



# Gatwick Airport Northern Runway Project

Response to the Examining Authority's Written Questions  
(ExQ2) – Climate Change and Greenhouse Gases

**Book 10**

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## Table of Contents

1	Response to the Examining Authority's Written Questions – Climate and Greenhouse Gases	1
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# 1 Response to the Examining Authority’s Written Questions – Climate Change and Greenhouse Gases

1.1.1 The below table sets out the Applicant’s response to the Examining Authority’s Written Questions relating to Climate Change and Greenhouse Gases.

<b>ExQ1 Question to: Question:</b>		
<b>CLIMATE CHANGE AND GREENHOUSE GASES</b>		
CC.2.1	Applicant	<p><b>Finch v Surrey County Council</b></p> <p>The Supreme Court has recently (20 June 2024) handed down judgment in the case of R (on the application of Finch on behalf of the Weald Action Group) (Appellant) v Surrey County Council and others (Respondents). At ISH6: Climate Change the ExA noted that the Applicant had responded to comments made by IPs relating to downstream emissions by reference to the Finch case in written submissions (see [REP3-072]) [REP4-032].</p> <p>Following the Supreme Court judgment, all parties are invited to comment on the relevance or otherwise of this decision to the Applicant’s DCO application.</p>
	IPs	
		<p><b>Introduction</b></p> <p>1. The Finch case concerned a project to expand oil production from a well site in Surrey, including oil extraction. It was common ground that it was inevitable that oil produced from the site would eventually undergo combustion that would produce GHG emissions.<sup>1</sup> The main issue before the Court was to decide whether, on a proper interpretation of the EIA Directive and Regulations, the “effects of the project” on</p>

<sup>1</sup> [45].

		<p>climate which had to be assessed included the combustion emissions.<sup>2</sup> This issue reflected the wording of the Regulations which require an EIA to “identify, describe and assess in an appropriate manner...the direct and indirect significant effects” of the project on, amongst other factors, “climate”: see reg 4(2), reflecting article 3(1) of the Directive.</p> <ol style="list-style-type: none"> <li>2. An important starting point is to recognise that <u>Finch</u> concerned a project where it was common ground that the “downstream” emissions resulting from the eventual combustion of oil that had been refined following extraction were “inevitable”; and this allowed the Court to find that the strictest potential test of causation (the “necessary and sufficient” test) was satisfied.<sup>3</sup> It was also common ground that the emissions could be measured using an established methodology and that “this was not a difficult task”.<sup>4</sup> Although the Court identified principles to be applied in determining whether EIA needs to consider the effects of a project, the project in question had particular features which should not be assumed to apply in other cases, including this Project.</li> <li>3. Next, it is also important to recognise that the judgment recognised that there are limits on what any EIA can be expected to assess.</li> <li>4. If an effect is to be considered an effect of the project, there must be a causative link between the project and the effect in question. The judgment does not identify which of the alternative approaches to identifying that link should be followed in EIA cases (save that it appears to apply the “necessary and sufficient” test when considering the example of commodity manufacture), but it does go on to identify principles which on any approach to the causation principle must circumscribe what an EIA does.</li> <li>5. In particular, there are the following important principles to apply:             <ol style="list-style-type: none"> <li>(1) if there is insufficient evidence available to find a conclusion that an effect is likely, that effect does not need be assessed. Here insufficiency includes circumstances where a possible future</li> </ol> </li> </ol>
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<sup>2</sup> [49(i)].

<sup>3</sup> [79]-[80].

<sup>4</sup> [81].

occurrence is a matter of speculation or conjecture (and even if a possible effect is likely, the adequacy of evidence must also govern the nature and extent of the assessment);<sup>5</sup>

(2) an additional reason not to assess effects is that they would not be significant.<sup>6</sup>

### **The Project**

#### Introduction

6. In this case the implications of Finch have been raised in some representations by referring in an unspecified way to downstream emissions.<sup>7</sup>
7. Other representations refer to the case directly, or implicitly, in representations raising the following issues:
  - (1) The relationship between indirect economic effects as assessed by the Applicant and the assessment of carbon effects;
  - (2) The related but more specific claim that the Applicant should assess carbon emissions resulting from inbound flights if it is relying on benefits from inbound tourism;
  - (3) The particular claim that the Applicant should include in its carbon assessment well-to-tank emissions relating to the creation of aircraft fuel used in flights to and from the Project.
8. In their Written Representations, GACC raised in general terms the need to consider the carbon effects of enabling flights,<sup>8</sup> before raising a range of points at Deadline 4<sup>9</sup> under the broad claim that the Applicant had considered a range of economic effects, including indirect, induced and catalytic effects, but had not

<sup>5</sup> [74] and [77].

<sup>6</sup> [138].

<sup>7</sup> See the Applicant's **Relevant Representations Report** [REP 1-048] section 3.2 in response to Abinger Parish Council and the **Applicant's Response to Written Representations** [REP3-072] section 36 in response to Gareth Hayton.

<sup>8</sup> See section 37 of the **Applicant's Response to Written Representations** [REP3-072].

<sup>9</sup> GACC Deadline 4 Submission - **Post-Hearing submissions, including written summaries of oral submissions to the Hearings** [REP 4-106].

		<p>considered upstream or downstream carbon effects, including increased tourism-related development arising from increased flights (in particular at middle- or low-income nations served by Gatwick flights), as well as embodied carbon associated with increases in freight imports and exports. A more specific concern related to the need to assess the carbon effects of inbound flights. GACC restated their broad position by general reference to the Finch judgment in their Deadline 6 submission.<sup>10</sup></p> <p>9. In their Deadline 4 submission<sup>11</sup> CAGNE contended that it was not correct for inbound flights to be excluded from the assessment of GHG emissions, on the grounds that it would be inconsistent to do so whilst the Applicant relies on the benefits of inbound tourism. It was also argued that such “upstream” emissions are capable of amounting to indirect effects of a proposed development which fall for assessment.</p> <p>10. The issue of inbound flights was also raised at ISH6: see the Written Summary of Oral Submissions ISH6: Climate Change (including Greenhouse Gases).<sup>12</sup></p> <p>11. These issues are addressed further below in the light of the <u>Finch</u> judgment.</p> <p><u>Indirect, induced and catalytic economic effects and carbon effects</u></p> <p>12. This issue has been addressed in the <b>Applicant’s Response to Deadline 4 Submissions</b> <a href="#">[REP 5-072]</a>.<sup>13</sup> The response of the Applicant is not altered by the <u>Finch</u> judgment. Any suggestion that the EIA in this case identifies economic effects all of which generate carbon effects that can all be identified and assessed is misplaced, and far removed from a case which proceeded on the agreed basis that extracted oil would inevitably be burned.</p> <p>13. To confirm the position, it is perhaps helpful to briefly review the approach taken to economic effects in the assessments that are before the examination.</p>
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<sup>10</sup> GACC Deadline 6 Submission – **Post Hearing submissions including written summaries of oral submissions to the Hearings held during w/c 17 June 2024** [\[REP6-124\]](#).

<sup>11</sup> Deadline 4 Submission - **Issue Specific Hearing 6 Post-Hearing submission** [\[REP4-093\]](#).

<sup>12</sup> Deadline 4 Submission – **Written Summary of Oral Submissions ISH6: Climate Change (including Greenhouse Gases)** [\[REP 4-032\]](#).

<sup>13</sup> Paras 3.5.34-7 and 3.5.45-53.

		<p>14. Local socio-economic impacts are set out in <b>ES Chapter 17: Socio-Economic</b> <a href="#">[APP-042]</a> (produced by Lichfields) which includes <b>ES Appendix 17.9.2: Local Economic Impact Assessment</b> <a href="#">[APP-200]</a> (produced by Oxera). This considers the total effects of the Project and identifies these effects at different spatial scales where there was considered to be the potential for likely significant effects to arise, including the Gatwick Diamond, a Labour Market Area and the Six Authorities Area. The assessment considered economic effects in terms of effects on employment and the supply chain during construction and operation which were considered by reference to direct, indirect, induced and catalytic effects.<sup>14</sup></p> <p>15. Direct effects relate to the economic activity of the Applicant and firms on site at the airport (such as airport management staff and air crews). Indirect effects relate to economic activity in the supply chain of the Applicant and other firms at the airport, such as aircraft parts manufacturers or maintenance firms not based at the airport. Induced effects relate to economic activity due to workers – both on site and in the supply chain – spending their wages on activities that are not necessarily associated with, or located close to, the airport, such as barbers and restaurants. Catalytic effects relate to the economic activities of firms that are not in the indirect or induced footprint of the airport choosing to locate or to expand near the airport because of the connectivity it offers, such as a professional services firm opening a new office near the airport. As explained below, these effects were considered by estimating the total net impact of the Project, from which the direct, indirect and induced footprint was subtracted to give catalytic effects.<sup>15</sup> Local tourism effects<sup>16</sup> were not assessed separately<sup>17</sup> as they were considered to fall within the assessment of the induced and catalytic effects.</p> <p>16. A national economic impact assessment was carried out in the <b>Needs Case Appendix 1 – National Economic Impact Assessment</b> <a href="#">[APP-251]</a> by Oxera. This took the form of a cost-benefit welfare analysis of the Project. Its methodology applies a framework for such analysis in the transport sector known as</p>
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<sup>14</sup> See ES Chapter Table 17.4.1 [\[APP-042\]](#) and Appendix 17.9.2 section 5, including Table 5.1 and para. 5.2.2 [\[APP 200\]](#).

<sup>15</sup> Section 6.1.

<sup>16</sup> Inbound tourism relating to increased inbound passengers from overseas who spend their tourism money in the UK, creating jobs and GVA;

<sup>17</sup> See **Appendix 17.9.2: Local Economic Impact Assessment** [\[APP-200\]](#) para. 6.4.6. Nor were trade and FDI effects, as it was not possible to quantify these effects at a local level: see ES Chapter 17 Table 17.4.2.

		<p>Transport Analysis Guidance (“TAG”). It has been employed in this case to assess the costs and benefits that are additional at the national level.<sup>18</sup> It is not part of the environmental statement because its function is to carry out a cost-benefit analysis in accordance with Transport Analysis Guidance (“TAG”). It states however that the Project is not expected to have material supply-side employment effects that would generate employment impacts at a national level, confirming the scope of the local economic impact assessment in the ES.<sup>19</sup></p> <p>17. In summary, the assessment considers (1) the capital and operational costs of the project,<sup>20</sup> before (2) assessing impacts on users (passengers) and providers (airlines and airports) of aviation services having regard to changes in fare levels and airport revenues;<sup>21</sup> then (3) considering potential wider economic effects including output changes in imperfectly competitive markets<sup>22</sup> the impact on public accounts from increased APD,<sup>23</sup> marginal external costs relating to increased road traffic,<sup>24</sup> employment and productivity impacts,<sup>25</sup> trade and foreign direct investment<sup>26</sup> and tourism.<sup>27</sup> The assessment then accords a value to environmental impacts, in particular those arising from air quality, GHG emissions and noise,<sup>28</sup> before calculating the Net Present Value (“NPV”) of the Project. This calculation takes the value of impacts</p>
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<sup>18</sup> Sections 6.5-6 and para. 6.7.1. The national economic assessment at Appendix 1 to the Needs Case confirms that the Project is not expected to have material supply-side employment effects that would generate employment impacts at a national level. The analysis of the local employment effects of the Project does not estimate national-level additionality and displacement: see fn 108.

<sup>19</sup> Footnote 108.

<sup>20</sup> Section 4.

<sup>21</sup> Section 5.

<sup>22</sup> The additional economic value of output not captured through user benefits because fare savings are not fully passed on to consumers when markets are not perfectly competitive. Costs of production decline and businesses receive a change in revenues which are higher than any change in costs, implying additional welfare to businesses that is not captured in estimated fare-saving benefits: see section 6.2 generally.

<sup>23</sup> Section 6.3.

<sup>24</sup> Section 6.4

<sup>25</sup> Sections 6.5-6.

<sup>26</sup> Resulting from the area around Gatwick and the UK becoming more attractive for business, leading to further trade and investment which is reflected in more jobs and GVA: see section 6.7. This effect was considered in the form of the potential welfare benefits arising from an expansion in aviation activity that in turn increases connectivity and facilitates trade. The assessment used national elasticities of trade to passenger numbers to determine the effect of the project on UK trade, and that effect was then translated into a change in productivity using an elasticity of trade to productivity which is expressed in terms of the GVA of relevant trading sectors.

<sup>27</sup> Section 6 generally.

<sup>28</sup> Section 7.



		<p>(benefits) on passengers and providers, adding the value of wider impacts (benefits) and then subtracting the cost of the environmental impacts and the cost of the Project.</p> <p>18. However there are benefits and costs that the NPV calculation does not capture and which have not been quantitatively assessed. These include the potential impacts on trade and foreign investment,<sup>29</sup> tourism, competition, resilience and freight which have not been allowed for, as explained further below.<sup>30</sup></p> <p>19. The Applicant also commissioned an update of a 2017 report by Oxford Economics: <b>Needs Case Appendix 2 - The Economic Impact of Gatwick Airport: a report by Oxford Economics [APP-252]</b>. This considers the “core” direct, indirect and induced impacts of the Project, presented using metrics of GDP and employment.<sup>31</sup></p> <p>20. This assessment took a different approach to catalytic impacts, estimating them at the national level, based on a relationship between air connectivity and productivity.<sup>32</sup> It also considered potential inbound tourism effects, having regard to the volume of forecast international arrivals and visitor spend data before converting this spend into GDP and employment figures.<sup>33</sup> Further trade effects in the form of economic activity facilitated by increased imports were estimated by having regard to import volumes and typical margins received in supply chains, which were then converted on a similar basis.<sup>34</sup></p> <p>21. The Applicant considers that its approach to the assessment of economic effects, including indirect, induced and catalytic effects, is comprehensive and does not require further analysis in the light of the <u>Finch</u> judgment. Further, it considers that the <u>Finch</u> judgment supports the position it has expressed previously, that the identification and assessment of these economic effects does not translate into a need</p>
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<sup>29</sup> Para. 6.7.5-7.

<sup>30</sup> See section 8 and §9.2.2.

<sup>31</sup> Para.s 2.2.2-3 and Table 4-1; see too Annex A para.s 1.1.1.13. Annex A describes the methodology generally.

<sup>32</sup> Para. 2.2.4; Annex A para.s 1.14-33.

<sup>33</sup> Para. 4.3.5-6; Annex A paras 1.34-6.

<sup>34</sup> Para. 4.3.8-9; Annex A paras 1.37-8.

		<p>to conduct a related assessment of carbon effects. For convenience it draws on the <b>Applicant's Response to Deadline 4 Submissions</b> [<a href="#">REP5-072</a>]<sup>35</sup> to confirm its position below.</p> <p>22. The calculation of these impacts in the local economic assessment is derived from a combination of employment figures (from which wages across different sectors is drawn to assess direct effects), input-output modelling including the use of multiplier calculations (to consider indirect and induced effects having regard to profits and wages generated in the UK from supply-chain spending) and a local employment to air traffic elasticity (to assess total net impact and allow catalytic effects to be calculated). These calculations do not translate into carbon emissions.<sup>36</sup> The fact that the assessment estimates these effects, founded on employment figures, does not mean that the calculations can be taken to convert into further carbon emissions as effects of the project. The creation of these jobs does not necessarily or reliably correlate with further carbon emissions; nor do any broad multiplier or elasticity assumptions employed in the assessment to generate economic values. It should also be emphasised that as a place-based assessment, the local economic assessment does not address net changes at the national level.</p> <p>23. Taking the different forms of economic effect in turn, in relation to direct economic effects generated by activities on the airport, any related carbon effects are covered through the assessment of ABAGO-related emissions in <b>ES Chapter 16: Greenhouse Gases</b> [<a href="#">APP-041</a>]. In relation to indirect effects, however, employees taking jobs in the local area, or firms taking on new employees or undertaking further investment, or producing more goods or services will involve a wide range of activities in relation to which potential carbon emissions are beyond any coherent or realistic assessment in connection with the project. The fact that the local economic assessment uses metrics including wages and profits to assess economic effects does not mean it is possible to identify and assess the carbon effects of the additional economic activity or the jobs that are assumed to derive from it. Firms in the supply chain, for example, may carry out additional services such as maintenance or take on new staff to do so, but this will not necessarily have any identifiable effect on the carbon emissions associated with their activity. In the case of premises in the</p>
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<sup>35</sup> See in particular paras 3.5.34-7 and 3.5.45-53.

<sup>36</sup> See Tables 5.4, 5.6 and Box 6.1.

		<p>supply chain emissions are likely to be generated there in any event. The carbon associated with a new job or investment in new premises is practically impossible to estimate, as the employer may not increase its floorspace or opening hours and may be able to employ more staff within their existing footprint.</p> <p>24. Similarly, in the case of induced effects, new employees in the local economy may spend earnings on goods or services or a combination of the two, but this will include spending that is not associated with the airport; and it may take a wide variety of forms (whether online or in premises, for example) that are impossible to accurately predict. The carbon associated with goods that are supplied will almost always have been generated somewhere else in a manner which cannot reasonably be assessed. All these activities can take a wide variety of forms; and any emissions associated with all this activity are not susceptible to assessment in connection with the operation of the project. As for catalytic effects, decisions of firms to locate or to expand near the airport because of the connectivity it offers may not cause any change in emissions if they involve relocation; and any decisions to expand do not necessarily cause emissions or generate emissions that can be reliably estimated, whether at local or national level, for similar reasons to those that apply to indirect and induced effects.</p> <p>25. These circumstances are distinguishable from the project considered in <u>Finch</u>, in particular the inevitable causal relationship between the extraction of the oil before its subsequent refinement and then combustion to make end products, thereby producing emissions which could be reliably calculated.</p> <p>26. Even if the creation of further economic activity as measured in financial terms in the local economic assessment could generate further carbon emissions, the nature of the indirect, induced and catalytic economic effects is such that, in the language of the <u>Finch</u> judgment, there is “insufficient evidence available to found a conclusion that a possible environmental effect is likely”.<sup>37</sup> The circumstances of this case are very different from the extraction and then combustion of oil considered in <u>Finch</u>.</p> <p>27. In so far as the judgment used the example of steel manufacture to conclude that this was “far from sufficient” to bring about the environmental effects of the use of the products which the steel will be used to</p>
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<sup>37</sup> [77].

		<p>make, because steel had “many possible uses and could be incorporated into many different types of end products used for all sorts of different purposes”, this “indeterminacy” applies similarly to the indirect, induced and catalytic economic effects considered in the local impacts assessment. Any consequential carbon effects resulting from economic activity or job creation that is prompted by the Project will depend on “innumerable decisions made downstream” which will affect whether or how such activity might generate carbon. It would be impossible to make “any meaningful assessment” of these effects when granting consent for the Project.<sup>38</sup> Similarly, taking the example of manufacturing components to form part of a larger object, the manner in which carbon emissions may be generated as a result of indirect, induced or catalytic carbon effects is “so conjectural that no realistic assessment could be made of GHG emissions arising from such use”.<sup>39</sup></p> <p>28. Turning to the national economic assessment, it should be emphasised that this is a cost-benefit analysis and not part of the environmental assessment. It is clear from the summary of that assessment, as set out above, that it is a financial exercise that is not designed to consider economic benefits in a way which translates into carbon emissions; however the elements of that exercise are considered below to confirm whether the assessment takes into account economic benefits which may have related carbon emissions that fall for assessment following <u>Finch</u>. It should also be noted that in the specific context of the exercise that is being undertaken, carbon emissions are already taken into account as an environmental cost consistently with the assessment properly undertaken in the ES. The Applicant does not consider that any further assessment of carbon-related effects is necessary, for the following reasons.</p> <p>29. The assessment does not include indirect and induced employment effects, which are addressed as part of the local impact assessment (see above). Effects resulting from workers switching to more productive jobs in the vicinity of the airport (or within the airport) have been estimated,<sup>40</sup> but because the Project could result in some movement of jobs from other locations, which are not accounted for in the assessment, any potential welfare benefits would be only indicative and have therefore being excluded from the NPV</p>
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<sup>38</sup> See [121].

<sup>39</sup> [122].

<sup>40</sup> Paras 6.5.3-4, §6.6.2-4 and §6.9.2.

		<p>calculations.<sup>41</sup> In so far as the local assessment does consider employment effects, these have been addressed above.</p> <p>30. Taking the different elements of the national analysis, impacts on users and providers of airline services are influenced by increases in air traffic movements, but the emissions resulting from those movements are assessed separately as part of the GHG assessment (aviation, ABAGO and surface access emissions) and the financial quantification does not establish or imply other forms of carbon emissions which can fall for assessment. In relation to wider effects output changes in imperfectly competitive markets, increased APD and changes to marginal costs to business arising from increased traffic on the road network, these are again financial calculations which have no independent bearing on the assessment of GHG emissions arising in particular from aviation and surface access under the GHG assessment.</p> <p>31. As for trade and foreign direct investment, the assessment recognises generally that the Project could provide increased connectivity in the form of improved access to foreign markets, facilitating and encouraging trade between the UK and the rest of the world. However, changes to trade are excluded from the economic assessment, partly on the grounds of difficulties in robust assessment.<sup>42</sup> The same approach applies to tourism effects.<sup>43</sup> The analysis confirms that there would be a potentially positive effect, through increased services and reduced fares, as well as an increase in expenditure in the UK by inbound tourists as well as overseas by outbound tourists. However any incremental welfare benefits that result from reduced fares are included as part of the user benefits estimate; and although the prospect of increased spending in the UK is recognised (in part by visit spending on hotels and restaurants)<sup>44</sup> these effects are not quantified because of the lack of evidence on how tourism could generate welfare impacts on the UK economy.<sup>45</sup> Similarly, the assessment recognises in relation to outbound tourism that there is no clear evidence on the differential spending of UK citizens who go abroad or stay at home (and this would be a</p>
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<sup>41</sup> Paras 6.5.5 and 6.6.5.

<sup>42</sup> Para. 6.7.5.

<sup>43</sup> Paras 6.8.2-8.

<sup>44</sup> Section 6.8.

<sup>45</sup> Para. 6.8.5.

		<p>financial not a welfare impact anyway). But given the limited evidence on the mechanisms through which both inbound and outbound tourism would affect welfare in the UK, changes relating to increased tourism are not quantified.<sup>46</sup></p> <p>32. In each case, where the assessment excludes these effects from the NPV analysis on the grounds of a lack of clear evidence, similar considerations apply to the assessment of carbon emissions, which cannot be reliably quantified in relation to the Project:</p> <p>(1) It is not necessary to allow for carbon relating to trade or tourism to form part of the assessment - beyond the emissions that should properly be allowed for when considering the effects of aviation, that is the movement of planes holding freight or tourists, which have been assessed. The fact that the Project may encourage increased trade and investment which is reflected in more jobs across different sectors or greater economic activity does not translate into a reliable or meaningful assessment of carbon emissions, for similar reasons to those set out above in relation to the local economic assessment. The increased additional economic value or employment does not mean that emissions correlatively increase or that the emissions would result from the creation of that value or employment, or that it can be meaningfully assessed, because there are innumerable decisions to be taken on how that activity may arise which affect whether or how carbon is generated. No realistic assessment could be made of how that activity will generate additional carbon emissions;</p> <p>(2) Similarly, in relation to tourism, whether inbound or outbound, even to the extent that there may be financial benefits such as expenditure in hotels and restaurants, these do not in themselves imply resulting changes in carbon emissions that can then be reliably assessed in identifiable correlation with the operation of this project. Difficulties in obtaining evidence of how inbound and outbound tourism could generate benefits across the UK apply particularly to any suggestion that the carbon emissions resulting from various forms of tourist activity beyond the Project can or should be assessed. This applies to the specific example raised by GACC of increased flights leading to increased tourism-related economic development in other countries.</p>
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<sup>46</sup> Para.s 6.8.5-8 and 6.9.2.

		<p>33. The same conclusion also applies to the specific example raised by GACC of airport growth supporting an increase in airfreight which increases the embodied carbon associated with UK imports and exports. The embodied carbon in imported or exported goods is generated beyond the project itself with no necessary link to it and cannot be meaningfully assessed. In so far as GACC suggest that there should be some comparative exercise which considers the emissions generated with and without the project, in relation to imports that are facilitated by the project, this would be practically impossible to achieve. The Applicant remains of the view that these matters do not fall for consideration through the EIA process. Emissions associated with aircraft that carry trade goods or tourist passengers have however been considered as part of the GHG assessment. The issue of inbound flights is covered below, although it is worth noting here that the approach to costs/benefits analysis (which excluded excluding the costs of inbound GHG) was consistent with TAG at the time and that (again consistent with TAG) the National Assessment did not include inbound tourism in the benefits.</p> <p>34. The same considerations that apply to the local and national economic assessments apply to the updated Oxford Economics work, including its consideration of direct, indirect, induced and catalytic economic effects. To the extent that this work considers catalytic effects, including connectivity-, tourism- and trade-related effects, these again relate to effects that cannot be meaningfully translated into carbon effects and any carbon emissions associated with this activity would arise from a series of decisions that are beyond the scope of assessment in relation to the Project. Tourism, for example, was only considered in respect of inbound tourists, but once they have arrived in the country and spend in different sectors such as hospitality, their spending will be absorbed into the wider carbon emissions of those sectors across a wide variety of activities that cannot meaningfully be assessed by reference to the Project.</p> <p>35. For these reasons, the Applicant does not consider it necessary or reasonable to assess carbon emissions as sought by GACC; and the <u>Finch</u> judgment reinforces the position it has previously set out.</p> <p>36. In any event, the Applicant cannot envisage how these emissions would have the potential to create a significant effect in the context of the other emissions that are already being assessed in relation to this Project. Notwithstanding the issues identified above, it is difficult to conceive of how they would contribute</p>
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to any understanding of the significance of carbon effects, in circumstances where the large majority of the assessed emissions relate to aviation activity. By way of illustration, the Oxford Economics assessment, **Needs Case: Appendix 2 - The Economic Impact of Gatwick Airport – A Report by Oxford Economics** [APP-252] considers connectivity benefits and their relative effect on UK GDP, finding that the Project would have a maximum 0.15% effect as at 2038.<sup>47</sup> The Applicant does not consider that this effect reliably translates into a carbon calculation, however even if it is (unreliably) assumed to give a broad indication of carbon effects resulting from that additional economic activity, it does not suggest that such effects would be significant at a national level.

Inbound flights

37. The question of emissions arising from inbound flights was raised by the ExA at ISH6 and addressed in Section 12 of the **Applicant’s Response to Actions – ISH 6 Climate change (including Greenhouse Gases)** [REP 4-036].
38. By way of summary, the Applicant confirms that the approach adopted to quantification of inbound flights is set out in paragraph 16.4.16 of **ES Chapter 16: Greenhouse Gases** [APP-041]. That approach takes into account the taxi out and take-off from Gatwick, the CCD (climb, cruise, decent) aloft emissions for those outward flights, and the land and taxi-in emissions at the other airport. This effectively allocates emissions to the departing airport location, even though the emissions relating to land and taxi-in will in fact arise away from Gatwick. This approach was considered appropriate to avoid double counting at a national and international level. It is the standard international approach for aviation emissions to be accounted at the source, rather than end, location. Considering only outward flights in this way also allows for contextualisation against the UK carbon budget and the Jet Zero trajectory, which align with UK emissions inventory approach based on modelling ‘bunker fuel’ consumption of jet fuel.

<sup>47</sup> See **Needs Case Appendix 2 – The Economic Impact of Gatwick Airport – A Report by Oxford Economics** [APP-252] Table 4.2.



		<p>39. The Applicant has argued that while it would be technically feasible to estimate emissions from inbound international flights these would not provide a meaningful quantification for comparison and contextualisation against UK carbon budgets. Inbound emissions if placed into a global context would be infinitesimal.</p> <p>40. The Applicant acknowledges the aspect of the <u>Finch</u> judgment which holds that the EIA Directive does not impose any geographical limit on the scope of the environmental effects of a project. On this basis, it has given further consideration to what inbound emissions would be.</p> <p>41. It is necessary, however, to have regard to another aspect of the judgment - namely that a reason not to assess carbon emissions could be that they were reasonably judged not to be significant.</p> <p>42. The need to judge significance has, following the IEMA guidance, had regard to the contribution made by the Project to reducing GHG emissions relative to a comparable baseline that is consistent with a UK trajectory towards net zero.<sup>48</sup> The Applicant regards this approach to significance as appropriate in a UK context for the reasons already provided.</p> <p>43. If inbound emissions are to be considered, however, the Applicant does not consider that the same approach to contextualisation can be taken. The relevant contextualisation metrics from the UK carbon budgets do not include emissions from inbound international flights. In these circumstances, significance is more appropriately judged in a global context.</p> <p>44. On this basis, the Applicant has considered addressing the question of adding inbound flights to our GHG assessment and how best contextualise GAL with global aviation emissions projections.</p> <p>45. A basic way of assessing the emissions themselves is to double those associated with the outbound flights. The Project aviation emissions, when doubled to include inbound flights, would amount to 0.512 (outbound)<sup>49</sup> x 2 = 1.022 MtCO<sub>2</sub>e, as at 2050 (excluding well-to-tank: see below). It should be noted that</p>
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<sup>48</sup> See section 6.2 of the IEMA Guidance.

<sup>49</sup> See **ES Appendix 16.9.4: Assessment of Aviation Greenhouse Gas Emissions** [APP-194] Tables 5.2.1 2050 baseline and with project aviation emissions.

		<p>the outbound emissions are already contextualised against the UK carbon budget, however for the avoidance of doubt the total figure can be used).</p> <p>46. The International Civil Aviation Organization (ICAO) in 2022 published a report on the Long Term Aspirational Goals (LTAG) for international civil aviation emissions.<sup>50</sup> It models four scenarios out to 2050 and beyond covering similar ‘levers’ as the JZS: aircraft technology, operational improvements and SAF uptake. Scenario 1 projects global international aviation emissions to reach 950 mtCO<sub>2</sub>e in 2050.<sup>51</sup> This is a reasonable scenario against which to contextualise GAL outbound + inbound emissions, because it best aligns with JZS ‘High Ambition’ scenario, particularly around SAF uptake levels. A total of 1.022 MtCO<sub>2</sub>e would represent just 0.11% of 2050 global international aviation emissions, and obviously an even smaller proportion of global emissions. Even allowing for how aviation emissions will reduce over time to 2050, the proportion is plainly insignificant. However, it should be noted that ICAO’s LTAG study on international aviation emissions includes well-to-tank impacts, hence the contextualisation made here is not completely like-for-like, but this does not affect the conclusions to be drawn from this comparison. Well-to-tank emissions are addressed further below.</p> <p>47. CAGNE has argued that the assessment of inbound emissions is necessary to avoid an inconsistency of approach with reliance on tourism benefits. The above assessment assesses inbound emissions appropriately. The Applicant does not accept that there is any incompatibility between taking into account economic effects, in so far as they can properly be assessed in the EIA or accorded weight more generally as recognised in national policy, and then considering carbon impacts, but only to the extent that it is necessary to do so under the EIA regime.<sup>52</sup></p> <p><u>Well-to-tank emissions</u></p> <p>48. In response to representations from Interested Parties, the Applicant provided a quantification of well-to-tank (“WTT”) emissions for construction, ABAGO, surface access and aviation. Appendix B to the</p>
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<sup>50</sup> <https://www.icao.int/environmental-protection/LTAG/Pages/LTAGreport.aspx>

<sup>51</sup> Para. 4.2.2.

<sup>52</sup> REP5-080 Deadline 5 Submission - 10.38 Appendix H - Response to CAGNE's Deadline 4 Submission – Issue Specific Hearing 6 Post -Hearing Submission.

		<p>Supporting Greenhouse Gas Technical Notes<sup>53</sup> provided the relevant calculations, after explaining why the WTT emissions had been excluded from the assessment carried out in Chapter 16 of the Environmental Statement.</p> <p>49. The Applicant has reviewed those calculations in the light of the quantification of emissions from inbound flights as explained above. It has developed the WTT emissions calculation to apply to inbound flights as well as the outbound flights that were considered within Appendix B. It has also considered the implications of allowing for WTT emissions associated with production outside the UK, which were excluded from the Appendix B assessment.</p> <p>50. Table 1 of Appendix B in <b>Supporting Greenhouse Gas Technical Notes</b> [<a href="#">REP 4-020</a>] gives total WTT emissions figures which do not disaggregate the proportion that is produced in the UK (this exercise is carried out in Table 2). This table relates to outbound flights. If the same total of additional WTT emissions for aviation (3.847 MtCO<sub>2</sub>e between 2018 and 2050) is also assumed to apply to inbound flights, the totalled figure for inbound and outbound can be converted to give a figure that gives total WTT emissions, as applied to identified time periods within the assessment. Taking the year of 2050, the total WTT emissions, inbound and outbound, would produce an uplift from the total aviation emissions at 2050 set out above (1.022 MtCO<sub>2</sub>e) to 1.234 MtCO<sub>2</sub>e. The 0.11% contribution figure set out above would rise to 0.13%. Again, this figure is demonstrably insignificant at a global scale.</p> <p>51. The calculation has been produced this way because to the extent that WTT emissions from inbound flights are considered, they would fall outside any contextualisation against UK carbon budgets, as with inbound flights more generally.</p> <p>52. It should be noted that the inclusion of this uplift in relation to WTT including inbound flights does not change the outcome of the contextualisation exercise carried out at paragraph 1.4.7 of the Appendix B assessment.<sup>54</sup> This is because UK-based WTT emissions for outbound flights have already been included in those calculations and other WTT emissions attributed to the rest of the world (i.e. those not produced</p>
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<sup>53</sup> [[REP4-020](#)].

<sup>54</sup> the whole airport figures provided at Ref CGG8.5.3 in **The Applicant's Response to Deadline 5 Submissions** [[REP 6-094](#)].

		<p>within the UK<sup>55</sup>), including those for inbound flights, do not fall for consideration as part of the UK carbon budget (or contextualisation against Jet Zero<sup>56</sup>).</p> <p>53. However the total WTT emissions that have been considered do not change the conclusion that, when contextualised against global aviation emissions, aviation emissions with WTT emissions are not significant.</p> <p><u>Other matters</u></p> <p>54. As set out above, the Applicant emphasises that the additional emissions calculated as a result of allowing not only for further non-UK WTT emissions, but also for additional emissions relating to inbound flights, do not affect the contextualisation of carbon emissions against UK carbon targets or (in the case of aviation) Jet Zero. For the same reasons, the additional emissions allowed for in an EIA context as set out above do not affect the separate approach to policy, which is predicated on whether a project would have a material impact on the ability of Government to meet its carbon reduction targets, including carbon budgets.<sup>57</sup></p> <p>55. The Applicant has also considered whether the <u>Finch</u> judgment has any other implications for the assessment carried out in the ES. <b>ES Chapter 6: Approach to Environmental Assessment</b> [<a href="#">APP-031</a>] explains the overall approach to the environmental assessment undertaken and recognises the scope for indirect effects to arise “which are not a direct result of the Project, often produced away from the Project site or as a result of a complex pathway”,<sup>58</sup> which is consistent with the approach taken in <u>Finch</u>.<sup>59</sup> The potential for cumulative, inter-related and transboundary effects was also addressed.<sup>60</sup> Where relevant both direct and indirect effects of the Project were addressed in the respective ES chapters. After reviewing the</p>
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<sup>55</sup> See para. 1.4.6 of the Appendix B assessment.

<sup>56</sup> See para. 1.4.10 of the Appendix B assessment.

<sup>57</sup> See the ANPS para. 5.82 and the NNNPS para. 5.18.

<sup>58</sup> Para. 6.3.24.

<sup>59</sup> See eg at [88] the reference to EC Guidance from 2013 that defines indirect effects in terms that refer to secondary effects as “effects that occur as a consequence of a primary effect or as a result of a complex pathway”

<sup>60</sup> See para.s 6.2.20-5 and 6.3.58-61.

		judgment, the Applicant does not consider that <u>Finch</u> requires the assessment of any effects which have not already been addressed in the ES or any other information as produced through this examination.
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