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Planning Inspectorate
Temple Quay House 2
The Square
Bristol, BS1 6PN

Our ref: TCS1/2

Your ref: EN010158

Attn: Rebecca Luxton
By email: rosefieldsolar@planninginspectorate.gov.uk

10 March 2026

Dear Sirs

Rosefield Solar DCO application

1. We are instructed jointly by Preston Farms Ltd. and TCS Biosciences Ltd. We have not been formally involved before. On behalf of these clients, James Preston made a statement at the CAH hearing on 25.2.26. This letter is primarily as cover for the written representations due today, as explained further below. We also deal with the various other requirements of this deadline as set out in the Rule 6 letter.

2. By way of written representations, we are sending with this, as separate documents:

    1. Written overview submissions to the Examining Authority reflecting the evidence below and other concerns identified.
    2. Statement on behalf of Preston Farms Ltd., with summary and documents referred to:
    3. Appendix 1 (letter from supervising Veterinary Surgeon).
    4. Appendix 2 (Maps A and B).
    5. Appendix 3 (Report by Sharps Acoustics).
    6. Technical note on noise management at Morgan and Morecambe Offshore Wind Farm with reference to equestrian concerns.
    7. Statement on behalf TCS Biosciences Ltd., with summary (note: there are references for journals etc. which can be provided if requested) and,
    8. Explanatory document from the British In Vitro Diagnostics Association.

3. Please note that our submissions give rise to important questions as to procedural compliance by the Applicant. As set out in more detail, we ask that the Examining Authority scrutinise the deficiencies raised most carefully and require the Applicant to provide necessary information and/or revise its proposals so that the Examining Authority can be sure than the impacts on our clients' operations can be avoided, and to offer our clients the opportunity to respond to what is said, probably at a further hearing.

4. Other points required (as applicable to third parties) to be dealt with as per the Rule 6 letter are listed below with our brief comments and cross reference:

- Written summaries of oral submissions made at the hearings and any other post hearing submissions.
  These are in effect subsumed in what we are submitting now, and reflect the transcript.
- Any specific responses to points raised in oral submissions at the hearings.
  These are covered to the extent necessary in the submission and evidence herewith.
- The applicant's draft itinerary for an accompanied site inspection (ASI) (if required).
  We have very recently received a draft revised itinerary document which unfortunately seems to be missing its map in Appendix I. There are various points which our clients consider ought to be visited. To avoid confusion, they intend to discuss further with the applicant and revert with an agreed list/map of same.
- Written representations (WR) from interested parties and summaries of any that exceed 1500 words.
  Please see above and documents herewith.
- Responses to comments on relevant representations (RRs).
  These are covered by the material submitted now.
- Initial principal areas of disagreement statements from interested parties see annex F.
  The list given does not include our clients, so this has not been done, though could be if requested. The issues of disagreement are in fact clear from the representations and evidence.
- Requests to be heard at a future open floor hearing (OFH), if not already heard.
  Please see submissions herewith.
- Requests to be heard at a future compulsory acquisition hearing (CAH).
  Please see submissions herewith.
- notification of wish to have future correspondence received electronically.
  Yes, please communicate with us by email. Please use the following email addresses:
  Patrick Lyons [redacted]@richardbuxton.co.uk>
  James Preston [redacted]@tcsgroup.co.uk>
  Gareth Williams [redacted]@tcsgroup.co.uk>
  Richard Buxton [redacted]@richardbuxton.co.uk>
  Lewis Hadler [redacted]@richardbuxton.co.uk>
- Comments on any further information/ submissions accepted by the ExA.
  We believe the material now submitted covers matters.

5. We trust the above and attachments are clear, but if you have any queries, please let us know.

Yours faithfully

[redacted]

RICHARD BUXTON SOLICITORS

[redacted]

PLANNING ACT 2008

ROSEFIELD SOLAR FARM DCO APPLICATION EXAMINATION

EXAMINING AUTHORITY PANEL:

MR RICHARD MORGAN AND MR MARK JAMES

WRITTEN REPRESENTATIONS

OF PRESTON FARMS LTD AND TCS BIOSCIENCES LTD

OVERVIEW SUBMISSION

Examination library documents are identified by their examination reference. Abbreviations aim to be consistent with those used by the Examining Authority ("ExA")

Introduction

1. This document is the overview and summary of the written representations and supporting evidence submitted jointly by Preston Farms Ltd ("Preston Farms") and TCS Biosciences Ltd ("TCS Biosciences").

2. Preston Farms' examination ref. is [redacted] TCS Biosciences' examination ref. is [redacted].

3. Preston Farms is an affected person. TCS Biosciences is an interested party.

4. This document is provided, along with the underlying written representations, in accordance with the ExA's Rule 8 letter **[PD-009]**, mindful of the advice in the main body of that letter and its Annex A (examination timetable) as to what is sought from participants in the examination, and when.

5. The ExA should please note that the package of written representations and supporting evidence, and this overview and summary, are together intended to also sufficiently summarise the points made for TCS Biosciences and Preston Farms at hearings to date, in particular at CAH1, at which Mr James Preston spoke for both companies and further

introduced the ExA to the unique and nationally critical nature of their combined businesses, and the unjustifiable threat posed by the DCO Proposals.

6. For whatever reason the Applicant has failed to understand the threat the Proposals present, despite repeated meetings at which matters have been explained to the Applicant (being charitable, the other interpretation is the Applicant has ignored the problem). The Applicant has ploughed on regardless, looking to spatially insert its Proposals and associated rights over land into the Preston Farms holding, and also to position plant close to the holding boundary without necessary buffering. It has done so despite there being reasonable alternatives that should be pursued instead.

7. Both businesses are anxious the ExA fully understands matters. They believe (with justification) that once the ExA does so, the need for adjustment of the Proposals to mitigate risks to the businesses is obvious, and required by statute and policy/guidance.

8. This is so by reason of:

   (1) basic compulsory acquisition principles, which apply by virtue of both s.122(3) of the Act and the applicable national policy statements which make clear they do not displace them (EN-1 and EN-3) (so falling within s.104(3)); but also

   (2) under the applicable national policy statements even if compulsory acquisition principles are put to one side (s.104(3) again); and

   (3) application of the statutory requirement to have regard to relevant and important considerations (s.104(2)(d)); and

   (4) application of the statutory adverse impacts/benefits balance (s.104(7)); and

   (5) the underlying administrative law requirement to have regard to material considerations.

9. Preston Farms and TCS Biosciences also hope that Buckinghamshire Council has understood matters and raised the impact on the companies in its Local Impact Report, which is due at the same time as these written representations. If it has, then s.104(2)(b) will also be engaged as regards the companies.

10. Government policy and guidance is clear that the compulsory acquisition and the disturbance to the businesses should be kept to the minimum reasonably necessary, through exploration of all reasonable alternatives and tests of necessity and proportionality (as well as the basic requirement of legitimate purpose). Whereas the Applicant is seeking a maximalist Proposals position.

11. In light of the gravity of the issues, and their complexity, the ExA is requested to make provision for consideration of the companies' specific issues at an Issue Specific Hearing.

12. The ExA is also requested to include a site visit to the Preston Farms' holding in its schedule of site visits. Biosecurity measures will be needed, which it is hoped will be acceptable to the ExA. As will an exercise of judgment on the part of TCS Biosciences and Preston Farms as to where and what the ExA, Applicant, Buckinghamshire Council and any attending interested parties should be shown, depending on the nature of any interested parties also attending, given confidentiality issues.

13. TCS Biosciences and Preston Farms invite the Applicant to enter into a statement of common ground with them, in order to narrow the issues and identify matters in dispute.

14. By one means or another, the DCO should at a minimum be changed to:

    (1) Reduce construction disturbance by altering arrangements for access to Parcel 3.

    (2) Remove field E23 from the "Works", or at most use E23 for no more than a cable run, with access rights limited to works on the cable run.

    (3) Remove the land within Order Limits immediately to the south of field E23 from the Works, or at most use it for no more than a cable run, with access rights limited to works on the cable run.

    (4) Appropriately assess the risk that construction and operational impacts will disturb the Preston Farms livestock and put in place mitigation that will avoid that.

    (5) Appropriately assess the risk that construction and operational impacts will cause biosecurity breach or other contamination at Preston Farms land and put in place mitigation that will be sure to avoid that.

15. The document now summarises why that is, though for the underlying detail see the written representations and supporting evidence that sits beneath.

Why the DCO Proposals threaten the TCS Biosciences and Preston Farms combined operation

16. As Mr James Preston explained at CAH1, Preston Farms and TCS Biosciences operate together as an integrated controlled biomedical production system. The Preston Farms holding ("the Holding") into which the Proposals interpose themselves is part of that production system, and not (remotely) a conventional farming unit. The Holding is

subject to a Home Office licence.

17. The livestock (horses and sheep) at the Holding are blood donors who supply TCS Biosciences with the raw material (blood) for the clinical diagnostic materials (e.g. agar plates) and other life sciences products which TCS Biosciences provides.

18. TCS Biosciences is the only such provider in England and Wales.

19. The nationally (and indeed internationally) critical nature of the product cannot be overemphasised.

20. There is one other provider in the United Kingdom, a smaller operator in Scotland.

21. In terms of agar plates in isolation, Preston Farms/TCS Biosciences produce enough blood for over 100 million per annum. The UK alone uses over 60 million per annum.

22. The importance of agar plates alone is explained by the BIVDA open letter attached.

23. The nature of the product means that the supply has to be close to TCS Biosciences, and vice versa. Hence the symbiotic nature of the two businesses.

24. It is critical that the blood used for the product is robust and, just as crucially, consistent (for obvious reasons given its application, e.g. diagnostic laboratories need to know that the medium they are using to diagnose is biologically materially the same as the one they used the day, week, month, year etc before).

25. This means that the donor animals must be stress free.

26. It also means that their blood must be free from any contamination (in the broadest sense, including e.g. feed additives, let alone any need for antibiotics).

27. Horses are prey animals, that naturally herd, and their flight reaction is well known (the popular expression ‘don’t scare the horses’ is not an idle one).

28. Sheep are also prey animals, that naturally herd, with a similar flight reaction.

29. Disturbance and stress interferes with blood quality and consistency.

30. To give a simple example of the effect of disturbance/stress on the animals’ blood, product wastage spikes (more than doubles) after sheep are shorn.

31. Contamination interferes with both blood quality and consistency. Biosecurity is a broad and key business risk as crises relating to foot and mouth and current concerns around bluetongue virus demonstrate.

32. In light of the above, and as the underlying detailed written representations explain, Preston Farms' livestock live in a precisely calibrated state. The animals move and graze as herds across the Holding in the summer months, through carefully controlled movements, and live in specialist indoor and yard facilities during colder months.

33. Stable and stress-free environmental conditions are maintained.

34. Biosecurity and anti-contamination measures are deployed throughout the operation.

35. Contact with humans and other fauna is strictly controlled, including through control of access generally (and whilst the Holding does have public rights of way, these are subject to limited and local use only, and, necessarily, on narrow lines that can be readily monitored and controlled).

36. All of the animals' feed comes from the Holding (so their winter feed as well as grazing), which keeps contamination/biosecurity risk to a minimum.

37. Animal movements are carefully controlled.

38. The Holding is deliberately contiguous in nature to allow the above (quarantine area aside, necessarily).

39. The contiguous nature of the Holding is not only necessary for the livestock to move and graze without disturbance, including rotational grazing, but also to allow the controlled movement of livestock, generally and including to the blood donation facilities and winter facilities that are positioned in the Holding.

40. The DCO Proposals would do several things that would compromise the operations (the detail of which is explained by text and visual illustrative in the Preston Farms specific written representation):

    (1) The DCO Proposals would bring extensive construction disruption to the Holding. In particular, access to Parcel 3 from Granborough Road (6/11 on the **[APP-008]** Land Plans) would come across a key part of the Holding and is not compatible with Preston Farms' operation.

    (2) The DCO Proposals include compulsory acquisition of "field E23" (6/13 on the **[APP-008]** Land Plans) and placing solar panels there, as well as a cable run, and using E23 for general access to the rest of the solar farm. E23, of which Preston Farms is the tenant, lies in the centre of the Holding and is essential for the movement of the livestock, with multiple routes in and out, making it a lynchpin of the Holding as regards animal movements. These include that it is the only means

by which livestock can access the land to the east of E23. The Applicant has proposed to "mitigate" these impacts by placing "movement corridors" between the solar panels. That will not work. Movement corridors between solar panels is a recipe for stress and panic in the livestock, even before consideration is given to potential noise. Amongst other things, the evidence from Preston Farms' veterinarian, Ms Jennifer Harbison, explains this. Field E23 must remain open and uncluttered. It must also remain biosecure/free from contamination. Whilst a cable run, and access to maintain that cable run only, could be tolerated with appropriate controls, anything more is an unacceptable risk.

(3) The DCO Proposals position the solar farm substation in Parcel 3, adjacent to the Holding. So exposing livestock to disturbance from that direction (noise, some light and activity etc). No detail has been provided regarding necessary buffering and other measures to avoid disturbance of livestock.

(4) The DCO Proposals position the solar farm BESS in Parcel 2, adjacent to the Holding. So exposing livestock to disturbance from that direction (noise, some light and activity etc). No detail has been provided regarding necessary buffering and other measures to avoid disturbance of livestock.

(5) The DCO Proposals include general access rights for each of fields 6/10, 6/11 and 6/12 (on the **[APP-008]** Land Plans), as well as cable rights. Like E23, fields 6/10, 6/11 and 6/12 are a central part of the Holding, and tenanted by Preston Farms. The access rights sought would expose livestock to disturbance and obvious risk of contamination/breach of biosecurity.

41. Thus the DCO Proposals would cause disruption and disturbance during the construction and operational phase, and would physically fragment the Holding. All of which presents a clear and obvious threat to the operation and so to the product.

42. Preston Farms presently runs at 100% capacity, so any disruption to the Holding will mean disruption to the biomedical supply chain.

43. As regards fragmentation of the Holding, the Applicant has proposed compensation/replacement land, but (whilst appreciated) the land is over to one side (to the north-west) and the Holding would remain fragmented. The suggested replacement land would also take time and considerable expense to be brought to standard.

Has the Applicant appropriately understood, assessed and sought to mitigate the threat in the DCO Application (or elsewhere)?

44. No, on all counts.

45. The requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 are clear, as are the policy requirements (see EN-1 Section 4 and relevant parts of Section 5).

46. As regards the Applicant's EIA work, the environmental statement ("ES") gives passing consideration to the businesses in its "Population" chapter, but with no adequate understanding or assessment of the threat the Proposals present to the businesses and no adequate grappling with alternatives and mitigation.

47. This is consistent with the lack of consideration or assessment of impacts to livestock from noise in the ES noise chapter, which inappropriately suggests that the sensitivity of a receptor such as this is "negligible" (**[APP-056]** ES Vol. 2, Chap. 13, p.23) and the lack of consideration of impacts to livestock generally, not just from noise but lighting and activity as a whole.

48. As regards noise, the companies have instructed an expert acoustic consultant, Mr Clive Bentley, consider the Applicant's work. Mr Bentley's report is attached. It is highly critical.

49. The Applicant's assessment is seriously deficient by reference to the requirements of the EIA Regulations and national policy and guidance.

50. As is the proposed mitigation.

51. No or insufficient detail is provided, in the ES or elsewhere, as to how disturbance from construction and operation will be avoided. Including in terms of the visual and acoustic separation of livestock from infrastructure such as the solar farm substation and its associated plant and the BESS.

52. The Applicant's response to the companies' relevant representations **[PDA-006]** (at p.336-338) simply repeats the Proposals and incorrectly asserts that what is embodied within them, and the replacement/compensation land, represents sufficient adjustment and mitigation (e.g. that it is enough the solar farm's substation is not in E23 and that E23 will have movement corridors etc and the replacement land). In the draft CEMP and other documents very recently supplied to Preston Farms by the Applicant, the Applicant has taken the substance little or no further.

Why the threat cannot be justified and why (and how) the Proposals should be changed (or else the DCO refused)

53. The critical national priority for low carbon infrastructure set out in EN-1 is recognised, as is that the DCO Proposals are therefore CNP infrastructure.

54. However, this does not disapply the requirements of s.104, including s.104(2)(d), s.104(7), and s.104(2)(b) if the local impact report raises impact on the companies, nor the other policy in EN-1 and EN-3.

55. The product that Preston Farms and TCS Biosciences provide is, itself, of at least national importance, if not international importance.

56. Even if the mitigation hierarchy has been correctly applied (which it has not), the impact on the companies falls within para.4.2.15 of EN-1, as an *'unacceptable risk to, or* unacceptable *interference with, human health and public safety'*, given the critical nature of the product for the NHS and UK medical sector generally.

57. In the circumstances, even before consideration is given to the rules governing compulsory acquisition (which CNP status does not disapply), the Proposals should not be permitted to threaten the businesses' operation.

58. Even if the companies are wrong on that, and the Applicant can threaten their operation if it is strictly necessary for it to do so, it is not necessary.

59. As regards the s.122(3) requirement for a "compelling case in the public interest" to justify compulsory acquisition is explained further by the Government's September 2013 guidance *"Planning Act 2008 Guidance related to procedures for the compulsory acquisition of land"*. The Guidance must be read as a whole, but it is sufficient to quote the first paragraph under "General considerations":

> The applicant should be able to demonstrate to the satisfaction of the Secretary of State that all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored. The applicant will also need to demonstrate that the proposed interference with the rights of those with an interest in the land is for a legitimate purpose, and that it is necessary and proportionate.

60. The companies are not seeking the blanket refusal of consent for the solar farm.

61. Rather, the material threats the Proposals present are avoidable, without requiring a refusal of development consent for the solar farm, if the DCO sought is suitably adjusted:

(1) As regards construction, there are other, larger and more suitable access points

closer to Parcel 3 than Granborough Road, including via Winslow Road, that would avoid interference with the Holding.

(2) As regards field E23, it is a reasonable alternative to leave field E23 free of Works, other than, at most, cabling, and free of access requirements other, at most, access to that cabling.

(3) The same is true of the land (6/10-6/12) to the south of E23.

62. The Applicant has not engaged with this, and has certainly not demonstrated otherwise.

63. The Applicant can surely use, or secure, additional land within or outside the Order Limits on which to place solar panels in lieu of E23, if it is so minded.

64. The above will inevitably mean the Applicant must request changes to the DCO. The Applicant ought to have made those changes long ago, before making the application. The alternative is refusal of the DCO (or withdrawal by the Applicant to change it).

65. The companies urge the Applicant to now fully engage with the issues the DCO Proposals pose for Preston Farms and TCS Biosciences and make the necessary adjustments.

66. In addition, as to this:

(1) It is also unclear to the companies that it is truly necessary for the solar farm substation and collectors to be positioned where they are, immediately north of E23, and similarly the solar farm BESS to be positioned where it is, so as to butt up against the Holding. It is unclear why these items could not be located in the main body of the solar farm to the west, with a cable run to the East Claydon National Grid electricity substation.

(2) However, on the (hypothetical) assumption that it is genuinely necessary for the solar farm substation, collectors and BESS to be where they are proposed, what is needed is suitable buffering and other measures to avoid disturbance to the livestock from those areas. At present, nothing has been specified.

67. The matters identified above should have been addressed and actioned by the Applicant long ago. That they have not, is not for want of attempts to engage the Applicant on the part of the companies. The necessary steps must be taken now.

Next steps

68. It is now imperative the Applicant fully engages with the threat its Proposals pose to the businesses, and change the Proposals accordingly, as well as providing necessary

mitigation through DCO requirements.

69. Preston Farms and TCS Biosciences respectfully ask the ExA to ensure that is done through this examination process.

70. Beyond the obvious changes to the Proposals which are required, as set out above, in order to ensure no disturbance to the businesses, the full range of impacts on the businesses must be adequately assessed by the Applicant, which to date has not been done. That may reveal the need for either additional change to the DCO, or to finer detail in the DCO requirements.

71. As part of this, the Applicant should engage in a statement of common ground process with the companies.

72. That work must then inform, with sufficient detail, the measures, in the ES or elsewhere, as to how disturbance from construction and operation will be avoided. Including in terms of the visual and acoustic separation from such as the BESS.

73. The companies also respectfully ask the ExA to include the Preston Farms holding in the site visit itinerary, albeit noting that confidentiality requirements may limit the extent of a site visit to the holding.

James Burton

[redacted]

10 March 2026

Written Representation and Evidence for Preston Farms Limited

Interested Party Number: [redacted]

Representation Summary:

Preston Farms Limited is an affected person within the Order Limits, both as an agricultural tenant and a freehold landowner.

This representation concerns the effect of the proposed development on a specialist, regulated farming operation, not a conventional grazing one.

Key points

- Preston Farms and TCS Biosciences operate as an integrated system where animal welfare, biosecurity and product quality are central to the businesses and essential to their downstream diagnostic results.
- Preston Farms operates under a Home Office Licence and is the only farm of its kind in England and Wales.
- The land managed by Preston Farms functions as a single coordinated operational system. The current scheme would fragment that system.
- The currently proposed construction and cabling access are not workable or proportionate.
- The Applicant's reliance on future consultation, advance notice and outline management plans does not demonstrate that the current scheme design is workable alongside our ongoing operation.
- The proximity of major infrastructure is a serious concern. The Rosefield substation, collector compounds and BESS are close to sensitive parts of the farm and the Environmental Statement does not demonstrate compatibility with the welfare and operational requirements of the animals.
- Field E23 is operationally critical.
- Replacement land does not resolve many of our key operational concerns.
- Preston Farms has engaged constructively and seeks proportionate reconfiguration rather than total removal of all infrastructure in the affected area of the project.
- The targeted changes sought, include:
    - removal of the main Parcel 3 construction route from Granborough Road, noting that there are other available routes.

- removal of Field E23 from the project
- limitation of rights across the holding to essential cabling only
- effective sound and visual separation between intrusive infrastructure and sensitive areas

Preston Farms' position is that the Applicant has not demonstrated that the compulsory acquisition powers and rights sought over this land are necessary, proportionate, or the minimum required.

Given the specialist, regulated and nationally important nature of the operation, the Examining Authority is respectfully requested to scrutinise with particular care the compatibility of the proposed development with the continued operation of Preston Farms and its role in supporting healthcare diagnostics.

Written Representation and Evidence for Preston Farms Limited

Interested Party Number: [redacted]

Introduction

1. Preston Farms Limited is an affected person within the Order Limits, both as an agricultural tenant and a freehold landowner.

2. We have been farming around Botolph Claydon since 1948 and have farmed the land affected by the proposal since the 1960s, with other parts taken on in the 1980s. We have been tenants of the Claydon Estate since 1948, benefiting from a strong and stable relationship. We have purchased adjoining freehold land where possible to support and expand our business.

3. Contrary to the Applicant's material which describes the operation as employing one farm manager, Preston Farms employs approximately 15 staff. We work closely with and exclusively supply our sister company, TCS Biosciences Limited, which employs approximately 55 staff. Together the businesses therefore support around 70 employees locally.

4. TCS Biosciences has operated for more than 60 years supplying donor animal blood and serum to UK and international healthcare and life science companies.

5. The company founder, Dr Alan Preston (a haematologist), set up the Preston Farms and TCS operations to combat the problem of low quality blood products in the diagnostic market. A quality product is the cornerstone to both businesses.

6. This is the only operation of its kind in England and Wales.

7. We wish to make clear from the outset that we support the transition to renewable energy and recognise the importance of low-carbon electricity generation. Both Preston Farms and TCS Biosciences have taken steps to support sustainability objectives including installing many solar panels on our own buildings.

8. However, we have serious concerns about the potential impact of the Rosefield Solar Farm proposals on the continued operation of our businesses, particularly given the compulsory acquisition powers and extensive land rights sought over land that is integral to our operation. We have raised these concerns, both in relation to construction and operation of the proposed solar farm, consistently with the Applicant over the last three years.

9. We have engaged extremely reasonably with the Applicant over the last three years, trying to find practical solutions to minimise the impact of the project,

which would allow us to co-exist. We recognise that the proximity of parts of our farm to the National Grid sub-station makes some infrastructure in that area attractive to the Applicant. We have not requested a wholesale removal of the project from this area, despite the potential impacts on our business. Rather we have sought the minimum reconfiguration and mitigations that will reduce the risk to our continued operation. In a project of this scale, where alternative configurations are available, we do not consider that the Applicant has demonstrated that such extensive powers and rights are necessary over this area of land.

10. This submission therefore addresses the necessity, proportionality and compatibility of those powers in relation to a specialist and regulated farming operation. In summary, the proposals should be reconfigured so that there is no material impact on our operation.

Business Overview

11. Preston Farms and TCS Biosciences operate as an integrated system.

12. TCS Biosciences is a life sciences company supplying products used in clinical diagnostics and life science manufacturing. Preston Farms is the regulated specialist farm entity managing the donor animals which are essential to that supply chain.

13. For the purposes of this phase of the DCO Examination, TCS is submitting separate information from its perspective as a market facing life science business and the additional challenges that the solar farm proposals present from their perspective. The material should be read as complementary.

14. Preston Farms carefully manages a population of horses and sheep used as donor animals. The animals donate blood under veterinary-supervised conditions and this blood is supplied to TCS Biosciences for processing and distribution to diagnostic laboratories and life science manufacturers.

15. Donor animal blood is used in the manufacture of blood agar plates and other diagnostic media used in clinical laboratories for the identification of infectious diseases.

16. The animals are maintained in carefully managed grazing environments during the summer months and housed in specialist barns and yards during the winter. The farm operates as a fully integrated system in which Preston Farms produces the feed used for the animals. This approach is designed to ensure full traceability of inputs and to minimise the risk of contaminants entering the production chain.

17. The operational system is deliberately structured with animal welfare, stability, and biosecurity in mind. The operation focuses on:

- maintaining stable environmental conditions
- minimising disturbance and stress
- controlling animal movement
- preserving biosecurity

18. All the above contribute to good animal welfare and to consistent product quality, which is essential to our customers and their work in diagnostics.

19. The holding therefore functions as a coordinated operational system rather than simply as conventional agricultural grazing land.

20. Any sustained disruption to this system risks affecting both the welfare of the animals and the reliability of the downstream supply chain.

21. As highlighted during the hearings, we disagree with the applicant that any detrimental effects of the proposed project would only be localised. Any sustained reduction in our ability to supply product, or a variation in product quality, would have significant consequences on diagnostic healthcare supply chains both nationally and internationally.

Regulatory Context

22. Preston Farms operates under a Home Office Licence.

23. The licence requires the maintenance of very high standards of animal welfare, with carefully managed conditions. The operation is subject to inspection and regulatory oversight by the Home Office.

24. The layout of the holding — including grazing rotation, specific movement routes, controlled access and biosecurity protocols — has evolved over many years to ensure compliance with these requirements and to ensure efficient and stress-free management of the animals in our care.

Welfare and Product Quality

25. Under the relevant Codes of Practice associated with the Home Office licensing regime, the establishment must provide species-appropriate housing, husbandry and welfare conditions designed to minimise stress and provide as natural an environment as possible, all year round. Environmental stability and predictable management conditions are an important part of these welfare requirements and form part of best husbandry practice.

26. Veterinary and animal welfare literature recognises that physiological stress responses can alter haematological and biochemical parameters in animals. In horses in particular, studies have demonstrated measurable changes in blood parameters following transport, handling and environmental disturbance. Similar endocrine mechanisms are also recognised in livestock, including sheep.

27. Preston Farms does not assert that any disturbance automatically renders donor blood totally unusable. However, the maintenance of a stable, low-stress and controlled environment is important in supporting both animal welfare and the consistency of blood obtained from donor animals. In the context of diagnostic supply chains, consistency and predictability of biological materials are extremely important for maintaining reliable downstream laboratory performance. This is consistent with our Home Office license which recognises that both horse and sheep blood remain essential components of established microbiology and pathology methods, and that blood collection should be supported by proper welfare monitoring and quality control to ensure a consistent and reliable product.

28. Accordingly, while physiological stress responses may not necessarily invalidate donor blood entirely, disturbance capable of altering blood parameters may reduce the proportion of material that meets quality requirements or affect the consistency of batches supplied to diagnostic laboratories.

29. For these reasons, maintaining a stable and low-disturbance environment for donor animals is integral both to welfare compliance and to the reliability of the products supplied into healthcare diagnostics.

30. This operational sensitivity materially distinguishes the farm from conventional livestock grazing. As discussed below, the Applicant here makes a fundamental error in not appreciating this.

31. Please also see attached letter in Appendix 1 from our responsible Veterinary Surgeon of Equine Veterinary and Reproduction Limited, which confirms the issues of concern and concludes “It is my opinion that the information provided does not currently provide sufficient certainty that animal welfare and biosecurity risks can be avoided or adequately controlled to maintain compliance with statutory welfare obligations for the livestock at Preston Farms”.

Maps and Plans

It is important to fully understand the geography of the proposals and our concerns. We ask the Examining Authority in due course to carry out a site visit so that it can fully

appreciate our position. However, for the purposes of these representations, we ask it to refer to the various maps and plans in Appendix 2, cross referenced as below.

Farm Overview

32. The Preston Farms holding comprises both tenanted and freehold land forming a substantial largely contiguous operational area (see the area outlined in orange at Map A in Appendix 2). The separate orange section, to the east on the map, is used for quarantine purposes.

33. The tenanted land within the Order Limits includes fields SA35, SA36, SA37, SA38, SA39, SA40, SA41, SA42, SA43, SA44, SA45 (SA35-SA45 are together also known as 6/10 on the Land Plans APP-008), SA46, SA47, SA48, SA49, SA50 (SA46-SA50 are together also known as 6/12 on the Land Plans APP-008), SA51, SA58, SA59, E10, E11, E20, E21, E22 and E23 (E23 is also known as 6/13 on the Land Plans). SA and E references are from APP-007 Location, Order Limits and Grid Coordinate Plans

34. This area amounts to approximately 131.2 hectares as per the Applicant's Population document.

35. Freehold land within the Order limits includes SA52 and SA53.

36. Although the compulsory acquisition mainly affects the tenanted land, the holding (both owned and tenanted) functions as a single operational system, developed over many years of practical operations.

37. The farm currently manages around 400 horses and 3500 sheep. The land area ensures a spacious grazing environment for these animals during the summer months, supporting the natural conditions referred to in our Home Office licence, as well as creating high quality nutritious food to feed during the winter months. During the winter, the animals are carefully housed in a number of barns and yards across the holding.

38. Welfare standards are paramount to the business and are recognised by third party horse charities that we work with and the many horse owners who repeatedly choose to send horses to us when they can no longer care for them.

39. The proposed development would effectively divide the area we farm into separate sections, as can be seen from Map A in Appendix 2. This not only impacts the ability for animals to rotate around the farm during the summer grazing months but also has the potential to prevent them accessing the key housing and facilities associated with the donation process.

Deficiencies in the Environmental Statement

40. The Environmental Statement refers to Preston Farms as a grazing tenant employing one farm manager. As previously highlighted at the Compulsory Acquisition hearing, this description materially understates the scale and nature of the operation. The assessment largely treats the land as conventional agricultural grazing. It does not reflect the scale of the business, its regulated nature, the number of employees involved or its link to healthcare supply chains. We have raised these issues with the Applicant on a number of occasions, including via presentations and as part of both the non-statutory and statutory consultation processes. Indeed, we consider the ES materially misleading in this respect. The error is repeated in the noise chapter of the ES by stating that the impacts of noise will be negligible (ES Vol2 Chap 13, p23). That wholly ignores the sensitive nature of the grazing animals we have. We attach at Appendix 3 a report from a noise consultant setting out some additional concerns.

41. In that connection we note that no equine receptor assessments have been undertaken. No behavioural assessment of livestock response has been carried out and no Preston Farms specific noise assessment has been presented. In summary, no evidence has been provided demonstrating that the current proposed project design or suggested mitigation measures would enable us to maintain stable operations.

42. In other NSIP examinations, horses have been recognised as sensitive receptors requiring specific consideration of behavioural responses to disturbance. For example, within the Morecambe Offshore Wind Farm Transmission Project examination, construction noise guidance for equestrian receptors was prepared drawing on advice from the British Horse Society, recognising the particular sensitivity of horses to construction activity and disturbance. This demonstrates that equine receptors can require a more tailored form of assessment than general agricultural receptors.

43. That point is particularly important here. The British Horse Society's own construction guidance is high-level and expressly general in nature, and recommends site-specific advice where it is being relied upon. It cannot by itself demonstrate that the current scheme design, construction activity, access arrangements and outline management measures are compatible with Preston Farms' regulated specialist donor-animal operation, in which minimising stress is operationally important. No comparable assessment has been undertaken in the present application despite the scale of the equine operation at Preston Farms, its regulated status and the downstream use of the products supplied. The Environmental Statement also places significant weight on the temporary nature

of the construction phase. However, for a livestock operation that relies on a stable environment, reducing stress and striving towards natural behavioural and environmental conditions, disruption lasting several years cannot reasonably be regarded as temporary.

44. Even very recently, the Applicant proposed amendments to the construction, operational and decommissioning management plan documents but still has not properly understood why and how we operate in the way we do. Rather than taking account of what we have been saying, the Applicant appears to have relied on off the shelf guidance documents relevant to road side equestrian safety but clearly distinct from how our farm operates and the management of large groups or horses within a specialist system.

Potential Loss of Land

45. We acknowledge that discussions have taken place regarding replacement land through the Claydon Estate. Please see as marked on Map B in Appendix 2. We also appreciate that this has been supported by Rosefield. Negotiations remain ongoing but have not been finalised. Whatever the other impacts of concern, lack of replacement land would lead to an immediate and extremely significant impact on our ability to supply product. Although appreciated, the land under discussion is not a like for like swap and would take significant improvements involving much time and expense to replicate the functionality that is being lost. Currently, the farm operates at 100% capacity and so it is not a question of being able to move animals to "other" areas or pause operations whilst problems are sorted out. In addition TCS have a number of large and long-term supply agreements that would be affected by any, even temporary, loss of functionality of the farm or pause in operation. We have already put on hold a number of enquiries over the last few years due to the uncertainty that the Rosefield project has created.

Fragmentation of the Holding

46. Turning to the current proposed design, the combined impact from loss of land and access routes divides the holding into separate operational sections, as can be seen from the maps in Appendix 2.

47. For a system reliant on controlled animal movement and flexible grazing rotation this represents a structural change to how the business functions rather than simply a reduction in land area.

48. As mentioned above, we acknowledge that discussions have taken place regarding replacement but while this is appreciated, replacement land does not also address the fragmentation of the existing operational system.

Construction Impacts and Access to Parcel 3

49. The proposed construction access arrangements introduce significant vehicle movements and personnel access across land currently managed as a controlled operational and biosecure environment.

50. In particular, the proposed access to the entirety of Parcel 3 from Granborough Road (6/11 (AP-008)) is not compatible with our operation. (seen also in Map B of Appendix 2) It would introduce daily movements of construction workers' vehicles, HGVs and other construction traffic for a prolonged period of time. The scale of this access is not easily mitigated, as it would be too great to control effectively and there can be no guarantee of adherence to our specialist operating systems.

51. The fact that the only access to the entirety of Parcel 3, other than 14 abnormal loads, comes across a key part of our operational land is not workable and is not proportionate given the layout of the Rosefield site. The proposed access is particularly difficult to understand given that the main infrastructure in Parcel 3 is at the far end of the parcel from the access route proposed across our farm. There are other, larger and more suitable access points closer to Parcel 3, including via Winslow Road.

52. Even if described as temporary, and we do not consider 2 to 3 years temporary for operational business purposes, such disturbance would affect a regulated operational system designed to maintain stable management conditions and introduces significant risks. This is reinforced by the fact that Granborough Road (6/11) (AP-008) is a key link between our two sites and we have already seen the disruption caused by other infrastructure projects and subsequent road closures. It is also the route by which regular tractor access is required, and where the majority of our winter food is stored.

53. Given the number of personnel and vehicles involved, the associated level of activity would be extremely difficult to reconcile with the security and biosecurity controls currently in place. It would also impede the movement of animals between distinct blocks of land. At present, access to many areas of the holding is tightly controlled, and the introduction of a construction route through these areas would fundamentally change that arrangement. One of the principal biosecurity controls for plots 6/10 and 6/12 is that no unauthorised personnel currently enter these areas.

54. Overall the Applicant's suggestions are limited in substance and largely rely on future consultation, advance notice, procedural controls and additional wording in outline management plans. They do not demonstrate that the current scheme design is workable or proportionate for Preston Farms' regulated and specialist operation. Given the likely number of construction personnel and vehicles involved over a prolonged period, it is not possible to provide Preston Farms with a realistic or consistently enforceable means of protecting its biosecurity and operational requirements in practice.

55. As stated above, the farm is currently operating at full capacity. We do not have the ability under the current proposed design to move animals away from the extensive construction and access areas or pause operations.

Proximity of Infrastructure

56. Parcel 3 contains some of the most intrusive infrastructure associated with the project, including the Rosefield substation and collector compounds, are close to sensitive parts of our holding, which is likely to have impact both during construction and continuing operation. We have been reasonable in recognising that some infrastructure is proposed here due to its proximity to the National Grid Substation, however, to the extent that this can be reconfigured, it should be, especially given our lack of confidence in the Applicants' currently proposed mitigations in this area which are just described as "enhanced mitigation".

57. The Environmental Statement does not demonstrate that construction noise, vibration, lighting and activity levels in these areas as well as the ongoing operation of the infrastructure will remain compatible with the welfare and operational requirements of the animals. As above, it does not consider this issue.

58. Particular concern also arises in relation to the proposed BESS infrastructure in Parcel 2 and associated electrical equipment located in close proximity to our animal grazing in the area 6/10 on the Land Plans (APP-08). The Applicant's own material highlights that these are the noisiest of all the infrastructure. In addition to noise and disturbance, Preston Farms and TCS Biosciences are both concerned about fire risk, emergency response, insurance implications and wider business continuity. The current application does not explain how these issues have been assessed in the context of a regulated specialist donor-animal operation or demonstrate that the proposed BESS location is compatible with the continued operation of businesses supplying products into healthcare diagnostics.

59. The Environmental Statement does not provide any species-specific assessment of the potential effects of such infrastructure on equine behaviour or welfare, nor has it demonstrated that operational noise levels would remain compatible with

the stable, low-disturbance conditions required for the management of donor animals at Preston Farms.

60. The proposals should be reconfigured to prevent construction and operational activity from taking place in such close proximity to these sensitive areas. Whatever is done, it is essential that sound and visual separation between infrastructure and these areas, which is guaranteed to be effective, is secured.

Field E23

61. Field E23 has been a central issue through our discussions with the Applicant.

62. As can be seen from Map A of Appendix 2 this field forms an important part of the coordinated movement and rotation system necessary to maintain efficient operation of the farm. E23 contains the only non-road access to the block of land to the east of the proposed development.

63. The loss of this field alters the functionality of the holding as an integrated system.

64. We have highlighted the importance of this field to the Applicant repeatedly during the development process and requested that it be removed from the scheme. Instead, the Applicant has proposed livestock corridors through solar panels.

65. We do not consider this to be a workable solution. Horses are herd animals accustomed to open grazing conditions and we do not consider it safe or appropriate to move large groups (60-70 horses) of animals through fenced corridors surrounded by solar infrastructure. It is worth highlighting here that the horses under our care revert to close to their natural species state, they live in herds of 60-70 horses, are not ridden or isolated individually. The veterinary letter referred to at point 30 reiterates this point.

66. Replacement land offered elsewhere does not address this issue because it does not maintain the internal configuration of the existing holding.

67. Given the current design now places solar panels, rather than more significant infrastructure, we do not see why this field could not be moved to another part of the project area or removed altogether.

Access and Cable Rights

68. Preston Farms recognises that cable connections to the grid may require certain land rights.

69. However, the rights sought extend significantly beyond the physical cable corridor and are not limited to cabling in the way they are in other parts of the scheme. We are particularly referring to plots 6/10 and 6/12 in the Land Rights document.

70. In the table of required rights over land under "Purpose for which rights over land may be required and restrictive covenants imposed", (APP-013 Schedule 9) the Applicant has included both **Access Rights** and **Cable Rights** for each of 6/10, 6/11 and 6/12. Looking at the definition of Cable Rights, Preston Farms cannot see why the Applicant is also seeking separate and additional Access Rights.

71. Given the large size of plots 6/10 and 6/12, the rights sought are unclear and appear wholly disproportionate for areas that sit outside the main scope of the project. In the oral hearing, when asked about the necessity for these wide-ranging rights, the Applicant suggested that the cabling works could be managed by giving Preston Farms advance notice to remove animals, and that such cabling would be limited in width and short in duration. However, no justification was provided for the much wider general access rights sought.

72. Preston Farms appreciates that cabling will be required. However, that limited cabling activity is wholly unreflected in the breadth of rights sought in the Applicant's submission.

73. In addition, Preston Farms does not understand why so many fields remain within the light blue sections (APP-008 (6)) of plots 6/10 and 6/12 at all, and suggests that the Applicant should remove as many of these areas as possible to white unless it is clearly demonstrated what they are required for in relation to cabling and access.

74. For land forming part of a licensed establishment with strict biosecurity requirements, the introduction of permanent third-party access creates operational risks. The necessity and proportionality of these rights, particularly the additional access rights over and above cabling rights, has not been clearly demonstrated. As presently drafted, the rights sought go materially beyond what has been explained, justified or shown to be necessary by the Applicant.

Alternatives and Mitigation

75. Preston Farms' primary position remains that the scheme should be reconfigured to avoid interference and interruption to our operations.

76. We would obviously prefer none of the infrastructure in the vicinity of our operations in plan 7 of APP-008 at all, given the sensitivity, but we have tried hard to work with the Applicant and have not objected to the compulsory powers

exercised over Fields E10 and E11 (when we first had discussions about a renewable energy project, with the Claydon Estate, these were the only fields mentioned). We have also discussed how while infrastructure in E20/21 and 22 is problematic, it could potentially be workable with reconfiguration and additional mitigation. The remaining points below are the absolute minimum that we require to be amended and we believe that this is a proportionate request given the scale of the project.

77. If the scheme were to remain substantially as proposed, however, practical mitigation measures would include the following. These have been put forward in discussions between the Applicant and Preston Farms and TCS Biosciences since 2023, but so far to no avail.

- **Limitation of Access Rights**
  No access across the operational holding other than where strictly necessary for essential underground cabling, together with refinement of the location of any such routes.

- **Removal of Main Construction Route to Parcel 3**
  Removal of the main construction route to Parcel 3 from Granborough Road so that access is taken from the north of the site rather than across our holding.

- **Removal of Field E23 from the project**
  Exclusion of Field E23 from the project given its critical importance to our operation.

- **Defined Sound** and **Visual Separation**
  Clear and enforceable sound and visual thresholds or barriers between Rosefield infrastructure and sensitive housing and grazing areas, in particular the Rosefield substation, BESS and collector compounds are among the most intrusive elements of the scheme and should therefore be subject to further reconfigurations and/or additional mitigations.

- **Enhanced Construction Mitigation**
  Species-specific noise management, advance notification protocols, control of lighting and glare, agreed biosecurity protocols, and routing that avoids established movement corridors.

78. These measures are intended to ensure that any interference with the holding is limited to what is genuinely necessary and our ability to supply high quality product is not compromised.

Necessity and Proportionality

79. Under section 122 of the Planning Act 2008 compulsory acquisition powers may only be granted where there is a compelling case in the public interest and the land is required for the development, or to facilitate it.

80. The extent of rights sought must represent the minimum necessary interference with affected land.

81. Given the specialist and regulated nature of the operation, Preston Farms does not consider that the Applicant has demonstrated that the extent and configuration of the powers sought represent the minimum necessary interference.

82. In addition, it appears that alternative configurations of the scheme are available which would allow the project to proceed while causing materially less disruption to our specialist business. Given the role of Preston Farms and TCS Biosciences in supplying products used within healthcare supply chains, disruption could have implications extending beyond the local area on a national and international level.

83. Preston Farms recognises the policy support for renewable energy infrastructure and the national need identified in the relevant National Policy Statements. However, that policy support does not remove the need for careful examination of whether the particular powers sought over this land are justified in the circumstances of this case. Preston Farms' position is that its specialist Home Office licensed operation, its tightly managed welfare and biosecurity requirements, and its critical role in healthcare diagnostics together create a materially unique situation which warrants especially careful scrutiny by the Examining Authority when considering necessity, proportionality and the balance of public interest in this case.

Conclusion

84. Preston Farms and TCS Biosciences remain willing to engage constructively with the Applicant.

85. However, the current proposals do not demonstrate that the compulsory acquisition powers and new rights sought over land forming part of a regulated specialist enterprise are necessary or proportionate.

86. The Examining Authority is respectfully requested to scrutinise particularly carefully the compatibility of the development with the continued operation of a

Home Office licensed establishment supplying materials used in healthcare diagnostics, and to consider whether the circumstances of this case justify a different conclusion from that which might be reached for more conventional agricultural land.

87. We would welcome an issue-specific hearing and organised site visits to discuss our concerns on the ground.

EQUINE VETERINARY & REPRODUCTION

5th March 2026

To Whom It May Concern:

Re: Implications of proposed Rosefield Solar Farm on animals at Preston Farms, Botolph Claydon

Preston Farms is a large, specialised livestock farming establishment, operating under a Home Office licence, with approximately 3,500 sheep and 400 horses. I am both their treating Veterinary Surgeon and Home Office Named Veterinary Surgeon and therefore have extensive knowledge of both the day-to-day care and management of the livestock and the legal requirements for their health and welfare.

I have several concerns regarding the impact of the proposed development of the Rosefield Solar Farm on the welfare, safety and biosecurity of the animals at Preston Farms.

1. Proximity of development to livestock.

During the summer months both sheep and horses are housed on land that is both within the proposed project boundary and immediately adjacent to the site, in some areas within 10 metres of the site boundary. One of the sites of winter housing is approximately 200 metres from the proposed substation and associated infrastructure. Another of the premises used for winter housing is in close proximity to the Order limits and under the proposals may be used for access, construction activity and underground cabling.

Both horses and sheep are prey animals and are therefore highly sensitive to noise (particularly tonal or intermittent noise), vibration, lighting changes, visual disturbances and unfamiliar activity as a result of their evolutionary survival strategy. The hearing range of both is wider and more sensitive than that of humans. Their behavioural reactions to any such disturbances can be both extreme and unpredictable and may result in injury to individual or groups of animals.

This proximity of the proposed development to the livestock at Preston Farms is likely to negatively impact their welfare both during construction and once the solar farm is operational due to noise, vibrations, artificial lighting and inhaled pollutants from machinery and construction traffic. The safety of the livestock will also be put at risk due to the proximity of construction traffic accessing the site.

2. Impact on requirements of Home Office licence

As part of the HO licence, there are statutory requirements for animal welfare, stress minimisation, biosecurity and security for the livestock at Preston Farms. These are enhanced when compared to animals not under HO licence

3. Impact on biosecurity

There will likely be an increased disease risk arising from additional vehicle and personnel movements, construction access and cabling works across livestock land, altered drainage and contact pathways. This would have serious implications for this Home Office regulated operation, which as part of their licence to operate, requires controlled access and whole-site security.

4. Impact on security and safety.

The livestock rely on rotational grazing and predictable movements between grazing and housing areas to maintain welfare. The proposed development will affect their access to grazing areas and will increase the distance and tortuosity of movement from grazing to housing areas, putting their safety at risk. The flight nature of the species housed at Preston Farms increases their risk of injury due to fleeing and area in response to adverse stimuli discussed in Paragraph 1.

5. Proposed movement corridor through solar panels

The proposed corridor through the solar panels in Field E23 to facilitate movement of livestock in an attempt to mitigate the effect the development will have on the ability to reach and use the many access points within this field is inappropriate, given the species in question. The funnelling of both horses and sheep into a narrow corridor is likely to create panic, stampeding and crushing of animals and result in injury and potential fatalities.

6. Impact of stress on production

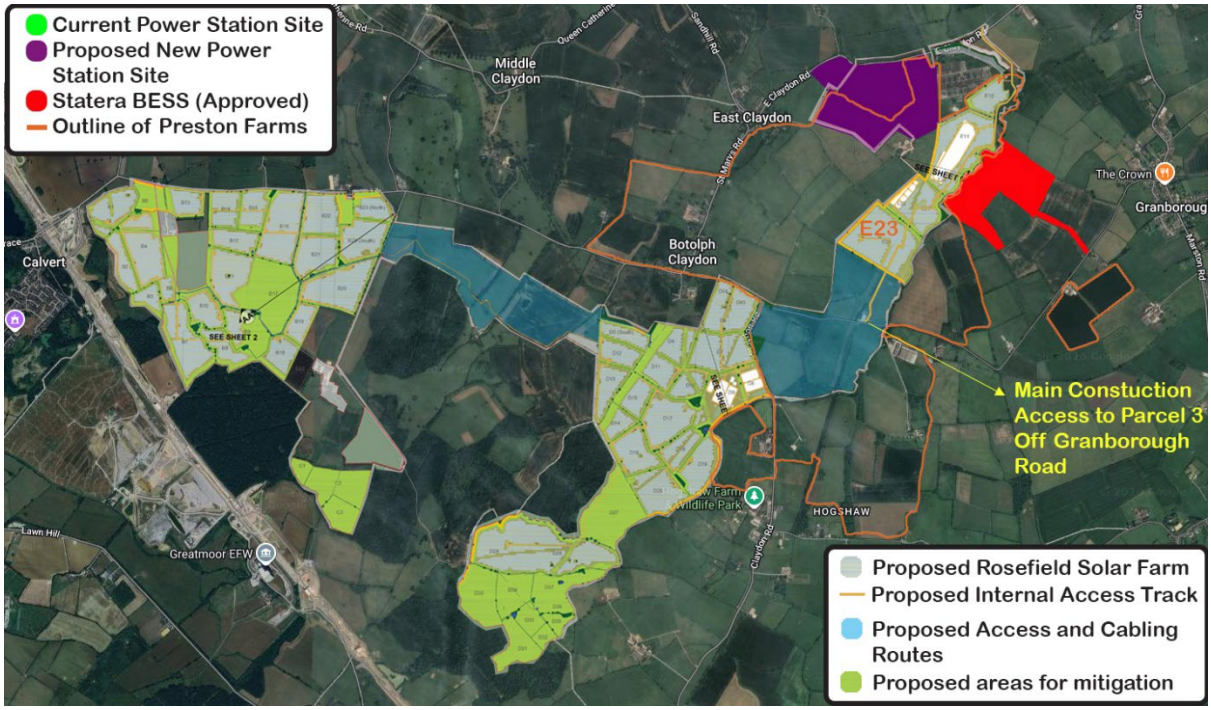
The increased stress caused to the livestock by this development may negatively impact on the production potential of the livestock, the key aspect of any farming operation, as a result of its effect on their health and welfare.

The proposal in its current form does not allow for appropriate separation of construction (process and traffic) and site infrastructure from the livestock of Preston Farms. It is my opinion that the information available does not currently provide sufficient certainty that animal welfare and biosecurity risks can be avoided or adequately controlled to maintain compliance with statutory welfare obligations for the livestock at Preston Farms.

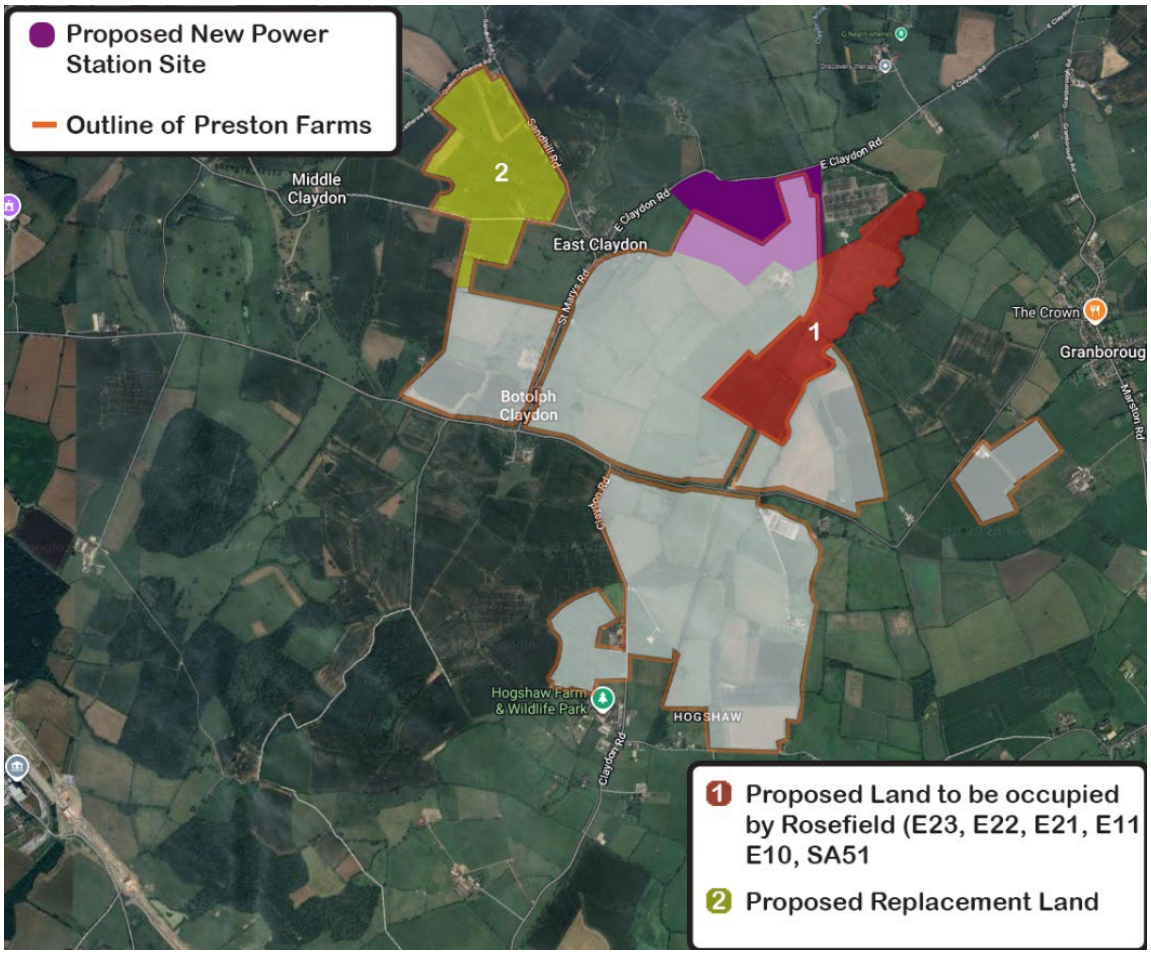
SIGNED:

Jennifer Harbison MA, VetMB, MRCV

Map A


Current Power Station Site
Proposed New Power Station Site
Statera BESS (Approved)
Outline of Preston Farms
Middle Claydon
East Claydon
Botolph Claydon
Calvert
E23
The Crown
Granboroug
Main Constuction Access to Parcel 3 Off Granborough Road
HOGSHAW
Greatmoor EFW
Proposed Rosefield Solar Farm
Proposed Internal Access Track
Proposed Access and Cabling Routes
Proposed areas for mitigation

Map B


Proposed New Power Station Site
Outline of Preston Farms
2
Middle Claydon
East Claydon
1
The Crown
Granboroug
Botolph Claydon
Hogshaw Farm & Wildlife Park
HOGSHAW
1 Proposed Land to be occupied by Rosefield (E23, E22, E21, E11 E10, SA51
2 Proposed Replacement Land

sharps acoustics

Rosefield Solar Farm

Review of noise assessment work for proposed solar farm development on horses in fields, paddocks and stables in the vicinity of the development

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9th March 2026

Contents

1.0 Introduction

1.1 Sharps Acoustics LLP (SAL) has been commissioned by Preston Farms and TCS Biosciences to consider the impact of construction and operational noise and vibration from the proposed Rosefield Solar Farm on horses in fields, paddocks and stables in the vicinity of the development.

1.2 This report discusses relevant policy requirements, the importance of considering equine receptors for noise and vibration, particularly in this case, good practice for an approach to noise and vibration mitigation and then considers the extent to which this matter has been properly dealt with in the submitted noise and vibration chapter of the submitted ES for this development.

1.3 The report also discusses other concerns arising from a review of the noise and vibration assessment presented, which have the potential to affect the assessment outcome.

2.0 Relevant Policy

2.1 National Policy Statements (NPS) set out government policy for different types of Nationally Significant Infrastructure Projects (NSIPs) and the guidance contained in NPS EN-1 *'Overarching National Policy Statement for Energy'* and NPS EN-3 *"National Policy Statement for Renewable Energy Infrastructure''* is relevant when determining the requirements and appropriate methodology for assessing noise generated by the proposed solar farm development. The key requirements of these documents in this case are described below.

NPS EN-1

2.2 The context for the NPS EN-1 *'Overarching National Policy Statement for Energy'* (2025) guidance on noise and vibration is provided in paragraph 5.12.1, which states:

> *"Excessive noise can have wide-ranging impacts on the quality of human life and health such as annoyance, sleep disturbance, cardiovascular disease and mental ill-health. It can also have an impact on the environment and the use and enjoyment of areas of value such as quiet places and areas with high landscape quality.."*

2.3 Of relevance to this matter, the NPS EN-1 sets out the following factors that it states will determine the potential noise impact of a proposed NSIP:

- inherent operational noise from the proposed development, and its characteristics;
- the proximity of the proposed development site to noise-sensitive premises and areas (including dwellings, schools and hospitals), and noise sensitive areas (including certain parks and open spaces);
- the proximity of the proposed development site to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and

- the proximity of the proposed development site to designated sites where noise may have an adverse impact on protected species or other wildlife, including migratory species.

2.4 NPS EN-1 references the three policy aims from the Noise Policy Statement for England (the NPSE).

2.5 To demonstrate that the aims of NPS EN-1 will be achieved, paragraph 5.12.6 of NPS EN-1 sets out a number of elements that should be considered and included within a noise assessment:

- a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal characteristics, if the noise is impulsive, whether the noise contains particular high or low frequency content or any temporal characteristics of the noise;
- identification of noise sensitive premises and noise sensitive areas that may be affected;
- the characteristics of the existing noise environment;
- a prediction of how the noise environment will change with the proposed development;
    - in the shorter term such as during the construction period;
    - in the longer term during the operating life of the infrastructure;
    - particular times of the day, evening and night (and weekends) as appropriate, and at different times of year.
- An assessment of the effect of predicted changes in the noise environment on any noise-sensitive receptors, including an assessment of any likely impact on health and quality of life / wellbeing where appropriate, particularly among those disadvantaged by other factors who are often disproportionately affected by noise-sensitive areas;
- All reasonable steps taken to mitigate and minimise potential adverse effects on health and quality of life.

2.6 Paragraph 5.12.14 of NPS EN-1 describes options for mitigating the adverse effects of noise and/or vibration, which include engineering solutions; lay-out options; administrative controls (such as setting noise limits); and insulation.

NPS EN-3

2.7 NPS EN-3 "National Policy Statement for Renewable Energy Infrastructure" (2025) sets out governmental policy specifically relating to DCO applications for renewable energy infrastructure. It does not require any additional guidance or standards to be considered but advises that a noise assessment would be required (in accordance with guidance in EN-1) and that good design is required to mitigate noise impacts on ecological and heritage receptors.

2.8 Of relevance in this matter, Paragraph 2.10.122 of EN-3 also advises that applicants:

> *"… develop an ecological monitoring programme to monitor impacts upon the flora of the site and upon any particular ecological receptors (such as bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime."*

2.9 In addition to the NPS documents, if there are other considerations that are both relevant and important to the determination of an application for a DCO, such matters can also be considered alongside the NPS, and other guidance may be relevant.

3.0 Impact of noise and vibration on horses

3.1 The horses owned by Preston Farms / TCS Biosciences provide blood which is needed for clinical diagnostics. The importance of this will be described elsewhere in other submissions from TTP, so is not discussed further here.

3.2 Horses have instinctive behaviours inherited from their wild ancestors. As prey animals, they stay highly alert to their surroundings and can be disturbed by unfamiliar sights, sounds, or experiences, even when no real predators are present. The British Horse Society[1] describes horse sensitivity as follows:

> *"Horses can become accustomed to noise, whether short sharp sounds, continuous noise or discontinuous noise (e.g. gunshot, motorway, train). Police and military horses have proven their resilience to noise but the training involved is highly skilled and the horses are carefully selected. Some horses would never reach the same acceptance even with the same training. Such training may not be in the scope of most horse owners therefore it should be assumed that noise is likely to be distressing to horses which are not accustomed to it. If a human may be disturbed by a noise, then so may a horse be disturbed, but a horse may be concerned about sounds which humans recognise and dismiss instantly as no threat."*

3.3 Research[2, 3] has found that, when startled or stressed, they may display physiological changes (such as variations in heart rate and increases in cortisol concentrations, vocalize, act destructively, or attempt to flee, which can endanger both themselves and nearby people. SAL understand that this increase in stress levels can affect the quality of the blood which is taken. For this reason, the welfare of the horses which may be affected by noise and vibration arising from this development should be considered differently to the welfare of "normal livestock".

3.4 The impact of noise on horses has been acknowledged for the Morgan and Morecambe offshore wind farms development in a document[4] provided by the developer in response to the Examining Authority's Second Round of Questions in that case.

3.5 The hearing range of horses is not the same as humans and the way in which horses respond to sound differs from the way that humans respond to sound and varies significantly depending on the animal's nature and training. Horses may habituate to sounds present, which complicates the process of understanding the relationship between source noise and response. There are currently no reliable studies which enable an adverse effect to be linked to a measured level; however, there are steps which

can be taken to minimise the potential impact on horses. This should have begun with the need to identify the potential issue and to engage with Preston Farms / TCS Biosciences to discuss a process for identifying potential impacts and managing the project in such a way as to ensure that the impact from noise and vibration is effectively avoided or mitigated. However, this was not done, as reflected in lack of information in the ES.

3.6 At the Morgan and Morecombe wind farm development, this was explicitly recognised at paragraph 1.3.1.9 of the technical note[4], as follows:

> *"… the Applicants recognise the key role that engagement with affected equestrian receptors will have in identifying measures which will be most effective at reducing the risk of adverse noise impacts at a particular location."*

3.7 In that case, equestrian receptors were considered to be at risk from noise and vibration generated by the construction noise which would be present. The applicants considered that the approach to noise and vibration mitigation would need to be developed on a receptor specific basis and would be likely to vary dependant on the activities and the locations of the receptors. For this reason, they committed to:

> *"… engagement with these receptors throughout the post-consent and construction phases will be key to identifying measures which will be most effective at reducing the risk of adverse noise and vibration impacts at the time the works are undertaken."*

3.8 There are a range of noise and vibration mitigation options available, including:

- moving activities away from receptors, where possible;
- the selection of low noise and vibration plant and techniques;
- use of non vibratory methods, where possible;
- sound insultation at individual stables;
- screening;
- adjusting timings of certain activities; and
- implementing good practice management measures to minimise noise.

3.9 Of key importance, in SAL experience, is engagement with and maintenance of good communications between the developer, their contractors and Preston Farms / TCS Biosciences throughout the project.

3.10 A similar approach is needed in this case, in SAL view.

3.11 Only Buckinghamshire Council has been identified as a stakeholder in this Chapter. SAL understand that Preston Farms have engaged with the applicant on a number of occasions to attempt to highlight their concerns about the impact of noise and vibration on their horses. However, despite this, no non-residential receptors have been identified as needing to be included within the scope of the assessment.

3.12 There has been no recognition of the importance of considering equine receptors (they are not mentioned at all), nor engagement, nor discussion of an approach to the control of noise and vibration in the noise and vibration chapter of the ES for this project. This is a key omission, in SAL opinion.

3.13 Although I have only looked in any detail at the impact of noise on horses in this review, I note that many of the same points will be true for sheep; I would expect the same sort of stress response to noise and vibration.

4.0 Other concerns relating to the noise and vibration assessment

Source data and assumptions

4.1 It is common for an assessment to be made without noise source levels for the plant which will be finally selected to be available and, in such instances, estimated noise levels must be used to provide the basis for predicting operational noise levels in the area. However, in this case, the source levels used are lower than are typical for a development of this nature and size.

4.2 No information has been provided in relation to tonal noise from plant, particularly that anticipated from the proposed inverters. (The source levels and characteristics are required to be described by paragraph 5.12.5 of EN-1).

4.3 The assumptions underlying the assessment appear incomplete and may be unreliable, therefore.

Assessment criteria and consideration of the sensitivity of equine receptors

4.4 The assessment of construction noise has been adopted 65dB, $L_{Aeq,T}$ as the threshold of significance. For construction vibration a value of 1mm/s. PPV has been adopted as the threshold for potentially significant vibration impacts.

4.5 Although the noise and vibration chapter directs the reader to the biodiversity chapter of the ES for a consideration of noise on ecological receptors, that chapter contains no consideration of the impact of noise on horses. The adopted thresholds do not therefore enable an assessment of the impact of construction noise and vibration on equine receptors to be made.

4.6 Given the research that suggests that sudden noises are most likely to have a significant impact on horses, a metric which considers short term "spikes" of noise which can occur (such as the L_{max} metric) to assess impacts is necessary alongside the $L_{eq,T}$, which averages noise over a particular time period, T. No such metric is currently proposed by the applicant.

4.7 In addition to this, the metrics referred to for human receptors are all "A weighted". This A weighting adjusts the sounds measured to allow for the way in which humans perceive sound at different frequencies. Humans can hear very well, for example at 1-3kHz, but cannot hear sound at very low or very high frequencies unless it is much louder in level. Horses (and other animals) do not respond in the same way, so an A weighted metric would provide an indication of the sound that they are hearing. When assessing noise impacts on different species, this must be accounted for.

4.8 The impact of vibration from piling has not been considered and no reason has been given for excluding it from the scope of the assessment. This is a particular concern when considering the impact on horses, given that this has the potential to generate sudden, high levels of both noise and vibration.

4.9 The assessment of operational noise is proposed to be made using the approach suggested in BS4142. This is considered to be valid, except in relation to low frequency sound. BS4142 states, in its scope, that:

> *"The standard is not applicable to the assessment of low frequency noise.*
>
> *NOTE Information on the assessment of low frequency noise is given in NANR45"*

4.10 Given that some of the proposed plant (for example inverters) will produce low frequency tones, SAL consider that these should be considered separately, taking account of the guidance in NANR45 and bearing in mind the potential for standing waves at the frequencies likely to be present withing structures.

4.11 The submitted assessment does not consider such tones, other than by application of a penalty (discussed below). As advised by BS4142, this would not be appropriate for low frequency sound.

Consideration of tonality

4.12 The submitted assessment of operational noise applies either a 2 or 3dB penalty to account for tones (or other intrusive sounds) which the assessors consider may be present. The assessor considers that tonality which would be "just perceptible". Given the low ambient (and background) noise levels present (according to the applicant's noise survey work), SAL consider that tonality is likely to be more than "just perceptible" in some locations. As a result, the penalties applied appear likely to be too low. The impact of the noise may therefore be higher than that presented.

4.13 The ES chapter explains that these penalties have been applied based on an assessment of the predicted level and a comparison of these with the baseline noise level present. This is a reasonable approach, but no further detail has been provided, so it is not possible to check the validity of the values applied. In SAL view, further justification should be provided to demonstrate that these penalties are reasonable, particularly given the low noise levels present at some locations.

5.0 Conclusions

5.1 The submitted noise and vibration assessment fails to identify or address equine receptors, despite the recognised sensitivity of horses to unfamiliar noise and vibration and the specific welfare implications for the Preston Farms / TCS Biosciences herd. The Environmental Statement contains no acknowledgement of horses, no engagement with the owners, and no receptor-specific analysis, representing a substantive omission in the assessment's scope.

5.2 Methodological concerns also limit the reliability of the assessment in SAL view. Source noise levels appear lower than typical for a development of this scale, tonal and low-frequency components have not been properly evaluated, and the approach relies on what appear to be incomplete assumptions.

Construction impacts have similarly been inadequately addressed: the adopted thresholds do not allow assessment of effects on horses, sudden noise events have not been evaluated using appropriate metrics, and potential vibration impacts from piling have been excluded without justification.

5.3 Given these omissions and uncertainties, the assessment does not provide a robust basis for determining the noise and vibration effects on equine receptors. A more rigorous, receptor-specific methodology supported by engagement with Preston Farms / TCS Biosciences and the application of appropriate mitigation measures, is required to meet policy expectations and ensure that adverse impacts on horse welfare are properly avoided or minimised.

References:

1. "Advice on Noise on routes used with horses", The British Horse Society
2. "The Impact of Noise Anxiety on Behavior and Welfare of Horses from UK and US Owner's Perspective", Riva, et al. 2002.
3. "The Management of Horses during Fireworks in New Zealand", Gronqvist, et al. 2016
4. "Managing Construction Noise at Equestrian Receptors Technical Note - Morgan and Morecambe offshore wind farms: transmission assets"

MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Managing Construction Noise at Equestrian Receptors Technical Note

Deadline: 6
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Prepared by:

RPS

Prepared for:

Morgan Offshore Wind Limited, Morecambe Offshore Windfarm Ltd

Contents

Glossary

Term	Meaning
Decibel	A unit used to measure or compare the intensity of a sound by comparing it with a given reference level on a logarithmic scale
Noise	An unwanted or unexpected sound.
Onshore Order Limits	Onshore Order Limits See Transmission Assets Order Limits: Onshore (below).
Sound	Fluctuations of pressure within a medium (gas, solid or fluid) within the audible range of loudness and frequences with excite the sensation of hearing.
Transmission Assets	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning.
Transmission Assets Order Limits	The area within which all components of the Transmission Assets landward of Mean High-Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds). Also referred to in this report as the Onshore Order Limits, for ease of reading.

Acronyms

Acronym	Meaning
BHS	British Horse Society
ES	Environmental Statement
NSR	Noise Sensitive Receptor

1 Managing Construction Noise at Equestrian Receptors Technical Note

1.1 Introduction

1.1.1.1 The Examining Authority's Second Round of Questions issued on 8th September 2025 (PD-011) requested that the Applicants provide further information of how the impacts of construction noise on wildlife, livestock (cattle and sheep) and horses have been assessed and what specific measures are going to be implemented to mitigate the impact on animals during construction (Q2.14.1.5).

1.1.1.2 Livestock were not identified as receptors sensitive to construction noise and vibration at the pre-application or scoping stage and therefore impacts on these were not assessed or reported in the ES. The Applicants refer to their response to REP3-101.8 (REP4-094), which includes reference to available research on noise and livestock, how this relates to construction noise levels limits proposed for the Transmission Assets and the range of mitigation measures which may be considered to reduce noise impacts on both livestock and horses.

1.1.1.3 In its response (REP5-130), the Applicants confirmed that construction noise impacts had been assessed at both Wrea Green Equitation Centre and Quaker Wood Stables, and these are reported in APP-117. However, the Applicants also noted that, further to this assessment and issues raised with regard to potential impacts on horses and protected characteristics of users of the equestrian facilities in submissions to the Examination, it had commenced a study to identify the risk of noise impacts on equestrian receptors which will be used to inform specific noise mitigation at these receptors during construction. The Applicants committed to submit the outcome of the study at Deadline 6.

1.1.1.4 This technical note provides the findings of this study which includes a review of equestrian receptors at the businesses for which concerns have been raised. The technical note also sets out the scope of specific mitigation measures which should be considered at these receptors to minimise noise impacts on equestrian receptors during the construction phase.

1.1.1.5 Although the focus of this technical note is on construction noise, the Applicants have also given consideration to the impact of construction vibration on equestrian receptors, setting out further measures which can be applied to minimise these impacts.

1.2 Review of research, guidance and assessment approaches

1.2.1.1 As noted in paragraph 8.11.4.10 of Volume 3, Chapter 8: Noise and Vibration (APP-117), the Applicants acknowledge that horses can be startled and flee from noises, with reference to guidance published by the British Horse Society (BHS, 2025). This guidance was used to inform the assessment of impacts on Wrea Green Equitation Centre and Quaker Wood Stables, the latter which were identified as locations where horse riding would be undertaken during the daytime as a recreational activity.

1.2.1.2 However, in response to the issues which have been raised during Examination, the Applicants have undertaken a wider review of available research and guidance relating to noise impacts on horses, with a particular focus on construction noise, as well as reviewing assessment approaches undertaken to support other Development Consent Orders and major infrastructure schemes.

Research review

1.2.1.3 The Applicants have identified no research studies specific to the response of horses to construction noise. However, when reviewing wider research undertaken on horses' reaction to different sounds, the Applicants have found that several research studies concur with the British Horse Society (BHS) guidance, in that noise can lead to behavioural responses in horses (Christense et al., 2005), particularly where the noise is novel and unfamiliar (Janicka et al., 2022). Research also indicates that different horses, like humans, have different sensitivities to noise and therefore, when considering mitigating the impact of construction noise on equestrian receptors, a receptor specific approach is required.

1.2.1.4 When considering the risk of construction noise impact on equestrian receptors from individual construction activities and how this should be mitigated, understanding the hearing range of horses is an important factor. Research has identified that a horse's hearing can range from 55 Hz to 33.3 kHz, with a region of best sensitivity from 1kHz to 16 kHz (Heffner and Heffner, 1983). In comparison, the frequency range audible to humans is typically from 20 Hz to 20 kHz.

Guidance review

1.2.1.5 In addition to the guidance used to inform the assessment of equestrian receptors reported in APP-117, the Applicants have identified further guidance published by British Horse Society relevant to the impact of noise on horses from construction activities. In its specific guidance relating to construction (BHS, 2024), the British Horse Society reiterate that it is a horse's instinct to run from threat, with *'sudden noise and movement'* being likely triggers to a horse's reaction. In construction terms, it relates this to sudden movement or noises from machinery being more of a threat to those which are still.

1.2.1.6 The guidance also provides specific advice on how such reactions from horses can be managed by contractors, based on the following distances from construction activities:

- 20 metres:

  Machinery or activity should not resume until horses are at least twenty metres past. If it is not possible for activity to be halted, staff should be at the location to warn approaching equestrians as appropriate. Such 'sentries' should be obvious on approach, not hidden behind a tree or equipment as suddenly appearing could be an additional stress factor causing a horse to react.

- 50 metres:

If a horse appears distressed—freezes, jerks sideways, prances about, takes flight, spins round or shies away or acts in any way other than a calm forward motion—or an equestrian appears to be struggling for control, or shouts, all movement and noise should cease immediately to avoid escalating the situation. Activity should not resume unless the equestrian indicates that it is safe to do so or is out of sight or more than fifty metres away.

Approaches taken to assessing impacts in EIA

Approach taken in assessment reported in APP-117

1.2.1.7 In its assessment reported in APP-117, the Applicants identified noise sensitive receptors in accordance with the criteria set in Table 8.15, the latter defining their sensitivity according to different settings where human receptors may be present. The assessment methodology and receptor sensitivity are matters which have been agreed with Fylde Borough Council (AS-089, FBC.NV.8) and South Ribble Borough Council (REP4-080, SRBC.NV.8).

1.2.1.8 Both Wrea Green Equitation Centre and Quaker Wood Stables were identified as commercial receptors in accordance with guidance in Table 8.15, with a corresponding sensitivity to noise identified as 'low'. However, following further consideration of the particular sensitivity of horses to sound, noting that any noises may be considered as a potential threat from which horses flee, the sensitivity of those using these locations for horse riding as a recreational activity receptor was increased to medium.

1.2.1.9 However, the Applicants acknowledge that protected characteristic individuals using the equestrian receptors may, like horses, react differently to sound, including sudden and unfamiliar sounds arising from construction. Therefore, the Applicants' focus during the post-consent phase will be to further understand these specific receptors, including their users, and identify what receptor specific mitigation is appropriate to minimise impacts. This approach is further discussed in **paragraph 1.3.1.13** below.

1.2.1.10 The Applicants acknowledge that Midgeland Riding School is also a commercial receptor in accordance with the criteria set in Table 8.15. However, the building associated with the riding school is approximately 650m from the Order Limits and therefore lies outside the construction noise assessment study area of 300m from the Order Limits. Therefore, construction noise impacts at this receptor were not reported in APP-117.

Other DCOs and other major infrastructure projects

1.2.1.11 In its review, the Applicants have not identified any other EIA assessments submitted to support DCOs or other major infrastructure projects in which the noise impacts on horses have been considered in the original application documents. The Applicants have identified that the consideration of noise impacts on horses to invariably be in response to matters raised during examination of the developer's applications, the most notable of these being 'High Speed 2 Limited Phase One Noise effects on Livestock' (Arup, 2017) study.

1.2.1.12 This study focussed on the effects resulting from transportation noise effects during the operational phase of High Speed 2 (HS2), noting the following in relation to managing construction noise impacts on livestock, including horses:

'A number of protective measures are identified in the HS2 Phase One Environment Statement to control construction noise and vibration, including the requirement that best practicable means (BPM) will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors. Additional site-specific mitigation may be also identified in the local environmental management plans.'

1.2.1.13 Although the HS2 Phase One study referred to the application of BPM to minimise construction noise at properties and other sensitive receptors, it acknowledged that site specific mitigation may also be identified to minimise impacts on livestock receptors and such measures to be included in management plans.

Construction vibration

1.2.1.14 The focus of this study is on construction noise, however, the Applicants acknowledge that there is the potential for horses to react to vibration resulting from the construction of the Transmission Assets. Although the Applicants have not identified any specific research studies on this issue, the Institute for Environmental Research and Education (IERE, 2025) suggest that evidence is emerging which indicates horses can:

- Detect subtle seismic activity, such as small earthquakes.
- Respond to vibrations caused by approaching vehicles or machinery.
- Differentiate between different types of vibrations.

1.2.1.15 Therefore, the Applicants have also considered how vibration from construction sources can be managed so that the reaction of horses to it, and the consequential impact on equestrian receptors, can be minimised.

1.3 Outline approach to mitigating construction noise and vibration impacts at equestrian receptors

1.3.1.1 The study has confirmed that equestrian receptors are at risk of impacts due to sudden noises and vibration generated by the construction of the Transmission Assets.

1.3.1.2 The Applicants recognise the need to consider how horses will react to the construction works in close proximity to these receptors and identify what mitigation measures will need to be applied to minimise the risk of adverse noise and vibration impacts at them.

1.3.1.3 However, the Applicants also recognise that the approach to mitigation will need to be developed on a receptor specific basis, as this will vary depending on the specific construction activities (construction plant, timing, duration), the location and use of each equestrian receptor, and the sensitivities of the particular horses. Therefore, engagement with these receptors throughout the post-consent and construction phases will be key to identifying measures

which will be most effective at reducing the risk of adverse noise and vibration impacts at the time the works are undertaken.

1.3.1.4 The scope of mitigation measures and engagement to be considered by the Applicants, including reference to existing project commitments, are set out in further detail below.

Scope of mitigation measures

1.3.1.5 In its update to the Outline Construction Noise and Vibration Management Plan (oCNVMP) at Deadline 5 (REP5-054), the Applicants committed to give specific consideration to the control of noise at the following equestrian receptors, including the need for any receptor specific measures:

- Wrea Green Equitation Centre
- Quaker Wood Stables
- Midgeland Riding School

1.3.1.6 The oCNVMP sets out a number of measures which will be considered to minimise construction noise throughout the construction period. These include the use of plant fitted with measures to reduce the noise emitted from them, the shutting down of plant when not in use and the use of site hoardings/temporary noise barriers, including at temporary construction compounds.

1.3.1.7 The Applicants note that the measures already included within the oCNVMP will contribute to minimising construction noise and vibration impacts at equestrian receptors. However, the Applicants consider that further specific measures may need to be considered to minimise the impacts at these and other equestrian receptors identified in this study, with a particular focus on minimising the impact of sudden noise events. Such activities which may give rise to such events include but are not limited to:

- setting up and decommissioning of temporary construction compounds (Wrea Green and Quaker Wood Stables);
- deliveries to operational construction compounds (Wrea Green and Quaker Wood Stables);
- installation of sheet piling to support trenchless techniques entry and exit pits (potential for all receptors);
- drilling associated with trenchless techniques (potential for all receptors); and
- reversing alarms on vehicles (all receptors).

1.3.1.8 In these circumstances, additional measures are available to control the impact of such events, which include the following:

- timing such activities, as far as reasonably practicable, to days and times when horses not likely to be near them, or arrangements can be made to remove horses from land while activities are being undertaken;
- handling deliveries and materials in a manner which minimises noise and vibration;

- selection of low vibration equipment or operate equipment in low vibration modes where practicable;
- consider if non vibratory methods can be used for compacting haul roads and backfill material;
- consider enhancing sound insulation measures to any affected internal facilities; and
- applying BHS guidance to shut down machinery or stop movement and noise, as far as reasonably practicable, where horses are within 20 m / 50 m of construction activities. The application of any measures set out in this guidance will be informed by the bespoke Communications Plan between the equestrian receptor and their appointed Agricultural Liaison Officer (ALO) and Principal Contractor.

Engagement with affected receptors

1.3.1.9 As noted in **paragraph 1.3.1.3**, the Applicants recognise the key role that engagement with affected equestrian receptors will have in identifying measures which will be most effective at reducing the risk of adverse noise impacts at a particular location.

1.3.1.10 The Applicants are already committed to engagement with various receptors across the Projects, which include those equestrian receptors identified in this study as likely to be at risk of construction noise and vibration impacts. The relevant commitments are as follows.

Outline Code of Construction Practice (oCOCP) (REP5-044)

1.3.1.11 The Applicants are committed to appointing an Agricultural Liaison Officer (ALO), who will be the dedicated point of contact for ongoing engagement about practical matters with landowners, occupiers and their agents during the pre-construction and construction phases.

1.3.1.12 The scope of works included in the ALO role include arranging meetings with landowners, occupiers or their agents to minimise disruption where possible to existing farming regimes and timings of activities. Such meetings will provide the opportunity for these equestrian receptors to discuss planned construction activities with the potential to trigger horses and identify appropriate noise and vibration mitigation measures to minimise/avoid such events.

CoT79: Outline Construction Noise and Vibration Management Plan (oCNVMP) (REP5-054)

1.3.1.13 In the update to the oCNVMP submitted at Deadline 5, the Applicants committed to engage with specific sensitive receptors during the detailed design stage to further understand their use and identify any receptor specific noise and vibration limits and any potential mitigation measures required to minimise construction noise and vibration impacts. These included the following equestrian receptors:

- Quaker Wood Stables,
- Wrea Green Equitation Centre

- Midgeland Riding School

CoT35: Outline Communications Plan

1.3.1.14 As noted in ISH4, the Applicants have engaged regularly with Wrea Green Equitation Centre in respect of the Transmission Assets. Engagement has focused on the necessary communication and the potential impacts to the sensitivity of the horses. The concerns raised by this receptor include noise and vibration, as well as communication and potential visual and odour disturbance on the horses.

1.3.1.15 The Applicants have updated the Outline Communications Plan at Deadline 6 (J1.1/F05) to include a commitment to continuing this engagement through a bespoke communications plan for Wrea Green, which will be prepared in consultation with the Centre. A draft of the bespoke communications plan was shared with Wrea Green on 17th October 2025. The Applicants note the suggested amendments made by Wrea Green and an updated draft will be shared before the close of examination. .

1.3.1.16 The aim of the bespoke plan is to outline a dedicated communications plan for all stages of the Transmission Assets, including survey and construction, which will need to be in place throughout the Transmission Asset's presence near Wrea Green. The bespoke plan will be regularly reviewed and updated in consultation with Wrea Green, as appropriate. The objective of the Communications Plan is to provide tailored information to parties which may require more detail due to the nature of their operations. The purpose of the communications plan is to provide more detail to include (but not limited to):

Information provision / gathering

- Provision by the Applicants of a list of potential activities, including schedules of deliveries and activities (via the detailed Construction Traffic Management Plan) to discuss the context of Wrea Green Equitation Centre's current operation and mitigations that can be applied (i.e. timing and location of classes and works).

Engagement.

- Regular check-in calls prior to and during any works in the vicinity (in addition to any general project updates);
- Prior information and details about the works taking place in the vicinity of Wrea Green Equitation Centre (including agreement on what constitutes in the vicinity);
- Proposed start dates and durations of works;
- The agricultural liaison officer's contact details; and
- The contractor's details and landowner liaison contact.

Mitigations

- Bespoke mitigations to be employed, relating to the key areas of concern for Wrea Green Equitation Centre including, but not limited to:
    - Layout of the temporary construction compound to minimise potential odour and visual impacts;

- Appropriate fencing and screening; and
- Measures to minimise noise and vibration impacts associated with the setup, use and decommissioning of the temporary construction compound.

- Regular review (during check-in calls) of the efficacy of mitigation measures, including the protocols contained within the Wrea Green Communications Plan, to ensure measures can be amended as appropriate.

1.3.1.17 In addition, the Project has committed to provision of an equine veterinarian or other suitable specialist to support Wrea Green Equitation Centre by advising on potential additional mitigation measures during the construction phase. This will take into account the activities carried out during the pre-construction period and ensure expert input is available to understand the horses' behaviour and advice on measures that, alongside the Applicants' mitigation, can be taken to help them to acclimatise to any changes in their environment.

1.4 Conclusion

1.4.1.1 The Examining Authority's Second Round of Questions issued on 8th September 2025 (PD-011) requested that the Applicants provide further information of how the impact of construction noise on wildlife, livestock (cattle and sheep) and horses have been assessed and what specific measures are going to be implemented to mitigate the impact on animals during construction (Q2.14.1.5).

1.4.1.2 Livestock were not identified as receptors sensitive to construction noise and vibration at the pre-application or scoping stage and therefore impacts on these were not assessed or reported in the ES. The Applicants refer to their response to REP3-101.8 (REP4-094), which includes reference to available research on noise and livestock, how this relates to construction noise levels limits proposed for the Transmission Assets and the range of mitigation measures which may be considered to reduce noise impacts on both livestock and horses.

1.4.1.3 In its response (REP5-130), the Applicants confirmed that construction noise impacts had been assessed at both Wrea Green Equitation Centre and Quaker Wood Stables and these are reported in APP-117. However, the Applicants also noted that, further to this assessment and issues raised on horses in submissions to the Examination, it had commenced a study to identify the risk of noise impacts on equestrian receptors which will be used to inform specific noise mitigation at these receptors during construction. The Applicants have also considered the impact of construction vibration on horses.

1.4.1.4 Within this study, reported in this technical note, the Applicants have:

- reviewed available research and guidance which have reaffirmed its understanding that sudden noises can trigger horses to respond and therefore risk adverse impacts at equestrian receptors;
- identified approaches to mitigating impacts, referring to current commitments to managing construction noise within the oCNVMP and

potential additional measures to be considered on a receptor basis to control the impact of sudden noises and construction vibration; and

- identified the key role engagement with the affected equestrian receptors throughout the pre-construction and construction phases, referring to its current engagement commitments.

2 References

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The British Horse Society (BHS) (2025) Advice on - Noise on routes used with horses

10th March 2026

The Planning Inspectorate
Temple Quay House,
2 The Square,
Temple Quay,
Bristol,
BS1 6PN

Re: Written Representation for Case reference: EN010158
Application by Rosefield Energyfarm Limited for Rosefield Solar Farm

Interested Party Reference number: [redacted]

Representation Summary:

- TCS Biosciences Ltd (TCS) requests recognition as a nationally important manufacturer and seeks careful consideration of planning impacts, including an issue specific hearing.
- TCS was founded in 1965 with the specific aim of supplying the life science community with consistent, fresh, high quality and sterile donor animal blood. We are also the only manufacturer of donor animal blood for microbiology applications in England and Wales, supplying material critical for blood agar plates used in NHS diagnostics.
- Donor animal blood is essential for diagnosing life-threatening infections (e.g., Sepsis, Meningitis, Streptococcus pneumoniae) and supports antimicrobial stewardship.
- Stress to donor animals measurably reduces blood quality, decreasing quality and directly affecting diagnostic reliability.
- Donor animal blood quality depends on low-stress animal welfare, tightly controlled bio-secure environments, rapid processing. Storage and stockpiling are not feasible due to short shelf life.
- Operations require close proximity between Preston Farms (donor animals) and TCS processing facilities, with continuous year-round production.
- TCS employs 55 staff locally, with long tenure and highly specialised, experience-based laboratory skills.
- The DCO Proposals take areas of the Preston Farms holding that would physically fragment it, and place plant next to what remains, as well as running construction and operational activity through and alongside the holding, as explained in detail in the Preston Farms Ltd written representation.

TCS Biosciences Ltd
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Registered in England No. 2172900 Vat No. GB 729 8545 85

- As such the Proposals would disrupt the Preston Farms operation, and threaten the blood supplied due to stress disturbance of the livestock and biosecurity/contamination risks.

- Concurrent major infrastructure works may restrict staff access, disrupt time- and temperature-sensitive logistics and delay supply of essential diagnostic materials.

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10th March 2026

The Planning Inspectorate
Temple Quay House,
2 The Square,
Temple Quay,
Bristol,
BS1 6PN

Re: Written Representation for Case reference: EN010158
Application by Rosefield Energyfarm Limited for Rosefield Solar Farm

Interested Party Reference number: [redacted]

Dear Sirs,

TCS Biosciences Ltd (TCS) is a UK-based manufacturer and supplier of high-quality biological reagents and critical raw materials used across the healthcare, life science, and industrial sectors. Our products play a vital role in diagnostic microbiology within the NHS, the manufacture of innovative vaccines and treatments, and the provision of safe drinking water.

1) Donor animal blood and diagnostic microbiology

We are based in the village of Botolph Claydon, along with our sister company Preston Farms Ltd (PFL). TCS and PFL are unique in England and Wales, we are the only manufacturer of donor animal blood for microbiology applications.

Blood, from our donor horses and sheep, provides a critical nutritional supplement used as a raw material in blood agar plates. Blood agar plates have and will continue to serve an important role in clinical microbiology, allowing clinicians to rapidly and reliably diagnose life threatening infections such as meningitis, sepsis and Streptococcus pneumoniae. Moreover, the use of blood plates is essential in determining treatment, ensuring the correct antibiotic stewardship and management of antimicrobial resistance (AMR).

TCS was founded in 1965, with the express purpose of supplying the life science community with consistent, fresh, high quality and sterile donor animal blood. Throughout our 60-year history, the business has grown, supplying customers across the UK, Europe and Middle East with enough blood products to produce over 100 million blood agar plates per annum.

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To be fit for purpose, animal blood, and in particularly the red cells, needs to be robust. This begins with the donor animals that live at Preston Farms. They are afforded a higher level of welfare and husbandry than livestock on standard agricultural land. A low stress and as natural as possible existence are of critical importance, to ensure robust red cells. Donor animal blood must also be sterile and free from infection. This begins with the donor animals, hence the necessity for strict herd control and animal management within a bio secure environment. Equally donor animal blood must also be free of microbial inhibitors, antibiotics, to ensure that blood agar plates can successfully support growth of microbial contaminants in patient samples.

Donor animal management and aseptic collection techniques form only part of the story. The donor animal blood must be processed quickly and diligently after collection. Manual processing techniques, by skilled laboratory technicians, ensures that the fragility of the red cells is not impacted and robustness of the red cells remain. Stringent procedures at TCS in its suite of laboratories ensure that the donor animal blood remains sterile throughout production and processing.

The robustness of red cells is essential to how blood agar plates perform. Strong, intact cells provide a clear and reliable background for the correct interpretation bacterial haemolysis patterns. Fragile cells can lyse prematurely, causing discoloration of the media and reducing contrast round bacterial colonies. This can mask true haemolytic reactions. Haemolysis is an essential part of diagnosis, aiding bacterial identification.

Maintaining the level of control detailed above ensures batch-to-batch consistency, providing laboratories with reliable performance, reproducible culture characteristics and confidence in diagnostic results.

Under our ISO9001 Quality Management System (QMS), TCS tests and releases each batch of donor animal blood against robust specifications. These specifications include visual assessment of colour and measurement of percentage packed cell volume (PCV). PCV indicates the proportion of red blood cells present and must fall within a defined range to ensure optimal performance. The quantity and integrity of red blood cells are critical to the overall effectiveness of blood agar plates.

The fragility of red cells is also impacted by time. The more aged the red cells, the less robust they are. Typically, our defibrinated donor animal blood carries a 28-day shelf life from the date of collection. This means that TCS and PFL are businesses in continuous operation, producing and despatching donor animal products, 52 weeks of the year.

Stress in donor animals can reduce both the number and quality of red blood cells. It may also affect additional physiological factors that increase processing waste, placing further strain on available blood volumes.

In horses and sheep stress responses have been shown to produce measurable changes in blood parameters. Numerous studies examining transport, environmental disturbance and handling have demonstrated increases in cortisol concentrations and associated changes in haematological values following stress exposure. This relationship is supported by elevated clot-related waste figures recorded by TCS immediately following shearing of donor sheep.

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Freshest ongoing supply means that TCS needs to be sited close to PFL donor blood collection sites. On bleed days, donor animal blood is collected from these sites at least hourly so that it may be processed immediately.

The fragility issues and freshest ongoing supply of donor animal blood does not allow for TCS or our customers to hold meaningful contingency stock. Stock piling of blood agar plates is therefore not possible.

The need for donor animal blood collected from stress-free animals with guaranteed packed cell volumes (PCVs) is supported by the other established supplier in the UK donor blood market, E&O Laboratories "All donor animal blood products are harvested from Stress Free Animals with guaranteed PCV's and free from any microbiological inhibitors"

E&O Laboratories are based in Scotland and given the larger operational scale of TCS and PFL, we believe that E&O Laboratories may face challenges in absorbing significant volume shortfalls at short notice. Depending on the scale of the short fall, sufficient scale up may not be possible.

The attached document, **Protecting the Lifeblood of UK Diagnostic Microbiology (Appendix 1)**, has been produced by the British Invitro Diagnostic Association (BIVDA) in support of the critical and largely unknown and underappreciated role donor animal blood plays in supporting the health of our nation.

In response to the BIVDA document, David Wells, Chief Executive Officer for the Institute of Biomedical Science (IBMS) has also stated the following:

"We know that in country resilience is of vital national health security, especially as this was clearly an issue during the pandemic."

Ultimately, the impacts of the proposed scheme on PFL, their donor animals and resultant effects on TCS' ability to supply donor animal blood products that are fit for purpose and the eventual outcome for national health should not be underestimated. The impacts of TCS suffering a restriction in, or failure to, supply would be felt quickly, rapidly impacting the effectiveness of clinical decision making.

We therefore urge inspectors to consider the activities of TCS and PFL as nationally important and invite them to visit our site(s) to understand better the nature of our operation and criticality of the products we produce. We would welcome a specific issue hearing to ensure the risks to the supply of donor animal blood and the potential impacts on the health service are understood and acknowledged in the decision-making process.

2) Impacts on rural businesses

TCS Biosciences has had a base in Botolph Claydon for over 60 years, and have occupied our main site since the 1980's and our Park Leys site since the mid 90's. We employee 55 staff, with the majority of them residing within a 10-mile radius of Botolph Claydon.

Across our 55 people, the average length of service is 11.5 years. However, this has been skewed down by recent expansion and hire of new employees. 10 new employees have been with us less than year, increasing the remaining 45 staff to a 14-year average, with 30% of our team serving 20 years or more.

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Almost 75% of our team are directly involved with the production, despatch, sale and general management of donor animal blood products. These staff were all categorised as key workers during the Covid pandemic.

As well as providing unique products, we are also the unlikeliest of businesses to be housed in a small village within a rural setting. Most of our production and development activities are laboratory based. This supports Buckinghamshire Council's 2025–2035 economic strategy on driving annual productivity growth by prioritizing high-value, innovation-led sectors. This includes life sciences and development of advanced laboratory spaces and research and development facilities.

Local businesses also benefit from our location. We partner with many businesses nearby who provide products and services to TCS and PFL. To a degree the hospitality sector also benefits from our presence. We frequently use hotels and restaurants in Buckingham, Winslow and Waddesdon for supplier and customer engagement as well as for our own field-based sales resources. Our employees all use petrol stations, convenience stores and other service providers locally on their commute to work.

3) Impacts of increased traffic / vehicle movements

We have significant concerns with regards the increased movement of Rosefield employees, LGV, HGV's and abnormal loads throughout the construction phase of the proposed development. Consideration must be given to our employees and the impact on their daily commutes in and out of our facility.

Potentially, increasing lateness / absenteeism and the resultant impact on our critical manufacturing operations. Our daily collections of the animal blood from the animal collection sites to the processing facility will also be impacted by the proposed NSIP access and vehicle movements.

There are many advantages to living and working in a rural environment, however the road network is not one. Many of the proposed roads near and around the site are narrow, aged and poor quality. Diversion capacity is significantly limited in the direct area of Botolph Claydon. Many of the roads are failed or failing under the increased traffic from other local NSIPs. Diversions can be extremely long and time consuming.

Although the magnitude of the risk does not compare to the risk the DCO Proposals present to the quality of the donor blood TCS relies upon, it should also not be overlooked that there will likely be impacts on employee wellbeing. Having to deal with diversions and additional traffic means stress associated with being late to work, or late home, or just more time in the car. Similarly, damage to personal vehicles due to the further and inevitable deterioration of the road network locally due to heavier use is a real issue and brings its own frustrations. In terms of the business, there is the potential for impact on morale, time off, and impact on the quality of the output of an individual and on overall productivity.

Botolph Claydon falls within the Oxford – Cambridge Arc. Increased traffic, road closures, diversions and general road quality could all be detrimental to acquiring skilled new staff as the commute to our premises becomes unattractive. We already have examples where people have declined job offers at TCS due to other local NSIP traffic restrictions.

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Employees are not the only ones affected. It is necessary for logistics partners to operate unhindered. We have numerous deliveries, mainly by LGV's daily and weekly HGV deliveries. Many of which are time and / or temperatures sensitive.

Outbound logistics could also be impacted. We despatch products to customers Monday – Thursday on a weekly basis. Many of our products are time and temperature sensitive and are packed for despatch against agreed courier cut offs. Missed / delayed collections could have serious impacts for our customers, some of which operate on a just-in-time basis to ensure blood products are used as fresh as possible.

4) Cumulative Effect

We have referred to cumulative impact within this document. We are dealing with 3 other NSIPs (HS2, East West Rail and Grendon Underwoods Mega Prison). We also have the recently approved Statera BESS on land directly adjacent to the planned Rosefield development.

There is a concern that peak construction phases of these projects will overlap making it harder for employees, suppliers and logistics partners to access our sites. Our experience of these NSIPs show that whatever "in theory" rules and mitigations are put in place for roads and transport issues, there is very little one can do when these are breached, which is often the case.

Although early in the planning process, the proposed development of the new East Claydon National Grid substation (to replace the existing East Claydon substation) should also be considered in the planning process of the Rosefield DCO. Many of the haul routes overlap and the construction periods coincide and then traffic from the two would compound accessibility issues.

The new East Claydon substation would be on top of all the other major projects in the area, adding to cumulative effect.

5) Environment

The need for renewable energy is not lost on us a business. TCS have held ISO14001 certification, the leading international standard for Environmental Management System, since 2012. And have been registered to the Science Based Targets Initiative (SBTI) since 2024. These standards do not only focus on the environment at a global scale. They encourage businesses to think locally too.

We have deployed our own environmental initiatives, including the installation of almost 400 solar panels on the roofs of our two sites. A renewable energy environmental gain should not come at the cost of the environment itself or in our case, clinical diagnostic microbiology.

Conclusion

Despite being a rural location, Botolph Claydon and the surrounding land hosts a business manufacturing and supplying critical and irreplaceable raw materials for clinical diagnostics. With over 50 employees, TCS should be considered one of the largest local employers outside the major towns of Aylesbury, Buckingham and Bicester and city of Milton Keynes.

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Our rural location is necessary, due to the agricultural nature of our sister company and sole supplier of donor animal blood products.

Our inability to supply these products would be felt swiftly and on a national level.

Yours faithfully,
TCS Biosciences Ltd

[redacted]

Gareth Williams
Sales and Marketing Director

Enclosures:

Appendix 1 – BIVDA, Protecting the Lifeblood of UK Diagnostic Microbiology

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BIVDA

The British In Vitro Diagnostics Association

Protecting the Lifeblood of UK Diagnostic Microbiology

The Strategic Importance of Donor Animal Blood in Culture Media

Executive Summary

Diagnostic microbiology underpins modern healthcare and national antimicrobial resistance (AMR) strategy.

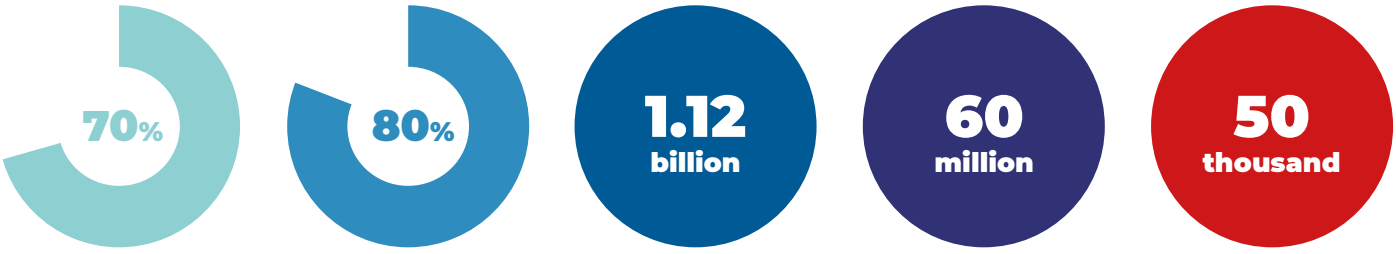
Around 70% of clinical decisions rely on diagnostics, and approximately 80% of those decisions are informed by pathology laboratories. NHS England reports approximately 1.12 billion diagnostic tests annually, including 50–60 million bacteriology samples.

Within the UK, the Standards for Microbiology (SMI) produced by the Royal College of Pathologists and the UKHSA are gold standards for microbiology testing and these indicate that the use of animal blood within agar is essential for diagnostic identification.

More than 60 million blood-containing agar plates are used annually in the UK, requiring over 50,000 litres of donor animal blood each year.

Animal blood—primarily from live donor horses and sheep—is an irreplaceable and largely unrecognised raw material essential for bacterial culture, antimicrobial susceptibility testing, and AMR surveillance.

DIAGNOSTIC MICROBIOLOGY IN NUMBERS



CLINICAL DECISIONS RELYING ON DIAGNOSTICS

DECISIONS INFORMED BY PATHOLOGY LABORATORIES

DIAGNOSTIC TESTS PERFORMED ANNUALLY BY NHS ENGLAND

BLOOD-CONTAINING AGAR PLATES USED ANNUALLY

LITRES OF DONOR ANIMAL BLOOD USED ANNUALLY

ABOUT BIVDA

BIVDA is the national industry association for manufacturers and distributors of diagnostic tests in the UK, representing over 250 industry members and organisations from large multinationals to microbusinesses. Our industry is a valuable subsector of the UK's globally-admired life sciences industry, contributing between £1.5—£3 billion to the UK economy annually.

Our members are world leaders in genomics, hospital and community testing, including infection diagnostics and testing to mitigate the impact of antimicrobial resistance (AMR).

1 The Central Role of Blood Agar in Clinical Microbiology

Blood-enriched agar is the backbone of bacterial diagnostics. It provides a nutrient-rich growth environment, enables observation of haemolysis patterns, and allows accurate phenotypic identification of pathogens.

Without blood enrichment, many clinically significant bacteria will not grow, phenotypic antimicrobial susceptibility testing (AST) cannot therefore be performed, and rapid diagnostic triage becomes impossible. This leads to overuse of antibiotics and increase in antimicrobial resistance.

2 Life-Threatening Pathogens Dependent on Blood-Enriched Media

Numerous fastidious and clinically critical organisms require blood-enriched media for reliable detection, including:

- Neisseria meningitidis
- Streptococcus pneumoniae
- Haemophilus influenzae
- Streptococcus pyogenes

These organisms can cause severe diseases including bacterial meningitis, sepsis and pneumonia, where rapid and accurate diagnosis is essential.

There are approximately 12 million throat swabs taken annually in the UK, all requiring blood agar for accurate diagnosis.

3 Antimicrobial Resistance (AMR): Culture is Irreplaceable

Culture-based microbiology enables laboratories to detect resistance mechanisms, identify emerging resistance patterns, and support national AMR surveillance systems.

Without blood agar, viable isolates cannot be produced and phenotypic antimicrobial susceptibility testing cannot be performed, undermining the UK's national AMR strategy.

4 Why Molecular Testing Cannot Replace Culture

Molecular or Genotypic diagnostics detect only predefined genetic targets and currently cannot identify unknown or emerging pathogens. They cannot provide viable organisms for antimicrobial susceptibility testing. Culture remains the only comprehensive diagnostic approach.

Accurate phenotypic identification is also vital for clinical decision-making.

Donor animal blood-based culture is indispensable for:

- ☑ Phenotypic bacterial identification
- ☑ Antimicrobial susceptibility testing (AST)
- ☑ Antimicrobial resistance (AMR) surveillance
- ☑ Outbreak detection and public health response
- ☑ Clinical decisionmaking across primary, secondary, and emergency care

Genotypic methods (e.g. PCR) cannot replace culture because they:

- ☒ Detect only predefined targets
- ☒ May miss mutated or emerging pathogens
- ☒ Cannot provide viable organisms for AST
- ☒ Cannot comprehensively support AMR surveillance

5 National Supply

The UK benefits from highly specialised, licensed donor animal blood collection operations that underpin national microbiology services. These facilities operate within a tightly regulated and ethical framework and represent a unique, quality-assured capability that cannot be rapidly replicated.

In England and Wales, TCS Biosciences Ltd is the main provider of donor animal blood for microbiological diagnostics. One other company situated in Scotland provides a similar service. Due to the unique nature of the requirements, these are the only two providers within the UK. They are essential biomedical production facilities and, as such, they should not be considered in the same way as conventional farms.

Establishing a compliant, ethically sourced, and quality-controlled blood collection infrastructure requires significant regulatory approval, technical expertise, validated processes, and long-term supplier relationships. As such, robust and equivalent alternatives cannot be developed quickly or easily.

Currently, there is no validated synthetic, plant-based, or import substitute capable of meeting the stringent quality, safety, and performance standards required for NHS microbiology laboratories. The existing domestic capability therefore represents a strategically important and irreplaceable national asset.

6 Supply Considerations

The UK's donor animal blood supply is structured around a continuous, freshly collected and ethical production model. These products are inherently perishable, with a limited shelf life that reflects their biological origin and the requirement to preserve functional integrity.

Performance in blood agar is directly linked to freshness, controlled handling and validated processing timelines. As a result, large-scale stockpiling is neither technically practical nor quality-assured. Extended storage can compromise haemolytic performance and introduce stability inconsistencies.

For these reasons, resilience is achieved not through strategic reserves, but through sustained, managed, and continuous supply from established, licensed collection facilities that reflect the biological nature of the product and the stringent quality standards required for NHS microbiology laboratories.

7 National Consequences of Disruption

The need for constant supply of fresh donor animal blood products must not be underestimated. Any significant disruption—whether from disease outbreak, infrastructure projects, regulatory restriction or transport interruption, would be evident nationally within weeks, meaning:

- Delayed or missed diagnoses of serious infections
- Increased inappropriate antibiotic prescribing
- Collapse of antimicrobial resistance surveillance
- Higher hospital admissions and healthcare costs
- Reduced national resilience against emerging infections

Clinical supply chains, pathology / bacteriological testing, biomanufacturing and research all rely on consistent, high-quality donor animal blood products.

8 Recommendations

- Formally recognise donor animal blood production as Critical National Biomedical Infrastructure
- Provide protection for existing production facilities

Conclusion

Donor animal blood is not an agricultural by-product; it is a strategic biological resource fundamental to the delivery of diagnostic microbiology across the United Kingdom.

A reliable, high-quality domestic supply underpins the NHS's ability to rapidly identify life-threatening infections, perform antimicrobial susceptibility testing, and sustain national antimicrobial resistance surveillance.

Any disruption to this supply would be felt within weeks, with immediate and widespread consequences for patient care, antibiotic stewardship, public health protection, and national biosecurity. The UK's production capability represents a critical national asset that cannot be readily replaced by imports, synthetic alternatives, or molecular methodologies.

> Safeguarding donor animal blood production is a matter of national health security

Preserving this capacity requires formal recognition, proportionate regulatory protection, and coordinated strategic planning. Ensuring continuity of supply is not optional—it is essential to maintaining resilient clinical diagnostics and protecting the population from current and emerging infectious threats.

The evidence is clear: safeguarding donor animal blood production is a matter of national health security. Immediate action is required to strengthen resilience, protect existing infrastructure, and guarantee uninterrupted access to the biological materials that underpin modern healthcare.

For further enquiries, please contact: **pressoffice@bivda.org.uk**

BIVDA

The British In Vitro Diagnostics Association

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