

25 June 2014

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09:38

NC	[9.30] Sir, we're submitting a note - there were rail centroid connectors.
Insp	Prof Bonsall - would you have wanted to ask different questions if you had been told this?
PB	Yes [says] of Mr Chadwick.
Insp	Opportunity to ask when he is recalled to be asked Qs by Mr Jones. There was another point too?
PB	Yes the Stated Preference for Trolleybus as opposed to bus.
NC	We agree that exceptionally when new info provided Prof B can cross-examine on points directly related to that new info- but not a general invitation to repeat cross-exam.
McKinnon	Your proof para 3.19 doesn't refer to the Initial business case [C-1-5]. Why?
Ch	First 3 were the formal ones, then BAFB which was a requirement of the Dept, then 2012 a response to a request from DfT. Last one seemed opportune to refer to business case review.
McK	Do they break with the initial business case or follow on from it?
Ch	Each builds on the previous one but is supplemented by additional analysis.
McK	Overcrowding. There was a HoC Transport Cttee Report in 2003 that concluded
NC	Mr Chadwick should be allowed to look at it. Fairness and context.
McK	Appendix to OBJ-1622. Pages 3 and 24. Recommendation that overcrowding needs to be taken more seriously. Yet at [para 9:46] of your Rebuttal Mr Chadwick you said sitting ratio was similar to diesel buses. Are you saying no worse than with buses?
Ch	No. Conflating standing with crowding. The Transport Cttee was referring to chronic crowding. We are talking about standing within the design tolerances. We set out a number of alternative vehicle configurations and as it says at 2.36 of the rebuttal outside the peak times people will get a seat - analysis at APP108. Majority will stand in the peak period but that's not the same as crowding. A load factor is the percentage of the design capacity of the vehicle.
McK	Article [BM47 appendix].
Ch	I've not read the article in detail but the practice in the UK particularly on rail is we identify the capacity of the vehicle as the number of seats and the design capacity for standing.
McK	You deny that the load factor is 300%.
Ch	It's a percentage of the design capacity.
McK	The standing density. I think Mr Chadwick will be familiar with the concept and the standard generally applied in Europe is 4 passengers per sqm?
Ch	That would be a familiar benchmark - I don't think it's a standard as such.
MK	Authors suggest an indicative density of 4-5 passengers per sqm.
Insp	Page 37: An indicator of standing discomfort.
McK	Given that it'll be a single articulated trolley bus and you said would prefer the option of 60 seated passengers, would give a density of 8 persons per sqm?
Ch	Well APP134 I have 2 references. We set out what would be the density of standing. Less than 4.
McK	I'd be very interested to see how you arrived at figure of less than 4. [reads it]. I can't understand the reasoning.
Insp	Outside the inquiry you can ask clarification.
McK	In my PoE I gave evidence of the Sitaro G bus used in London - 158 passengers with seating for approx 60. PoE at para 8.5. Standing capacity is 8 passengers per sqm on that. Can you explain how Mercedes Benz could come up with a figure that's so different from the one you've come up with in this document that's been handed out?
Ch	Is this calculation your calculation or Mercedes Benz's?
McK	It's mine but it is their official measure.
Ch	Well if it's been licensed in the UK it must be considered to be safe in the configuration that it's operating.

Insp	Something that needs to be clarified outside the inquiry. Too complicated to see how the difference has arised [sic].
McK	Was it taken into account in the modelling?
Ch	Crowding not modelled but we satisfied ourselves that capacity was appropriate.
McK	Some prefer to let a crowded bus pass - impact on waiting times- was that fed into the model?
Ch	No it was not- I repeat previous answer.
McK	When Metro submitted Prog Entry Business Case in March 2012 it claimed [C2 para 6.3] that journey from Holt Park to City Centre would be saving of 1 or 3 minutes from the current journey time. Then Metro revised upwards the time saving drastically. What inputs to the model changed to increase time savings?
Ch	Input from DfT - wanted us to look again at the runtimes. If you look at G-4-94 para C page 3 we said run times had been re-assessed. 2 things happened- developed and applied a new run-time model. And the design of the scheme was modified between the scheme subject of 2012 submission and the current scheme.
McK	You said the design of the scheme modified. Can you answer Qs on that?
Ch	Not on the detailed design but broadly re-routing in South via Belle Isle rather than Rwy alignment; specification of a corridor at the University at Woodhouse Lane, work at junctions; work by Mr Robertson for priority on traffic signals. All fed into revised runtime model.
McK	I was only asking about the northern route but since you mentioned the southern route para 1.12 of C-1-5, you might want to look at. States that as a result of the realignment the journey time is 2 minutes longer - an increase of 17%.
Ch	That's correct. Some changes made it shorter and some longer. What the alignment through Belle Isle does is add costs to increase the catchment, although it increases the runtimes from Stourton.
McK	Pra 2.49 of your rebuttal to my PoE. As can be seen from C-1-5 the Belle Isle Alignment increases the overall benefits. Is it gratuitous [sic] that the HS2 route came along otherwise wouldn't have done that?
Ch	Given us the opp within the cost envelope to increase the benefits of the scheme.
McK	These benefits outweigh the increase in journey times?
Ch	Overall that's correct.
McK	And the benefit is it takes in a bigger catchment than previously.
Ch	That's part of it.
McK	Has the design team considered if a longer route would have even more benefit?
Ch	A number of things considered but alternatives each have partic challenges associated with them and were filtered out early on.
McK	Para 3.5 of G-3-17. Don't need to look at it - Leeds Indicative Board Report 19th June 2013. Stated intentio to extend the scheme to Aire Valley. DO current costs relate to future proofing?
Ch	No -no latent costs for future extensions. If future schemes, would have to be assessed on its merits. I distinguish between future proofing and extensions. At prsent no more than aspirations.
McK	My understanding is, no account taken of congestion and future-proofin for that either?
Ch	No don't accept that. At least half the scheme segregated from direct interaction with traffic. Other parts give it priority on the street and attempt is to insulate as far as possible from congestion - Mr Roberston - signalling strategy.
McK	Model assumes congestion remains the same so everything you've set out is based on guesswork.
Ch	The modelling does predict traffic growth. The congestion is an output of the modelling rather than an input. What Mr Hanson does is make assumptions about level of traffic and then congestion is an output.
Insp	I think I understand the answer to Prof Bonsall that you may have misunderstood.
McK	Para 2.2 of C-1-5 states that City Centre would be the newest NGT stop to the proposed HS2 station and would be 8 minutes away. Has the loss of passenger traffic at Leeds City Station following arrival of HS2 been taken into acct in the risk assessment?
Ch	No
McK	Have increased electricity prices been taken into act.

Ch	Have ,made an assumption in line with govt projectons. Have we done sensitivity tests around that, no. But electricity cost is a small proportion of the costs and don't consider it a major risk - main costs labour and leasing.
McK	Are you not aware that cheap hydro-power is a major factor behind the systems in Switzerland and British Colombia?
Ch	Circumstances abroad differ. I know from speaking to people in Switzerland that they see it as green and also as energy produced inside the country. Price not important.
McK	Para 29.8 of C1 says will allow Leeds to take advantage of renewable sources of electricity and repeated elsewhere. Has this been included as a benefit in the business case?
Ch	Not in the monetised business case. That is base don there being a small increase in carbon emissions.and a monetised disbenefit. But as I said to Prof Bonsall it's the principal reason we feel confident sayng we can outweigh the small monetised disbenefit by the changes that would happen. The promoters could "fre-ride" on the change in energy mix, or puposely secure their energy from a renewable provider.
McK	That's what Metrolink do now.
Ch	I'm not aware of that.
McK	A decision to follow Metrolink and do it now, would it be harmful to the VfM case?
Ch	No. If we were to agree that with the Dept that would be a benefit.
McK	Green energy costs more?
Ch	Yes but a trade-off between benefits and costs.
McK	Without study how can you say the benefits would outweigh the costs?
Ch	Quite right that would require detailed study. Just giving my view now. If a decision was made it would be taken in 5 or 6 years time but it could be an added benefit that would come at an additional cost and promoters would have to come to a view if it would or would not be.
McK	Seems strange that if, as you suppose, the benefits outweighed the costs, that hey would not have included it now.
Ch	Well depends on the materiality of it. We take account of the proportionality rule and focusing our efforts on the things that make a big impact on the decision. This would have an additional benefit but would not have a big effect.
McK	We are told 90% of the costs relate to highway changes. Do you know how long Headingley Lane would have to beclosed.
Ch	I don't. Not 90% of the costs- Table 10.1 of C1 has a breakdown of the cpital costs - construction cost £103.1m. And also utilities and inflation. But it isn't 90% of the total.
McK	Sorry for giving the wrong figures but those were taken from 2 councillors responsible for this project at a public meeting.
Insp	I'm not sure anyone can answer it as the construction programme has not been done yet.
Ch	My understanding is it would be measured in weeks.
Insp	Very difficult to answer if no-one appointed to build it.
McK	Hasn't been input?
Ch	No it hasn't bee input. Comes down to materiality. Will be a code of construction practice. Part of code is to minimise impacts on traffic. There's flexibility so that works can take place at quietest times.
McK	Where similar schemes have happened elsewhere, people have gone out of business.
Ch	If you look at tramways, major developent. In Birmingham, roads completely rebuilt. That is not the intensity of work for this scheme. My understanding is, no different to remodelling junctions or surfacing of roads.
McK	Yet it will take years.
Ch	Part of the reason is to minimise impacts to make sure areas not affected longer than they should be and undertake less time-critical works .
McK	Where works take place it will cause disruption?
Ch	It will but code of construction is there to allow businesses to trade as close to normall as possible.
McK	Has an independent credit scrutiny of the scheme been carried out?
Ch	Not sure what you mean. The City Council has a AAA credit rating.
McK	Would have helped the Insp?

Ch	What exactly would be scrutinised?
Mck	When one takes place they are not interested in the sorts of things that seem interesting to you like optimism bias which can be very high on schemes like this
Ch	Well a credit scrutiny would be on creditworthiness of the borrowers as a whole. No local authority has ever defaulted.
Mck	I mean of the scheme- something Standard and Poors recommend.
Ch	I'm familiar with the work by Standard and Poors and it is for schemes where significant investment of equity by the private sector - like toll roads or concessions. Not the case with this scheme where the operator is paid to run the operation and the revenue risk is with the private sector. It's not applicable in this case.
Mck	In your opinion?
Ch	Corect.
Mck	Are you aware that in Liverpool there was a consortium in place to run it before the TWAO?
Ch	Yes but a sequential process was put in place subsequent to MRT. Can't do that now. Only when we get to final approval would a contract be in place under the current government-prescribed system.
Mck	Given that Dept were raising doubts in May 2012 were you surprised they gave approval in July 2012?
Ch	I don;t recognise doubt -a dialogue and the approval was the natural outcome of that dilogue.
Mck	Thank you Mr Chadwick.
Insp	A few Qs. One raised earlier about it being the busiest route in the country.
Ch	Um, I don't recall saying that in my evidence. I think almost certainly the busiest bus route in Leeds certainly. With confidence I can say it's the busiest route served by bus in Leeds but am sure there will be busier routes in London for example.
Insp	You say the busiest bus route in Leeds but no evidence to show that?
Ch	Otley Road is the busiest corridor. A number of individual routes. We don't have access to First's ticketing data.
Insp	With your survey. Someone was asking- the survey was only doe for bus users?
Ch	Stated preference we did 2 surveys as part of that exercise. One was focused on bus users and that s the one that informed the assumptions for LTM. Was a second survey looking at drivers and P&R choices but given the change in model that data was not used and the model did not have any regard to that data.
Insp	The survey was based on existing bus users and not people who might use a bus if it was better?
Ch	Correct. Some bus users have no cars available an are captive to bus but there are some who have cars available for the journey.
Insp	Things still outstanding: -para 3.74 of Proof - said about effect on pedestrians and cyclists. Have you any assessment, any info to show the effect on pedestians and cyclists? A lot of objectors have suggested it wouldbe harmful to pedestrians and cyclists.
Ch	Indeed. Rebuttal to Leeds Cycling Campaign- rebuttal appendix.
NC	Sir I was planning to go to that in re-examination because Mr Chadwick referred to it in answer to an earlier question but we didn't look at it.
Insp	I wan to clarify with the DfT approvals. The Business Case Review, C1, is that based on changes that DfT recommended to be able to get business case approval or including other changes DfT aren't aware of.
Ch	They gave approval based on C2.
Insp	Yes and also asked for further info.
Ch	Didn't ask for anything else. Gave their own BCR and outlined why they came to that view. Promoters had 2 choices- either say "fine but no need to do additional work" -for small schemes that is sensible as it costs time and money. Other way is say we listened to what you said and have made amendments to address those explicitly. You ask if the Dept is aware of those changes. Are aware of what we've done in broad terms -letter to Mr Sunderland in G-4-94, and that's summarising what's said to them in meetings and presentations. And they were provided with the full set of C1 docs. But we don't know what their views are till SoS has considered your report.
Insp	You have had a dialogue with DfT to arrive at what is in the DfT.

Ch	Yes but not expressed an opinion.
Insp	I realise that but based on a dialogue since C2 docs. [10:58] Adjourn till 10 past 11.
DG	Submitting 2 docs - FWY128 -NE Natural England Standing Advice and FWY129 guidance from RoI on lighting and bats. Don't think it's going to be an issue but 1 passage I want to take Prof Purseglove to.
NC	Not in Statement of Case. Not calling evidence.
DG	Para 17 point sometjing - environmental effects including loss of trees and cables. Our case is that an alternative public transport scheme would not have those effects. Cross-examination limited to testing limits of promoters' evidence not advancing positive evidence about ecological effects. Guidance is relevant.
	Re-examination
NC	Asked about lighting factors - nothing in WebTAG specifically on it?
Ch	No
NC	Put to you that if congestion at Hyde Park Corner, no special lane and NGT would be held up. Mr Robertson's Appdx APP 6-3-3. Data for each junction page 22. At bottom, analysis of capacity [11:20]. Look at "headingley Lane Southbound in "do something"- what is the degree of saturation in AM Peak?
Ch	66%.
NC	Are you familiar with the degree of saturation that's considered acceptable?
Ch	Significantly greater than 66%.
NC	If greater than 93% i Do Minimum can you answer Prof Bonsall whether congestion is likely?
Ch	Low overall traffic growth predicted on Otley Road Corridor. This degree of saturation gives me comfort that it can deal with growth on traffic.
NC	What is the likelihood of congestion up to Hyde Park Corner?
Ch	So low that we need not be concerned with it.
NC	Different point now. Were asked Qs about the differential between "do smth" and "do minimum" on bus quality. Asked about changes to smart cards, ticketing, so on taken into act in do-minimum. Gave the answer that not a reasonable enough certainty to include it - swipe-in, swipe-out products in the do minimum. What did you mean?
Ch	For the specification of the do-min we include measures that are either committed (that is funding available and powers obtained so a clear route for implementation) or schemes it's assessed to be a high degree of probability that they will come forward. That is the broad definition of the do-min. There are some things that may occur in the future that are uncertain in extent or when they will happen and we exclude them from the do-min.
NC	C1, section 15.133. What was the extent of the assumption made in relation to smart ticketing?
Ch	Metro already has a programme in place I think Mr Henkel outlined to introduce smart ticketing. Has done so for concessions under English National Concession scheme and is also doing it for scholars and will do so in future. But no change in structure of fares as would be needed in my view to have significant gains in boarding time.
NC	You say do-min includes "Forecast underlying conditions". At one stage when explaining the do-min you gave the answer you just gave that it set out changes that are committed or reasonably expected but others excluded because outside the control of the promoter. Is the correct test control of the promoter or what you reasonably expect happens?
Ch	As you suggest [NC - hope I don't suggest] the latter. I think I overstated control. Some of the most significant changes like smart ticketing or hybrid buses is being pump-primed by the public sector. That is relay what I wanted to refer to - changes that have happened, their funding has been instigated by the public sector and at the moment no prospect of further change.
NC	For clarity are the things included limited to those in the control of the public promoter?
Ch	They are not limited to those in control of the public promoter.
NC	Move on to specification of the LCA. You said you need to confirm the majority of the benefits are not delivered by the minor part of the costs?
Ch	That's correct.
NC	In context, C1 para 5.4. Do we find the words you used in oral evidence?
Ch	Indeed.

NC	If we go to 5.19 in order to come to a conclusion on that issue or assist DfT come to a decision in relation to funding on this issue, how is the specification arrived at in relation to the objectives of the scheme?
Ch	As it says, specified to meet the objectives but by definition the extent it can meet those objectives will be lesser.
NC	You said the purpose of LCA was not to explore a bus-based package. What did you mean?
Ch	Goes back to para 5.4 - confirm majority of benefits not delivered by minority of the costs. If there were to be a bus based package, would be subject to design-based optimisation and if a value over £5m itself subject to a LCA test for such a package.
NC	Para 5.7: Option identification and filtering. In the Promoters' overall analysis as distinct to the business case, can you assist whether the consideration of alternatives is wider or restricted to LCA and NBA?
Ch	Wider
NC	When did it take place?
Ch	In advance of 2009 business case but in business case review in recognition that time had moved on that process was repeated in C-1-1 and the conclusion was that trolleybus remained the promoters' preferred technological option.
NC	Can we turn to section 5 of your Proof on the Statement of Matters. Page 60. Matter 12. So that to remind ourselves- whether you consider the scheme is reasonably capable of attracting the necessary funding?
Ch	Yes I consider it is reasonably capable of obtaining the necessary funding.
NC	The basis for that?
Ch	Have developed a scheme and the way it's been modelled and developed since 2009. We set out our view that there is no need to make further adjustments to CB and nothing Prof Bonsall has raised in the inquiry has caused me to change my view.
NC	You were asked about evidence NGT will support regeneration and development. Asked about C-1-18. Go to section 4 assessment of wider economic impacts. Para 4.2. What if anything does this passage, what evidence does it provide about supporting regeneration and development?
Ch	Forecast impact of additional jobs facilitated by NGT. W Yorks, Leeds City level.
NC	If one is looking for evidence of regeneration is this it or does one look somewhere else?
Ch	Well these are forecasts and derived from a model that reflects mathematical evidence on how the elements of the economy recasts.
NC	TWE can we place reliance on the exact numbers?
Ch	Well the numbers are stated precisely because in a previous promotion of a project the promoters were criticised to 4,000 so we thought we would give a precise number. Could equally be rounded to 3,700 if you prefer.
NC	You said LTM was applied in Milton Keynes.
Insp	Can I go back to the question - didn't really get an answer - said "oh could be rounded".
Ch	Like all forecasts these will have a tolerance around them. Difficult to say what the tolerance is. See no reason why the tolerances would be any more or less than the other tolerances in the evidence before the inquiry. Forecast to be a central case but as with all these things there is a tolerance around that.
NC	You said the model was reviewed in the report and put a quote in there report can we go to para 2.13 in C-1-18. Is this the quotation?
Ch	This is the quotation to which I was referring.
NC	What do DfT say about UDM?
Ch	This is report from consultants commissioned by the Dept not the Dept. First sentence is it seems well suited. Won't read it all out.
NC	Going back to Prof Bonsall's Q, "where's the evidence" does this provide it?
Ch	Well UDM gives forecasts and independent consultants have concluded it is a suitable way of assessing these impacts.
NC	Different point entirely. Leaping on [11:50]. Asked about facilities for cyclists and pedestrians. You said relevant evidence set out in Rebuttal to Cycling Campaign. Let's have a look. REB1-OBJ1470. Is the Memo 19th April the doc you were referring to?
Ch	This was the doc.

NC	You said it was set out in the Annex - where do we look?
Ch	General conclusions are para 1.4 to 1.7.
NC	Heading "qualitative assessment"- undertake by whom?
Ch	Colleagues from my firm SDG.
NC	Then heading "quantitative assessment" - what's that referring to?
Ch	Looking at cyclists only and assessing what the monetised benefits would be of the improvements that were an integral part of the scheme. These have not been included in the formal cost-benefit analysis but if you look at para 1.19, BCR increases when cycling benefits are included.
NC	So pedestrians qualitative, cyclists monetised and we have the figures?
Ch	Correct.
NC	You were asked about C-1-11. Asked about tests done and variations in travel times and NGT. The say at 2.20 halfway through passengers who will benefit from the proposed infrastructure improvements and impacts could be similar to other schemes 50% but a conservative approach adopted 25%. And similarly at 2.21 in relation to existing bus passengers. Why did you take off half of the 50%?
Ch	Er as it says we took a deliberately prudent approach for 2 reasons- one to reflect the uncertainty around scale of the benefit was seasonality- data on punctuality was from the final quarter of the year. And secondly, while looking at evidence of how schemes elsewhere led to punctuality improvements without detailed modelling we could not accomplish we thought it prudent to take a proportionate approach and the case was strong and could afford to take this prudent approach.
NC	You said recognising the limitations of the data and taking half the benefits you could have done. What did you mean, half of what you could have done.
Ch	Didn't think the data would let us credibly justify such a position so we claimed half.
NC	Conservative or optimistic?
Ch	Of definitely conservative with regard to punctuality benefits.
NC	Is the approach consistent with LCA?
Ch	It is.
NC	Were asked Qs by Prof Bonsall based on his rebuttal - look at NWLTF118 please. One of the criticisms Prof Bonsall made of you was though you had drawn attention to various aspects of the business case review in your oral evidence you had not drawn attention to certain points he had raised in this doc and you accepted that. For example you accepted on page 7 the reference to decrease in emissions shouldn't have been included. If we look at 4-11.2 in his rebuttal he says it will have misled the lay reader. But who is the business case addressed to- is it addressed at the lay reader?
Ch	The Business Case the audience is the DfT. For the Business Case Review we have produced a document that is equivalent to a doc if we were producing it for Programme Entry for the first time. Consistent with Dept Reqs if looking at this scheme for the first time.
NC	Prof Bonall put to you and you agreed that an amendment should be made. Having made those objectives, your view whether the objectives are met by the Preferred option?
Ch	The scheme will contribute to meeting the objectives when they are taken together.
NC	With or without the amendments?
Ch	With the amendments I made in response to questions.
NC	You were asked about interchange opps. If going from Leeds City Stn to Adel and possibility of changing at Arndale Centre. Put to you, not as convenient as now getting from 1 bus to another because the NGT stop not as proximate to bus stops?
Ch	Correct.
NC	Go to drawing A-11. Your initial answer was, "walk to City Sq and go somewhere else" Where?
Ch	Albion St and avoided need for an interchange but I appreciate there's a different willingness to walk the distance.
NC	If we take drawing no.25 an example near the University NGT stop. If a lack of ability or willingness to walk from behind Arndale Centre to proximate NGT stop would the University stop give an opp to make the interchange?
Ch	Yes no reason why not. In close proximity.
NC	After Mr Hague asked further Qs by Prof Bonsall. UDM and prediction about no. Of jobs. Referred to fact you can test the model by comparing a projection from a back-cast and

	evidence those relationships work. What were you referring to?
Ch	Way UDM works is, it assimilates the economy by time year by year. What we do is set the conditions to an earlier year and see whether the data allows us to make comparisons for the current year. That is the process for validating the processes in the model.
NC	Has that been undertaken for this application.
Ch	Yes.
NC	What was the outcome?
Ch	It was deemed satisfactory. The UDM also underpins the package of measures that comprises the West Yorks Transport Fund.
Insp	Is there anything to show that its outputs were satisfactory?
Ch	Not within the core documentation. It has been applied in relation to a much wider set of works and this application is an adjunct to a much wider set of interventions.
Insp	Is that doc available?
Ch	I'm not familiar with what docs there are.
NC	We'll add that to the action list Sir.
	Prof Bonsall asked about Table 7.3 in C1- contribution to West Yorks Transport Plan targets. Asked in particular about entry under mode share - target increase proportion of trips by sustainable modes. What was put to you was that public transport doesn't relate to sustainable modes. Let's take up West Yorks LTO - D-6-11 please. Page 57. Reference to "More sustainable travel modes" - what are the examples?
Ch	Says "walking, cycling and public transport".
NC	So is public transport considered a sustainable mode or not?
Ch	It is a sustainable mode.
NC	There's a sensitivity test on NBA Full Quality. Asked and the BCR for it. Does NBA exist or is it likely to exist?
Ch	In my view the vehicle that's tested does not exist and there is no evidence available to us that it is likely to exist in the near to medium term.
NC	Is it a realistic alternative or not?
Ch	No it is a modelling appraisal test.
NC	Were asked in relation to alternatives, is there an analysis of alternatives against meeting the original scheme objectives. You've already referred to section 5 of C1. First put it in perspective. You explained the business cases limited to specific alternatives for specific purposes. Take up ES A-08b, page 36. There's a review of alternative options and a heading "assessment against the scheme objectives".
Ch	We do.
NC	Is...your view as to whether this is where we should look?
Ch	Yes this sets out a summary of a more in depth assessment that has taken place.
NC	Next, moving from the overall assessment of alternatives can we look at APP135. The business case, your responsibility. Appendix 1, guidance for LA seeking DfT funding for major schemes. Can we look at 3.3 on proportionality. And 3.3.1. Page 12 of 77. Is this guidance relevant in relation to the business case for this particular scheme?
Ch	It is.
NC	What does this tell us about the alternatives in relation to the business case that it recommends should be assessed?
Ch	Bottom heading is proportionality. Says any appraisal should have LCA and do-min and larger schemes "may also need" an NBA. But Dept have made clear throughout that they would require it for this scheme.
NC	Has this guidance been complied with?
Ch	It has been.
NC	Asked about competition in the bus market. You said had carried out a sensitivity test that the bus just carry on as they were.
Ch	Not just - quite a significant competition.
NC	You said an extreme case.
Ch	Yes.
NC	Point made what happens if they engage in intensive competition for 3 or 4 years or so.

Ch	A shorter period.
NC	Is that carried forward for the full 60 years for the sensitivity analysis?
Ch	For the economic appraisal it assumes it's the full 60 year period this carries on over. But have also looked at the financial impact so you can see what happens on a year by year basis to the financial case. That has not been reported in the Core Docs but led us to the conclusion that NGT would be robust under that level of competition.
NC	So you say in addition a financial test?
Ch	Chapter 21 sets out the position. We looked at what Table 21.2 would be and it gives us some assurance that NGT would be affected by competition but would remain robust.
NC	You were questioned on the relative attraction of rail and trolley vehicle. You referred to the assumption that had been made by the modellers. If you take up C-2-8. You referred to it as a "clumsy" assumption and would prefer it hadn't been made. What was meant?
Ch	We provided a set of assumptions of what we considered an appropriate set of quality factors. The way they were applied to the rail service is one that could have been better thought through.
NC	Look at page 20 para 4.10. Headed "bus stop and rail station quality factors". Right place to look?
	What does that mean so far as you understand?
Ch	Ah. Not something I had previously appreciated. Previously we had looked at the tables and assumed the same was applied across the board but I see that AECOM were aware of that clumsy assumption and have corrected for it.
NC	What you said was it wouldn't have a big impact, but if a correction has been made?
Ch	It wouldn't have any impact.
NC	Later on you referred to the stage process of prog entry conditl approval etc. You said when you move to conditional approval there'll be changes to the appraisal and optimism bias will come down. And later said the next set of changes would "give us higher numbers on all fronts". What did you mean?
Ch	If optimism bias is reduced, would increase BCR. Also some changes in January this year and I said in my proof we have done some tests that would suggest they would increase the benefits of the scheme.
NC	Prof Bonsall put to you run-times, crowding assumed for rail not NGT, stated preferences and quality factors. Taking all those together if there is validity in any or all of them what is the impact on the business case and is BCR and NPV likely to be sufficient or not?
Ch	My view is that we would still have a case that would be sufficient to attract funding.
NC	A number of things you are going to check -stated prefs and busiest corridor in Leeds - those are all the Qs for me.
Insp	Lunch break then next witness. Will adjourn till twenty-five to two.
	[13:35]
	Discussion whether First content to submit questions in writing for Mr Webb, to be answered in writing- DG to take insts.
DG	Objection to procedure - unreasonable timetabling, 6 weeks to 15 weeks, had months. No case and having a second go. Will make costs application.
RW	No warning - should have had a quiet word.
DG	Not making an application now. Not seen what it is but right to give a warning now.
RW	Table 4.1 appendix
JPurseglove	All of local importance. Of species which could occur, no water voles. 1 badger set well away. Leaves you with birds and bats. Bats are the key ones as unless you have schedule 1 birds which are rarer birds - not observed them- left with common birds, not a big deal. In a few areas, scrub where common or garden birds like sparrow live.
RW	Bats p.18 para 4.11. What's the sitn there?
JP	Issue is roosting. Mature trees and buildings. 3 years of quite intensive surveys where might be found.
RW	Where?
JP	Lawnswood where a build we believe 1 bat only was seen flying in and out- an impact on that bat. Other is No.6 Wood Lane. In main path - pipistrelle bats, commonest bats in the UK.
RW	What is the construction phase mitigation?

JP	Air pollution, water, noise, don't allow machines to stray.
RW	What doc scures those?
JP	CEMP. I can't see it. Code of Constrction practice.
RW	CEMP what wil that be?
JP	Construction code for contractor- build in tree repacement. 3:1 replacement. Bat boxes and bird boxes. Sure vegetation cleared only when birds not breeding and lighting not obtrusive.
RW	In terms of bats you refer to a licence where bat roosts to be lost. NE's position do they object?
JP	No - 3 letters - said saw there would be damage to bats but said the mitigations we proposed appeared to be correct.
RW	Page 32 of Proof para 7.3. Unable to guarantee in advance but your conclusion.
JP	That's right we know of more onerous schemes have still got approva with the mitigation in place.
	Requires ongoing maintenance for the first 5 years after development and further surveys carried out to see it is all as it should be.
RW	3 refs to note for REB-1611 Headingley Land, REB-0728 Prof Griffiths and Reb-0388 Mr Borrin. Can we get ourselves a doc showing what is proposed. Drawing 18. Adequacy of the mitigation meadow proposed?
JP	The triangle with the path running through it. Idea is to purchase that s we are losing a similar area through scrub and shrubbery. And in addition a rosst of up to 10 bats and not directly affected but do fly down across that area where we know they forage. So we are proposing to purchase that so we have in perpetuity trees, rough grassland already there.
RW	On adequacy Appdx 4 of Headingley Land - what's the conclusion?
JP	This area is adquate because the area is sufficient, uses existing trees - a plus as already mature, good links to other areas of foraging and conveniently close t Headingley Castle Roost.
RW	Reb-1611 at para 2.41,.
JP	Yes I said it "probably is" suitable. Entirely agree.
	<u>DG x-ex (Alex B to note)</u>
	<u>Christopher Foren</u>
Foren ('CF')	I'm asking Qs on behalf of A660 Joint Council. Mentioned house-sparrows in tangential way, "common garden and woodland". Just on house sparrow, describe it as a common bird but becoming uncommon on RSPB Red List?
JP	Well spotted yes.
CF	That's the most serious conservation priority for RSPB?
JP	Not as serious as Schedule 1 bt it is serious and a lot of work to show that.
CF	7[9?] % betwee 2001 and 2008 - an alarming decrease?
JP	Yes.
CF	You said, if a schedule 1 bird turns up, it will be an issue. How close does it have to turn up?
JP	Question is, does it turn up breeding or not. They generally fly over and above. It's all about range really. The impact has to be on the habitat it's dependent on. If a barn owl resident at Stourton, that happens. But if was resident within that corridor it would be a prolem.
CF	A roblem of such magnitude that would cause Promoters to think again about the route?
JP	If smth amazing turns up like a Crane, it would be a worry. Whether it was a showstopper I don't know. Would get the RSPB out.
CF	Where would the red kite fit in?
JP	I cannot imagine that red kites would be affected. It's about their range. I got some daa about tawny owls and they are very wide-ranging. 1 to 5 or 6 sqkm so the corridor of the trolleybus would not be significant on a red kite.

CF	Diffit if it was nesting?
JP	Yes we would have a problem.
CF	Were released recently and se over Headingley all the tim?
JP	Yes. Good example.
CF	Paragraph 4.2 of Proof [16:00] you say no impact due to lack of ecological corridors?
JP	I would probably have to qualify that statement. There is not a "Lack of". I would probably prefer to say "extent of". If you walk up Meanwood Valey you can go and go. 1.3km from Valley, 1.8 to Breary Marsh, 1.5km to Canal. And the scale of what we're doing I don't think would be a worry.
CF	The fields on Headingley Hill do form part of that corridor?
JP	Yes they do. What you're saying is the corridor is part of that corridor. That is exactly why we are replacing that area. That is the only area we are adversely affecting and can't "put back"
CF	About 70m to 70m trinagle?
JP	Yes I'll believe it.
CF	A relatively small area?
JP	A little it less- 4.7500sqm lost and 5000sqm lost.
CF	Pushing the trolleybus through the meadows has effects either side- mistaken just to concentrate on the linear footprint?
JP	Yes it's true but the proportion of area taken is relatively low compared with the buffering around it. 15.3m wide on average. It is an adverse impact. The most problematic area. The drive to Headingley castle is 100m. What I should say is, it's the only really concerning area in terms of habitat but is so much on the tarmac, compared to most infrastructure schemes the impact is relatively low.... I don't see the trolleybus footprint as being an impossible barrier for bats to pass too and flow. In St Augustine's Church we suspect there are bat roots there and they cross the road. Infrastructure has adverse impacts and you try and mitigate down so on balance it is not too bad.
CF	If one was trying to maximise biodiversity you wouldn't have the trolley bus.
JP	Or other development.
CF	A proposal for a block of flats on the land.
JP	That's why we want to acquire it.
CF	Cumulative effect of flats and NGT would be harmful?
JP	Yes well of course and presumably if we hadn't come along and bought this one the lot would have gone covered in houses...perhaps I shouldn't speculate...wild speculation.
CF	Sir we'll make a submission about that because it seems to us the applicn for flats is piggybacking on this application. Page 27 of your proof please. Impacts from lighting.
CF	Say "mitigation area to remain unlit".
JP	Well certainly a possibility as regards the middle but there'll be lighting along the corridor - obviously low-level lighting along the cycle land but some associated with the thing itself.
CF	And the stop and one of the things about it is the stops will be particularly well-lit. Will affect biomass of insects too.
JP	What I found was there were studies and no real conclusion. I worked with motorways with much greater impacts- some have a feast and others collide. I give the example of Leeds Bridge where bats are feasting away in the lights.
Cf	All we can say is, we don't know?
JP	Yes there isn't an easy answer -would be a PhD's paradise working out how many insects brain themselves on lights.
CF	A badger sett- where?
JP	Can't say in public domain -may need legal advice. Because people bait badgers and people are anxious this stuff is not set out.
Insp	Would prefer not to have that info.
CF	Can we turn to Stourton now. I think you said earlier when Mr Walton was examining you in chief...you visited the proposed P&R site. At mo - rough grazing or semi-improved?
JP	Semi-improved as marked on the plan but when I visited- not recently, was nibbled by horses so couldn't tell the quality of the habitat really. Uninteresting heavily horse grazed field - good stuff all round it.

CF	Well you said potential for ground nesting birds.
JP	If you took the horses off, you might. Lots of things going in - trees, water, not the same. Much richer than present scenario.
CF	Are you sure about that- parking spaces, depot and resting place for drivers.
JP	Of course a lot of hard surface but an awful lot of planting and water. We've scored it as a loss, of semi-improved grassland. Haven't denied it's lost.
CF	It's literally and metaphorically marginal isn't it?
JP	Yes. What I'm used to is arable farming and many towns are much richer - urban foxes and jays. Not an arable desert but something of a desert because of th horses. Good stuff around - a churchyard, quite a batty sort of place.
CF	All the improvements termed mitign or compensation could be secured outside of this proposals could be secured outside of this scheme?
JP	Yes in an ideal world.
CF	In your book "Taming the Flood" yo didn't say that -do you stick by what you said?
JP	I'll blush with shame! Jolly old, out-of-date and not very correct.
CF	Unlimited economic growth not desirable.
JP	We could do things with schemes we couldn't otherwise do.
CF	Well scheme objectives are "Maximise the growth of Leeds economy" and then "sustainable growth of Leeds". You say, fallacious?
JP	In those days....I was an environmentalist between 2 ends, trying to make sure infrastructure schemes had proper design, ntegration etc, accepting mankind determined t suck the world dry. This scheme is reasonably benign- largely on tarmac, only 2 bat roosts affected, 3 to 1 planting. Happy to defend it.
CF	If it has to be done at all.
JP	Yes.
Insp	Claire Randall - any Qs remaining? Can you just keep yours to ecology?
CR	A few remaining.
Insp	Mr Natkus not able to turn up today. Might have to be in written form if not going to make tomorrow.
CR	Primarily I want to ask about mature trees and their value. I thin probably most of page 1 would be covered by Mr Walker.
JP	I have made a little note and we can whistle through them. Question do these trees in combination have significant ecological value? All trees are an ecological resource. The older ones have significant value over younger ones. Complicated story -very old trees famous for being rich for invertebrates. If you go to deer parks you find 500yr old beetles that are not in younger trees at all. There is an arboricultural survey I cannot speak to but don't think many are that old. Mid 1840s to 1850s - might find trees just possibly, could reasonably imagine mid-nineteenth or mid-twentieth century trees. Not quite in that category but sowuld have bits in them. That's why the edge of woodlands have good stuff and towns with their gardens mimic that. The mix of young and old is probably very rich - last to arrive would be great spotted woodpecker but would be there in 20 years or so.
CR	Had in mind mid-to-late Victorian planting. Is it not obviously the case that a 150yr old beech tree that would be cut down near Headingley Castle is 150yrs closer to that ancient status?
JP	Don't think it is relevant.
CR	Well we hear about long-term nature of the scheme...
Insp	You say the newly planted trees will take much longer to get there.
JP	Undeniable. You can see a lot are kept- isn't all destruction but it is regrettable and the development makes it slightly worse.
CR	Doesn't the clear felling disrupt the complex balance of animal and plant species?
JP	Do you want me to answer that?
CR	Will run several together. How long would it take before had achieved same ecological contribution?
JP	Well, "clear felling" to me implies what the forestry commission do with a large area. In this application you are taking them bit by bit. And it implies a certain scale of felling. It;s a 15m wide corridor. Not clear-felling but removing trees in that area and trees around are retained Obviously not all as rich - removing a lot of stuff that isn't particularly old, mixed with ld trees.

	Timescale for that - really 3-5yrs for 1.5m high, 15yrs for 5m high. By 15yrs birds nesting, butterflies laying eggs and a system that's pretty good. You've got a buffer there to catch a lot of the wildlife. Obvious! not so good but I don't hink a terrible nose-dive. The big trees as a proportion are not so great.
Insp	For that partcular tree would you have to wait as long as it is old?
JP	No I don't think so- 100yr tree not a lot more moths etc than a younger tree? I can say that from experience -lots of areas I've planted.
Insp	You say about 15yrs.
JP	Yes I think so - may be the odd specialist insect that needs longer.
CR	Wild garlic and other plants. Brambles and dock. Takes time to get a balance. How long for new planting to re-establish the ground-level cover?
JP	One you need to answer Tom Walker but I can answer too. You are talking about Woodland Ground Flora. Details haven't been drawn up but very easy if you try to do it, quickly. Need to strip off nutrient-rich topsoil and actively plan would garlic, anemone etc. Would take I should think 2 or 3 years. You can do it and fast and it should be done.
CR	Would he new grass in the pocket park e grassed or planted in this way?
JP	What's proposed is wild flower meadow- grasses and wild flowers- Yorks Farm Fescue, Stitchwort, pink campion and you would manage that.
Insp	Would that be of significant ecological value?
JP	Yes hugely and we do that routinely these days.
CR	Compatible with picnics?
JP	Would cut in early summer. Is being done a lot- where I live in Cambridge a fair proportion of the park is planted as grassland ad cut each year.
CR	Not numbers or proportions of super-trees?
JP	1,777 super-trees.
CR	That's the total number.
JP	Yes then 6ha of scrubland.
RW	Let's lead that for Mr Walker.
JP	He might contradict me but he told me yesterday.
Insp	I want to leave that- not sure if correct or not.
CR	Not sure whether passage of trolley bus every 3 mins is a disturbance?
JP	Some disturbance but nota disaster- bound to be more disturbing than what is there at the moment.
CR	There is a significant replacement of a living envt with a non-living envt - a track?
JP	Of course.
CR	Would the local ecology ever fully recover t status equivalent to present and how long would be years of detriment?
JP	Kind of answered it already- 15yrs to have a really good impact and 3:1 establishment, 15 yrs should be pretty well there. Start to get results in the first few years.
Insp	2 outstanding people - Bill McKinnon and Mr Natkus.
	Is Mr Natkus coming [to Joanna]
Joanna	No.
Insp	With Mr Purseglove retiring, written Qs would need to be in writing.
JP	Will be here in 2 or 3 weeks but would be nice to get it done and dusted.
Insp	Will adjourn till 10 o'clock tomorrow.