introduce the next piece, I’d like to recognise the comment from
11 Natural England’s deadline 3 submission, regarding the use of native species in
12 the AONB but there’s an action within there, requesting that the document is
13 formally corrected, when you suggested that it was a typographical or something
14 between using non-native species and not using non-native species. But, in
15 essence, are there locations where non-native species are likely to be considered
16 to be put in? And why is the decision for that being taken, Mr Tait?

17 MR TAIT: Thank you, sir. On this occasion, it’s Mr Andrew Kay, who’s the lead
18 landscape designer.

19 MR KAY: Good morning, sir. Andrew Kay, on behalf of applicant. So it’s on designated
20 and protected areas, we are not proposing the use of non-native planting. This
21 includes the area within the Kent Downs AONB. Planting type LE2.11
22 woodland with non-native species are proposed for new areas of woodland
23 within the project that are not contiguous with existing woodland areas and
24 they’re mainly focused on proposed road junctions on the A13 and M25 and
25 areas north of the M2, A2 and A122, Lower Thames Crossing. That is in line
26 with the wider design principle that we explored in issue-specific hearing 3, in
27 terms of creating wooded junctions.

28 The woodland typologies are displayed on the environmental master plan,
29 as described earlier, there’s a whole suite of documents and we can supply those
30 later. And to clearly show areas of woodland planting where the use of
31 non-native species, the LE2.11 have been proposed. This excludes areas of any
32 compensatory woodland planting proposed for ancient woodland or SSSI and
33 woodland loss.

1 The reason why this decision has been taken to include a small proportion
2 of non-native species is to ensure that the proposed woodland planting areas are
3 resilient against future diseases and predicted climate change. This is further to
4 clause LSP 02 of the 7.5 design principles document, reference REP3-110. And
5 I'll quote directly from the design principle, which states, 'The planting species
6 mix shall be as diverse as reasonably practicable to ensure resilience against
7 potential future diseases. It will include native species of local provenance and
8 will also consider the inclusion of a small percentage of non-native species,
9 where appropriate, in response to forecasted impacts of climate change.' Thank
10 you.

11 MS LAVER: I was going to ask if you could just slow down a little bit because you're
12 racing through it and I can't get any notes down and I'm trying really desperately
13 hard to hear. If you're coming through other items later, if you could just slow
14 the pace down, that would be great. I realise I do want to get home for the rugby
15 tonight, but this is far more important that I hear what you're saying.

16 MR KAY: Yeah, no problem.

17 MS LAVER: Thank you.

18 MR TAIT: Andrew Tait for the applicant. If could just ask Mr Kay slowly to read the
19 first sentence out that he said, which was the direct answer to the question about
20 non-native species in AONB in the protected areas.

21 MR KAY: Yeah, sure. Andrew Kay, on behalf of the applicant. 'On designated and
22 protected areas, we are not proposing the use of non-native planting. This
23 includes areas within the Kent Downs AONB.'

24 MR PRATT: Thank you very much. As usual, I will open this out to anybody who
25 wishes to speak on this matter. I'm not seeing any hands up. So in that case...
26 No. In that case, I think we can draw this one to a speedy conclusion. In that
27 case, it's 11.25. Should we go for a 10-minute break?

28 MR SMITH: Can I suggest 15 as a minimum, please, Mr Pratt? I mean, by the time
29 we've walked to our retirement room and turned around and walked back, 10
30 minutes has gone.

31 MR PRATT: Yes, you're probably very right and I think we do need a little bit of a break
32 anyway so if we can be back in 15 minutes then, please, and that's 11.40.

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34 **(Meeting adjourned)**

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MR PRATT: Good morning, everybody and welcome back. This is issue-specific hearing number 6: mitigation, compensation and land requirements, and this is the second session. I'm Ken Pratt. I'm a panel member. We managed to get through item 3(b) when we left, which leaves us item 3(c): biodiversity net gain.

Now, on this one, I will note that the biodiversity net gain is not policy at present but could the applicant provide its position with this regard, particularly in relation to the Environment Act requirements? At this point I'm just going to highlight table 1.1 and 3.1 of the Environmental Statement, appendix 8.21, APP-417, which although suggests that the general biodiversity net gain is 7%, hedgerows are -11% and streams are -7%. And, I think, at that point, if I could ask the applicant just to provide a detail on its position.

And it's been suggested that we can deal with that one and the next item number 2 are you intending to improve your score on biodiversity net gain and what's the implications for trying to increase it so we can take items 1 and 2 together. Thank you, Mr Tait.

MR TAIT: Thank you, sir. Sir, as you noted, it's not policy at present but I will ask Mr Clark to explain the approach that the project has taken towards the biodiversity metric.

MR CLARK: Good morning, Nick Clark for the applicant. In the design, the project's focused on maximising biodiversity value through being ambitious, in terms of the habitats proposed for essential mitigation requirements and their long-term management, with a focus on the Lawton principles of more, bigger, better and joined-up. It's recognised that the ambition demonstrated by the design does not necessarily maximise the value calculated by the biodiversity metric version 3.1 – which is the version we have used – but it is the view of the applicant that the project delivers a design of high biodiversity value.

It is expected that the forecast metric performance would improve during the detailed design process. Design refinements would seek to further introduce habitat loss during construction, minimise lag time between habitat loss and creation and maximise the condition and distinctiveness of habitats created, and the project would seek to maximise biodiversity performance over the full project lifecycle.

1 The extent of any land required to achieve 10% net gain and the costs to
2 the scheme of purchasing any shortfall of biodiversity units against the
3 commitment to a 10% uplift would depend on the availability and the cost of
4 suitable land to deliver biodiversity net gain and the availability and cost of
5 purchasing specific numbers and type of biodiversity units required on the open
6 market.

7 It should be noted that, in the absence of biodiversity net gain being a legal
8 requirement for the project, it's difficult to justify compulsory acquisition of
9 land on those grounds alone, i.e. not being considered essential mitigation.
10 Further, the addition of land to the order limits for biodiversity net gain purpose
11 would correspondingly increase the number of biodiversity units needed to
12 achieve an uplift of 10% by increasing the value of the biodiversity baseline.

13 However, we have undertaken to provide an estimate of what would be
14 required to meet 10% uplift for the three metrics: area-based habitats, hedgerows
15 and rivers and streams. From an area perspective, to meet the area-based
16 habitats, approximately 210 hectares of additional land in the form of existing
17 habitat, which could be improved in condition and therefore result in an increase
18 in biodiversity value, would be required. From a hedgerow perspective, we
19 would require the creation of an additional 16 kilometres of new hedgerow. And
20 from a rivers and streams perspective, we would require the creation of an
21 additional 13 kilometres of watercourse.

22 To purchase the equivalent biodiversity credits to meet the 10%
23 thresholds, we are using statutory unit value because that's the most available
24 unit value measure that we have at the moment. We consider that the cost of the
25 project would be approximately £45 million.

26 In terms of the two linear habitats – hedgerows and rivers and streams –
27 we have looked to consider whether provision of that within the order limits as
28 they stand is possible. In relation to hedgerows, we spoke to a number of the
29 agricultural landowners. Initial designs included separating up some of the
30 larger agricultural fields to create this additional hedgerow length. There is
31 strong resistance to that because it would make those fields very, very difficult
32 to manage from a farming perspective.

33 The creation of an additional 13 kilometres of watercourse is problematic.
34 We're creating an additional – I think we're creating 45 kilometres of

1 watercourse, which is a net gain of about 22 kilometres. Let me just check my
2 figures. Yeah, that's project-wide. That's what we're creating. In addition to
3 that, it's problematic in terms of hydrology and land available, which is why we
4 are where we are with the figures that we provided and the two options that we
5 have would be to either secure more land to create that habitat or purchase credits
6 on the open market. That's everything now. Thank you.

7 MR PRATT: Thank you for that. You actually, in that last piece, probably answered
8 my, what would have been almost a supplementary question about if the NPS is
9 a general principle to avoid harm, obviously whatever term you use on
10 biodiversity net gain being a negative number, you would assume that there
11 would be harm but to bring it even up to zero, you've obviously answered the
12 question that it's just not practicable as you see it within the order limits and cost
13 effectiveness as it stands.

14 MR CLARK: Nick Clark for the applicant. I think it's important to make the distinction
15 between our ecological impact assessment and the significance of impact on
16 receptors, such as penetrating watercourses and the biodiversity net gain metric
17 and how that accounts for biodiversity value, Type 2 establishments, etc. The
18 two aren't – they're two parallel processes because the score that we have for
19 area-based habitats, hedgerows and rivers and streams aren't at 10%, doesn't
20 necessarily mean that we haven't appropriately mitigated or compensated for
21 impacts. So I think, yeah, the point I'm trying to make is I think it's important
22 to make sure that we provide a distinction between those two aspects.

23 MR PRATT: Thank you for that clarification. Are you finished now, Mr Tait?

24 MR TAIT: Yes, sir, thank you.

25 MR PRATT: Thank you very much. Well, I will open this out to everybody. If you
26 would like to just raise your hand if you would wish to speak. And I will go to
27 Natural England first and go around the table from there, inside and outside the
28 room. Mr Grant.

29 MR GRANT: Nick Grant for Natural England. Could I bring in Ms Covill, please.

30 MS COVILL: Kathleen Covill for Natural England. Only a short point in response to
31 this item on the agenda. In our written reps we have supported National
32 Highways in seeking an ambition to achieve that 10%. It's really interesting to
33 hear the sort of additional work that you've done at looking at the likely costs
34 on that so I think that's something we want to take away and ponder.

1 Obviously we know that you're in a non-mandatory space on BNG. We
2 do really welcome your statement around the fact that you're expecting detailed
3 design to be able to change the metric figures slightly, at least for area habitats,
4 even if it's not for hedgerows and rivers. And I guess what we'd like to see is a
5 re-run of the figures of detailed design so we get a feel for how that improvement
6 is working and whether it can get closer to 10%.

7 And also that, where impacts are reduced at detailed design that the
8 compensation and the mitigation that will go in will stay. I'm just wondering
9 whether BNG will continue to drive those decisions at detailed design so that
10 we do see that improvement but we don't see compensation litigation areas
11 reduced because of the reduction on the construction side, if you get my point.
12 So it might be that there's a bit more discussion that we can have at follow-up
13 meetings around that principle. Thank you.

14 MR PRATT: Thank you very much. Within the room, and the first hand I saw up was
15 Mr Edwards of Thurrock so if you would like to take the floor.

16 MR EDWARDS: Yes, thank you, sir. Douglas Edwards for Thurrock Council. As with
17 the last agenda item, I'm going to begin and then Mr Plumb is going to address
18 you on certain technical matters. So far as the application of the biodiversity net
19 gain approach to a project of this nature, obviously it is the case that there is no
20 legal or policy requirement to apply it to this project. We do, however, welcome
21 the fact that the applicant has nonetheless sought to apply it on a voluntary basis
22 and to assess the scheme against it.

23 We also accept that, absent a legal or policy requirement, there are some
24 difficulties in the requirements of biodiversity net gain justifying for compulsory
25 acquisition but that does not excuse the obligation, as we see it, for the applicant
26 to do everything it can within the order limits and the land that it's seeking to
27 acquire, to enhance the biodiversity credentials and to achieve biodiversity net
28 gain.

29 And we also consider that consistent with that is paragraph 5.23 of the
30 national policy statement for projects of this nature, which require that an
31 applicant should show how the project has taken advantage of the opportunities
32 to conserve and enhance biodiversity. And consistent with that, we say that the
33 applicant should be doing everything reasonable within the order limits to meet
34 that objective and to enhance its biodiversity net gain credentials.

1 And it is in that context that we have a concern about whether that
2 requirement, as we see it, has been realised in Thurrock and, in particular, in
3 respect of the approach to the implementation of the landscape-scale approach
4 to biodiversity mitigation, compensation and enhancement north of the river.

5 I've already indicated that specific concern relates to the area around the
6 Tilbury Viaduct and if it's convenient I'll ask Mr Plumb just to explain what that
7 is now. And the applicant has helpfully indicated that they can make available
8 on the screen a document and that is an extract from the environmental
9 management plan. It's examination document at 163 and it's sheet 4 of the
10 environmental management plan as originally submitted. Can I say this has been
11 revised in a later document, REP3-101 but those revisions don't affect the point
12 that Mr Plumb wishes to make on reference to this document.

13 MR PLUMB: Thank you. Steve Plumb for Thurrock Council. As has been mentioned,
14 we're supportive of the principle of trying to achieve biodiversity net gain. The
15 figures were mentioned earlier: +7% overall for habitat area within Thurrock
16 and north of the Thames – that's actually 9% so we're sort of nearly at the 10%
17 level. And we appreciate there are factors such as, the risk multiplies, which
18 apply to the metric calculation, which if you're doing woodland creation,
19 hedgerows and things, does affect the scores.

20 One of the issues we've raised throughout the process has been how we
21 add in some of the additional measures and the Tilbury Viaduct mitigation is an
22 example where we feel there's scope for achieving additional mitigation
23 enhancements within the area, which would work towards achieving that target
24 but also improve this idea of landscape, that habitat connectivity.

25 So the area, as shown on the plan, there is quite a narrow sort of corridor,
26 there's a wetland feature being provided and very limited amount of additional
27 habitat underneath. Yet, within the order limit area, there are areas of scrubland,
28 wetland features, which are not being maintained, fairly poorly managed and
29 there's opportunities there to consider some of these areas, we feel, to bring
30 those into the management to help with improving that biodiversity net gain
31 score.

32 Yeah, so the area is – there's predominantly – south of the railway line and
33 to the west, there's some areas near Station Lane, which could be included. And

1 on the east side of the LTC route below the blue wetland area, there's again
2 scrub areas within that area, which could be included.

3 Yeah, the other point is again, with regard to hedgerows, again linking this
4 back – yeah, the separation between landscape and biodiversity can be unhelpful
5 in a sense because, as well as providing additional habitat from a biodiversity
6 point of view, there is scope to enhance the plant – provide improved hedgerow
7 planting along Low Street, which is on the edge of the conservation area and
8 there are residential properties facing onto the site. And, again, that would help
9 with screening.

10 Yeah, so it's the area sort of along the boundaries of the blue stippled area,
11 just for ease.

12 MR EDWARDS: Thank you very much indeed. And to conclude, sir, on this matter so
13 you've heard the concerns raised by Mr Plumb. So far as those concerns, if
14 they're to be implemented, then they could easily be addressed by a change to
15 the environmental management plan and that's how they would be introduced
16 into the DCO. Thank you.

17 MS LAVER: I think what I will ask for the applicant just to consider for our purposes is
18 the land agreements in the CA, in the book of reference around that, if you might
19 need to have a look at that because obviously any changes that are being
20 suggested to take more land for improvements has a knock-on effect for the CA
21 process. And maybe when you're responding we might understand a little bit
22 more around that.

23 MR SMITH: And again, in that respect, returning to the point, Mr Tait, that was made
24 very clearly by your witness there: we are in this non-statutory space and we
25 recognise the difficulties that that creates and we want to be very clear and sure
26 that we don't find ourselves in a world where BNG, biodiversity net gain, is
27 being advanced as a principal purpose for CA because of course that would
28 generate difficulties of its own.

29 MR TAIT: Yes, sir. Understood.

30 MR PRATT: Thank you so far. Ms Dillistone, if you'd like to... Thank you.

31 MS DILLISTONE: Thank you, sir. Alex Dillistone for the Port of London Authority.
32 Table 1.1 of the biodiversity metric calculations, which is document reference
33 APP-417, identifies the predicted biodiversity net gain of the river units. There's

1 -7% overall for rivers and streams, which is the average of -7% for the north and
2 -8% for the south of the project.

3 Now, I recognise that we are in a non-statutory space here, but the PLA is
4 coming at this from the point of view of the fact that it does have conservatory
5 functions, and it would – those numbers do seem a little on the low side for a
6 project of this size. So we support the point that Mr Edwards has already made
7 on behalf of Thurrock Council that the applicant should make further efforts to
8 find opportunities for enhancing biodiversity net gain.

9 The other point I have to make, and I would just be very brief, is that
10 Ms Laver touched on earlier the question of whether there is a sufficient land
11 requirement. If the applicant is going to look at opportunities, provide
12 biodiversity net gain, and if they would require the offset of river units, the PLA
13 is likely to be the owner of the foreshore and the riverbed in the estuary, so we
14 would welcome the work on biodiversity net gain being done as soon as possible
15 by the applicant so that further land requirements are identified in relatively short
16 order. Thank you.

17 MR PRATT: Thank you. Ms Ellis.

18 MS ELLIS: Thank you. Vicky Ellis, CPRE Kent. I just want to pick up on a couple of
19 things really that the applicant's ecologist said when he referred to BNG as not
20 being essential mitigation. BNG isn't mitigation, so BNG is not intended to be
21 mitigation. It's meant to be a gain on top of any essential mitigation or
22 compensation. And furthermore, the UK is often cited as the most
23 nature-depleted country in the world, and the UK ranks bottom out of 14
24 European nations for nature connectivity and for having lost more wildlife than
25 any other G7 country.

26 This is an appalling record, and I really feel that something like this needs
27 to be addressed. While we're not statutory with BNG, I still think that the
28 applicant should have a sense of duty.

29 MR PRATT: Mr Bedford.

30 MR BEDFORD: Thank you, sir. Michael Bedford, Gravesham Borough Council. Sir,
31 we start, obviously, with the recognition of the legal position and the specific
32 policy position in relation to BNG, but we also note that existing policy – that's
33 in national networks at 5.33 – deals with biodiversity within and around

1 developments, and current policy makes a connection between beneficial
2 biodiversity improvements and the achievement of good design.

3 So good design is already current policy, and there is a requirement for
4 NSIP to achieve good design. And what we would say is that the extent to which
5 a development doesn't achieve a positive outcome in terms of biodiversity net
6 gain is a component of your assessment as to whether the development overall
7 can be regarded as achieving good design.

8 And in relation to what the applicant says, that the applicant says, 'Well,
9 we have sought to maximise biodiversity net gain in designing the project,' our
10 assessment is that this is a case where the applicant has not used the achievement
11 of the ENG metric as an input to the design process. It is only, as it were, an
12 output, so when one sees the applicant saying, 'Well, we have sought to
13 maximise,' it's maximise against parameters which have already been set, which
14 don't include achieving that outcome. So, in a sense, they say, 'We can only do
15 what we can do,' but that's because they set the parameters where they set the
16 parameters.

17 The last point just to make on this is that in a sense this is something of a
18 timing issue. We know that this is effectively the largest construction project,
19 certainly in the highway field, to be undertaken in Britain. It is intended to be a
20 flagship or exemplar or pathfinder project.

21 And it's a happenstance of timing, now we know about the two-year delay
22 in construction, that the consenting decision will be made under effectively one
23 regulatory regime where BNG is not a requirement. But the actual
24 implementation will be against a different regulatory regime where it will be.
25 And, in a sense, one wouldn't want to suggest that anybody's gaming the system,
26 but it is very much a matter of timing as to why the 10% isn't being required.
27 So those are our, as it were, concerns.

28 I think we also would just draw to attention – and I think we can flesh this
29 out in the post-hearing submissions. We think that the suggestion made by
30 Natural England about wanting to see, as it were, a reassessment of the BNG
31 credentials as we move forward to detailed side, we think that there's something
32 in the Black Cat DCO, but we'll check the references on that and provide that in
33 our post-hearing submissions. Thank you, sir.

1 MR PRATT: Thank you very much. I notice that within the last two comments, they do
2 potentially both come up in the next two items on the agenda, but I have no other
3 hands up – oh, I do have a hand up in the room. If you would care – please, sir.

4 MR LAWSON: Thanks, sir. John Lawson representing Joan Carver. Just a brief
5 question really to the applicant on how the BNG assumptions move from the
6 macro to the micro. I mean, is it the intention to go for a net gain overall,
7 accepting there are going to be some winners and losers within certain parts of
8 the scheme, or is it going to hone down ultimately to smaller areas and see
9 whether that can be enhanced in the way that policy suggests?

10 Obviously, thinking about our client's site in particular, which is
11 40 hectares, but it's been quite significantly impacted, and the opportunities to
12 compensate for that would certainly be there if the red line, for example, were
13 extended out or if there's flexibility to allow for further enhancements outside
14 that very tightly drawn line. Thank you.

15 MR PRATT: Thank you very much. Is there any other hands, either in the virtual room
16 or in the physical room? Right, in that case, Mr Tait, the floor is yours on this
17 item.

18 MR TAIT: Thank you, sir. First of all, in relation to the point made on behalf of Natural
19 England, we will, of course, liaise with them about the use of the tool of BNG
20 at the detailed design stage, so we'll discuss that with them because they've
21 raised that specifically.

22 Secondly, to make absolutely clear in response to Mr Smith's observations
23 that the applicant is not seeking to justify compulsory acquisition on the basis of
24 seeking to secure any particular level of biodiversity net gain. The justification
25 is otherwise and may be coincident with a particular product in the tool, but not
26 otherwise. And so it's clear in response to the point made on behalf of the PLA
27 that we are not – we'll not be looking for further land requirements to be seeking
28 to achieve that. And then, thirdly, I want to pass to Mr Clark in relation to any
29 other observations in there.

30 MR SMITH: Just before you do, can I just clarify in relation to also the equivalent direct
31 question that proceeded from Lawson Planning Partnership because I believe, in
32 a micro sense, they were seeking, potentially, to offer in additional land for
33 compensation and/or mitigation and did suggest the possibility of an extension
34 to the red line boundary in land that they individually control. But you do seem

1 to have set out a general principle here, which is that you're not seeking to
2 further expand the red line boundary.

3 MR TAIT: That's correct, sir.

4 MR SMITH: Okay, well, it may not be the answer that you sought, Mr Lawson, but
5 there's a clear answer there on the table at present.

6 MR LAWSON: Thank you, sir. And it does help, and it will factor further again next
7 Friday.

8 MR SMITH: Thank you.

9 MR TAIT: Thank you, sir. Mr Clark.

10 MR CLARK: Thank you. Nick Clark for the applicant. Just two points I'd like to raise.
11 One is in response to the comment that Natural England made about whether
12 any detailed design reduction in the extent of habitat loss could result in the
13 equivalent reduction in our mitigation or compensation strategy. Just to confirm,
14 that's not the case, so any reduction that we do make will be a positive benefit.
15 We wouldn't look to reduce the mitigation or compensation to offset that
16 positive benefit.

17 The second point is to correct an error that I made, I think, earlier in the
18 discussion. I said that in order to meet a 10% threshold for rivers and streams,
19 we would need to provide 13 kilometres of new watercourse. I've been
20 corrected. It's actually 23 kilometres of new watercourse. Those are the points
21 I'd like to make. Thank you.

22 MR PRATT: Thank you for that last bit of clarification as well.

23 MR TAIT: Andrew Tait for the applicant. In relation to the specific point made about
24 Thurrock, we will deal with that specifically in writing because clearly there –
25 as Mr Smith observed, there are holistic implications, but we want to look at it
26 on that basis and respond accordingly.

27 MR SMITH: Thank you.

28 MR PRATT: Did you wish to add anything on this?

29 MS LAVER: No, I was actually going to ask you to respond to the Thurrock point, but
30 you got there before me.

31 MR PRATT: In that case, I think we can probably do items 3 and 4 together. So that's
32 the applicant clarifying if when calculating the biodiversity net gain, it's
33 included in that metric. Any mitigation that was proposed – the mitigation
34 proposed for this project is or is being utilised for another function. So, in other

1 words, it could be double-counting, such as agri-environmental schemes or
2 anything along those lines.

3 Do any of the change requests that are in or coming in impact your
4 biodiversity net gain calculations? And lastly, and as I say, I'll link the two
5 together. Could you please advise on its thoughts with regards to rerunning the
6 metric as Natural England suggested metric 4.0 as opposed to 3.1.

7 Now, I believe one of the differences between the two of them is in the
8 new metric there is an allowance for rural and urban trees, which the 3.1, the
9 that you've used, does not actually account for. So I'd be interested in your
10 thoughts on that as well.

11 [Crosstalk]

12 MS LAVER: Can I just add a follow-on to that as we're just dealing with these items
13 holistically? I guess the only area where I'm really struggling with the
14 biodiversity net gain is how it is featuring in the plans. Obviously, it's in
15 addition to the mitigation and compensation because it isn't something that you
16 have to do. And what I'm struggling visually, when I'm looking at the areas that
17 are identified for compensation and mitigation, is where biodiversity net gain is
18 on top. So if you could take me to where this is, either identify it's tabulated or
19 it's included in a particular plan, that would be helpful.

20 MR CLARK: Nick Clark, for the applicant. If I may, I'll respond to your question first,
21 Ms Laver. The biodiversity net gain metric calculates the value of the baseline,
22 what exists currently and then the value of what would exist through project
23 intervention. The project design and our compensation and mitigation design
24 provides that project intervention setting, and the biodiversity net gain metric
25 calculates the value generated by that.

26 There aren't areas of mitigation, compensation and biodiversity net gain.
27 What the metric does is calculate all of the habitats within the order limits of the
28 project, with some subtle exceptions, which I can go into if necessary, and
29 provides the output, which is set out in APP-417, so the final score from the
30 metric. So we're kind of accounting for the design rather than providing a design
31 which then accounts for biodiversity net gain. Is that – sorry, I'm probably not
32 explaining myself very well.

33 MS LAVER: Sorry, I'm not an ecologist, so no, I'm not getting it. I'm really sorry for
34 really not getting it. But I guess, for me, I understand when you are identifying

1 parcels of land which will be nitrogen deposition compensation, for example,
2 and you propose to plant a woodland, for example, for that. What you said is
3 that – or I think, within your material, that doesn't include net gain. It's not
4 calculated within that. So where does the additional bit of gain come? I'm trying
5 to be really basic.

6 MR CLARK: Yeah, so I think I need to cover two points. The first point is how we
7 calculate the biodiversity net gain, so we could have a field, a 100-hectare field,
8 agricultural land, that will have a basis line value in terms of units. So that could
9 be –

10 MS LAVER: I can stop you. I do understand how it's calculated through the metric.
11 I'm just trying to understand how it features – ultimately, when it gets built, how
12 does anybody know which bit was gained? I don't mean to be silly in a sense
13 of that tree was gained and those other 10 weren't. I just can't, in my own head,
14 get around how you can determine something was in addition to something else
15 on a planting scale.

16 MR CLARK: The net gain isn't in addition to anything. The net gain – or the value is
17 calculated based on the habitats that are created, so we look at the habitats that
18 currently exist and value them within the order limits, and we look at the habitats
19 that the project would create, and they have a value. And then we compare the
20 two.

21 MS LAVER: Oh, the penny's dropped. Thank you.

22 MR CLARK: Oh, great.

23 MS LAVER: You thought you were going to struggle for a long time there.

24 MR CLARK: Thank you. Okay, going back to the two agenda item questions, the
25 assessment does, as stated, include those units generated in protected species
26 mitigation compensation areas to provide for this project. The Defra
27 February 2023 consultation response on the biodiversity net gain regulations and
28 implementation clarifies that mitigation and compensation for protected species
29 and protected sites can be counted within a development's biodiversity net gain
30 calculation, and it is clarified that this can be up to the point of no net loss in
31 biodiversity.

32 It is considered that this project aligns with the guidance for protected
33 species mitigation compensation additionality. As per the metric user guide, the
34 assessment excludes the unit value of all bespoke compensation provided for

1 irreplaceable habitat loss. In this case, the woodland proposed to compensate
2 for the loss of ancient woodland. The assessment also excludes consideration
3 of nature and deposition compensation sites which form part of the order limits
4 for the reasons discussed in section 3.3 of appendix 8.21, reference APP-417.
5 The assessment does not include any mitigation or compensation provided for
6 other developments.

7 Three change requests have been made by the applicant. These are
8 considered likely to have very minor impact on the metric calculations, given
9 the limited nature and extent of the changes proposed. These change requests
10 include proposed reduction in the order limits of around 19 hectares and some
11 minor changes in the designation of temporary and permanent acquisition. An
12 initial qualitative assessment of the impacts of these change requests and the
13 metric assessment suggests that a reduction in the order limits would likely
14 improve the biodiversity net gain forecast for unit outcomes, primarily by
15 reducing the overall baseline unit value within the order limits.

16 To answer the question around the version that we have used, version 3.1,
17 and the updated version, version 4.0 of the metric, the current biodiversity net
18 gain assessment for the project has been run using the national Natural England
19 metric 3.1 tool and associated guidance, which was the latest version of the
20 metric available at the time of application submission. A newer 4.0 version of
21 the metric has been released by Natural England that came into effect in
22 March 2023.

23 Natural England advises users of previous versions of the biodiversity
24 metric should continue to use that metric unless requested to do so – unless
25 requested to do otherwise by their clients or consenting body for the duration of
26 the project that it's being used for. This is because users may find that certain
27 biodiversity unit values generated in biodiversity metric 4.0 will differ from
28 those generated by earlier versions.

29 Defra has advised that projects in an advanced stage of consenting and the
30 consenting process are not required to update their calculations with the latest
31 major update of the metric. For this reason, the applicant does not at this stage
32 intend to switch to metric 4.0. It is not considered that simply updating the
33 assessment using the latest version of the metric would add any value to the

1 outcomes for biodiversity over continuing to refine the assessment using the
2 metric 3.1 version. Thank you.

3 Oh, sorry, I've just been pointed to the fact you asked a question about
4 rural and urban trees and their inclusion in version 4.0.

5 MR PRATT: I just highlighted that my understanding was that 4.0 takes account of rural
6 and urban individual trees, which the 3.1 is limited on, but if you wish to
7 continue, please continue.

8 MR CLARK: Just to say that – sorry, Nick Clark for the applicant. Just to say that you're
9 absolutely right. That now is included in version 4.0. It doesn't appear in
10 version 3.1. The outcome of that inclusion for our project would be to slightly
11 increase the baseline value – slightly. We don't think it would significantly
12 affect the overall output from the metric.

13 MR PRATT: Thank you for that. Before I open this up, I've just got one other comment
14 that I would like to just get some clarity on. There are a number of areas,
15 watercourses and habitats, where they are temporarily being used, and I think
16 the documentation suggests they're going to be reinstated.

17 Within this sort of general discussion, is the reinstatement to, shall we say,
18 existing conditions or existing quality, or is the proposals generally to try and
19 improve them, whatever an improvement actually means?

20 MR CLARK: Nick Clark for the applicant. In terms of reinstatement, it is what it says
21 on the tin, really. It will be reinstating the habitat back to previous condition.
22 There is a commitment to that in the draft DCO. The wording of that I don't
23 have in front of me, but it aligns with that. From a biodiversity metric
24 perspective, the loss of habitat and then its reinstatement is picked up in the
25 metric, and it's picked up as an adverse effect. You're taking out that habitat,
26 re-planting it. Although it will come back to as it was, it takes time, and that
27 establishment time has a negative impact on the metric, so it has picked up in
28 our overall biodiversity score.

29 MR PRATT: Thank you for that clarification. Have you anything else, Mr Tait –

30 MR TAIT: I don't think so.

31 MR PRATT: Thank you very much. Well, in that case, I'll open it to the room, both
32 in-personal and – so, I'll open this up to the room for comment and – is that
33 Ms Hooton?

1 MS HOOTON: Yes, sir. Thank you very much. Sue Hooton, London Borough of
2 Havering. Just a couple of comments really that the authority support Natural
3 England's request to re-run the calculations, but we do understand that this
4 would be, if it used version 4.0 or 4.1, depending on whatever calculation's
5 available at the time, this would be comparing apples with pears, so our
6 suggestion would be that it is necessary to compare the figures that are provided
7 now with those that may be enhanced at detailed design stage.

8 But the other comment really relates to the calculations, and the metric is
9 only a calculator. It's not an ecologist. We support the applicant's view that the
10 devil is always in the detail, and fixation on numbers is not necessarily
11 particularly helpful or supports the actual enhancements that will be delivered
12 when time allows. And that's really the comment that it all takes time.

13 And comments have been made this morning about enforcement, but it is
14 long-term. Just planting a new habitat is not going to deliver the same amount
15 of biodiversity unless it is managed appropriately for the correct length of time.
16 Thank you, sir.

17 MR PRATT: Thank you. Have we anybody else who wishes to talk on this matter? If
18 you don't mind, Natural England, if I could talk to you. If you could bring you
19 forward first.

20 MS COVILL: Thank you, sir. Kathleen Covill for Natural England. We did, in our
21 written rep, which is REP1-262, reference – request – well, advise that the
22 applicant re-run the net gain calculation with 4.0 rather than 3.1. We have taken
23 on board National Highways' response to our written rep around some of the
24 challenges with that.

25 The reason we made that recommendation, I guess National Highways
26 have partly been caught out by timing, really, in that they ran their calculation
27 with 3.1 in 2022, and 4.0 has been published early 2023. So I guess our position
28 on that was on the basis that the survey requirements for 3.1 are not hugely
29 different from 4.0. A lot of the changes to 4.0 are around improving customer
30 experience using the metric and the guidance itself.

31 So I think a quick chat with our BNG specialist. His view was that it was
32 probably a desk-based exercise really to take on board that rural tree
33 classification that is new, a new part of 4.0. But again, we'll be guided by
34 National Highways to some degree in terms of whether that amount of work's

1 proportionate or not for them to make that shift to the most up-to-date metric.
2 It's unlikely that 4.0 will be updated now for at least another two to three years,
3 so it will be the most current version when we get to consent and construction
4 and detailed designs, so I guess that's our position on that one.

5 But if 3.1 has to be used then, as one of the previous parties suggested, the
6 re-run of the metric at detailed design should be with 3.1. It should be with that
7 metric then if that's what National Highway stick with.

8 MR PRATT: Thank you for that clarification. Yes, this timing seems to be appropriate
9 or inappropriate all the time. Ms Blake, you had your hand up.

10 MS BLAKE: Thank you very much, sir. Laura Blake, Thames Crossing Action Group.
11 Firstly, I would just like to comment on the fact that, indeed, the timing does
12 seem to be critical and on so many different aspects of this project and with a lot
13 of questions over the progress and how quickly National Highways seem to push
14 to get this resubmission in before a lot of these changes, as a group, we find quite
15 questionable, because there do seem to be a lot of aspects that have come up
16 with various changes that possibly could have been known about. But the
17 application is being pushed through.

18 On this particular item, I'd like to comment on the double-counting and,
19 in particular, other projects. We have, obviously, commented previously in
20 various submissions on the Hole Farm Community Woodland. And, whilst it's
21 not an application document, I would just like to read quickly from the Hole
22 Farm Woodland planning statement that's been submitted to Brentwood Council
23 in regards to the planning application for that location.

24 And just under the need for the project, 7.2 and 7.3 in that document, and
25 I would just say that this is the need for the project as in Hole Farm Community
26 Woodland as the planning application going into Brentwood Council and not the
27 Lower Thames Crossing as we are considering the project in this scenario and
28 present case.

29 '7.2. The project meets a range of needs in contributing towards local and
30 national government objectives regarding habitat creation, climate mitigation
31 and improving public health and well-being through the provision of new green
32 infrastructure, in line with aspirations of the Thames Chase Plan,' which we're
33 assuming to refer to the fact that the original announcement being that it was to

1 improve biodiversity against the existing major route network of National
2 Highways.

3 '7.3. The project also meets the need of providing suitable mitigation and
4 compensation for the LTC scheme. However, it is highlighted that the project
5 will proceed whether or not the DCO, development consent order, for the LTC
6 scheme is granted.' Further through in there, they also go on to mention about
7 various aspects, and I won't go into the details now. I'll put it in the written
8 submission in regards to the biodiversity net gain metrics that have been used.

9 But I think, just those two points in the projects, the need for the project,
10 just highlight that that does appear to us to be double-counting, because they are
11 indeed saying that it's going ahead regardless of whether the LTC goes ahead or
12 not.

13 MR SMITH: Ms Blake, given, of course, that that is a separate planning application to
14 Brentwood Council, I think it would assist everybody here if it became an
15 examination document. I know it's placing a burden upon yourself, but would
16 it be possible for you to source that as a document and submit it by deadline 4?
17 We can then put it into the examination library, and then anybody who wants to
18 make observations on it, comment on it, could do so with fixed reference to
19 documents that are in our library, as opposed to worrying about what may or
20 may not change on Brentwood's website, so that was the first very practical
21 request I was going to make of you, if you're able to do that.

22 The second then is a pass-over question to be picked up in writing by the
23 applicant, please, which is, essentially, to pick the degree to which there is any
24 specific additionality around the delivery of that project as applied for that is
25 secured as a consequence of LTC proceeding, or whether all dimensions of that
26 project will remain as proposed in the planning application, irrespective of
27 whether development consent is granted for this project or not, because I think
28 we do need to understand that point, because you can't really get onto the
29 double-counting point until you've got that baseline place: what's been applied
30 and secondly, is there any additionality in relation to what's being applied for
31 that specifically relies on a development consent decision on the LTC?

32 MR TAIT: Yes, sir. Andrew Tait.

33 MR SMITH: Thank you very much.

1 MS BLAKE: Thank you, sir. Laura Blake, Thames Crossing Action Group. We fully
2 intend to submit everything that we can in our next written submission. Might
3 I suggest, seeing as these documents that I'm reading out from the application
4 are actually National Highways submission on the application, would it be more
5 appropriate for them to submit them –

6 MR SMITH: They can, and it would probably be helpful if they did, but –

7 MS BLAKE: Yes, sorry, I felt that you were aiming that at requesting us to do it, which
8 we'll quite happily do, but I didn't know if it'd be more appropriate for the
9 applicant to do it, seeing as it's their original document that's been submitted.

10 MR SMITH: Yeah, if Mr Tait is happy to roll all of that up, then I think that's the best
11 way to do it. But it is normal when somebody refers to something to support in
12 evidence their position to ask them to provide the document. Of course, it's their
13 document.

14 MR TAIT: I think we know what's being referred to, and we will refer to it in our
15 response.

16 MR SMITH: Excellent.

17 MS BLAKE: Thank you very much, sir.

18 MR SMITH: Yeah. Keep an eye on what comes in at deadline 4, though, Ms Blake, so
19 that if there's anything that you have been referring to that is out with the scope
20 of what the applicant provides, then it doesn't lie too long on the table without
21 being sorted out.

22 MS BLAKE: Of course, sir. Thank you.

23 MR PRATT: Thank you. Has anybody else got anything to add to this discussion at this
24 point in time on this item? I'm not seeing any hands up in the room or in the
25 virtual room, so, therefore, Mr Tait, I believe that it is your floor.

26 MR TAIT: Thank you, sir. There are two points. One is about the implication and
27 usefulness of re-running metric 4.0, bearing in mind the comments from
28 Ms Covill, and the second is in relation to Ms Blake on behalf of TCAG to pick
29 up the BNG-specific aspect of the point that she was raising. And I'll ask
30 Mr Clark to pick up those two points.

31 MR CLARK: Thank you. Nick Clark for the applicant. On the first point raised by
32 Natural England, we will have a look at the implications of running version 4.0
33 against version 3.1. We take the point that they make on it could be a desk-based
34 assessment. In earlier considerations around the proportionality of running that

1 assessment, we considered that we might need to do additional fieldwork. But
2 perhaps it's something that we could look at further and maybe even discuss
3 with Natural England about the need to run version 4.0.

4 MS LAVER: Yes, that would be really helpful. In fact, if between the parties you feel
5 it isn't necessary to re-run that or for whatever implications there are from
6 running it, if it would just feature in your statement of common ground.

7 MR CLARK: Of course.

8 MR TAIT: So we will liaise with Natural England, clearly, on the usefulness and the
9 implications of doing that. And then secondly, on BNG raised by TCAG.

10 MR CLARK: Yes, so the point raised by TCAG on the potential to double-count
11 biodiversity net gain scores specifically at Hole Farm. It should be noted that
12 from a Lower Thames Crossing perspective, Hole Farm provides compensation
13 for lots of ancient woodland and for the effects of nitrogen debit position on
14 designated sites and habitats.

15 As I specified earlier in this agenda item, both of those aspects are omitted
16 from our biodiversity net gain calculations, so Hole Farm does not generate any
17 biodiversity net gain uplift in our metric. Therefore, we can double-count with
18 any other development that's proposed.

19 MR SMITH: Okay. However, I will follow up briefly on that around – there are two
20 dimensions then to a double-counting suggestion. There's the BNG point, which
21 I think you have explained.

22 MR CLARK: Yes.

23 MR SMITH: But then there is the broader point, which is the nature of potential double-
24 counting around compensation and/or mitigation, which is that if the underlying
25 situation is that Hole Farm would proceed without any contingent link on the
26 delivery of LTC, then it is possible that one could argue a point that any
27 additional habitat delivered at Hole Farm would happen anyway. And therefore,
28 if you're looking at the quantum of loss and the quantum of harm that might be
29 mitigated and/or compensated from LTC, there's an argument – and I'm not
30 saying we're persuaded by it, but there's an argument that that is a
31 double-counting.

32 MR TAIT: Sir, we responded to that in our summary on ISH-1, but we clearly need to
33 provide some further elaboration of that.

1 MR SMITH: Because it's still – the jelly hasn't been completely nailed, I think, is the
2 best way of describing it.

3 MR TAIT: I understand it. And there's a distinction between what the nature and the
4 character of what would be proposed in any event and that which is tied to the
5 DCO, but we will address that as you requested.

6 MR SMITH: Yeah. And obviously, if Natural England can keep an eye on that matter
7 as well, so if there's any need for this whole question around double-counting to
8 be further considered, we will have Natural England's clear position. Now,
9 again, there's an issue about deadline 4 because you won't know what they say
10 at deadline 4 until you see it. But, nevertheless, if you do find yourselves –
11 maybe it's something that we might need to pick up at a further issue-specific
12 hearing that touches on certain biodiversity topics before the end of the
13 examination. I think that's probably the best way of looking at it.

14 MR PRATT: Thank you very much. One last chance for anybody to make comment
15 before I close this particular item on the agenda. Well, I'm glad to say that's
16 biodiversity net gain completed. And with that, I'm going to hand over to my
17 colleague, Ms Laver to deal with the next item on the agenda, green bridges.

18 MS LAVER: Thanks, Mr Pratt. I would like to make a start on this item, and we'll see
19 where we get to, whether we conclude it before we need some lunch, but we'll
20 press on. We can deal with 4(a)(i) and 4(a)(ii) together. It's clear in the agenda
21 there are some questions and statements, but green bridges are being put forward
22 as key benefits and mitigations for the scheme.

23 But what we're seeing in representations from interested parties is that
24 they simply dress up a road crossing and would not facilitate habitat
25 connectivity, so it would be helpful if we could hear from the horse's mouth the
26 primary purpose for these green bridges and how the applicant how the applicant
27 feels what are shown on the plans and photo montages will deliver what those
28 aspirations are.

29 And the second part is obviously about best practice design, what's being
30 relied upon, how have these types of green bridges been used elsewhere in the
31 UK, and have they been successful? If you could take us there, that would be
32 good. So over to you, Mr Tait.

1 MR TAIT: Thank you, madam. And I'm going to call upon Dr Emma Long in this
2 respect. And there is some visual material that we will be casting onto the screen
3 for this purpose. So, Dr Long, please.

4 DR LONG: Thank you, ma'am. Dr Emma Long for the applicant. So the overall
5 purpose of the green bridges is to mitigate the impacts of fragmentation on
6 terrestrial biodiversity receptors, from both construction and operation of the
7 project.

8 We recognise that major roads can be a barrier to wildlife and that there
9 are a number of locations along the project route and on existing road corridors
10 where green bridges have been used to promote connectivity of selected
11 landscapes and habitats for animals, as well as mitigating landscape severance
12 and providing improved experience for walkers, cyclists and horse riders.

13 There are seven green bridges proposed across the project, three in the
14 south, which is the Brewers Road bridge, Thong Lane north and Thong Lane
15 south, and four in the north, which include Muckingford Road, Hoford Road,
16 Green Lane and North Road. These are not the only crossing locations that can
17 be used by wildlife to get their way across the scheme. There are other
18 structures, underpasses, culverts, mammal ledges and viaducts, for example,
19 which also provide further permeability of the reach for wildlife.

20 MR TAIT: Madam, if I can just pick up the references where that is set out at a high
21 level. It's in the project design report part C, which is APP-508, page 12, and
22 the project design report, part F, which is APP-513, page 17, and also the design
23 principle STR.08 on green bridges specifically, which is REP3-110. That's at
24 the high level. But, in addition, in the OLEMP, which is REP3-106, there are
25 specific sections on the groups of green bridges and the various functions that
26 each is intended to perform is set out, and in the context of the overall purpose
27 about mitigating fragmentation on terrestrial biodiversity receptors. But there
28 are a number of functions that are also set out clearly relating to humans as well,
29 so if I can pass back please to Dr Long, having interjected.

30 DR LONG: Thank you, ma'am. Emma Long for the applicant. So our green bridge
31 strategy was also informed by our stakeholders. The Defra family, as we've
32 referred to them previously, provided guidance at statutory consultation in 2018,
33 and that's a document reference number REP2-008. If you look at page 84,
34 where they stated that it would be advisable that habitat connectivity along the

1 route be maintained wherever possible, recognising the significant ecological
2 impacts that a linear scheme has in severing ecological networks and that living
3 bridges and wildlife corridors should be installed in key locations to facilitate
4 the movement of wildlife and people, helping to futureproof the scheme.

5 As a project road is in-cutting in a number of locations, those underpasses
6 and culverts were not always suitable mitigation, which has led to the green
7 bridge design.

8 The location of the green bridges were primarily chosen due to the
9 concentration of notable terrestrial habitat receptors in the surrounding habitats
10 or the significance of confirmed commuting route.

11 However, landscape character was also a factor in the use of green bridges.
12 For example, within the Kent Downs AONB, the replacement of Thong Lane
13 south and Brewers Road bridges to maintain the landscape connectivity across
14 the [inaudible] corridor and to reduce severance as well as to improve the
15 walking, cycling and horse-riding experience.

16 MR SMITH: Can we just ask that the person in the virtual hearing whose telephone
17 seems to be linking to a voicemail system, just to switch their phone off, please,
18 and also silence their microphone. Thank you very much.

19 DR LONG: I'm okay to continue.

20 MR SMITH: I hope so.

21 MR PRATT: Only if she presses two.

22 DR LONG: So a good example is Hoford Road green bridge. This is an existing track
23 that was found to be a key bat commuting route from the woodland north of the
24 project to the open habitat south of the project. And, in addition, at that location,
25 a number of badger paths were also located in that area and, as such, this was
26 identified as a prime area for the green bridge, particularly within the project
27 being [in cutting?], making an underpass or a culvert unfeasible. And those are
28 alternative crossing types that you can use for bats and badgers. It also serves
29 to enhance or at least reintroduce the sunken lane that you have on Hoford Road,
30 which is a protected lane.

31 And, in addition to that, the green bridges also provide landscape
32 mitigation to help maintain landscape character and connectivity across the
33 project route to integrate the project into the landscape and to reduce the visual
34 impact of the project on sensitive receptors, and doing this whilst supporting the

1 landscape scale approach to mitigation and planting for the project, as shown in
2 the environmental master plan, and that's figure 2.4, application documents 159
3 to 168. And then there's subsequent revisions, which I won't go through
4 because there are very many of them, but we can provide that in writing, if
5 necessary.

6 In addition, the green bridges support the provision of new or reinstated
7 and re-aligned walking, cycling and horse-riding routes, and that would include
8 Thong Lane north and Muckingford Road. But, in fact, the majority of our green
9 bridges are multifunctional, so they can incorporate that element as well as the
10 biodiversity, habitat provision and landscaping planting.

11 MR TAIT: Andrew Tait. Dr Long, can you go on to look at the second heading, please,
12 about the design guidance and how it's been deployed, and then look at some
13 examples south and north of the river?

14 DR LONG: Yeah.

15 MR TAIT: Thank you.

16 DR LONG: Emma Long for the applicant. The green bridges have been individually
17 designed to respond to site-specific conditions to provide the greatest benefit to
18 each particular crossing location. And this is with reference to the Landscape
19 Institute technical note for green bridges, Landscape Institute 2015. And if you
20 see also section 8.5.8 of the environmental statement, chapter 8, terrestrial
21 biodiversity, which is application document 146. We can provide a link or copy
22 if that's necessary of the Landscape Institute guidance, so that's what we have
23 applied when taking forward the design.

24 And in doing so, we've looked at various components of that guidance,
25 including size, and the landscape guidance says for mixed use in bridges, which
26 is what we're providing with Lower Thames Crossing, to determine the width.
27 The minimum width of the natural zone should be calculated based on project
28 aims in terms of the target species that you're providing bridge structures for or
29 planting on the bridge structures for.

30 All of our bridges are multifunctional, and so we've based their sizing on
31 the habitat that we're seeking to connect and have then provided – so, for
32 example, Thong Lane north, which is the largest of the green bridges, is serving
33 to provide habitat connectivity between areas of woodland, and so it needs to
34 support mature woodland planting on it. It's the widest bridge that we have. It

1 also serves to provide reinstated road crossings and also walking, cycling and
2 all horse-riding provision in that location. It's approximately 84 metres wide in
3 total, that bridge.

4 In terms of the design, the soil depth that we've applied does follow the
5 Landscape Institute guidance for a variation of soil depths that can be used to
6 create a mosaic of vegetation and creating a varied topography. And this has
7 been reflected in the design of the green bridges. And it's supported by clause
8 S1.04, which states that for Brewers Road and Thong Lane south green bridges,
9 that variations and soil depth on the bridge can provide diversity and planting
10 species and heights.

11 The corridor on the green bridges has been designed to provide green
12 corridors to provide a degree of separation between the wildlife corridor and the
13 walking, cycling and horse-riding corridor, so it's really used for things like
14 double hedgerows.

15 In terms of functionality, function is site-specific. In addition to
16 connecting landscapes and habitats, they also perform – the green bridges also
17 perform some or all of the following functions. They're designed to provide a
18 high-quality provision for walkers, cyclists and all horse riders and also to
19 reinstate local road connectivity and access.

20 Some examples of where the landscape and strategic guidance has been
21 effectively deployed also has informed the shape of the green bridges, so they
22 are a sort of hour-glass shape, where you've got widening at each end and a
23 slight narrowing as you come across LTC. That's designed to enable animals to
24 find their way onto the bridges, guided by additional planting, suitable
25 vegetation to be in keeping with local landscape and habitats, so that we're not
26 putting something that's completely alien to the local environment on the bridge.
27 And the design for other uses, such as pedestrians, equestrians and cyclists, to
28 make sure that they have adequate degrees of separation from road traffic and
29 also from wildlife.

30 MR TAIT: Thank you, Dr Long. So up on the screen is what's called the regional
31 strategy for the southern group of green bridges. Could you talk to that, please?

32 DR LONG: I might, if it's okay, actually defer that to my colleague, Andrew Kay, who
33 has been more deeply involved in actually developing that regional strategy
34 through the design.

1 MR KAY: Andrew Kay for the applicant. So, on the screen is the regional strategy that
2 we developed for south of the river. I think we referred to this in issue-specific
3 hearing 3 as one of the wider landscape strategy. And, as part of this, we wanted
4 to create the large wooded loops around the M2-A2 junction. And part of this,
5 the green bridges would form the central components of this mitigation and
6 overall landscape strategy. So, to the north, where we've got significant
7 woodland connectivity between Claylane Wood and Shorne Wood, as my
8 colleague Emma referred to, that's where we want the significant woodland
9 planting to occur to enable that direct connection of woodland from Claylane
10 Wood to Shorne Woods over the green bridge.

11 The design of the green bridges over the A2 also feed into this wider
12 wooded loop that we're wanting to create but also create a visual connection
13 across the A2 for users of the A2 corridor on the LTC. As they travel along the
14 A2, they can see this visual connection between woodland south and north of
15 the A2 corridor and how that overall regional strategy led into also the design
16 and function of these green bridges.

17 MR TAIT: Andrew Tait. I think there's, yes, another slide which just shows that in plan.
18 Do you want to briefly identify the green bridges there and how they link into
19 the surrounding landscape, please?

20 MR KAY: Yeah, sure. Andrew Kay for the applicant. So, yeah, you can see in the very
21 top of the screen is the Thong Lane north green bridge. As you can see, the
22 woodland plants into the west along the edge of Gravesend, connects down into
23 Claylane Wood. That's why we've got significant woodland planting on the
24 bridge itself and then expanded that woodland planting into the east to connect
25 into Brummelhill Wood and then, subsequently, on to Shorne Woods Country
26 Park.

27 And then, as you can see, they've got two connections to the south, one
28 along the realigned Thong Lane, which connects the woodland planting that
29 performs and landscape visual mitigation from the village of Thong and then
30 connects directly over the A2 to woodland planting around Jeskyns community
31 park.

32 And then, further to the east, where we've got Brewers Wood, again we're
33 providing woodland connection across the bridge, from Shorne Woods to
34 woodland planting around Cobham Hall vegetable park and garden, and

1 additional woodland planting in in this area. As an additional point, I'd like to
2 make on these bridges in terms of the design, for Brewers Road green bridge,
3 which is the one on the very right-hand side, we focused our woodland planting
4 on the east. So, as you're approaching along the A2 corridor going westbound,
5 that's where you'll focus the view to provide that visual connectivity across the
6 A2 corridor.

7 And likewise, on Thong Lane green bridge, we provided a 10-metres wide
8 of – 20-metre wide woodland planting on the west-hand side, so again, bookends
9 your arrival onto the A2 junction, that boundary to the Kent Downs AONB, but
10 also to provide visual screening for users of the walker, cycling, horse riding
11 route on that bridge, to screen views further west towards the infrastructure
12 within the A2 corridor, so it forms much part of wider overarching strategy of
13 landscape from this area.

14 MS LAVER: Did I hear you correctly that you said 20 meters for the Thong Lane south
15 bridge, the planting?

16 MR KAY: Andrew Kay for the applicant. Yes, it's 20 metres on the west-hand side.

17 MR TAIT: And that's set up more fully in section 5.6 in relation to the management
18 requirements there of the OLEMP. And moving to the north, then, please, Mr
19 Kay, do you want to do the same exercise?

20 MR KAY: Yeah, Andrew Kay for the applicant. Yes, I can broadly describe the regional
21 strategy for the area north of the river, where we're focusing on Hoford Road
22 green bridge and Muckingford Road green bridge.

23 So we do have wider regional strategies in terms of woodland connection,
24 which we briefly described in issue-specific hearing 3, but in terms of the green
25 bridges, they also provide much wider walker, cyclists and horse riding
26 connections, because we're extending usage of that bridge on Muckingford
27 Road and also providing habitat connectivity, so it's much part of a wider
28 connection strategy, which Muckingford Road green bridge acts part of.

29 And, as my colleague, Dr Emma Long, mentioned, Hoford Road is a
30 protected lane, so we've adjusted the alignment of Hoford Road to allow the
31 earthworks to be more cut-in as you cross the bridge to retain that sense of
32 enclosure and to protect its sunken lane character as you cross, as well as
33 providing the habitat connection and the target species. So it's been a combined
34 effort looking at the overall landscape connectivity strategy, and they're looking

1 at more localised habitat connections and also people connections on these
2 bridges as part of a much wider regional strategy.

3 MR TAIT: Thank you. That's section 6.7 of the OLEMP. So, to pick these out, Mr Kay.

4 MR KAY: Andrew Kay for the applicant. Again, these are visualisations that we shared
5 at issue-specific hearing 3. And, as you can see on the left-hand side is
6 Muckingford Road green bridge, which you can see we've provided strong
7 hedgerow planting, provide for that habitat connection for, I believe, bats and
8 badgers across LTC. And again, as mentioned, this forms a [inaudible] walker,
9 cyclists and horse-riders route, and we wanted to provide a degree of separation
10 between those users of the road and the pedestrian routes and the habitats we
11 provided on each side, as well as screening views down to the Lower Thames
12 Crossing itself.

13 And, as similarly I mentioned on Hoford Road, that's much more of an
14 intimate design green bridge, which is much smaller in scale, provided for a
15 protected lane. And again, it's provided for the desired habitats, which is bats
16 and the protected lane status, so all the green bridges have been designed
17 appropriately to their context and their usage.

18 MR TAIT: Thank you. That was by way of example. There's also Green Lane in this
19 area, and I don't think we've got that on screen, or green bridges North Road,
20 but I'm conscious that under item 3, the target species for each of the green
21 bridges – that will be touching specifically on each, so that might be better to
22 leave that exercise to that step.

23 MS LAVER: Yes, please.

24 MR TAIT: I don't know whether you'd like to have that step now, although I appreciate
25 it's approaching lunch, or –

26 MS LAVER: No, I'd like that to come later.

27 MR TAIT: Very well.

28 MS LAVER: Because I have quite a few questions, and I think I'm going to overload
29 you with questions if we keep pressing on for more material.

30 MR TAIT: So happily, given the hour, that is our response to those two questions.

31 MS LAVER: So couple of questions to put back to you. In terms of the Landscape
32 Institute guidance that you've used, do you know where that guidance draws its
33 material from? Because I don't think green bridges are a very popular
34 construction in the UK. I did ask you if there's any examples of where they have

1 been used, and I didn't hear National Highways suggest where these have been
2 used before.

3 Now, I'm not familiar with the national Institute Technical Note, and of
4 course, we will be by the time we get through this, but I understand green bridges
5 are fairly popular in European countries, and they're certainly not multi-
6 functional. As in, they're not built, necessarily – the primary purpose is moving
7 cars across. So I'd like you to have a think about that. You don't need to respond
8 immediately, because I'm going to go around the room in relation to the points,
9 and you can wrap my things up at the end as well.

10 In terms of walkers, cyclists, horse riders, how many – and I know it will
11 be in the material – of the green bridges built are specifically for WCH? So that
12 don't have the cars on. I think it's Hoford Road, and is it just Muckingford
13 Road? Is it just the two? So you can come to that.

14 There are suggestions through the representations that Park Pale should
15 have been included as a green bridge, and it hasn't been. I'd like to understand
16 a bit of the rationale around that, given where it is located in the south of the
17 river. So I'll park those.

18 I'm going to move on, unless my colleagues have any other questions they
19 want you to come back to. No. Okay. So I'm going to open out to the floor,
20 and I'm going to start with Thurrock, please.

21 MR EDWARDS: Thank you, madam. Douglas Edwards for Thurrock. Mr Plumb is
22 going to make Thurrock's representations on this agenda item.

23 MR PLUMB: Thank you. Steve Plumb for Thurrock. Just to briefly confirm that Dr
24 Long mentioned the requests from organisations and referred to the Defra
25 family. Thurrock was very keen throughout the process to get additional green
26 lanes provided and the four within Thurrock have been added, in part at the
27 request of the council.

28 With regard to the provision of routes for walkers, cyclists and horse
29 riders, Hoford Road has got a traffic regulation order on, so it is a historic green
30 lane, but Green Lane is also a bridleway. So the provision of the planting on the
31 four routes in Thurrock is welcomed because it provides ecological benefits and
32 connectivity, but it also provides enhancement for pedestrian and cycling and
33 horse riding users along those routes.

1 The Muckingford Road – it links directly between Linford and East
2 Tilbury, through towards Chadwell St Mary, and also then connects to Hoford
3 Road, so it's strategically within the – it is an important route. So we support
4 the approach. Thank you.

5 MS LAVER: Thank you.

6 MR HUMPHRIES: Madam, Michael Humphries for Kent County Council. The green
7 bridges, as you will have seen from the plans, are obviously in an area that
8 connect a number of the important ecological sites within Kent, including
9 Shoreham Woods SSSI, which is an extremely important asset of Kent County
10 Council's. We've set out our concerns on green bridges, both in our local impact
11 report and written representations, under the subheading 'Biodiversity impact
12 M, green bridges.' I don't need to repeat those. You are able to read that, but I
13 have got with me Tim Bell, who's the manager responsible for what are called
14 ranger services in this part of Kent, and he will just elaborate one or two of those
15 concerns if that would be acceptable.

16 MR BELL: Tim Bell, Kent County Council. So just a few points, really. We just wanted
17 some clarity on the size of the planting on Brewers Road bridge, specifically,
18 because when we met on site there, there was some talk about splitting the
19 planting between the east and the west sides to help with the visual impact and
20 the ecological impact. From the ecology side of things, we felt that that,
21 effectively, dumbed down the bridge and made it two six-metre weird corridors
22 of not a lot of views, and we would look to obviously see that that should be
23 improved for linking the Shoreham Woods SSSI with the Cobham Park historic
24 landscape, which then leads into the National Trust at Cobham Woods and
25 Plantlife at Ranscombe.

26 So on that note, with Brewers Road bridge as well, we felt that the
27 82-metre bridge that's going to be planned over – I think you're calling it 'Thong
28 Lane north' – that effectively links newly planted woodlands, a fragmented
29 woodland called Claylane Wood, and then backs on to the urban Gravesend, and
30 obviously, the Brewers Road and Thong Lane south bridges directly link SSSI's
31 really good, established habitat, and we felt that you – a lot of eggs into the big
32 bridge, whereas that could have been done on Thong Lane south and Brewers
33 Road bridge, and had really, much better impact on ecology and linking already
34 good habitat, and we would also support the Park Pale point that was made,

1 because that will directly link the ancient woodland mitigation planting that
2 you're planning with what is the golf course initially, but then that obviously
3 leads into the Cobham Woods and Plantlife estate as well.

4 MS LAVER: Thank you. I appreciate Natural England do want to come in, but I'm just
5 going to stick with the councils for the moment, and I can see Michael Bedford
6 in the virtual room for Gravesham, please.

7 MR BEDFORD: Thank you, madam. Michael Bedford, Gravesham Borough Council.
8 Madam, again, we addressed our concerns about the green bridges, particularly
9 in terms of their width, in the local impact report, and by way of context, the
10 Landscape Institute guidance, which you've requested to be provided with – so
11 I'm not going to, as it were, read it out, in terms of the detail – that's in due
12 course, but it does give specific guidance on width, and where the function of a
13 bridge is intended to operate at a landscape scale or for an ecosystem, the
14 recommendation is over 80 metres. Now, that is achieved with Thong Lane
15 north, but clearly not with Thong Lane south, or Brewers Lane.

16 Now, we can understand that there are site constraints which limit what
17 you can do because of the transport corridors and the physical nature, but we're
18 not, at the moment, persuaded that the applicant has maximised – we appreciate
19 and welcome the fact that Thong Lane south has been widened by an additional
20 10 metres from what was 30 to now 40, but we're still not persuaded that the
21 maximum has been achieved, particularly when both of those two southern
22 bridges fall well below the 80-metre guidance, which appears to be being
23 suggested for a landscape-scale approach.

24 If I can bring in, then, Ms Hyland for specific comments further to that.
25 Thank you.

26 MS HYLAND: Hello. Val Hyland, consultant working for Gravesham Borough
27 Council. I'll try and be brief. Building on what other people have said, we think
28 the design criteria for the green bridges, in particular over the widened A2, as
29 set out in the design principles – we think they're not sufficient to provide the
30 sort of mitigation we need for these adverse environmental effects.

31 These bridges would need to be multifunctional to benefit wildlife,
32 landscape and people, and in particular, the green bridges over Thong Lane south
33 and Brewers Road, over the A2, are unlikely to provide the mitigation that we

1 need to reduce landscape severance across the transport corridor which runs
2 within the Kent Downs AONB.

3 The widened A2 is being accommodated into a constrained corridor, so
4 there are few opportunities to provide landscape or ecological mitigation, so
5 these two green bridges over the widened A2 are really important, as they're the
6 only linking points for wildlife, and their landscape role is crucial due to the
7 absence of other mitigation measures that might be possible to reduce severance,
8 as I said, but also to screen and reduce the impact of the new road infrastructure.

9 Now, there are also key elements of the recreation access network, and it's
10 our opinion that this combination of usage of the bridges has not been fully
11 considered, and the experience of users of the bridges, and notably walkers,
12 cyclists and horse riders, has not been fully assessed. Bridge users will be
13 exposed to the noise and lighting and visual intrusion from multiple lanes of
14 traffic from the widened A2 and the feeder roads beneath these bridges, and in
15 the case of Thong Lane south green bridge, proximity to the new A2 junction
16 with the A122, which we think has multiple layers.

17 So we think the bridges should be made as wide as possible, as a starting
18 point, to make these bridges fit for purpose, to allow the full range of functions
19 to be performed, and we would like the design of the bridges to be reviewed,
20 and the bridges to provide enhancement as well as mitigation, but if I could say
21 something briefly about the guidance, there are two parts to the guidance that
22 tend to be used. There's the Natural England guidance document, and the
23 Landscape Institute technical guidance note, which we've talked about. The
24 Landscape Institute builds on the Natural England work to examine the wider
25 benefits of green bridges.

26 Now, it's clear from both bits of the guidance that the best UK examples
27 of green bridges, providing the mixed uses of biodiversity, connectivity,
28 landscape severance and access, are the A21 Scotney bridge and Mile End in
29 London. Now, we're not suggesting that the designs of these bridges should be
30 applied to the green bridges over the A2, but we are saying there are elements
31 of their designs and lessons from the use that might be applicable in forming the
32 design of the green bridges south of the river.

33 The summary of findings from the Natural England guidance document
34 does also state that the planning of a green bridge should not be done in isolation,

1 but should form part of a wider mitigation strategy, and it also states that the size
2 and structure of the bridge should be based on the requirements of the expected
3 use.

4 I think that's all I want to say for now.

5 MR BEDFORD: Thank you. Thank you, madam.

6 MS LAVER: Thank you very much. I have to say I'm a little concerned about the Thong
7 Lane south bridge, in terms of its connection on both sides, in terms of the
8 widened A2, and the loss of that central landscaping belt, which is being
9 removed, and I'm hoping the applicant can advise whether there's any chance
10 to review the Thong Lane south bridge, but we'll come to that.

11 In the meantime, I'd like to go to Natural England, please.

12 MR HANNA: Sean Hanna for Natural England. I think we share some of the concerns
13 that Gravesham have just aired, so I won't repeat them, and they're in our written
14 representations as well. We welcome the consideration of use of green bridges,
15 because I mean, there's an existing severed landscape south, but equally, there's
16 going to be a much greater severed landscape north, so using the green bridges
17 has an opportunity to try and address some of those impacts, but we are
18 concerned with their functionality.

19 The Natural England-commissioned report looking at good practice for
20 green bridges does say that anything below 20 metres in terms of green is not
21 going to function from a species' perspective. It's suggesting a minimum of 50
22 metres wide, and as we've just heard, from a landscape perspective, it's
23 suggesting 80 metres, and that's the green element. That's not the width of the
24 road. That is purely the natural element.

25 I mean, we have been working collaboratively with the applicant and will
26 continue to do so, but we do feel that a more visionary approach to these green
27 bridges needs to be considered to actually make sure that they function and meet
28 the applicant's main objectives, because we are concerned that actually some of
29 the bridges will not meet the objectives that they're setting out of landscape
30 connectivity. For example, the two south of the river only link over the widened
31 transport corridor. They don't then link over the local distributor road, and in to
32 the green bridges put in for the Channel Tunnel rail link or High Speed 1.

33 So they're limited in their effectiveness. We're not dismissing them.
34 They're welcomed, but I think they could be much more effective and much,

1 much better with a more careful design, and certainly for the two in the Kent
2 Downs AONB, I think we share the concerns of Gravesham that actually they
3 need to look at user experience, as well as ecological benefits, because anyone
4 who's had the fortunate experience of walking across the one at Scotney, you
5 don't realise there's a dual carriageway underneath you. The noise of the dual
6 carriageway is non-existent because of the design of it.

7 Whereas, clearly, these bridges are not going to screen any of that noise
8 for recreational users in the Kent Downs AONB. I know that's a landscape
9 matter, but clearly there are notes that can be linked, given that they're
10 multifunctional.

11 So I think, yep, we think there's more that the applicant can do to make
12 these function from a landscape and ecological perspective.

13 MR GRANT: Ma'am, Nick Grant for Natural England. Just one final point: you may
14 have picked up reference to some Natural England guidance. That's a 2015
15 literature review which actually looks at bridges, both in the UK and around the
16 world, and best practice that comes from that. It's been referred to the applicant
17 before, but we'll make sure that it's in the examination document, if it's not
18 already, with our written rep at the end.

19 MS LAVER: Yes. Thank you. The point you made about the Thong Road south bridge
20 is that it doesn't connect over the side road, Downley Lodge Lane. I think they
21 were used as frontage roads. Is that what they were referred to? That's the issue
22 that I am really concerned about, so when I said I'm concerned about Thong
23 Road south, that is the particular point, is that we have this ecological
24 connectivity supposedly there, but then we hit a T junction, and we hit another
25 road, and I just can't see how that is going to function. So just from a cursory
26 point of view, it ceases to have this connecting effect, so that's the point I was
27 raising. So thank you, Natural England, for picking up on that.

28 Moving in to the virtual room, I believe we've got Kent Downs AONB.
29 Mr Johannsen.

30 MR JOHANNSEN: Thank you very much, and I won't repeat other people's
31 representations but do very much support Natural England and Gravesham
32 Borough Council's. As you've indicated, green bridges are a key point for the
33 Kent Downs AONB landscape impacts, and that's landscape including nature
34 and the wider definition of 'landscape,' and also a point that's been made about

1 severance – there is considerable additional severance, including the loss of
2 previous mitigation planting, which I think is something worth bearing in mind,
3 because previous schemes have been approved on the basis on their mitigation,
4 presumably, which is now being lost.

5 So there is considerable habitat, landscape and human severance, and
6 green bridges, in our view, given the constrained site, are the greatest
7 opportunity to address this landscape – wider scope of ‘landscape’ – and
8 severance.

9 So we welcome the fact that the approach for green bridges is
10 multifunctional. We do not agree that the designs, as they currently are, afford
11 that possibility. We don’t think that they provide that multifunctionality. I’m
12 speaking about the AONB bridges here, and also, we don’t think – and this has
13 been covered before, but we don’t think they do align with best practice, and
14 whether that’s been effectively deployed. No, we don’t think it has been
15 effectively deployed.

16 Previously, you mentioned Park Pale – well, you didn’t make a point, but
17 we do feel that there should be a green bridge at Park Pale, and that’s a point
18 that Kent County Council, Tim Bell, picked up.

19 Two final points – one is that I do think it’s very helpful to look at
20 European examples, as well as best practice in Britain. We’ve got a long history
21 of working with European protected landscapes, and so might be able to assist
22 you in your field visit, which we’d love to join.

23 The final point is around guidance, and it’s worth bringing to your
24 attention that the guidance of the NPSNN refers specifically where consent is
25 given in national parks and areas of outstanding natural beauty – we’ll include
26 this and references in our written response, but it refers, really, to ensuring that
27 high environmental standards are delivered, and if the green bridges are not in
28 accordance with design best practice, then we don’t think they would meet that
29 test. Thank you.

30 MS LAVER: Thank you very much. Vicky Ellis from CPRE, please.

31 MS ELLIS: Thank you. Vicky Ellis, CPRE Kent. If it’s okay, if I can refer to my notes,
32 if that’s alright with you.

33 MS LAVER: Yes, of course.

1 MS ELLIS: Whilst CPRE Kent welcomes the use of green bridges, we're equally
2 disappointed to read that there are only seven intended to be built for the whole
3 of the 23 kilometres Crossing, with all of them being of mixed use. We do not
4 consider, in view of the sheer scale of habitat fragmentation and destruction that
5 is going to occur, that this will not be adequate.

6 The applicant intends all seven green bridges to be of mixed use. Much
7 of the wildlife expected to utilise these corridors actively avoid and are sensitive
8 to any kind of human disturbance activity and/or are vulnerable to being run
9 over, such as dormice, hedgehogs, and badgers. It is well documented that
10 human disturbance negatively alters a species' behaviour. They may not occupy
11 or venture into, nest or breed in any area deemed a threat, or any area affected
12 by light pollution. Therefore, any intended green bridges should preferably be
13 created exclusively for faunal use. As pedestrians, cyclists, and other traffic will
14 be provided with another 43 separate, purpose-built crossings, there is no need
15 for the seven green bridges to be of mixed use.

16 Brewers Road green bridge, for example, has been designed around a two-
17 lane road, as has Thong Lane south, Thong Lane north, North Road,
18 Muckingford Road. These indicate that the main purposes of these green bridges
19 is to ferry traffic from one side of the carriageway to the other, rather than as
20 any meaningful mitigation for habitat connectivity compensation with greenery
21 proposed for either side of these green bridges becoming nothing more than
22 ancillary.

23 How long before people complain about visibility because of overgrown
24 hedges and health and safety due to lack of visibility? Is there going to be street
25 lighting? Is the grass planted in between the hedgerows to be kept mown? If
26 so, then the green bridges become more of an urban-looking street, rather than a
27 functioning wildlife corridor.

28 Furthermore, and I repeat, if wildlife such as badgers, hedgehogs, etc, were
29 to use these crossings, how long before they become victims of roadkill? With
30 the green bridges accommodating either a two-way road traffic footpath or cycle
31 path, the hedges and grass verges would perform no other purpose than to 'green
32 up' for aesthetics, rather than serve a higher purpose, that of a meaningful and
33 safe wildlife corridor. Due to the habitat fragmentation and enormous loss of
34 habitat, we would like to see wildlife given the priority on green bridges.

1 Page 150, 8.6.166 of the eight terrestrial biodiversity sites Scotney Castle
2 green bridge as an example of how dormice can successfully utilise a green
3 bridge. However, it took six years before dormice were recorded as successfully
4 utilising the bridge. Furthermore, Scotney Castle accommodates a single-track
5 access road for the castle's use, and not a two-lane carriageway for general use.
6 So we would like these points to be taken into consideration and addressed if
7 possible, please. Thank you.

8 MS LAVER: Thank you very much, Ms Ellis. Is there anybody else in the room? Laura
9 Blake, please.

10 MS BLAKE: Thank you very much, Ms Laver. Laura Blake, Thames Crossing Action
11 Group. When we first heard green bridges being mentioned, we initially thought
12 what we've now learned to be, I believe, considered to be 'wildlife bridges.' I
13 think there is obviously a big difference between green bridges and wildlife
14 bridges, and we have learnt that through looking into these matters. We do share
15 the concerns. I won't repeat what everyone else has said. I was going to raise,
16 obviously, the same as you were saying, Ms Laver, and Natural England said,
17 with Thong Lane south bridge. That is a big concern that we have.

18 I would just highlight another incidence. There's just one example and
19 follow-up in writing on others – the North Road green bridge, with provision for
20 both wildlife, which I'll come onto when we get onto the species item on the
21 agenda, but also on the connectivity for public rights of way, the bridges
22 proposed, the footpath on that bridge is proposed to be on the east side of the
23 road, and generally, the connections for the footpath that is currently used, and
24 a lot of the residents that would walk out across the fields there, with the farmer's
25 permission, are actually on the west side of the road.

26 There doesn't seem to be any safe crossing mechanism either side, and
27 when you get north of the bridge, further up towards North Ockendon, again,
28 the proposed public rights of way go to the east and west, rather than running
29 north-south, and I don't believe there's any proposal to have a safe crossing.
30 The B186 north road is an extremely busy road with a lot of large vehicles and
31 buses and things going along. So I think that, again, is another example of it
32 defeating the object of actually providing connectivity. Thank you.

33 MS LAVER: Thank you very much, Ms Blake. I'd like for the applicants to come back
34 on all this after lunch, please. I think it's a really good time to pause for an hour.

1 We'll return to your responses to those, then we'll finish off green bridges. I'm
2 minded, however, after that, to go to agenda item 6, on nitrogen deposition,
3 simply because I believe that there are lots of people in the room that really want
4 to talk about that, and I'm conscious that I'd like to get through that particular
5 point, and then flip back to item 5 for the afternoon. So if everybody's content
6 with that, we will hold the hearing now for lunch, and we'll return at 2.30. Thank
7 you.

8
9 **(Meeting adjourned)**

10
11 MS LAVER: Welcome back, everybody. This is the afternoon session of issue-specific
12 hearing 6. We left the earlier session on agenda item part 4.2, about the purpose
13 and best practice for green bridges. Now, we heard from all interested parties,
14 so I'll go to the applicant for their response. As I mentioned before the break,
15 we will continue to cover the rest of agenda item 4, then we will default to
16 agenda item 6 on nitrogen deposition. I think, once we're through that item, we
17 need to have a panel reconvene to determine how much time we've got left in
18 the day to cover the other agenda items. I think maybe we were being a little bit
19 optimistic when we set this agenda about how much we would get through. So
20 if everyone's content to proceed that way – I'm not seeing any objections.
21 So Mr Tait, it's over to you, please.

22 MR TAIT: Thank you, madam. There are a number of points raised both by you and
23 some of the interested parties, and I was going to deal with those in turn where
24 we can. There'll be a number where we respond in writing, and in any event,
25 respond more fully in writing on those points, but just to give you some
26 headlines in relation to some of the points you raised, and a number of the points
27 interested parties raised.

28 So I was going to start, as the first point, looking at the thinking that has
29 underpinned the identification of the two green bridges north/south over the A2
30 corridor, because there are a number of points focused on that, and I was going
31 to start with, first of all, a general point, which I was going to ask Dr Long to
32 deal with, and then individually, for her to look at Brewers Road, the
33 implications of widening there, Thong Lane south, the constraints that have been

1 presented for the project there, and then move on to some other of the matters,
2 but I was going to start with the A2 thinking, if I might.

3 So first of all, Dr Long, looking at the generic issue of widening the green
4 bridges over the A2 before looking specifically at Brewers Road and Thong
5 Lane south.

6 DR LONG: Thank you. Dr Emma Long for the applicant. So to answer the question
7 about why we've not widened the bridges further than we've currently proposed
8 over the A2 –

9 MS LAVER: Could you bring the microphone a little closer, please?

10 DR LONG: Is that better?

11 MS LAVER: Not really.

12 DR LONG: Better?

13 MR SMITH: No.

14 DR LONG: Is that better?

15 MR SMITH: If you actually try and go for maybe three or four inches between your
16 mouth and the microphone and you can hear the difference.

17 DR LONG: Okay.

18 MS LAVER: Disconcerting.

19 MR SMITH: And at that point you'll be recorded well.

20 MS LAVER: Thanks.

21 DR LONG: So the reason that we've not sought to widen the bridges further than we
22 have is down to a number of constraints. Primarily, if we were to try and widen
23 them to the extent that we're needing to shut the A2, that pretty much makes it
24 untenable. We have to be able to keep the A2 running. So we're slightly bound
25 by the maximum width of the structure that we can implement and maintain at
26 least some partial running on the A2, bearing in mind that we're having to work
27 with things like contraflow whilst the works for the LTC are ongoing.

28 It also, potentially, lengthens the amount of time that those bridge
29 structures are offline for, which are relied upon by other businesses, such as the
30 Shoreham Woods Country Park, in relation to Brewers Road bridge, and
31 potentially, the severance that it would cause for communities trying to commute
32 along Thong Lane – Road, which is part of the Thong Lane south bridge
33 connectivity.

1 Specifically, in relation – do you want me to move on to that, Andrew,
2 now? Yeah.

3 MR TAIT: Turning to Brewers Road now, I think.

4 DR LONG: Yeah. So in relation to Brewers Road bridge, the impacts there are that we
5 would potentially either affect a landing that's currently outside of our order
6 limits, if we widened east – if we widened further west, we start impinging on
7 SSSI woodland on the northern side to tie in. So we'd actually be taking out
8 SSSI woodland to put in a green bridge, which we didn't feel was appropriate.

9 In relation to the Thong Lane south, the difficulties that we have there are
10 that we've already widened that bridge by a further 10 metres to try and address
11 the concerns that had been raised by stakeholders, but we are limited by the
12 proximity to the slip roads for our LTC junction that ties into the A2, and we've
13 also got constraints with how we can tie in via the local connector road and
14 provide meaningful connection by widening that bridge. That's already been
15 pointed out. Merely making it wider is not necessarily going to solve that
16 particular issue, and I think probably those are the two key points we'd like to
17 make on Brewers Road and Thong Lane south.

18 MR BEDFORD: Thank you, and then I'm going to ask Mr Roberts to come and deal
19 with the point about the connector road below Thong Lane south, and the
20 constraints that is presented in relation to seeking to secure further connectivity.

21 MR ROBERTS: Good afternoon. Steve Roberts for the applicant.

22 So one of the difficulties we have at this location is – we heard earlier
23 about the multifunctional nature of this particular crossing at the A2, so it's
24 serving to provide that local link, as well as the green connectivity and provision
25 for NMUs, or walkers, cyclists, horse riders, and in trying to close the gap, if
26 you like, between the southern end of the green bridge and the barrier, if you
27 like, of the local two-way connector road, we'd have to get some sort of vertical
28 separation between the two, and the difficulty then would be tying the local road
29 back in to the Thong Lane connection, which itself could have further impacts,
30 in terms of vegetation loss and the construction works required to make those
31 connections under and over.

32 I think we'd also contend that a great separated connection at that location
33 would have a bigger visual impact as well, so hence we have proposed an

1 upgrade or a same-level connection of Thong Lane to the local connector road
2 at that location. So that's the main issue.

3 MS LAVER: Mr Tait, can I just respond on that point? I wasn't suggesting that we
4 needed to look at an additional bridge that went on. I suppose my reservation
5 around this Thong Lane south green bridge is that it doesn't really serve a
6 biodiversity connector point, because it has that severance from the A2 via the
7 connector road. So to put it bluntly, is it doing what it says on the tin?

8 Now, I realise that you're looking for multipurpose green bridges. It
9 certainly does provide connection for vehicles, and it certainly does provide
10 connection for walkers, cyclists and horse riders, but does it actually provide any
11 biodiversity value? And really, because of that, where it stops, its T junction,
12 you've then got the connector road – is there a danger that you encourage certain
13 species that would initially think, 'Oh, it's a bit of...' I don't know. I'm not a
14 hedgehog, but if I were, 'Here's a little bit of green track. I might want to go
15 along that. Oh, no. I've got to cross a big road now.'

16 So do we then create a situation where we create detriment to certain
17 species by having that green bridge? So that's really my reservation around this
18 particular bridge. I don't necessarily need you to respond. I just wanted to make
19 it a bit clearer for you what my concerns are here, and I think that's the concern,
20 possibly, of some of the IPs.

21 MR ROBERTS: Mr Roberts for the applicant. If I may respond on behalf of my
22 colleagues, that's really helpful. Thank you. We understand your point better
23 now, and we'll respond to you in writing in due course. Thank you.

24 DR LONG: I think the one point that we would make is currently there is no connection
25 at all for wildlife across the A2 in that location, because the bridge is grey. It
26 has no functionality whatsoever for biodiversity, or landscape benefit. So the
27 purpose of trying to improve the situation there is – to use the phrase 'close the
28 gap' – quite significantly, because we're dealing with the major infrastructure
29 transport corridor, and the local collector road – yes, it could be perceived as a
30 barrier to movement for wildlife, but it's significantly less of a barrier to
31 movement than the existing A2 and High Speed 1.

32 The point we would make about the High Speed 1 green bridges in two
33 locations is that they only cross High Speed 1. They link a sliver of land that
34 sits between the A2 and High Speed 1 to the north with extensive land to the

1 south. It doesn't actually provide connectivity to land north of the A2 corridor
2 at all. So it's a little bit of a road to nowhere if you're heading north over the
3 High Speed 1 infrastructure, and we're trying to bridge that gap by bringing
4 wildlife over the road and into the wider habitat on the north side of the road.

5 Thank you.

6 MS LAVER: Thank you. I think I would direct just an action, really, for Natural England
7 out of this hearing, to come back with a response to that. I don't want to be
8 going around the room back and forth on this point, but I would like Natural
9 England to give some thought to a response, just to my query about actually
10 whether we're creating a situation that we probably shouldn't be creating, or
11 actually, is it adding some value even though it's not perfect? So if Natural
12 England can take that away – we'll put it on an action, but thank you very much.

13 MR TAIT: Thank you, madam. The second matter is Park Pale and the consideration of
14 greening that. Again, I think I'll ask Dr Long to respond to that. We responded
15 to Natural England – written representation that it's not needed to mitigate the
16 impact, but I'd just like Dr Long to explain some of the considerations that have
17 surrounded that thinking.

18 DR LONG: Thank you. Dr Emma Long for the applicant. So in relation to the Park Pale
19 bridge, this is the bridge that provides sole access to the golf course south of
20 High Speed 1, and it's also a key access for Harlex Haulage, which is a key
21 consideration for us, in terms of not wishing to create further hardship and loss
22 of revenue for two businesses in the local area.

23 The fact that we don't need to modify this bridge structure as part of our
24 design means that there's very little – in fact, no scope to provide greening on
25 that structure as it stands, and again, it doesn't provide the best connectivity
26 north-south. Where it does come south of the A2 and links further south, it goes
27 through a box jack under the High Speed 1, which isn't the greenest of
28 connections, but the primary reason, really, is to not result in further loss of
29 revenue for local businesses in the area as a result, and the fact that it would
30 provide relatively limited benefit, in terms of mitigating the scheme, because we
31 already feel we're doing that adequately. Okay.

32 MR TAIT: And we'll elaborate on that in writing. The third point is a matter you've
33 specifically raised about, 'Which are the green bridges which would only be for
34 WCH?', and the position is that it would be Hoford Road, where there's a TRO

1 restricting vehicles, and what's called Green Lane, where there's a public right
2 of way. There is also a farm access, but no other vehicular access. So those are
3 the two where there wouldn't be shared vehicular access on a wider basis.

4 The next point arises from a matter Kent CPRE raised to say that there are
5 only seven green bridges, and the position of the applicant is that it's really the
6 other way around, that it's remarkable that there are so many green bridges in
7 this scheme, relative to other experience in the United Kingdom, but you, I
8 know, asked a wider point about European examples. We will come back to you
9 in writing so you have a fuller picture, rather than try and deal with that now, if
10 that's acceptable.

11 And the final point, I think, relates to a number of representations which
12 place somewhat different emphasis on which function should take priority,
13 whether it's WCH or ecological connectivity. For example, I know on behalf of
14 Kent, the reference to whether some of the planting should be split east and west,
15 or combined – those sorts of issues. There is flexibility in the design principles
16 to allow for that, but again we will come back to you in writing in relation to
17 that point more specifically.

18 MS LAVER: Yes, thank you. I thought that is what you would say. There is design
19 flexibility. At the moment, we're not at detailed design, so there is some wriggle
20 on that.

21 MR TAIT: I don't know whether there's anything else specifically you would like us to
22 deal with now, or your content for us to respond in writing on the remainder –

23 MS LAVER: Yes, I am content for you to respond in writing. Thank you.

24 MR TAIT: Thank you, ma'am.

25 MS LAVER: Okay, so we will go on to the next part of the agenda. Just forgive me one
26 second while I just get the agenda back on my screen. So we are onto the target
27 species. The target species for each of the green bridges and how they are
28 specifically provided for – I think here it would just be appropriate for you to
29 refer us to relevant documents, so that we only hear the headlines and we can
30 then refer to that material in our own time. What I would add for the IPs in the
31 room, particularly Natural England, I will be coming to them to ask whether the
32 bridges will enhance the environment for the protected species, which the
33 applicant is going to identify for us. So over to you, Mr Tait.

1 MR TAIT: Thank you. So we will deal with this concisely as possible, in the light of
2 what you've indicated, Dr Long. I don't know whether you can briefly, by
3 reference to each, pick up the particular target species.

4 DR LONG: Yes. Thank you. Dr Long, for the applicant. So the primary source of
5 information for the species, for which the bridges are being provided, is included
6 in the outline landscape and ecology management plan, and that's application
7 document REP1-173, and I think it is also provided for within the terrestrial
8 biodiversity chapter and associated technical appendices, which is APP-146.
9 But for Brewers Road bridge, this would allow dormouse and bats to commute
10 from woodland to the north of the A2 south, and vice versa, obviously. For
11 Thong Lane south, it's dormouse and bats primarily, that could make use of this.
12 For Thong Lane north, it's primarily been designed to link together woodland
13 planting.

14 It would also serve to benefit a large number of protected species, such as
15 badgers, bats and dormice. For Muckingford Road, it's primarily been designed
16 for bats and badgers, that use an existing similar alignment, via a hedgerow
17 that's being lost as a result of the construction of the scheme and hence
18 reinstating, and the same for Hoford Road and Green Lane. They're both
19 primarily put in for biodiversity benefits, double hedgerows for bats and in some
20 cases badgers. For North Road, similarly it's bats, and also would facilitate
21 movement by badgers, and that's through linking hedgerow planting that would
22 go in to ensure that animals can make safe passage across the road. Okay.

23 MR TAIT: Just for the record, OLEMP has been updated at REP3-106.

24 MS LAVER: Great, thank you very much. Very succinct. So, on that basis, I would like
25 to go to Natural England, please. Mr Grant, are you able to come in on the
26 question I asked?

27 MR GRANT: Thank you, ma'am. Nick Grant, for Natural England. Without wishing
28 to be evasive, is it alright if we take this one away? There are some licensing
29 colleagues that may have something to say and they're not here in the room.
30 We've been looking at the design principles, which – there's a whole host of
31 species that are going to benefit, but this is a helpful distillation of the species
32 that are actually being designed for, so we might need some expertise that I just
33 don't have in the room at the moment, I'm afraid.

1 MS LAVER: Okay. I don't think anyone else would object to that position because I
2 think it's really between the two parties and the Examining Authority, so I think
3 that's okay. We can move on from that. So we'll move on then to maintenance
4 and monitoring, and there is a bit of an overlap here with – oh, sorry. Laura
5 Blake, please.

6 MS BLAKE: Thank you very much. Ms Laura Blake, Thames Crossing Action Group.
7 I didn't want to put my hand up because I don't have the objection in what's
8 going on there. I would just like to reference and note the fact that within the
9 DCO examination for the A47 North Tuddenham to Easton dualling, that there
10 was actually evidence provided by somebody, and National Highways' own
11 representative admitted that there is no proven mitigation for bats in regard to
12 new roads. We'll obviously include that in our post-event submission, but I just
13 wanted to mention that at that point because I felt it relevant. Thank you.

14 MS LAVER: Thank you very much. That's helpful. So then onto agenda item
15 [inaudible], which is maintenance and monitoring. As I said, there is overlap
16 here with the agenda item 9, but I would like to confine this really just to green
17 bridges. The point is there in the agenda. The ExA needs to understand how
18 realistic the longevity and robustness of the planting is on the green bridges for
19 biodiversity purposes, given the restriction of landscape growth and the
20 proximity of vehicles on some of those bridges.

21 I did ask a member of the case team if they would be able to share
22 figure 7.9, which is REP3-103, but I don't know if one of my colleagues is in a
23 position to do that. I just wanted to bring up a photo montage of Brewers Road
24 green bridge. That's perfect. We heard before about the width of some of these
25 planting areas, and we are talking – it's a monitoring, but we're talking the
26 longevity and robustness of the planting. Now, if we just look at Brewers Road
27 here in the photo montage, this is winter, I believe, in year one. It shows the
28 planting zone. It doesn't look very wide. It sits seemingly in a concrete trough,
29 and just using this as one example of many of your green bridges, is there going
30 to be a restriction then on the width of planting and the root growth of the
31 planting area in the green bridges? But this is used as one example.

32 MR TAIT: So, if I can turn to, I think, Mr Andrew Kay on landscape, who will be able
33 to refer to the Landscape Institute's guidance on depths and soil debts – that

1 aspect – and how that’s been applied here, and then come onto any other
2 restrictions.

3 MR KAY: Andrew Kay for the applicant. Yeah. It’s mentioned in the design principles
4 document, REP3-110. We do have quite a number of design principles related
5 to green bridges, in terms of securing the green zones, or planting zones, on each
6 bridge. That has been determined by these targeted species that we’re looking
7 for to link either side of the bridge. So the width of the green zone’s been
8 determined ecologically by the target species’ habitats, and we have considered
9 the Landscape Institute guidance, in terms of appropriate soil depths, and we
10 have used the A21 Scotney Bridge as an example. For those examples they’ve
11 used a range from 0.3-1.5m in terms of soiled depth, and for the bridges,
12 particular at Brewers Road and for Thong Lane south, where we’re
13 predominantly looking for shrubs with intermittent tree species, to reflect the
14 woodland edge habitat required for dormice and other small mammals.

15 We felt that the structural design of those bridges would accommodate up
16 to a metre, or so, of soil death, but still allow some flexibility for soil variations
17 in depth to achieve intermittent tree species, which has been reflected in planting
18 typology shown on those bridges, and so the structural design of those bridges
19 has been designed to accommodate the targeted species. So we feel there is
20 sufficient soil depth and because we’ve got continuous connection across the
21 bridge, there should be sufficient water capacity. We understand that they will
22 be constrictions on the planting designs, so therefore we’ve targeted appropriate
23 species, but they are in line with targeted habitats that we’re trying to link across
24 in terms of the wooded edge and hedgerow planting that we’re trying to facilitate
25 across there. So we feel that the species that we proposed on these green bridges
26 are appropriate and that bridges have been designed to accommodate them.

27 MS LAVER: Okay. I’ve just got one further point on that before we go on to the next
28 part. In terms of a maintenance arrangement, we’re going to come on to who is
29 going to pick up the maintenance for these green bridges, but how are the outer
30 sides of the green bridges proposed to be maintained, particularly the side – on
31 the edge of the bridge with the A2 underneath? Given that green bridges aren’t
32 common in the UK, what’s the maintenance protocol for the outer sides of these
33 bridges?

1 MR KAY: Andrew Kay, for the applicant. I don't have the reference but we do have
2 some cross-sections that go through the green bridge and there are adequate
3 maintenance edges to reach the green bridges on the far ends, so in terms of
4 safety, to allow people to go on to the edge of the bridge for safe refuge, to
5 maintain the bridges from the outside. So they have been encountered in the
6 operational design of the green bridges and we do have management objectives
7 in the outline landscape and ecology management plan, to ensure that they are
8 managed, function as intended, and we do have principles to make sure that
9 species don't overhang the edge of the bridge and they don't fall down on the
10 road network below, and to ensure that there are management protocols put in
11 place to allow for that. So we have considered the management of these green
12 bridges and allowed specific space in the design going forward.

13 MS LAVER: Okay.

14 MR TAIT: Madam, just to add to that, in relation to wind blow and the risks of trees
15 affecting the carriageway beneath, there is in appendix A of the design principles
16 consideration of how that's been factored in. So that's set out in an appendix A
17 of the design principles.

18 MS LAVER: Appendix A. Okay.

19 MR TAIT: The issue also refers to proximity of vehicles. I don't know whether there's
20 anything specific on that you wanted to us to respond to.

21 MS LAVER: Only if you feel you wish.

22 MR TAIT: I think there might. Maybe, Dr Long, can help, in terms of nitrogen
23 deposition, for example.

24 DR LONG: Yes. I'll just respond briefly and we can perhaps provide more detail in
25 writing on this point as well. But I mean, the primary thing is road safety, where
26 we have got vehicular access. So there would be a vehicle restraint system in
27 place, which I think was the predominant feature showing in that winter view.
28 We have had some discussions around how, through detail design, that could be
29 modified to be more in keeping with the type of habitat we're trying to propose,
30 to reduce the urbanising effect, potentially, of something that's quite so robust
31 as that. So it could be a wooden clad version of vehicle restraint system, which
32 meets all of the National Highways' DMRB standards, but we do need to provide
33 something for road safety to stop people driving off the bridge.

1 There's also the impact from traffic itself, which is the indirect effect of
2 nitrogen deposition, and the proposed planting typologies that we're putting on
3 the bridge are not species that are particularly sensitive to nitrogen depositions,
4 so this is not the same as designated habitats that have got very specific species
5 that are present that would be sensitive.

6 We also have the ability to manage and maintain these areas, which we
7 don't do with any of the designated hotels because they don't sit within our land
8 ownership. So we can control things like weed growth, excessive bramble and
9 that sort of thing, and manage the vegetation in the way that Andrew has
10 described to ensure that it's safe, both for people and for very traffic, whilst still
11 ensuring that we're delivering the type of habitat that we want to provide on
12 these bridge structures.

13 MR TAIT: Thank you. That's all we know.

14 MS LAVER: I wasn't sure if I heard you correctly. Did you say that these bridges will
15 be in your ownership, or did I mishear that?

16 DR LONG: The structure will be National Highways'. The greening on the top would
17 fall within, I think, the management that could be delivered via the local
18 highways authority, but ultimately, it's still for National Highways to ensure that
19 that vegetation is maintained, according to the design principles, and the
20 OLEMP, which secure the type of habitat that we're providing on those bridges.
21 So, if that is being delivered via a third party, ultimately the buck still stops with
22 National Highways, if they don't deliver that to our satisfaction, and that's where
23 third-party agreements and payments be made to ensure that that could be
24 delivered. So it's not an additional burden that we'd been placing on local
25 authority to manage that on National Highways' behalf.

26 MS LAVER: Okay. Well, that really, probably, takes us into the second part of this bit
27 of the agenda, which is about monitoring and maintenance over time. I know
28 that round the room that some of the IPs will have some comments to make, but
29 what you're suggesting is, the maintenance of all of this green space rests with,
30 with National Highways.

31 MR TAIT: It does under requirement 5. That would bite on the undertaker.

32 MS LAVER: Okay, that's good. So in terms of the next part of the question, monitoring
33 – what monitoring's expected to occur? When is it required? How do we
34 determine the effectiveness of the green bridges for the biodiversity

1 enhancement purposes? So for the species which you've identified as being
2 target species, how do we know that those objectives will be met?

3 MR TAIT: I believe that's going to be Mr Andrew Kay.

4 MR KAY: Andrew Kay, on behalf of the applicant. So monitoring of the green bridges
5 are secured in the outline landscape and ecology management plan, REP3-016.
6 With the permission of the inspectors, I'll just like to give a brief example of
7 how the OLEMP is intended to work with regards to management and
8 monitoring of these green bridges. The OLEMP has broken down the project
9 into broader management areas, that perform similar landscape – meet
10 ecological functions. For example, in the south, chapter 5.6 of the outline
11 landscape and ecology management plan has grouped together the green bridges
12 at Brewers Roads, Thong Lane over the A2 and Thong Lane over the Lower
13 Thames Crossing as one management area. They perform similar functions in
14 terms of broader habitat requirements. Chapter 5.6 goes on to provide the brief
15 description of the bridges, provides the outline management requirements for
16 them and also provides a list of the specific landscape typologies that are present
17 on each of the bridges.

18 Taking one of these planting typologies present on the green bridge as an
19 example, chapter 8.11 of the OLEMP, only 2.5 shrubs of intermittent trees,
20 which we've been talking about in terms of Brewers Road – this chapter contains
21 the management requirements, the outline prescription to establish the planting
22 and also provides the outline measures of success and then goes on to provide
23 the monitoring, frequency and method. In this example, the suggested
24 monitoring program for the shrubs of intermittent trees would be after the
25 five-year establishment period. Monitoring visits every five years would be
26 undertaken in the summer to ensure that the measures of success that were supplied
27 in the original chapter are being met and maintained. National Highways'
28 appointed monitoring party will carry out the monitoring visits and the aim of
29 the suggested monitoring programme is to ascertain whether the outline
30 measures of success listed above have been achieved, and whether maintenance
31 operations or remedial actions are required.

32 The monitoring party will then feed back to an advisory group, which will
33 be set up as part of OLEMP and will feed back as part of the monitoring reports.
34 The advisory group can agree changes to the OLEMP, blend and/or its

1 prescribed management activities, when they are required, or when successful
2 achievements of targets have been met. Further details of the roles of the
3 monitoring party and the advisory party can be found in chapters 4.18 of the
4 OLEMP and chapter 4.1.13 and these will be developed further into full lengths
5 as per requirement 5.

6 MS LAVER: Thank you.

7 MR TAIT: That ties in again to requirement 5, of course.

8 MS LAVER: Yeah. Just a query – you said National Highways’ contractors will be
9 carrying out the monitoring after the five-year period. Presumably, that’s
10 suitably qualified ecologists and not just some sort of highways engineer that
11 might go out and take a look.

12 MR KAY: Andrew Kay for the applicant. Yes. In chapter 4 of the outline landscape
13 and ecology management plan, the roles and responsibilities of all the parties
14 involved have been described, and I believe they do say it’s a suitably qualified
15 ecologist, and landscape architects will be required to perform the monitoring.

16 MS LAVER: Okay, thank you. Mr Tait, does that conclude everything for the applicant
17 on those two matters?

18 MR TAIT: Yes, ma’am.

19 MS LAVER: Okay. So I’d like to just go around the physical room, and see if anybody
20 wants to speak. Natural England, please.

21 MR HANNA: Thank you. Sean Hanna for Natural England. I think, in terms of the
22 robustness and the longevity of green bridges, that goes back to the discussion
23 we had before lunch and about the width of the green elements. The larger an
24 area of habitat, simply, the more resilient it is to kind of impact and [inaudible]
25 area is clearly going to have much greater impacts and stress put on it. So I think
26 that’s in part where those minimum width criteria come from in the good
27 practice guidelines, so I think that that’s a key point from our perspective.

28 In terms of the monitoring, I think we’d also be quite keen to actually see
29 how they’re – not just from a habitat establishment perspective, but actually, are
30 they being used by the target species for other schemes that we’ve worked with
31 the applicant on? For example, A21 – they put in measures to try and get bats
32 to a crossing height, and they’re monitoring the effectiveness of those. So I think
33 it’s about the functioning of that green bridge, not just what it looks like.
34 Actually, is it delivering the objectives? So I think the monitoring needs to look

1 at the species and whether they are using it within the target time that they should
2 be. Thank you.

3 MS LAVER: Thank you. Anybody else wishing to come in on this point? Laura Blake,
4 please.

5 MS BLAKE: Thank you very much, Ms Laver. Laura Blake, Thames Crossing Action
6 Group. Not specifically to green bridges, but in aspect of the confidence we
7 have in the ongoing maintenance and establishment of the green bridges, we
8 have read recent reports that more than 400,000 trees that have been planted as
9 part of the national roadwork scheme have died within five years, and that within
10 the projects that the freedom of information request was put in for by, I believe,
11 The Times, that 30.4% of the samplings had died across nine projects, and that
12 National Highways were only able to provide figures for nine of the 38 big road
13 projects, meaning that that number would likely be higher, and obviously shows
14 an example that possibly there is not the monitoring in place, if they were unable
15 to actually share that information.

16 Also, just adding to the impact of the water that would be needed,
17 presumably, for watering such green bridges, especially when there are water
18 shortages, and with climate change, that could become an issue ongoing. We
19 had an extremely hot summer last year. We're experiencing this snap heatwave
20 at the moment, so I think we've discussed water in other aspects, but obviously,
21 that is something to consider when we are talking about establishing and
22 maintaining green bridges. Thank you.

23 MS LAVER: Thank you very much. Mr Edwards.

24 MR EDWARDS: Yes. Thank you. Douglas Edwards for Thurrock Council. Just by
25 way of a placeholder, we don't have any specific points about the approach to
26 monitoring and maintaining the green bridges, but Thurrock does have some
27 more general points in terms of the approach to maintenance generally, and we
28 were proposing to come to that, if we get to it at item 9 on the agenda.

29 MS LAVER: Yeah. We said we would finish off green bridges. We'll come to agenda
30 6. We'll reconvene and then we'll have to make a call on whether we get to item
31 nine. If we don't, it may be written responses, or a subsequent hearing.
32 Mr Johannsen, from the AONB unit, please.

33 MR JOHANNSEN: Thank you. Yes. Just to support the point Natural England made
34 about outcome, or function-focussed monitoring – so five years feels a little bit

1 arbitrary. The monitoring needs to think about when those outcomes should be
2 met and monitor accordingly, with provision for remedial action if those
3 outcomes aren't being met, and the other simple point is we are talking about
4 biodiversity monitoring, but everyone has been at pains to point out these are
5 multifunctional, so other functions should also be monitored and judged against
6 the success criteria. Thank you.

7 MS LAVER: Thank you, and I think we've got the CPRE.

8 MS ELLIS: Yes, thank you. Vicky Ellis, CPRE Kent. We just want to reiterate that the
9 very species these bridges are being put up for are then put in direct danger of
10 being part of a road accident and vulnerable to being run over, and we just would
11 like to see the biodiversity separated off from the two-laned traffic that would
12 be utilising this road. We just feel that the green bridges are – the green part of
13 the bridge is an ancillary and secondary nature to the real reason for that bridge,
14 which is to link the traffic, rather than the biodiversity. And also, if the
15 monitoring is maintained over the five-year period, what would happen if it
16 looks to be failing during that time? What's mitigation, or what's the plan, if it
17 does fail, and the green bridges haven't worked, or they're not fit for purpose?
18 We'd like to see some kind of forward planning, if you like. Thank you.

19 MS LAVER: Thank you very much. I don't see any further hands up, but following on
20 from that for the applicant –

21 MR HUMPHRIES: Madam, I keep trying to put my hand up.

22 MS LAVER: I'm so sorry, Mr Humphries.

23 MR HUMPHRIES: Madam, don't worry at all. Michael Humphries, for Kent County
24 Council. As you will imagine, obviously, the maintenance of these facilities is
25 important to us and as National Highways very properly explained, their
26 expectation is that, in practical terms, we will be the ones, as highway
27 authorities, that actually carry out that maintenance. That's important. Mr Tait
28 quite properly pointed to requirement 5, and you'll see in requirement 5.2(vi)
29 that that simply requires that the LEMP, prepared in accordance with the outline
30 LEMP, must, at (vi), give commitments to aftercare and monitoring and
31 maintenance activities relating to landscape and ecological features. So there
32 has to be commitments, but there's no indication of what commitments are
33 given.

1 Now it is said – and again, this is not unusual – that, of course, there will
2 have to be separate agreements with county council and indeed any other
3 highway authority and that’s not untypical, but we haven’t seen any such
4 agreements. What commitments, what agreements, what is going to be the
5 funding and, if it is proposed that we carry out the long-term maintenance of the
6 green bridges, and people have raised concerns about that, then surely we are
7 entitled to know what commitment we will be taking on, on what terms and with
8 what funding, because that’s obviously a direct burden on the people that we
9 represent. So I put down that marker there. I understand what is proposed, but
10 a lot more specificity will be required, I’m afraid.

11 MS LAVER: Mr Humphries, I’m sure Mr Edwards would have been saying the same
12 points and I was almost pushing him off to point 9. But, Mr Edwards, just to
13 come back to you, because we were on green bridges, if your points were on
14 green bridges, then I would like to invite you back in to talk about them, rather
15 than just generally, because I did say at the start of this particular topic, we were
16 just going to focus on green bridges, but if there are maintenance issues around
17 green bridges, then please, bring them in now.

18 MR HUMPHRIES: Yes, and we obviously can share the concerns expressed by Kent.
19 There are some more general concerns in terms of the time scales and the clarity
20 of the time scales, in terms of maintaining mitigated, new habitats more
21 generally, not specific to green bridges. But, as I said, I was proposing to come
22 to those at item 9, if necessary, but just to confirm, on the specific point of
23 maintenance of green bridges beyond the general points that were made by
24 Mr Humphries for KCC, with which, we share. We have no specific points to
25 raise in respect to that.

26 MS LAVER: Okay, thank you. From having come out of that, I certainly feel we need
27 a bit of clarity around the monitoring and specifically, if that is monitoring for
28 the target species, or if it is just monitoring to see whether the landscape takes,
29 they are two different points. So, if I could get some clarity on that, that would
30 be helpful. Whilst National Highways suggests you would be responsible for
31 the maintenance of that, there is clearly some confusion with local authorities
32 feeling they’re going to be responsible for that maintenance and, reasonably so,
33 asking questions about what funding’s in place and what’s expected of them. So

1 again, if we could really get some clarity on that, and if it's unclear and you can't
2 respond today, then we will need response in writing. So over to you, Mr Tait.

3 MR TAIT: Yes. We heard Natural England in relation to monitoring for species, so we
4 will respond to them and continue our dialogue with them as to whether that
5 needs to be made more explicit on the face of the OLEMP. It does refer to target
6 habitat and a number of outlined measures of success, against which the
7 monitoring is undertaken, but if that needs further clarity in relation to successful
8 species, then we will look at that in conjunction.

9 MS LAVER: I would suggest it does.

10 MR TAIT: The second point relates to funding and responsibility for carrying out the
11 management and monitoring in relation to green bridges, if I can just focus on
12 that for the moment. That does, as I indicated, fall upon the applicant and the
13 commitments pursuant to requirement 5 would – if those are to be set out, it's
14 substantially in accordance with the OLEMP – set that out.

15 But in essence, those are matters that would fall upon the applicant to
16 perform because there is a legal obligation to comply with those commitments
17 and those commitments would need to be incorporated into the LEMP, if they're
18 to be substantially in accordance with the OLEMP. So we can provide further
19 clarity on that, if there is absence of clarity, which there may be, certainly, from
20 others, and we'll respond to you in writing more fully on that.

21 MS LAVER: Yeah. I think something explicit will be required on that, and if the
22 colleagues to the right-hand side of the table, and Gravesham who are listening
23 in, if you feel there isn't the clarity that you need out of the OLEMP and
24 requirement 5, then can I suggest, on the back of this hearing, you set that out
25 for us explicitly as well, please? Okay.

26 MR TAIT: Could I just say? There may be agreements with the authorities which would
27 be pursuant to that, but in the absence of those agreements, that's the position.

28 MS LAVER: Yes. Thank you. We've no further speakers on that item, so do you feel
29 that you've concluded the points that you wished to make?

30 MR TAIT: Yes, thank you, madam.

31 MS LAVER: Thank you. So that will bring us to the end of agenda item 4. Whilst we
32 feel like we've only been back in the room a short while, I would like to take a
33 pause for a quarter of an hour, because I think, as a panel, we will need to

1 convene to really have a look at this agenda for this afternoon as to what we can
2 possibly get through. So, if everybody is comfortable with that, Mr Smith?

3 MR SMITH: Yes. In fact, look. I just wanted to flag this. In having that conversation,
4 we will be looking at two potential broad roads for all the – firstly being
5 consideration of matters that it might, having heard the balance of discussions
6 so far, be sensible to put into a written process, as against others that would come
7 to hearing, but come to hearing in October or November, given that we still have
8 those dates in reserve. So we've got options to consider. Before we make any
9 final decisions, we'll have a conversation with the room, but that's what we'll
10 be considering, because clearly there's more business in this agenda than we will
11 feasibly finish today, and again, for a range of good reasons, we don't want to
12 be sitting at 7.30 on a Friday evening.

13 MS LAVER: Okay. So we'll pause till 3.35, please.

14

15 **(Meeting adjourned)**

16

17 MS LAVER: Okay, we're resuming issue specific hearing 6. In the break we chatted as
18 a panel about what we may feel is achievable for the rest of today, ensuring that
19 after a very long week people are able to get home on a Friday night and to travel
20 safely. So we are of the feeling that we can get through item 6 – nitrogen
21 deposition – and hopefully have time for item 8 because we think that's quite a
22 short item given it was an update point. We are really unlikely to get to 5, 7 and
23 9, and we would look to defer those to a hearing in October or November unless
24 there is a party in the room that feels they would be severely prejudiced by those
25 being deferred to a subsequent hearing day.

26 MR SMITH: And on that point, I think, illustrating what we would mean by that, if
27 somebody had a specific expert who they've had travel today, for example, in
28 order to be with us, and there will be unreasonable cost associated with deferring
29 them to another time or possible availability issues, then we could dip into the
30 relevant subject matter and part here by having that person introduced and
31 having their points made on the record, and then we'll return to the main
32 business of those items later, but unless somebody's got special pleadings of that
33 nature, our preference would be to leave the entirety of those items over to
34 another day.

1 MR HUMPHRIES: Sir, Michael Humphries for Kent County Council. I have no
2 objection at all to that. Before we do move on, can I very briefly – on the matters
3 we were discussing before the adjournment – just raise a very short point? It
4 won't require National Highways to clarify it right now, but I think it is
5 something on which, madam, you will ultimately want clarity, and it's this point
6 about the responsibility for the bridges – the legal responsibility for the bridges
7 – and this is actually dealt with in article 10 of the order, and article 10.3 and
8 10.4 deal with the legal responsibility for the bridges in two circumstances.

9 10.3 says, 'In the case of a bridge constructed under this order to carry a
10 highway – other than a trunk road or a special road over a trunk road or a special
11 road – A, the highway surface being those elements of the waterproof membrane
12 over the waterproof membrane must – unless otherwise agreed in writing with
13 the local planning authority – from its completion, be maintained at the expense
14 of the relevant local highway authority' – so we would have responsibility –
15 'and the remainder of the bridge, including the waterproof membrane and the
16 structure below, must be maintained by the undertaker.'

17 The other one, 4, which is, 'A bridge constructed under the order other
18 than a special road or a trunk road for both highway surface and the remainder
19 of the bridge must be maintained by the relevant highway authority.' So if it's
20 a bridge over a non-trunk or special road, we have to maintain it. All of it. If
21 it's a bridge over a special road or trunk road, then we have to maintain the
22 surface, but National Highways maintain the remainder.

23 Now, in the example you gave us with the image on the screen, are those
24 green bits – are they surface that we have to maintain legally, or are they other?
25 And that's quite an important question because it's all very well in the LEMP
26 having to include commitments, and after all, we don't decide what's in the
27 LEMP and what's not in the LEMP – what the commitments are – so we can't
28 say, 'No, we're not accepting this,' if article 10.3 legally provides that we have
29 to maintain it. It is ours by law. So, a complicated legal question, don't need an
30 answer right at the moment, but maybe something for Monday.

31 MR SMITH: Exactly. That's exactly where I was going, Mr Humphries. I was going to
32 suggest that we did, for the purposes of organising the rest of today, need, in
33 fact, to return to the question of what we're going to do and not do today. So I
34 will bring that back to the table in a second, but yes, it's a very important point

1 and I think Monday is a good place and I have a list and it's just gone on it.
2 Okay, can we then return then to the question of what is deferred and whether
3 there is anybody who has a very particular need to introduce material or a person
4 on one of the matters that we're proposing to defer because it would be
5 disproportionate or of considerable adverse effect if they were not dealt with
6 today, so suggesting that we actually don't defer quite as much as we thought
7 we were going to. Is there anybody who's asking for that or are we looking at
8 deferring the totality of the issues that Ms Laver proposed to a hearing to be held
9 in either October or November? If I see any hands, we'll discuss it. If I don't
10 see any hands, then we'll defer the items that we proposed. I see no hands. Ms
11 Laver.

12 MS LAVER: Great, thank you. So, on to agenda item 6, which is the section on nitrogen
13 deposition compensation. We'll start out, again, posing the matters to the
14 applicant. Again, the agenda items speak for themselves, but I will just go
15 through the first one. The examining authority needs to understand how the
16 nitrogen deposition compensation approach aligns with the mitigation hierarchy.
17 The reason – I understand – for the inclusion of this on the agenda is that there
18 are IPs – and I'll use Thurrock as an example – have advised that no details have
19 been provided, setting out the reasoning why measures such as lower speed
20 limits could not be enforced along the route in certain areas, so why we've just
21 gone straight to compensation. So that gives a bit of context around the 6(a)(i).

22 I think just for the point of moving it forward quicker is then to include
23 item 2, which is for the applicant to clarify why – for all interested parties – the
24 current detail on how the size of the nitrogen deposition areas have been
25 determined and what their criteria was for selecting the sites they have. Now, I
26 suppose really what we're trying to understand from that, were the sites
27 identified because of existing Forestry England relationships? Was it willing
28 landowners came forward? Was it sites you already owned? What's the process
29 that's gone behind the sites in particular? So, over to you, Mr Tait, to pick up
30 parts 1 and 2, please.

31 MR TAIT: Thank you, madam. In relation to the mitigation hierarchy, how that's been
32 applied, the relevant document is the project air quality action plan, which is
33 APP-350, and I'm going to ask Mr Russell Cryer, the HRA lead for the project,
34 to speak to that and to item 2. So Mr Cryer.

1 MR CRYER: Good afternoon. Russell Cryer for the applicant. So the project air quality
2 action plan has a section, section 4, which is titled the compliance with the
3 mitigation hierarchy. So that goes through how we complied with the mitigation
4 hierarchy and then the subsequent sections of the project air quality action plan
5 go through each of the elements of that hierarchy. So section 5 is the
6 consideration of avoidance, section 6 is the consideration of mitigation, and then
7 finally, section 7 is the consideration of compensation, and each of those are
8 taken in turn as the hierarchy requires you to do.

9 So if things can't be avoided, you then look at mitigation. They can't be
10 mitigated, you then look at compensation. For example, paragraph 7.1.1, which
11 is the start of the consideration of compensation, states that, 'Mitigation has been
12 proposed where it's feasible, but where there are no appropriate mitigation
13 measures, the applicant has identified how best to respond to residual effects of
14 nitrogen deposition by proposing compensation measures.' So there's a clear
15 thought process that's written out in that project air quality action plan. So
16 within the mitigation section, for example, we look at all of the different possible
17 options for mitigating things and then we look at those individually as, 'Is there
18 potential to actually implement these? What's the likelihood, if we did
19 implement them, that they would actually change or reduce or avoid the impact?'
20 and then finally, looking at the viability of that as a mitigation option.

21 So every different option and every step of the way we're in consultation
22 with Natural England on developing these approaches from the assessment
23 through to how we go through that hierarchy, and Natural England have shown
24 support for that approach in the statement of common ground and items 2196,
25 2197 and 2198 all relates to the approach to nitrogen deposition and the
26 mitigation and compensation. So there was only one mitigation measure across
27 the whole project that was identified as viable and that was the speed
28 enforcement management measures on the M2 – between junctions 3 and 4, was
29 it? Yeah. So that was then proposed because that's feasible mitigation, which
30 you need to do as part of that hierarchy, and there's a REAC commitment to
31 propose that.

32 So because that is the only mitigation option that was feasible, we then
33 moved on to compensation, and again, the compensation section goes through
34 all of the different options that we looked at, looks at what guidance is there on

1 this and therefore developing our success criteria from what the guidance says
2 that you have to achieve, and then looking at each option in turn of how it would
3 be able to achieve those success criteria. So for the specific example of lower
4 speed limits, for example, being dismissed, part of the consideration of lower
5 speed limits within section 6 is that there are certain conditions that have to be
6 met as to whether a lower speed limit would work. So, for example, low speed
7 limits only work on reducing emissions significantly if it's from 70 miles an
8 hour to 60 miles an hour. So if the speed limit is already over 60, then that is
9 not a feasible measure, and this is laid out in section 6.

10 MS LAVER: Sorry, sir, could you just explain that in simpler terms, why it isn't feasible
11 to go from 70 to 60?

12 MR CRYER: If the speed limit is already 60 miles an hour –

13 MS LAVER: Oh, sorry, yeah.

14 MR CRYER: – because the evidence is that reducing speed limits from 60 further down,
15 you don't get a significant change in emissions. Equally, we looked at what the
16 actual speeds of the traffic are. So it might be a 70 miles an hour limit, but if
17 that traffic is only travelling at 62, there wouldn't be any point in reducing that
18 speed limit to 60, because again, it wouldn't make any difference. So the
19 assessment goes through each option speed limit reduction, speed enforcement
20 and all of the other barriers. All of these options are looked at and analysed in
21 that sort of way, and that's all reported in section 6. So moving on to the scale...

22 MS LAVER: Yeah, that's fine to move on. Thank you.

23 MR CRYER: So the scale of the compensation is reported again in the project air quality
24 action plan, paragraph 741/742. So again, this was developed in consultation
25 with Natural England. We looked at some dual and parallel and equal objectives
26 of the scale of habitat creation – had to be comparable with the area of
27 significantly affected habitat. So if you're going to be damaging important
28 habitats like ancient woodlands, you need to respond to that with some
29 compensation on the same sort of a scale.

30 MS LAVER: Are you suggesting like for like? Is that what you mean by comparable
31 scale? As in like for like, lots to harm, or is there an uplift?

32 MR CRYER: They deliberately don't want to get into ratios, if you like, because actually
33 what we think the critical thing is, is the functionality of that compensation rather
34 than the entire scale, but you have to have some measure of success of the scale

1 of what you're trying to achieve to identify suitable sites and that scale was
2 considered to be a comparable area. So yeah, like for like, if you want to use
3 that terminology. It means the same thing, doesn't it, but there is no uplift. So
4 there is no guidance that I'm aware of for compensating for habitat damage, if
5 you like, as opposed to habitat loss.

6 If you look at the Chartered Institute of Ecology Environmental
7 Management, their guidance on measures is that you may well want to have an
8 uplift if you're providing compensation for the loss of habitat because then
9 you've got to take into account how long is it going to take to mature and the
10 functionality of it. So they say you need to look at whether you should be
11 looking at an uplift, but we were thinking, 'We're identifying a significant effect
12 which is a degradation of habitats, but it's not the loss of that.'

13 So the compensation is trying to achieve additional resilience within the
14 network to compensate for the loss of resilience of that degradation of those
15 areas of habitat. So as I say, a comparable area seems a reasonable scale to be
16 looking at across the whole scheme. You've then got the secondary objective,
17 which is equally important, that the purpose of this compensation is to provide
18 resilience to the ecological networks that the affected sites are sat within. So
19 each site is supported in its resilience by the network it's within and therefore
20 this compensation is meant to be placed into those networks to make that
21 network as a whole more resilient. So each of those individual affected sites has
22 greater resilience because that network that supports it has greater resilience, and
23 the way you get that greater resilience within the network is to improve the
24 ecological connectivity.

25 So as part of the site selection process, we identified four key ecological
26 networks across the affected road network by analysis and proximity analysis of
27 the affected sites. So there was four clumps, if you like – affected sites – and
28 we thought, 'These are the ecological networks that are supporting those
29 affected sites,' so we need to find places to do our compensation within those
30 ecological networks so that we can find ecological connectivity between the
31 different builds within those networks. So our site selection then went to find
32 areas of land that would provide new connectivity between existing and retained
33 woodlands and semi natural areas.

1 So once you then start to strip out all of the constraints – so ‘It can’t be
2 that because that’s already nice habitat, it can’t be that because it’s an urban area,
3 can’t be that because it would have unacceptable landscape or visual impacts,’
4 you start to strip those out. We also did another proximity analysis of which
5 fields provide the most connectivity – because they’re closer to existing sites –
6 and all of these approaches are again set in the project air quality action plan of
7 the site selection process. So we identified plots of land that were within our
8 search areas that didn’t have significant constraints, were relatively high on the
9 ecological delivery index and then started to look at, ‘Right, we need to combine
10 scale with connectivity.’

11 So if we have one objective to have X hectares across the piece, all our
12 individual sites within these networks need to add up to that. So it’s that
13 combination of the functionality of having a sufficient scale with the
14 functionality of individual sites providing sufficient new connectivity in the
15 ecological networks that gives you the scale overall and the scale in each
16 individual site. Hope that makes sense.

17 MS LAVER: It does make sense. Interested parties on the other side of the table may
18 refute some of this stuff, but it’s helpful the way you’ve set that out. I certainly
19 followed what you were trying to say.

20 MR CRYER: Thank you.

21 MR TAIT: That’s our response to 6(a)(i) and (ii). Would you like us to carry on at this
22 stage?

23 MS LAVER: I think while we’re on – rather than flick around to interested parties, I’d
24 like to carry on because what we had elsewhere on the agenda was asking you
25 to set out where and why areas of land for nitrogen deposition have been
26 reduced, and I think based upon what we just heard about how you picked sites
27 and that connectivity, the change request is in to remove sites in the south and
28 this seems a good time to bring that in. Obviously, your material that you’ve
29 lodged with the change request sets out why there are other reasons for the
30 landowner for wanting those sites not to be removed and so forth, but I just
31 wonder if – those sites were obviously chosen because they fell within your
32 criteria, but what I’m suggesting is, ‘Okay, well, that’s great, but we don’t need
33 them now because we’ve got sufficient sites,’ and I just wonder why they were
34 chosen in the first place if you didn’t need them at all?

1 MR CRYER: Russell Cryer on behalf of the applicant. So the initial proposals for
2 nitrogen deposition compensation were provided in the local refinement
3 consultation. So that was the first stab at this, and within that, 279 hectares were
4 identified on eight sites and those were defined in those material for that
5 consultation as potential sites. So at that point we had a preliminary assessment,
6 and we wanted a meaningful consultation on it. So you don't go out for a
7 meaningful consultation saying, 'These are our final things, take it or leave it.'
8 So we went in, 'These are the sites that are looking like they hit our criteria. Our
9 expectation is this will be refined down to 250 hectares by the time we get to the
10 application because we will then have your responses to this consultation and
11 you will have the final air quality assessment which will tell us exactly how
12 many hectares of significantly affected habitat there are.'

13 So by the time we get to application, we'd reduce that to 245.7 hectares
14 and the final hectarage of significantly affected was 174.6. So there were some
15 changes because of the responses we got from landowners. One site was taken
16 out altogether because the consultation told us that that would be a risk of
17 business extinguishment for that landowner, but also that site had existing
18 environmental interests which would make it unsuitable. So we took that site
19 out and then we changed the Blue Bell Hill site from the version in local
20 refinement consultation. The landowner there came back to us with an
21 alternative suggestion. So that alternative suggestion wouldn't work for us
22 because a lot of the areas he was suggesting we use instead of those fields were
23 unsuitable, and we'd identified that already in our site selection process, but the
24 Burham site was part of his alternative and that hadn't been discounted
25 specifically.

26 So we reduced the area on his main farmed fields at Blue Bell Hill and
27 added in the Burham site at that point and that was to try and find common
28 ground with them to reduce the business extinguishment that he was telling us
29 they were going to have if we took these two large fields. When we start to talk
30 and engage with people about these things, we constantly have to go back to,
31 'Will this still achieve those two objectives of a comparable area and significant
32 additional connectivity?' So reducing the amount of Blue Bell Hill? Well, yes,
33 it would. So the vast majority of the new connectivity was in that northern field
34 – Cossington Fields – anyway, that connects most sites and also we still had

1 more compensation land than we did – we’d had identified significantly affected
2 habitat.

3 So that was the position at application. Since application, more
4 information has come to light with our ongoing engagement with the landowner.
5 The business extinguishment risks were a lot higher than we’d initially thought,
6 and there are environmental measures being carried out on that farm that mean
7 that the additional connectivity that we were expecting to get in the southern
8 fields – reservoir fields – we wouldn’t really get that because that’s already being
9 achieved with the stewardship that he’s already doing.

10 So it was to take out some more of the Blue Bell Hill site – was really,
11 really marginal in terms of reduction in connectivity on that site and equally, we
12 still had more hectares of compensation than significantly affected and in that
13 circumstance we thought to reduce business extinguishment risk was the
14 appropriate way forward and reduce that further. So we engage with people
15 constantly on these sorts of things, but we constantly then go back to those two
16 objectives. If we make that change, do we still achieve those objectives?

17 MS LAVER: So did I hear say you still, at present – if those sites come out – still have
18 more compensation area than you need?

19 MR CRYER: No, I wouldn’t frame it in those terms. We have a higher hectarage overall
20 than the hectarage of significantly affected habitats, but that is only one of two
21 of the objectives. So that objective of a comparable area – I think what we’re at
22 now is 205 hectares against 175. So that comparable area – if that was your only
23 measure – then you could say that, you could term it in those terms, but the other
24 part is that connectivity. So if the sites that you’ve chosen that achieve those
25 connectivity, if they were made smaller, they wouldn’t achieve the same
26 connectivity in that individual ecological network, and so whilst the objective of
27 comparable area is slightly overprovided, if you want to put it in those terms,
28 the connectivity is the critical thing for added resilience into the networks.

29 MS LAVER: The reason I asked that question was more from a CA perspective. I’m
30 trying to understand how you then make the case for needing to acquire third
31 party land and that test.

32 MR SMITH: Indeed, but I think in the light of time, we maybe need to hover carefully
33 on that, recognising that we do have two compulsory acquisition hearings this
34 time next week, the first of which is a strategic hearing where we will engage

1 with the applicant around the justification for, amongst other things, taking
2 particular parcels of land for essentially non-running highway objectives to be
3 met. So I think at this stage, what we need to nail are the ecological objectives
4 and the biodiversity connectivity objectives sought to be met.

5 I think we need to bear in mind that the volume of land that is then taken
6 – or proposed to be taken – might be larger than the volume of land that is sought
7 to be either mitigated or compensated because you need to provide connectivity
8 and you need to provide also habitat of what will develop to equivalent value
9 that won't be at the start of the exercise. We'll take those two into consideration
10 and then through the CA process, we'll look at the question of the extent of land
11 proposed to be taken. I think that takes us through it in steps rather than trying
12 to swallow too much at once today.

13 MS LAVER: Yeah, I wasn't intending to go into CA questions, Mr Smith. It was just
14 we started on that path and I wanted to get some clarity and just to park it in the
15 room, but Mr Pratt wants to come in.

16 MR PRATT: It's only a quick question and you may have to go away and come back
17 again. You said there are two options: comparable area and connectivity. How
18 does the maturity of the compensatory habitat come into that equation? Because
19 Mr Smith just mentioned very quickly, when you start something, it probably
20 doesn't give you what you want to start off with. What's the timeline and is that
21 dependent on the works? Basically, where does maturity of the habitat come
22 into your thoughts on this matter?

23 MR CRYER: Russell Cryer for the applicant. So the impact you're having, the
24 degradation to the habitats, is from an operational impact and it is an impact that
25 develops over time. So the damage caused by nitrogen deposition isn't like a
26 direct toxicity. It's over time you get more and more nitrogen and they gradually
27 decline the habitats. So you're looking at providing long term emerging
28 compensation for that. So it's not like you lose some habitat and you want to
29 compensate for that, for some instant habitat. The habitat does not need to
30 mature for the point where that impact starts to happen, because the impact will
31 start to happen and then it will just go on for a long time.

32 So if your compensation is then maturing and getting even more diverse
33 as that impact builds – so it's a bit different than when you get a habitat loss or

1 you disturb a protected species or something. That's the issue with it being a
2 degradation over time, rather than a 'bang' impact like that.

3 MR PRATT: Thank you for that. Thank you, Ms Laver.

4 MS LAVER: Mr Tait.

5 MR TAIT: That concludes our response, I think, unless there's anything else on (a)(i) or
6 (ii), and (iii) I don't think we have covered. I don't know whether –

7 MS LAVER: No, we haven't covered that yet, but I'd like just to leave that one for the
8 moment because it's about the sites you've selected, as opposed to the process
9 behind nitrogen deposition.

10 MR TAIT: We haven't got anything more to say on (iv), unless there's something you
11 would like us to.

12 MS LAVER: No, that's fine. So, in moving around the room, item 5 on the agenda was
13 there just as a flag to the interested parties, that we would like to hear from them
14 about the applicant's nitrogen deposition approach and whether it's robust. So
15 given we've heard the first part of their submission on that, now is a good time
16 to go around the room and ask IPs for their position. So, Mr Humphries, as I
17 normally miss you, I'll come to you first.

18 MR HUMPHRIES: Yes, you're going to have to try harder. Michael Humphries for
19 Kent County Council. We're principally interested in the (iv) item, and
20 understanding the emission of the two sites that are in Kent. There are three or
21 four stages to this. The first stage is, as Mr – I think, is it Mr Cryer, sorry?

22 MR CRYER: Russell Cryer.

23 MR HUMPHRIES: Cryer. I do apologise, I didn't quite write it down quickly enough.
24 Mr Cryer explained about the principles and the objectives and these are
25 articulated in paragraphs 8.6.445 and 446 – 8.6.445 and 6 – of chapter 8 of the
26 environmental statement. What they make clear, first of all, is that this is
27 compensation. Whatever other compensation is going on, this is compensation,
28 obviously, for nitrogen deposition effect, and again, that the approximately 240
29 hectares – as it identifies it – is both to increase the amount of high quality,
30 wildlife rich habitat and then, as was explained, a secondary objective of
31 positioning the habitat to forge strong links. Now, both of those elements are
32 important. The quantity is important, but also where you put it.

33 Second point, the case for that 240 hectares approximately is sufficiently
34 strong that both of the sites at Blue Bell Hill and Burham were included on the

1 land plans as land to be compulsorily acquired. I won't go into the compulsory
2 acquisition, but in other words, they satisfied the compelling case in the public
3 interest test. There's a compelling case for taking this much land.

4 The third point, when we then get to the minor refinement consultation,
5 which is AS095, page 6, we get the explanation as to why these two sites are
6 taken out, and the two sites are taken out not because it has been decided that
7 240 hectares is too much, don't need that much. They're taken out, in essence,
8 because we're told that there will be an effect on the landowner in one instance
9 and because the stewardship scheme is going to have some of the same effect.
10 So the additional connectivity benefits of our previous proposals would not be
11 reduced.

12 Now, what is being taken out is 10 hectares at Burham and then 29 hectares
13 at Blue Bell Hill. That's 39 hectares. That's approaching 20% of all the
14 compensation land. This is not a small amount, but 20%. Of course, both of
15 those instances – effect on landowners and not achieving effects because there
16 are other improvements going on – were reasons originally why those sites
17 would never have been included in the 240.

18 Now, what we still don't understand – and with greatest respect, I don't
19 think the explanation really adequately explained this – is, okay, you've decided
20 to take these two areas of land, almost 20%, out. Why are you just not replacing
21 them somewhere else? Because you needed 240. You had a compelling case in
22 the public interest for 240 hectares of land, and it does seem somewhat
23 inappropriate for National Highways to be, in effect, outsourcing its mitigation
24 and saying, 'Look, there's some other scheme – the stewardship scheme – that's
25 going to provide mitigation, and we will piggyback on that,' and so we obviously
26 have to consider whether to make this change, and there may be all sorts of good
27 reasons for doing it, but our point is, if it is done, what should be done instead?

28 MR SMITH: Can I briefly add a couple of observations to that because, Mr Humphries,
29 you've crystallised the question that I was going to throw in and essentially then
30 to ask the applicant to pick up the possibility that there is another instance of
31 'double-counting,' because if a particular benefit relevant to consideration of
32 connectivities and indeed compensation sought for the LTC flows from a
33 stewardship, how does one account for it in circumstances where it is

1 stewardship that delivers it, not something secured under the development
2 consent order? So that's the first point.

3 The second is its temporal endurance. How long would it be with us and
4 on what terms? And does stewardship provide adequate temporal endurance
5 relevant to essentially the project lifetime of LTC? So those seem to me to be
6 the two fairly spiky natural environment dimension elements of this, and then,
7 of course – and I'm going to follow my own rule on this and defer this item into
8 compulsory acquisition hearing 1 – there's the question of whether the CA tests
9 are met and indeed the somewhat associated degree to which tests in relation to
10 land more broadly propose to be taken for that purpose are met, because if it was
11 deemed to be met for the taking of the whole, and then the removal of the part
12 could be countenanced as still meeting the tests, there is a somewhat element of
13 instability that then flows around the degrees which the tests are met for all of
14 it. So that, I think, was –

15 MR HUMPHRIES: Obviously those questions are not directed at me and in view of –

16 MR SMITH: They're directed at the applicant.

17 MR HUMPHRIES: I won't be tempted to respond, much as I might like to, but I've
18 made my points. I've thrown the pebble into the pond and we can see where the
19 particular point goes.

20 MS LAVER: Mr Tait, I can see you're itching to jump in and I just wonder if there's just
21 been a slight confusion here.

22 MR TAIT: I think Mr Humphries' pebble has been thrown in the wrong direction, if I
23 may say so, because we're not relying on the stewardship scheme to perform
24 any function in relation to NDA[?], so far as this project is concerned. So that
25 is not something that obviously is a misunderstanding. It's not something we're
26 proposing. So as far as –

27 MR HUMPHRIES: But what this –

28 MR SMITH: Hang on a minute. Let Mr Tait respond and then, if needs be, we'll come
29 back to you for a clarification.

30 MR HUMPHRIES: Fine. Either way.

31 MR TAIT: So far as the reduction is concerned, that has arisen, as Mr Cryer explained,
32 by looking further at the extent to which the residual land would perform the
33 function of ecological connectivity, and that's an appropriate response when one
34 is considering any compulsory acquisition to be checking throughout, so one

1 isn't taking more land than you need, and one is flexible and responsive to those
2 who make representations in that respect, but it's the first point I really wanted
3 to respond to about the pebble.

4 MS LAVER: In Mr Humphries' defence, I don't think he was arguing that you were
5 taking land for stewardship. As I understood it, the point Mr Humphries was
6 making is you had put before the examining authority a book of reference and
7 land which included those two sites where the basis for acquiring them was for
8 the biodiversity nitrogen deposition. So therefore you were setting before us,
9 before the change request, that there was a case to be made for taking the land,
10 and that was for the offset of the compensation.

11 The point, I think, as I understand, is that, okay, they've come out for the
12 reasons explained – because you've got a landowner that doesn't want to sever
13 his agricultural parcel[?] – and all those things are reasonable reasons not to
14 acquire land, but Mr Humphries' point still stands. If you had made the
15 compelling case in the first place before us, you still need almost to substitute
16 the land you're now taking out, and I think that's the point you were trying to
17 make, Mr Humphries, and I feel there's some merit in that line of argument.

18 MR HUMPHRIES: The point is it says explicitly that the increased ecological
19 connectivity would be realised by the stewardship scheme and so the additional
20 connectivity of the previous proposals would not be reduced, therefore we're
21 taking it out. In other words, they're taking it out. If they said, 'We're taking it
22 out because we can't achieve the benefits on this particular piece of land because
23 of stewardship, but we're going to do it over here,' then I would understand that.
24 What they seem to be saying is, 'We're taking it out because of stewardship.
25 We wouldn't get the benefits here, but we don't need to replace it,' and that's
26 what I don't fully understand. That's my point, in effect, that you're relying on
27 what's happening on that land already to achieve your 240 hectares, which
28 you've told us there was a compelling case for.

29 MS LAVER: Mr Tait, could you just pause and not come in at that point, because I think
30 we do need to go to other parties, but I think it's a point that's well raised by
31 Mr Humphries and I think it is something which you are going to have to
32 respond to, not necessarily today but in writing, because it was the reason behind
33 the question I asked Mr Cryer in the first place around what was the purpose of
34 putting those sites in and what was in the book of reference to justify them, and

1 we're not straying into CA territory, but there was a justification put in for them,
2 and whilst you feel that you don't need the land, it begs the question why it was
3 there in the first instance, and that's the point Mr Humphries is making.

4 So we'll carry on to hear from the rest of the interested parties. Is there
5 anybody else, because we've heard quite a bit on the first three parts of nitrogen
6 deposition. Are there any other parties that want to come in that are not in the
7 room? I can see on the virtual, we've got Gravesham and we've got Kent Downs
8 AONB, but is there anyone else in the room?

9 MR GRANT: Ma'am, Nick Grant for Natural England. No, there's not a lot we
10 particularly wish to add to this. As the appellant very fairly said, there's a lot of
11 agreement between us and them, and that's recorded in the statement of common
12 grounds. So unless you have questions for us, then I don't think there's much I
13 can do.

14 MS LAVER: No, that's fine. Mr Edwards.

15 MR EDWARDS: Douglas Edwards for Thurrock. Likewise, we have no comments on
16 the approach. We do have some comments on the site surveys, which is agenda
17 item 6(a)(iii), but we'll come to that in –

18 MS LAVER: Okay, Mr Edwards, I know you want to talk, but I'd like to go to the
19 authorities first and I can see Michael Bedford's patiently waiting in the virtual
20 room. So Michael Bedford for Gravesham, please.

21 MR BEDFORD: Thank you, madam. Michael Bedford, Gravesham Borough Council.
22 We're on item 3, so I'm quite happy to defer that. I just didn't want to, in a
23 sense, miss the opportunity, because I noticed that Mr Humphries dipped in with
24 item 4 and so I didn't want, as it were, this to be our only chance to deal with
25 other items on this, but no, so far as items 1 and 2 are concerned, we didn't have
26 anything that we wanted to raise. Thank you.

27 MS LAVER: Thank you. The reason that Mr Humphries dipped into 4 is because I did
28 include it for the applicant and they did cover that point. So if you don't have
29 anything to say on item 4, then I will move to the Kent Downs AONB. Mr
30 Johannsen, please.

31 MR JOHANNSEN: Thank you, and once again, supporting Kent County Council's
32 point, the applicant has accepted several times today that the ecological
33 compensation should be as close to the impact as possible, and my colleague has
34 done some calculations which I think we submitted, about where the impact is

1 felt and where the compensation is made, and there's a significant disparity
2 between the two. So the figures we have is 176 hectares of land predicted to be
3 affected, of which less than 19 hectares would be north of the river, which means
4 that 89% of the impacts are felt in the AONB significant habitats, important
5 characteristics of the AONB, or close to it in its setting.

6 The figures we have now is that just 21% of the total compensation land
7 would be in the AONB, which we feel raises quite significant questions about
8 the approach which has been discussed about connection and compensation,
9 ecological compensation being proximal to the impact, and, I mean, we've
10 talked about severance. The truth is there is very significant ecological severance
11 between the north and the south of the river, and so that is an issue from our
12 perspective. We have made this point and the minor refinement consultation
13 report says it responds to all of the issues raised, but it hasn't responded to this
14 particular issue, and in addition, there's a claim that landscape scale
15 enhancement through the delivery of nitrogen deposition compensation sites
16 would be achieved, and again, with the loss and significantly less investment in
17 the Kent Downs and in its setting means that that is not being achieved.

18 MS LAVER: Mr Johanssen, if you could stay on, I just want to follow up on that. I was
19 well aware of the disparity between the compensation scales being proposed on
20 the north to the south, but in terms of the AONB, are there parcels of land which
21 you felt should have been included for nitrogen deposition compensation, and
22 were those put forward by your unit?

23 MR JOHANNSEN: We had many discussions about the Blue Bell Hill site and we're
24 essentially working on the basis that that would be included, and so if the
25 judgement is made that it is removed, then I think there would need to be a search
26 for other suitable sites as proximal as possible to the impact. We haven't done
27 that search and we haven't put forward sites, but obviously we would work with
28 the applicant to try and find the right sites as we have in the past.

29 MS LAVER: So with the loss of that Blue Bell Hill and Burham site, if that comes
30 forward, are you suggesting then the project doesn't enhance the AONB,
31 because that would have been an opportunity if not.

32 MR JOHANNSEN: Yes, it certainly doesn't enhance the AONB.

33 MS LAVER: Okay, thank you very much. I'll now go to Ms Laura Blake, please.

1 MS BLAKE: Thank you very much, Ms Laver. Laura Blake, Thames Crossing Action
2 Group. Obviously we agree with the questioning on the fact of the replacement
3 land if Burham site is removed, but I would also just like to flag up the fact that
4 the Burham site was actually added to the order limits without public
5 consultation because it was actually added to the order limits following the local
6 refinement consultation, which happened in May and June 2022, but obviously
7 prior to the DCO application going in, in the October. So I don't know. It just
8 doesn't sit right with us, the fact that it was added after public consultation was
9 in for such a relatively short space of time; that it was added and then all of a
10 sudden is removed and then no further land is being proposed to replace it. The
11 timing seems very curious to us. Thank you.

12 MS LAVER: I seem to recall reading something – maybe at some refinements
13 consultation – about why it was added and when. I'm getting nods from the
14 room, but maybe they can clarify. So I'd like to come back to you now, Mr Tait,
15 if you want to give responses before we go on to part 3.

16 MR TAIT: Thank you very much. Two matters, I think, both of which it will be helpful
17 for Mr Cryer to respond to. The first is, pursuant to the reduction process, what
18 the thinking was that led to the conclusion that there was a sufficiency of
19 compensation without the additional land and secondly, in relation to the
20 north/south distribution. So I wonder if, Mr Cryer, you could deal with those
21 two points in turn, first of all the thinking in terms of ecological connectivity
22 with the land which is left following the reduction.

23 MR CRYER: Mr Cryer, for the applicant. So at application the Burham and Blue Bell
24 Hill sites were put in and at that point the additional connectivity and the
25 additional ecological value of the Burham site and of reservoir field – which is
26 the southern field at the Blue Bell Hill site – were considered to be significant
27 and therefore to put forward, they would in themselves provide significant
28 connectivity within the ecological network over and above the ecological
29 connectivity ever achieved by Cossington Field, which is the northern field at
30 the Blue Bell Hill site. So part of the new information that we received talking
31 to the landowner was that that significant additional connectivity of those 39
32 hectares between Blue Bell Hill and Reservoir Field would no longer achieve
33 the significant amount of additional connectivity, and therefore they were no
34 longer suitable to propose for ecological compensation. So when they had value

1 – or when we thought they had value – we put them forward in the application
2 proposals, but when we realised that they wouldn't have significant value over
3 and above the connectivity from Cossington Field, then it is inappropriate to
4 continue to propose those, especially in balance with the potential to put the farm
5 out of business. So we put those areas forward because at that point they added
6 significant connectivity to that network, and when we found that they no longer
7 did, then we took them out because it was no longer suitable.

8 MS LAVER: So I'm trying to understand the rationale as to how, as the applicant with
9 professional expertise that you had, you identified that the land had connectivity
10 value for ecological purposes, but you seem to suggest that then the applicant
11 said, 'Oh, no, it doesn't,' and then the applicant just said, 'Oh, okay then, it's of
12 no – it doesn't serve its purpose for us now.' That seems a really simplistic way
13 of picking sites, so unless I'm misunderstanding – but I got the impression that
14 it was the applicant who'd made the decision that there's no longer a
15 connectivity value here. So could you just elaborate on that a little?

16 MR CRYER: Yes, I can. So our assessment of its original value was on the basis of it
17 was an arable field with very poor diversity boundaries to that field, so any
18 habitat creation on that would create a large increase in biodiversity within that
19 strip of that field. The additional information we got from the landowner wasn't
20 that he didn't think that was true, it's that he had recently gone into a stewardship
21 agreement with Natural England to enhance all the boundaries on that farm, and
22 therefore the northern boundary of that southern field is now going to be
23 enhanced with planting and strips of semi-natural habitat, which is what we
24 would have been doing. So it wasn't that –

25 MS LAVER: I understand that now. It just seems as if it were really simplistic, but what
26 you're saying is the type of works that you would have put in which would have
27 been part of your compensation are the works which the applicant said, 'Well,
28 we're doing already,' so in fact there's no uplift; there's no greater
29 compensation. Right, I understand.

30 MR HUMPHRIES: Madam, can I just come back on this? I think the problem – and we
31 don't have a closed mind on this, but we do want to understand the issue. The
32 objectives that are set out in the ES are to increase the amount of high-quality,
33 wildlife rich habitat, number one – and two, to position that habitat so that it
34 increases connectivity. All the discussion from National Highways has been

1 about connectivity, but that's only where you put the increased amount of
2 species rich habitat. We need to come back to the point about increasing the
3 amount of high-quality, wildlife rich habitat, because this is not about ecological
4 connectivity primarily, this is about nitrogen deposition reducing the quality of
5 habitats. It's that that one is compensating for, and then when you put the
6 replacement in, you try and do it in a way that connects other bits of site.

7 Not suggesting Mr Cryer needs to come back now, but when they do come
8 back in writing, it's that issue that we need to get to the bottom of, I believe.

9 MS LAVER: I think that's a point well made, Mr Humphries, and I think the applicant
10 – you need to take that on notice, please, and respond in writing at the next
11 deadline. Thank you.

12 MR TAIT: We'll respond on that, and in particular we will respond on the question of
13 the process as to, during that reduction, in considering why ecological
14 connectivity is sufficient with that reduced area.

15 MS LAVER: I think the point for Mr Humphries is he appreciates the connectivity, but
16 it's more than just connectivity. You are still seeking nitrogen deposition
17 compensation, so it's a double-edged –

18 MR CRYER: Yes. Mr Cryer for the applicant. This is what I was saying before about
19 the dual objectives. So we are trying to increase the amount of semi-natural
20 habitat, yes, and the scale of that – the success criteria of that increase was to
21 have the comparable area across the project, and whenever we're considering
22 representations we get from landowners and looking at the potential for any
23 change, we keep going back to those two objectives.

24 So even with the latest change post application, we still have a greater area
25 of habitat creation than we do significantly affected habitat, and therefore that
26 objective of creating new habitats on the comparable area is still achieved. And
27 the connectivity within that network that the Bluebell Hill site lies within is still
28 achieved because Cossington Field still connects several woodlands together
29 that are currently disconnected or severed in the landscape.

30 It is the case that Cossington Field on its own will be slightly less
31 additional connectivity than if we had half of Reservoir Field as well, but that
32 additional connectivity from half of Reservoir Field is just marginal now, since
33 we've found out that it will be planted up as a stewardship anyway. So you're
34 not achieving anything for that, so it's not suitable to continue to propose

1 something that isn't going to help your objectives, but we do still achieve the
2 two objectives of comparable area and connectivity within that ecological
3 network.

4 MS LAVER: I think my colleague Mr Pratt wants to come in, Mr Tait. He's been sort
5 of waiting patiently on the side, and before I let you come back in – in case we
6 then go away from the point he wants to make – I think it's timely, but we do
7 need to think about getting on to the next item.

8 MR PRATT: Yes, I've got one question and it can come back as part of your written
9 response, and that is the way I hear your part of your discussion on why you no
10 longer need the field is it's marginal and it's going into stewardship anyway.
11 Stewardship, when I was last involved, was a six-year period or a 10-year period.
12 Your road is likely to be around a little bit longer than that. By allowing – by
13 not taking it on at this point, are you not future-proofing the benefits, or is it
14 really that marginal that it doesn't matter? If you could take that sort of thought
15 away and come back, that's really my only question, Ms Laver.

16 MR TAIT: We'll come back in writing on that. We're conscious of the time. The only
17 other point is in relation to the north-south differential, and just in high-level
18 terms, madam, Mr Cryer can deal with that.

19 MS LAVER: Yes, please.

20 MR CRYER: Mr Cryer for the applicant. So as part of the site selection process, in the
21 project air quality action plan we look at identifying the networks that the
22 affected sites lie within. As I said earlier, we identified those four clusters of
23 sites from proximity analysis with the GIS, and those were therefore our search
24 areas for compensation areas to build resilience within those networks. So
25 government boundaries/AONB boundaries north and south of a river are not
26 relevant to that analysis. The analysis is about the actual ecological networks
27 that those affected sites lie within. So we made no attempt, nor I think is it
28 appropriate to make any attempt, to apportion to other types of boundaries that
29 are not ecologically based. So within each of those sites we also didn't want –
30 and deliberately didn't want – to try and say, 'Oh, right, there's nine hectares
31 affected in that network, so we need to find nine hectares of compensation.'

32 We looked at the opportunities and the constraints within each network to
33 spread our scale appropriately across that. So if you look for instance south of
34 the river, there is a lot more woodland in the landscape and there's a lot better

1 connectivity of those woodlands already in place, so the opportunities that you
2 have to actually reconnect some of those woodlands are relatively small-scale,
3 so we're achieving additional connectivity with one or two fields, whereas in the
4 north there are far sparser resource in terms of woodlands, so to try to connect
5 things up that are a long way away from each other, you need a bigger space to
6 do it.

7 And on top of that, one of our search criteria – or one of the criteria we
8 considered – was it was preferable to use land that was not compulsory. So Hole
9 Farm, for example, was already owned by National Highways. The site has
10 completely jumped out of my hands [inaudible] – was offered by the local
11 authority and therefore again doesn't need any compulsion. They're both on the
12 north. So a whole bunch of things that we needed to consider to find a balance,
13 but again goes back to those two objectives. Have we achieved greater
14 connectivity within each of the four clusters? Yes. Have we got a comparable
15 area of habitat creation across the project? Yes.

16 MR TAIT: That's all we wish to – at the moment. I know it's been a –

17 MS LAVER: I don't have any questions on any of that, so thank you. I do want to move
18 on now to – and we're running really close to the end of the day and all feeling
19 a little bit weary, but we've still got to cover this point about nitrogen deposition,
20 and it's about site surveys on the compensation sites – so the question is there in
21 the agenda. I suppose in my mind is if the level of existing – I want to know if
22 the level of existing nitrogen deposition on the compensation sites has been
23 assessed, noting for example you've got Hole Farm and the Bluebell Hill site
24 are both in close proximity to existing roads on the strategic network, with their
25 own nitrogen deposition impacts. I suppose where I'm going is have you
26 explored whether those sites are suffering from their own deposition problems,
27 so therefore whether that's been factored in?

28 MR CRYER: So whether a potential site within what we were calling the nitrogen
29 shadow at the time – so within 200 metres of a highway – was something that
30 we considered in our workshops as a preferential thing. So if we could find sites
31 that were outside of that nitrogen shadow then you wouldn't be trying to create
32 habitat that already had a significant nitrogen input from a road, but the reality
33 is all of the South East is massively polluted by nitrogen, so it was only a
34 preference, it wasn't a hard constraint. So some things were hard constraints,

1 like if it would affect a landscape character or something. Others were 'It's not
2 preferable but it's still okay' – you can mitigate that.'

3 The reality is that if you've got a site that's a very low biological interest,
4 such as an arable field, and you create some semi-natural habitat on that, it's
5 going to be much more wildlife rich. It might not quite get to the same wildlife
6 richness as if it had more nitrogen being dumped on it, but it would still be
7 massively more diverse than an arable field, and that was the point as to why it's
8 not a hard differentiator. It was something we thought about. Some of the sites
9 are in nitrogen deposition, but then they had other opportunities and value within
10 the network of just its juxtaposition to other sites. So it was a consideration, but
11 not a hard constraint.

12 MS LAVER: Just taking the survey a slightly bit further, and it's off nitrogen deposition,
13 but it's for those compensation sites and whether any archaeological surveys
14 have been undertaken on those sites.

15 MR CRYER: I believe no archaeological surveys have been carried out yet. They will
16 be, but the mosaic approach that we're going to take allows for whatever you
17 might find in that. So if there are some archaeological items there that it
18 wouldn't be appropriate to plant trees on top of, for example, you can deal with
19 that in your detailed design by planting the trees somewhere where those
20 archaeological items aren't, and allow a grassland to form on top of them. So
21 we have flexibility in detailed design to deal with those sorts of issues. And
22 equally where there's utilities or something, again you can have your trees
23 somewhere else because it's a mosaic approach.

24 MS LAVER: While you're on the mosaic approach, it just brings me then down to the
25 last item on this agenda which is about the habitat makeup, and the point made
26 on the agenda is 'reported that the mosaic of habitats for nitrogen deposition
27 sites is expected to achieve a ratio of approximately 70% woodland to 30% other
28 associated habitats,' so is that approach well founded? It would clearly pick up
29 the point if you find any other things under the ground that you didn't know
30 were there, but possibly that's a question for the room and we will need to go to
31 parties on this. I know Mr Bedford from Gravesham wanted to come in on the
32 survey point, but it's whether you had anything to add to that before we go out
33 and try to close off agenda 6.

1 MR CRYER: Mr Cryer for the applicant. So the approach was developed with Natural
2 England, and the management requirements that are set out in the guideline
3 landscape and ecology management plan are ‘To provide permanent wildlife
4 rich habitat, primarily woodland at a landscape scale; provide similar or more
5 diverse habitats significantly affected by the project; provide the most
6 ecologically appropriate mosaics for that site; and to integrate the objectives
7 with local nature conservation plans and initiatives.’ So these are the
8 management objectives. So what we know is mosaics are more wildlife rich
9 than solid blocks of a single habitat – edge habitats, transition zones – so they
10 will be more wildlife rich, so that’s the first point.

11 Most but not all of the significantly affected habitats are woodland, so
12 that’s why there’s a predominance of woodland in that mosaic, but some are
13 grasslands and associated habitats, so you want to represent that as well. And
14 then the mosaic approach allows you to be more flexible to fit in with local
15 initiatives, to be more appropriate to that specific site as well as achieving those
16 overall aims of wildlife richness and connectivity.

17 So all of those things tell us that mosaics are best, needs to be mostly
18 woodland to reflect the impact, and it gives us a lot of flexibility in the final
19 design to take into any new information that comes available, or any
20 opportunities we can take to feed into local initiatives.

21 MR TAIT: Thank you, madam. So far as the surveys – they’re recorded at APP-418 in
22 appendix 8.22 to the ES on those individual sites.

23 MS LAVER: Sorry, could you repeat that?

24 MR TAIT: Yes. It’s APP-418, which is appendix 8.22 to chapter 8 of the environmental
25 statement.

26 MS LAVER: Does that conclude everything on those two parts?

27 MR TAIT: Yes.

28 MS LAVER: So I want to just go out to the room to see if we can close off agenda 6.
29 We’ve obviously – we’ve got surveys and we’ve got habitats makeup.
30 Mr Edwards, you’ve put your hand up, and I know Mr Bedford from Gravesham
31 wants to come in. If it’s okay with you, Mr Edwards, I’m going to go to
32 Mr Bedford because he did already flag he wanted to come in on surveys. So
33 Mr Bedford for Gravesham, please.

1 MR BEDFORD: Thank you, madam. Michael Bedford, Gravesham Borough Council.
2 You've already touched in part on this point through your question and the
3 clarification that has been given about the absence of archaeological surveys at
4 the moment, and obviously the implication of that for what extent the treatment
5 of the new habitat creation is going to be appropriate on particular parcels, and
6 it's obviously been indicated that it would not be appropriate to plant trees in
7 areas which turn out to be of archaeological interest – but that's obviously an
8 unknown at the moment.

9 I think our concern is simply that looking through what is said in the air
10 quality action plan about the process that led to the identification of these sites,
11 and then what is said in the OLEMP about the proposed future proposals for
12 these sites, we think that at the moment there's been insufficient attention to the
13 wider environmental constraints that will include local heritage, particularly
14 below-ground archaeology but also landscape, and we're not at the moment
15 persuaded that the OLEMP is sufficiently as it were rigorous or strict in its
16 controls to ensure that the impacts on those other environmental topics are
17 adequately secured when it comes to the delivery of these nitrogen deposition
18 sites.

19 But I think the answer – and this probably is putting as it were something
20 on us – the answer is that we need to be I think probably quite clear about where
21 we think those weaknesses are in the OLEMP, so that you can get an idea from
22 us about what we want to see to tighten the OLEMP to ensure that those other
23 environmental topics are adequately addressed, so that the nitrogen deposition
24 sites, if they're deliverable, are not deliverable at the expense of other important
25 environmental issues.

26 MS LAVER: Wonderful. You've given yourself an action, Mr Bedford, so we'll add it
27 – so thank you very much.

28 MR BEDFORD: Well, indeed, but we've got to move things forward and I say that's the
29 concern, but I say I think that's how we think it needs to be addressed. Thank
30 you.

31 MS LAVER: Wonderful, thank you. So I'll come back to you, Mr Edwards.

32 MR EDWARDS: Yes. Douglas Edwards of Thurrock Council. Our point is a very
33 similar one to Mr Bedford's about the adequacy of the surveys that have been
34 carried out, and therefore the robustness of the assumptions and deliverability of

1 the nitrogen compensation strategy, but on the technical and particular point, if
2 I could hand over to Mr Plumb for Thurrock and he'll explain the basis of the
3 concern.

4 MR PLUMB : Thank you. Steve Plumb for Thurrock Council. One of the sites which
5 has been referenced is Buckingham Hill in Thurrock. As a matter of principle,
6 we can understand its inclusion and it delivers the connectivity which is being
7 discussed. We're aware that surveys have been carried out for ecological value
8 on site. The issue which we've raised previously and still not been addressed is
9 that it is a former landfill site. One of the issues which nobody knows is the
10 depth of the soil, therefore how realistic it is to carry out planting.

11 Under the OLEMP – under 6.11 which covers Buckingham Hill – it's
12 6.11.5 under the management requirements, it describes it as 'primarily
13 woodland at a landscape scale'. The issue we've got is obviously if overall
14 we're looking at 70% woodland, this site is very unlikely to be able to deliver
15 that amount of woodland.

16 We're already hearing now about you've got sites – about the archaeology
17 being excluded. You're getting the sort of cumulative effect of sites being taken
18 out and not being able to deliver the – overall, will 70% be achieved? Will you
19 start knocking these sites out? That's the main point. Thank you.

20 MS LAVER: It's a point well made, and I think it will need a response – not necessarily
21 verbally, but as a follow-up. Thank you. Is there anybody else that wants to
22 come in on the issue of surveys and habitat makeup, or can we close out item 6
23 after we've just had a brief response from the applicant?

24 MR TAIT: Just see if Mr Cryer wants to respond to that last point, but we're conscious
25 of time.

26 MR CRYER: Mr Cryer for the applicant. We're aware of the Buckingham Hill issues
27 and my expectation that during detailed design, when we look at that and how it
28 can be – what can be or is preferentially established on there is unlikely to be
29 one of the most wooded of the sites, and therefore there will need to be some of
30 the other sites that are more than 70% wooded.

31 The amounts of constraints that we're looking at – admittedly we've seen,
32 'Oh, there might be archaeology' or there are – well, there's Buckingham Hill,
33 and then there's utilities – that's not looking at all to me like it's going to force
34 us past that 30% of grassland or associated habitats, and it's part of the detailed

1 design process to ensure that happens, and how the applicant manages across the
2 whole scheme when management plans come forward for each site they are
3 appropriate for that site but they also achieve that overall objective. So it is a
4 detailed design matter that needs to be managed.

5 MR TAIT: Thank you, madam.

6 MS LAVER: Thank you very much. I think we've really reached the end of the line,
7 and I know I did say to parties we would cover item 8, but item 8 – which was
8 the habitats regulation assessment update – was really just to get a position of
9 progress and I do think that could be dealt with in writing from the relevant
10 parties. I mean, really the two parties are Natural England and the applicant, so
11 if they're both content and they're both in the room, I'd like not to open the floor
12 for verbal discussion on that, and then we can close this hearing out for today.

13 MR TAIT: And we will just be recording all the agreement that has been reached and
14 then identifying the very few issues still remaining, so we can do that in writing
15 very simply.

16 MR SMITH: Indeed, and that's much appreciated, and we're conscious of course that
17 the substantive HRA matters went out in the written process in any case. We
18 put the bulk of them into ExQ1, so the fact that we're now in writing – it would
19 have been nice if we'd had extra time to allow people to ventilate any
20 outstanding matters requiring clarification around the table but here we are, it's
21 the end of Friday and I think it's probably best in the interests of everybody's
22 sanity and safe journeys homeward that we stop.

23 MS LAVER: Right, before we just formally close out the hearing, just a very few rounds-
24 offs. We have been keeping actions. Gravesham kindly taken a few on, and so
25 have Kent, and so have Natural England – so thank you. We will publish those
26 actions in the early part of next week. This has been issue-specific hearing 6.
27 Some of the items 5, 7 and 9 we will defer to a subsequent hearing, and I'm just
28 saying that on the record before we close off today. Anything that's been spoken
29 about today, and anybody's who's watching at home or on the recording can
30 respond in writing to anything that they've heard by the deadline 4 on
31 19 September, so there's plenty of time to still submit views in writing.

32 Unless there is anything else that anyone wants to raise before I close this
33 out – oh good, no hands, we'll all be home for the rugby at 8.15. I can assure
34 you that wasn't our primary agenda; it's just been a very, very long week. So

1 thank you all for your time this week and your patience, and we will be back
2 again next week.

3 MR SMITH: Indeed, and if we all just briefly add our goodbyes, so from Rynd Smith,
4 panel lead, goodbye to everybody, and look forward to seeing those of you who
5 are joining us on Monday for issue-specific hearing 7.

6 MR TAYLOR: Goodbye from me as well.

7 MR YOUNG: Yes, goodbye from me.

8 MR PRATT: Goodnight, everybody.

9 MS LAVER: Goodnight, everybody. This is the closure of issue-specific hearing 6.

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11

(Meeting concluded)