# ANNEX A. Call for evidence questions response form

**Issued**: 27 March 2018

**Respond by**: 25 May 2018

**Enquiries to:**Steve Plant

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Call for evidence reference: Space Industry Act 2018: liability, insurance and charging

### Territorial extent:

This is a UK-wide call for evidence. We would welcome views from all interested parties including those outside of the UK.

## How to respond

Your response will be most useful it is framed in direct response to the questions posed, though further comments and evidence are also welcome.

Please use the form attached and send your responses to Steve Plant either at the address above or send to the Spaceflight Regulation e-mail address.

## General questions

Please be aware that we intend to publish a summary of responses received to this call for evidence. Please see page 5 of the main call for evidence document for further information on handling of responses. If you wish your responses to be treated as confidential, subject to other disclosure requirements, please tick the box below.

[ ] I want my response to be treated as confidential

Please note that in publishing a response on the call for evidence, we will not disclose any details which you consider to be commercially sensitive and data will not be attributed to a specific organisation (unless this has been agreed). For example, where information has been given regarding specific types of costs as a proportion of total costs, we will not include individual sets of data but we will provide an overview of the responses (e.g. that costs are high, medium or low).

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| Comments:  |
| About you |
| A. | Name: |
|  |
| B. | Organisation (if applicable): |

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| C. | Address and other contact details: |

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| D. | Please indicate the type of business / respondent you are from the following list: |
|  | **Respondent type** |
|[ ]  Business representative organisation / trade body |
|[ ]  Micro spaceflight-related business (up to 9 staff) |
|[ ]  Small spaceflight-related business (10 to 49 staff) |
|[ ]  Medium spaceflight-related business (50 to 250 staff) |
|  [ ]   | Large spaceflight-related business (over 250 staff) |
|  [ ]   | Insurance organisation / trade body |
|[ ]  Legal representative |
|[ ]  Academic representative |
|[ ]  Individual |
|[ ]  Charity or social enterprise |
|  [ ]  | Trade union or staff association |
|  [ ]  | Government Body |
|[ ]  Local government / Trading Standards |
|[ ]  Other regulatory body (please specify)  |
|[ ]  Other (please describe) |

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| E. | If applicable, what type of licensed spaceflight activity are you considering or planning to undertake in the UK? |
|  | **Space activities** |
|  | Launch vehicle operator |
|[ ]  Vertical launch – rocket launched to orbit from a spaceport |
|[ ]  Air launch – rocket launched to orbit from a carrier vehicle |
|  | Satellite operator |
|  [ ]   | Commercial – single satellite |
|  [ ]   | Commercial – constellation |
|[ ]  Non-commercial – single satellite |
|[ ]  Non-commercial – constellation |
|  |  |
|  | **Sub-orbital activities** |
|  | Launch vehicle operator |
|[ ]  Vertical launch – rocket launched from a spaceport |
|[ ]  Air launch – spaceplane launched from a carrier vehicle |
|  [ ]  | Horizontal launch – spaceplane launched from a spaceport |
|  [ ]  | Balloon launch – balloon launched from a spaceport |
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|  | **Associated activities** |
|  | Spaceport |
|  [ ]  | Vertical launch spaceport – for launching rockets |
|  [ ]  | Horizontal launch spaceport – for launching spaceplanes and carrier aircraft |
|  [ ]  | Balloonport – for launching balloons. |
|  [ ]  | Range Control Service Provider |
|  [ ]  | Other |
|  | If “other” please provide further details: |

## Future engagement

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| F. | Would you be willing to help shape the regulatory framework on these issues moving forward? [ ]  Yes, I would like to take part in a working group.[ ]  Yes, I would like to receive updates on developments.[ ]  No, I do not wish to engage further on these issues. |

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| G. | Please confirm which parts of this call you have provided answers for:[ ]  Liability for UK launch.[ ]  Insurance requirements under the SIA.[ ]  Charging under both the SIA and the OSA. |

## Liabilities questions

### Questions about liability to indemnify Government

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| 1. | What impact would an unlimited liability to indemnify Government have on launch activities in the UK? In answering this question, if applicable, please comment on the impact you consider it would have on your business and also the wider market. Please provide details and/or specific examples and evidence in support of your answer. |

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| 2. | What impact would a limit on an operator’s liability to indemnify Government have on the operation of a launch business from the UK? Please provide details and/or specific examples and evidence in support of your answer. |

### Questions about liability to indemnify claimants

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| 3. | What impact would an unlimited liability to indemnify claimants (third parties) have on launch activities in the UK? In answering this question, if applicable, please comment on the impact you consider it would have on your business and the wider market. Please provide details and/or specific examples and evidence in support of your answer. |

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| 4. | What impact would a limit on an operator’s liability to indemnify third parties have on the operation of a launch business from the UK? Please provide details and/or specific examples and evidence in support of your answer. |

**Questions about both the liability to indemnify Government and claimants**

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| 5. | Does holding an unlimited liability to indemnify Government and claimants differ from other liabilities held in the normal course of business? If so, how does it differ? Please provide details and/or specific examples and evidence in support of your answer. |

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| 6. | Would limiting one type of liability (either the liability to indemnify Government or the liability to indemnify claimants) have a bigger impact than limiting the other? Please provide details and/or specific examples and evidence in support of your answer. |

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| 7. | Government is considering the approach of using a maximum probable loss (MPL) calculation to set the minimum third party liability insurance requirement for launch from the UK. What are your views on using the same type of calculation to set a limit on either the liability to indemnify Government or the liability to indemnify claimants? |

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| 8. | Are there other mechanisms or calculations that could be used to set a limit on either the operator’s liability to indemnify Government or their liability to indemnify claimants if this was deemed appropriate?[ ]  Yes[ ]  NoPlease provide details and/or specific examples and evidence in support of your answer. |

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| 9. | What are your views on the approach to setting the liability limit to indemnify Government and to indemnify claimants at the same amount for all launches taking place from the UK? An alternative approach could be that liability limits are varied depending on the type of launch taking place from the UK or based on the risks involved in each launch, what are your views on this? Would certain launch activities require higher limits / unlimited liability? Why would this be the case? Please provide details and/or specific examples and evidence in support of your answer. |

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| 10. | Are you aware of liability regimes in relation to spaceflight activities in other countries? What is your view of their requirements in relation to liabilities? Please provide details and/or specific examples and evidence in support of your answer. |

Cross Waivers of Liability

The SIA provides a power to include conditions within licences that could mandate the use in contracts of cross waivers of liability for injury or damage from carrying out the licensed activities. This could mean that all parties involved in a spaceflight activity would have to bear their own losses.

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| 11. | Are you familiar with such cross waivers? Do you consider them to be standard within the space and launch industry? Do you have any views or comments on such an approach? Please provide details and/or specific examples and evidence in support of your answer.  |

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|  | Do you wish to provide any other comments in respect of liabilities for UK launch? |

## Insurance questions

### General questions about insurance for launch taking place from the UK

We understand that there is currently capacity in the insurance market to cover any insurance requirements that may be set in regulations and licence conditions. However we have received feedback that operators engaging in launch from the UK may find it difficult to purchase third party liability insurance cover to meet the liability they could incur under the SIA.

To provide support for your response to the following questions, please provide any evidence that you have in this regard.

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| 12. | What are your views on the availability and affordability of third party liability insurance for UK launch (both orbital and sub-orbital), assuming an unlimited liability? Please provide an explanation as to why you hold this view and evidence in support of your answer.  |

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| 13. | One of the options that Government is considering, is using a maximum probable loss (MPL) calculation for setting the amount of third party liability insurance for UK launch (both orbital and sub-orbital). What are your views on such an approach? Please set out the advantages and disadvantages of using such a calculation and provide evidence in support of your answer.  |

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| 14. | There are a number of different approaches used to calculate the MPL in countries where the method is currently used (for example the Australian approach differs from the US). Do you have any views on the most suitable approach? Please provide details and/or specific examples and evidence in support of your answer. |

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| 15. | Using an MPL calculation would mean that the minimum liability insurance amounts would be set on a case by case basis. Would this encourage operators to minimise the risks associated with UK launch (both orbital and sub-orbital) in order to reduce the amount of third party liability insurance that is required? Please provide details and/or specific examples and evidence in support of your answer. |

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| 16. | How much does the amount of third party liability insurance required affect the premium of the policy? Are there other factors that would have more of an impact on the policy premium than the amount of insurance required? If so, what are these? |

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| 17. | If the insurance requirement was for a launch vehicle operator engaging in launch from the UK to take out the maximum amount of third party liability insurance cover available on the market, what is the maximum that they could obtain?  |

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| 18. | Do you know of any other mechanisms or calculations that could be used to set the third party liability insurance amount for launch from the UK? Are there any precedents for use of these? Please set out the advantages and disadvantages of using a different approach and provide evidence in support of your answer.  |

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| 19. | What are the other kinds of insurance that a launch vehicle operator engaging in launch from the UK would obtain for launch? For example insurance to cover first and second parties?  |

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| 20. | What other risks would a launch vehicle operator engaging in UK launch insure against? |

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| 21. | How do the premiums of these policies compare with the premiums for third party liability cover?  |

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| 22. | Do you consider that holding an unlimited liability to indemnify Government and third parties affects the availability of insurance for UK launch (both orbital and sub-orbital)?[ ]  Yes[ ]  No[ ]  Don’t knowPlease provide details and/or specific examples and evidence in support of your answer. |

### Specific questions surrounding the insurance costs associated with launch from the UK

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| 23. | If you are considering engaging in launch from the UK, what proportion of your overall anticipated operational costs relate to insurance premiums for third party liability insurance?  |

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| 24. | If you have not yet sought an insurance quote for current or proposed operations, what have you estimated your third party liability insurance costs to be (as a percentage of operational costs)? What methodology did you use to reach this estimate? |

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| 25. | What level of third party liability cover would this provide? |

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| 26. | What proportion of your overall anticipated costs relate to other types of insurance (not third party liability insurance) for UK launch activities? What type of insurance would this be?  |

### Questions relating to other operators: Spaceports

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| 27. | What are the risks that are specific to operating a spaceport (for example, risks to equipment, infrastructure, and satellites when at the spaceport)? Which of these risks would be covered by insurance and why?  |

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| 28. | Are there any risks that that a spaceport operator would expect another party involved in launch activities to insure against (for example pre-launch insurance to cover satellites when at the spaceport)?  |

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| 29. | What other general or individual risks would a spaceport seek to insure against? |

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| 30. | Is such insurance available? [ ]  Yes[ ]  No[ ]  Don’t knowPlease provide details and/or specific examples and evidence in support of your answer |

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| 31. | If you are planning to engage in operating a spaceport from the UK, what proportion of your overall anticipated operational costs relate to insurance premiums for the operation of a spaceport? |

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| 32. | If you have not yet sought an insurance quote for current or proposed operations, what have you estimated your insurance costs to be (as a percentage of operational costs)?  |
| 33. | What level of cover would this provide? |

### Questions relating to other operators: Range Control Service Providers

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| 34. | What are the risks a range control service provider would insure against in the provision of their services?  |

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| 35. | Are there any risks that a range control service provider would expect another party involved in launch activities to insure against?  |

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| 36. | What other risks would a range service provider seek to insure against? |

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| 37. | Is such insurance available? [ ]  Yes[ ]  No[ ]  Don’t knowPlease provide details and/or specific examples and evidence in support of your answer |

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| 38. | If you are planning on engaging in the provision of range control services from the UK, what proportion of the overall anticipated operational costs in relation to the operation of the range relate to insurance premiums? |

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| 39. | If you have not yet sought an insurance quote for current or proposed operations, what have you estimated your insurance costs to be (as a percentage of operational costs)?  |

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| 40. | What level of cover would this provide? |

### General questions on securities as alternatives to traditional insurance

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| 41. | Section 38 of the SIA provides a power for the regulator to accept securities that satisfy prescribed conditions as insurance. What are your views on the exercise of this power? What are the advantages or disadvantages of accepting securities as insurance? |

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| 42. | What type of securities would be appropriate for the purposes of section 38?  |

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| 43. | What conditions should a security have to satisfy to be acceptable as insurance?   |

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| 44. | Would you be likely to use a security instead of purchasing traditional insurance? [ ]  Highly likely[ ]  Likely[ ]  Neither[ ]  Unlikely[ ]  Highly unlikelyIf you confirmed that you would use such a security, when would you do so and why? Please provide an explanation and evidence in support of your answer.  |

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|  | Do you wish to provide any other comments in respect of insurance for spaceflight activities carried out from the UK? |

## Charging questions

### General questions on the approach to charging

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| 45. | Fees could be set at specific milestones or charging points which could be linked to specific phases / review points within the licensing process. To what extent do you agree with this approach? [ ]  Strongly agree[ ]  Agree[ ]  Neither agree nor disagree[ ]  Disagree[ ]  Strongly disagreePlease provide an explanation as to why you hold this view.  |

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| 46. | What are your views on charges being set on the basis of time spent on a licensing application or monitoring activity, with the use of hourly rates?  |

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| 47. | What are your views with regard to charges being set on the basis of a fixed fee (where the costs are equally apportioned between a number of applicants for a particular activity for example, the licensing of the operation of a geostationary satellite in orbit)?  |

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| 48. | Charging schemes could be made up of a mixture of fixed fees, hourly rates and the pass on of third party costs depending on the nature of the work to be undertaken by the regulator in each case. To what extent do you agree with this approach? [ ]  Strongly agree[ ]  Agree[ ]  Neither agree nor disagree[ ]  Disagree[ ]  Strongly disagreePlease provide an explanation as to why you hold this view.  |

### Questions relating to charging regimes in other jurisdictions

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| 49. | Have you engaged in, or do you have knowledge of, spaceflight or associated activities (launch activities (orbital or sub-orbital), operation of a spaceport, provision of range control services, operation of a satellite in orbit) in another country? If so, which country was this?  |

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| 50. | What type of activity was this?  |

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| 51. | Were you charged a fee or are you aware of a fee for the licensing of that activity? |

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| 52. | If so, what is the level of that fee and how is it calculated? |

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| 53. | Were you charged or are you aware of charges for any other approvals that are required for those activities to be carried out from that country (for example spectrum costs)? If so, what are these costs and what is the level of the fee?  |

### Questions relating to costs of proposed activities

If you confirmed at question E that you were planning on engaging in spaceflight or associated activities from the UK, we would be grateful if you could please answer the following questions about the proposed costs of those activities. If you are planning on engaging in more than one activity, please provide answers for each of those activities. We will not disclose any details which you consider to be commercially sensitive and we will not be publishing individual sets of data.

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| 54. | What have you budgeted for the total cost of carrying out the activity, including setup costs and on-going operational costs? |

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| 55. | In your current business plans, what have you budgeted for licensing costs (for obtaining a licence under either the SIA or the OSA)?  |

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| 56. | Please provide a breakdown of what this budgeted amount includes?  |

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| 57. | What would this licensing cost be as a proportion of your overall costs? |

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| 58. | In your current business plans, what have you budgeted for the costs of other approvals that are required in order for you to carry out the activity (for example, spectrum costs / export licensing costs etc)? |

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| 59. | What would this cost be as a proportion of your overall costs? |

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|  | Do you wish to provide any other comments in respect of charging? |

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