

South Somerset District Council

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Martin Woods Director - Service Delivery Simon Fox Lead Specialist-Planning

Mr M Fysh MP House of Commons, London Date :08 July 2019Your Ref :0ur Ref :Our Ref :14/02554/OUTAsk for :Simon FoxDirect Line :01935 462509email : simon.fox@southsomerset.gov.uk

Via Email – marcus.fysh.mp@parliament.uk

Dear Mr Fysh MP,

Town & Country Planning Act 1990 as amended

Planning Application at Up Mudford Proposed Sustainable Urban Extension 14/02554/OUT and 15/03942/FUL

Thank you for your letter 25 June 2019. As a formal comment on the above 2 applications, (14/02554/OUT – 765 homes and 15/03942/FUL – associated attenuation ponds), I will ensure your letter goes onto our public planning web site and that any planning report on these applications address your concerns.

The application was not considered at Planning Committees on 3rd July. We will find an alternative date and keep you up to date.

You state you are particularly concerned about the possibility of land contamination from anthrax. In this regard I attached 2 letters from Public Health England to the consultants of the applicant and 1 letter to consultants of the objector Mudford Parish Council. I also attach a final concluding statement from South Somerset's Environmental Health Officer at 28-6-19. From these you will see the following:

- a) The site has been extensively tested and no tests have proved positive.
- b) Impartial Public Health England testing of the applicant's samples has been expert and robust, and no indication of anthrax has been found.
- c) Anthrax has reduced to one death a year in the country and this is usually due to imported feed/hides. Contamination on/from grazing land is generally not evident. And there has been no cases of anthrax infection in human association with development areas – whether land was previously grazed farmland or brownfield site, such as tanneries.
- d) There is no evidence from the testing of any old tannery works on this site.
- e) Anthrax spores do not spread
- f) Testing is best done at known burial pits and associated water areas e.g. ditches and drainage. This testing has been done by the applicant and no tests have found any sign of anthrax. No actual burial sites have been found, only suspected burial sites and then once tested, no sign of anthrax has been found.
- g) To allay ongoing public concerns, despite only negative tests, there could always

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be more testing. In this regard SSDC Environmental Health have proposed a "belt and braces" planning condition, should the scheme be supported by SSDC Regulation Committee, and the applicant has supported this condition. Subject to this condition, SSDC Environmental Health state the site is safe for housing development

I hope you would agree that these assessments and conclusions now fully address the issue of land contamination.

Finally you will know that this site has long been identified as a strategic housing growth area for South Somerset and is formerly endorsed in our up to date Local Plan 2006-28, including through public consultation and an Inquiry by the Planning Inspectorate. Subject to matters of design, landscape, heritage impact, ecology, drainage, traffic and transport all being appropriately addressed and considered at planning committee, SSDC supports this site as a strategic housing location.

Please let Marc Dorfman (Planning Case Officer) or I know if you require any further information.

Yours sincerely

Simon Fox Lead Specialist (Planning) Service Delivery

File 14/02554/OUT & 15/03492/FUL

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Marcus Fysh MP

Member of Parliament for Yeovil Constituency



HOUSE OF COMMONS

LONDON SW1A 0AA

Mr Simon Fox South Somerset District Council Brympton Way Yeovil

BA20 2HT

Our ref: MF/MAC/JF

25 June 2019

our Sim-Ref 14/02554/OUT

I write regarding the planning application for land at Upper Mudford which I understand is to be discussed on 3rd July. I apologise for not being able to attend the meeting in person but am required in Westminster at the time.

I would like to echo the representations made on behalf of Mudford Parish Council that the application falls short in certain areas. I would urge that concerns about the suitability of the site in general, as raised by Historic England amongst others, are considered but in particular there appear to still be unresolved issues regarding the accuracy of traffic assessments and the risk of anthrax.

With regard to the risk of release of anthrax, it should surely be a minimum requirement that a full survey is carried out to assess the danger of anthrax release as the proposed sampling after planning permission is granted is totally inadequate in public health terms.

Could I ask please to be kept informed about the outcome of the meeting.

With best wishes,

than ,

Marcus Fysh MP

21-22 High Street, Yeovil BA20 1RF 01935 314321 | 020 7219 4527 marcus.fysh.mp@parliament.uk www.marcusfysh.org.uk MarcusFyshForYeovil **9**@MarcusFysh

Environmental Health Memo

To:	Marc Dorfman		From: Paul Huntington
	The second s	River Reality of Date (Rule) of	Our ref: PDH/040905
tep saling	opplication Number:	14/02554/OUT 15/03942/FUL	Date: 28th June 2019 UPDATE Revised and additional Planning Condition clauses should the scheme be recommended for approval

Proposal:	Outline app for development of sustainable urban extension to comprise 765 dwellings, 65 bed care home, employment land etc	
Location:	CL4060, CL4371 et alia. Upper Mudford Primrose Lane Mudford Yeov	

Supplementary Anthrax Investigation Report

Further to the supplementary report submitted by the applicant in August 2018 and communications we have had with Public Health England (PHE) please see my comments below and suggested draft conditions.

I am satisfied that the applicant has undertaken the recommendations made by PHE in their letter dated the 19th February 2018. I have also noted the letter from PHE to Forge Environmental dated 06 November 2018 where PHE conclude ..."that the site has been extensively investigated....all samples tested have been negative....it has not been demonstrated that the land represents an area of significant anthrax contamination."

It is my opinion that PHE have distilled the issue regarding to the potential for Anthrax contamination to a number of key points.

- Previous anthrax outbreaks in cattle have occurred at Hillside Farm
- Anecdotal evidence suggests that the affected cattle were burned and the burning site decontaminated with quick lime
- If the cattle were burned and quick lime used, it is accepted that any residual contamination of the land would be at low levels
- Again anecdotal evidence suggests that when the cattle were dragged to the burning site and these areas where treated with quick lime, thus likely to reduce contamination further
- That it is reasonable to conclude that the land would be minimally contaminated with anthrax spores in the areas where the cattle died, dragged and burnt.
- It is difficult to find any evidence that tannery waste was spread on the site.
- It is unlikely that tannery waste, if indeed used on the land in question, would be responsible for the anthrax outbreaks.
- And even if tannery waste was spread on the site it would be very unlikely to pose a risk to human health.

PHE went on to make further recommendations, (letter 19-2-18), reproduced below.

Further sampling should be considered in the areas of most concern. These include:

1. Known burial sites. Samples should be taken over 3 different depths up to a depth of 2m with closer spacing between sample sites.

2. Areas at high risk of anthrax infection other than burial sites. These include the path on which carcasses were dragged for burial and areas where the cattle were known to have been found dead. Sample to 0.25m depth with a grid of 4 x 4m with 1m points.

3. Water drainage areas. The current literature suggests that anthrax spores can aggregate in water drainage points such as streams and ditches and that drinking from these sites (as well as flood water) pose the greatest risk of anthrax acquisition in cattle. Ditches, drains and streams likely to be affected by water run-off from the fields where the carcasses are known to have died and known to have been buried should be sampled to a depth of 0.25m below the base.

Further PHE in their letter 12-12-18 also conclude that:

- PHE testing of samples has been expert and robust and no indication of anthrax or tannery waste has been found.
- In the last decade, apart from cases of anthrax acquired through the injection of imported heroin, there have only been 3 cases of anthrax in the UK. One case was acquired in Kenya and the other two cases where associated with imported drums from Africa. None of these were due to spores becoming airborne and there have been no cases of anthrax infection in humans associated with land development.
- No cases of anthrax infection in human association with development areas that may be of risk of contamination, has been found by PHE – whether land was previously grazed farmland or brownfield site, such as tanneries.
- Anthrax spores tend not to spread.
- Testing is best done at known burial areas and associated water areas e.g. ditches and drainage – and despite the anecdotal evidence no "burial sites" have been found and no tests have indicated any form or trace of anthrax.

In my opinion it is clear that recommendations have been followed by the applicant. Sampling has been undertaken as required and all sample results have been negative for anthrax spores.

I concur with the PHE view that available evidence does not suggest that there is contamination of the site by tannery waste. It would therefore be unreasonable to require the applicant to undertake any further investigations unless additional evidence on the ground is found.

It is my view that given the available evidence it is reasonable to conclude that the site is safe for development and that these matters can be dealt with by condition.

Should the overall scheme be recommended for approval, as the development goes forward I would recommend the following condition be applied, the purpose being to effectively investigate and if required remediate any burial sites should they become apparent during the course of the development work.

"LAND CONTAMINATION: The development hereby permitted shall not begin until a scheme to deal with any contamination of land, controlled waters and/or ground gas has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include all of the following measures, unless the Local Planning Authority dispenses with any such requirement specifically in writing:

- A scheme of further investigation to a depth of 2m of the soils encountered in Trial Pit T5 reported on by Forge Environmental in their Supplemental Report of PRI006.D/SAR/003 Rev A (Aug 2018), and referred to in the Public Health England letter to Forge Environmental Management Ltd on 19-2-18
- ii) Prior to the commencement of development in each phase or part thereof the full depth of topsoil will be stripped and stockpiled. If any evidence of significant ground disturbance is identified this will be further investigated in accordance with the methodology set out in Para 3.2 of Forge Environmental Supplemental Report PRI006.D/SAR/003 Rev A (Aug 2018), and additionally by a method submitted to and approved in writing by the Local Planning Authority and in accordance with BS10175 2013.
- iii) If during the works on any phase contamination is encountered, (e.g. including signs of burning, odour, staining of the soil, unusual coloration or soil conditions, or animal remains from the past) which has not previously been identified, then the additional contamination shall be fully assessed and an appropriately remediated based on a scheme submitted to and approved in writing by the Local Planning Authority. Any possible contamination will reported to the LPA immediately, (within 14 days) and all development work immediately suspended until a scheme of assessment and remediation is agreed by the LPA.
- iv) A validation report detailing the proposed remediation works and quality assurance certificates to show that the works have been carried out in full accordance with the approved methodology shall be submitted to and approved in writing by the Local Planning Authority. Details of any post-remedial sampling and analysis to show that the site has reached the required clean-up criteria shall be included in the report, together with the necessary documentation detailing what waste materials have been removed from the site and how any waste material has been safely dealt with.

Reason: To ensure that actual or potential land contamination has been investigated and any associated environmental risks have been assessed and mitigated in accordance with the aims and objectives of Policy EQ7 of the South Somerset Local Plan (adopted March 2015), and to protect the health of future occupiers of the site from any possible effects of contaminated land, in accordance with Local Planning Policy.

Informative: Due to the potential for this condition to disrupt progress on the development it is anticipated that topsoil will be removed from the areas of the site in a phased manner as the development progresses. The details of how this will be implemented will be dealt with at the reserved matters stage.



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Mr Richard Blaney Forge Environmental Management Ltd The Forge Lower Vagg Chilthorn Domer Yeovil Somerset BA21 3PY

19 February 2018

Dear Richard.

Re: Upper Mudford, Primrose Lane, Yeovil, Somerset: Anthrax Investigation Report no. PRI006.D/AR/001 and LQM Report Number 1356-0

You recently asked us to review the above reports and to provide an expert opinion on these reports. We have considered both reports at length and have also consulted with colleagues at DEFRA and the Animal and Plant Health Agency (APHA). It is not clear from the reports that we have reviewed if the proposed development is planning to build directly on the carcass burial sites, or whether these are located in the proximity. If the latter is true, the distance between the burial sites and the development would be an important factor in the considerations below. Our opinion is as follows.

1. Previous anthrax outbreaks and cattle burial at Hillside Farm: There is evidence of previous outbreaks of anthrax in cattle at Hillside Farm and that there are cattle burial sites in the fields close to the proposed development. Anecdotal evidence from local residents suggests that there were outbreaks of anthrax in the 1950's, 1960's and 1970's, and there is evidence of areas where cattle were buried. It is reported that the affected cattle were burned, the burning site decontaminated with quick lime, and the remains were buried nearby, with the local police officer and veterinary officer being present during these activities. Anthrax has been a notifiable disease in the UK under the Anthrax Order 1938, meaning that all suspected and confirmed cases of anthrax need to be reported to DEFRA (previously MAFF). During the anthrax outbreaks, it is likely that anthrax spores would be released to the environment from body fluid seepage from orifices from the dead cattle before the bodies were buried, causing low level contamination of the land in these areas. The bulk of the anthrax bacilli would be contained within the body of the cattle, and provided the body remained intact, would not contaminate the

land. If the cattle were burned and the land affected treated with quick lime. particularly the burial sites, then it could be concluded that residual contamination of the land would be at low levels. Anecdotal evidence from eye witness reports state that the path on which the cattle were dragged following death to where the carcasses was burned and buried were treated with quick lime, thus likely to reduce contamination further. Large scale contamination of the land would only occur from the burial of untreated carcasses, where large numbers of spores would be expected at the immediate burial ground, due to release of spores as the carcass decomposes, and in areas of water run-off associated with these areas. There are no official records available, and so no way to confirm definitively on the treatment and burial of the carcasses (or if they had a laboratory confirmed anthrax diagnosis), but from the available evidence, we think it would be reasonable to conclude that the land would be minimally contaminated with anthrax spores in the areas where the cattle died, where they were dragged to disposal and the burial sites.

2. Tannery waste on land designated for redevelopment: There is one report from a local resident that tannery waste had been spread on the fields designated for redevelopment. Mr Rosewell, whose family were the tenant farmers at Hillside Farm from 1952 until the 1970's, states that the family do not recall any tannery waste being used to fertilise the land at Hillside Farm and also states that it is unlikely that tannery waste would be used to fertilise grazing pasture, being much more likely to be used and ploughed into arable land. Mr Jeff Downing, Planning Officer, South Somerset District Council (SSDC), states that it was known that tannery waste was used as a fertiliser in the Somerset region. Regulations on the handling of hides and skins were covered by the Hides and Skins Regulations of 1921 (S.R. and O. 1921, No. 2076). These regulations state that all waste and packing materials during the unpacking of hides and skins at tanneries should be burned or disinfected. The hides and skins are treated through liming in the early processes in tanneries, this is considered to be a powerful disinfecting process and to decontaminate the hides and skins¹. We consider that it is unlikely that tannery waste, if indeed used on the land in question, would be responsible for the anthrax outbreaks. Hugh-Jones and Hussaini (1975)² have tracked the incidence of anthrax disease in cattle from 1938 to 1967 with trends in bonemeal importation during that time. Recorded outbreaks of anthrax infection decreased during the war years, as importation fell due to the war. After the war ended, importation of raw animal food products increased, and the number of recorded anthrax outbreaks increased. In 1957/58, the use of steamed bone flours for livestock feedstuff increased, and the incidence of anthrax infections fell. Use of animal bonemeal again increased in the early 1960's to cope with an increase in demand for animal feedstuff, and three

¹Ministry of Labour. Report of the Committee of Inquiry on Anthrax. Presented to Parliament by the Minister of Labour by Command of Her Majesty November 1959. Her Majesty's Stationery Office, Cmnd. 846.

² Hugh-Jones ME and Hussaini SN (1975). Anthrax in England and Wales 1963-1972. Vet. Record, 97: 256-261

large processing plants were opened from 1962-64. Anthrax outbreaks during this period increased. A report submitted to SSDC by Mr K Millard, received on 10 Jan 2014, attaches an e-mail from Tweedie Evans Consulting for the attention of Robin Taylor (dated 14 Jan 2013) stating that the anthrax outbreak that occurred in 1962 was related to a cow that had recently been bought from market, and it was not thought that the outbreak was related to site derived spores. We consider that the previous outbreaks of anthrax at Hillside Farm were likely related to contaminated feedstuff and not from soil-derived spores. There is no direct evidence of tannery waste being used to fertilise the land, but if this did occur, the level of contamination would likely have been very low, spread over a wide area, and would be very unlikely to pose a risk to human health.

- 3. Sampling regime and use of composite samples for testing: In the LQM report, there is much criticism of the use of composite sampling for testing for anthrax contamination. Composite samples were produced from single site sampling at targeted areas where it was known that cattle died, were dragged for burial and were buried during the anthrax outbreaks in the 1950's and 60's. These samples were tested by PHE Rare and Imported Pathogens Laboratory according to our Standard Operating Procedures and reported as no anthrax spores found. Previous testing in 2012 in areas earmarked for development also showed no anthrax spores found (Tweedie Evans Consulting). The PHE guidance on building on contaminated land³ draws upon the WHO anthrax manual⁴, particularly Annex 7 Sampling plans for environmental testing of potentially contaminated sites. The WHO guidance recommends broadly statistical sampling to achieve a 95% statistical chance of locating a contaminated area, and also states that composite sampling can be used to reduce costs and to make sampling operation more practical. The WHO manual is considered to be the definitive guide on anthrax and was written by known experts of the time. However, the current British Standards Institute BSI 10175:2011+A2:2017 (replacing both BSI 10175:2011 and BSI 10175:2011+A1:2013) states in section 7.7.2.4 that composite sampling should not normally be used for the investigation of land potentially affected by contamination and is more normally used to evaluate soil quality for agricultural purposes or for characterisation of stockpiles. Therefore, in this case, where the land is known as having cattle affected by anthrax buried on the land, we would not recommend the use of composite samples.
- 4. Recommendations: In light of the counter-indications for using composite samples as described above and to provide further assurance to the residents of Upper Mudford, we recommend the following further sampling of the site:
 - If the samples from which the composite samples were formed are still available, these should be sent to RIPL for testing.
- 3

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364744/Guidance_of_A ssessing_Risk_of_Anthrax_on_building_Land_151014.pdf

⁴ WHO (2008). Anthrax in animals and humans. Fourth Edition. Ed. P. Turnbull.

- Further sampling should be considered in the areas of most concern. These include:
 - Known burial sites. Samples should be taken over 3 different depths up to a depth of 2m with closer spacing between sample sites.
 - Areas at high risk of anthrax infection other than burial sites. These include the path on which carcasses were dragged for burial and areas where the cattle were known to have been found dead. Sample to 0.25m depth with a grid of 4 x 4m with 1m points.
 - Water drainage areas. The current literature suggests that anthrax spores can aggregate in water drainage points such as streams and ditches and that drinking from these sites (as well as flood water) pose the greatest risk of anthrax acquisition in cattle. Ditches, drains and streams likely to be affected by water run-off from the fields where the carcasses are known to have died and known to have been buried should be sampled to a depth of 0.25m below the base.

We would be happy to discuss any of the points above in more details if required. It should be noted that we are currently revising the guidance currently published on the PHE website, which will be published in due course.

Yours sincerely

Dr Tim Brooks Clinical Services Director and Head Rare and Imported Pathogens Laboratory E tim.brooks@phe.gov.uk



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Mr Richard Blaney Forge Environmental Management Ltd The Forge Lower Vagg Chilthorn Domer Yeovil Somerset BA21 3PY

06 November 2018

Dear Richard,

Re: Upper Mudford, Primrose Lane, Yeovil, Somerset

Further to recent e-mail correspondence and the meeting on 24th October, we would like to give the following opinion on the matter of anthrax contamination on the land earmarked for development at Primrose Lane, Upper Mudford, Yeovil, Somerset.

- 1. The sites of possible cattle burial sites have been extensively investigated by Forge Environmental Management (summarised in report PRI006.D/ADS/002 rev. B, dated March 2018). Based on previous recommendations by PHE (letter to Mr Richard Blaney, 19 February 2018), more extensive sampling has been carried out in areas of known cattle burial sites, areas where cattle are known to have been dragged for burial and in sediment from streams/ditches collecting drainage from the land. All samples submitted to PHE for testing have tested negative for anthrax spores. Based on the above investigations, it has not been demonstrated that the land represents an area of significant anthrax contamination. If a case were to occur from contact with contaminated soil, which is highly unlikely, this would be almost exclusively cutaneous anthrax acquired through a skin abrasion, which would be easily recognised and treatable. The UK has had only one unconfirmed case in a builder since the 1970's with an unverified serological diagnosis with possible contact with horsehair plaster and a history of travel in West Africa. There have been no recorded cases of anthrax in humans in the UK due to the development of potentially contaminated land.
- Tannery waste: There is no direct evidence that tannery waste has been spread on the land. If tannery waste was previously used to fertilise the land, we consider that the risk of the waste containing anthrax spores is low due to the decontamination processes of hides and skins required under the Anthrax Prevention Act 1919 and the Factories Act 1937.

We would be happy to discuss any of the points above in more details if required.

Yours sincerely

Dr Tim Brooks Clinical Services Director and Head Rare and Imported Pathogens Laboratory E <u>tim.brooks@phe.gov.uk</u>

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Dr Judith Nathanail and Mr Richard Ogden Land Quality Management Ltd The Sir Colin Campbell Building University of Nottingham Innovation Park Triumph Road Nottingham NG7 2TU

12 December 2018

Dear Dr Nathanail and Mr Ogden,

Re: Letter Let01/jfn dated 19 November 18

Thank you for your letter reference Let01/jfn dated 19 November18. In your letter you have asked a number of questions and I provide the answers below:

 "Do you consider the amount of testing Abbey Manor have done to date will provide sufficient evidence for Abbey Manor to demonstrate that in respect of anthrax, the site is safe and suitable for use as required under planning (MHCLG, 2018) and the risk to future residents from anthrax is negligible?".

In general, we think that the amount of testing over the site as a whole to be adequate. We would recommend that more testing is done at the known burial pit areas (as identified thus far from ground disturbance investigations) in order to answer public concerns, and that any further burial pits that are uncovered during excavation and building should be investigated. This has been our recommendation to the South Somerset District Council Senior Environmental Protection Officer.

"Can you tell us anything about likely concentration or distribution of spores in an anthrax burial pit; if there were spores surviving in a pit, would two samples be sufficient to find them?"

Anthrax spores tend not to spread far from their original site of contamination, therefore, we would expect any spores to be concentrated within the burial pit with the heaviest concentration to be where the animals bled out following death. Given that the carcasses were burned and the pits, along with the site of animal deaths and paths where they were dragged were treated with lime, this would significantly reduce the number of free spores in the soil. The chance of finding surviving spores in the two samples taken depends from

where the samples were taken. It is our understanding that the samples were taken from areas where evidence of burning was found, indicating that the immediate site where the carcasses were burned were sampled. If spores did remain following disposal of the carcasses, it is more likely that they would be concentrated in the ground immediately under the burned carcasses and so we believe that the more likely contaminated areas were sampled. As stated above, we would recommend further testing of the burial site to further answer public concerns. The practice of local incineration at sites of anthrax deaths, which was introduced in the early 20th Century, has reduced the level of anthrax cases in livestock to an extremely low level, providing evidence of the efficacy of this procedure.

3. "How confident are you that if there are spores in the sample, they would be detected by the test? Are there any special precautions the sampler should take to ensure sample integrity?"

The tests we use have been extensively validated over a number of years. The samples are cultured on selective media and then PCR is used on any suspect colonies to detect the presence of anthrax bacilli. The PCR covers three gene targets, one on each plasmid and a chromosomal gene. This method has been used previously to successfully test for very low levels of contamination by anthrax spores in a village hall and a private home following a case of inhalational anthrax in 2006. No special precautions are required by the sampler beyond those recommended in PHE's published guidelines for taking environmental samples for anthrax testing (https://www.gov.uk/government/publications/anthrax-assessing-risk-of-anthrax-on-building-land).

4. "Have you also seen that (in a letter dated 4 October 2015 included in (Forge Environmental Management Ltd, 2018)) one of the farmer's sons has stated that they believe anthrax was associated with the land".

We have seen this letter.

5. Whilst such anecdotal information is not proof, would it not suggest that it is possible that anthrax spores are present beyond the burial pits, and sampling across the site would be prudent?"

The source of the anthrax outbreaks in 1953 and 1962 cannot be proven, but we must consider the available evidence. Whilst we acknowledge the anecdotal information supplied by the farmer's sons, a published review of anthrax cases in England and Wales between 1963 and 1972¹ were analysed and linked to the importation of infected feed. This links with the decline in the incidence of anthrax infection in cattle and pigs from the late 1960's when feed production methods changed and inorganic materials were used more widely than bonemeal for land fertilisation. Indeed, since the late 1960's, we have seen a steady decline of anthrax deaths in animals from several

¹ Hugh-Jones and Hussaini (1975). Anthrax in England and Wales 1963-1972. Vet. Rec. 97: 256-267

hundred a year to the current rate of under one death per year. This indicates that the majority of cases of anthrax that were seen in cattle and pigs before new feed production practices were introduced were due to imported infected feedstuff. The situation we see today, where outbreaks are very rare and are very localised, suggest that widespread contamination of grazing land is not evident. As stated under (2), anthrax spores tend not to spread far from their original site of contamination, and if spores are present, they are likely to be concentrated in larger numbers in these areas, making a positive detection more likely. We, therefore, consider that the most practicable areas for testing would be the known burial areas and areas where water from these areas collect, such as ditches and drainage areas.

6. "Can you clarify whether your view is that any spores present in disturbed soils are or are not likely to become airborne and pose an infection risk to groundworkers or neighbours"

There have been no cases of anthrax infection in humans associated with developing areas that may be of risk of anthrax contamination, whether that is previously grazed farmland or brownfield sites such as tanneries. In areas where anthrax is endemic and human cases occur, these cases are associated with direct contact with infected animals, carcasses or hides, wool or fur. In these endemic areas, which include parts of the Middle East, India, Africa, Eastern Europe, the US and Canada, the populations in these areas live alongside contaminated land on a daily basis, yet human cases occur mainly when there are known outbreaks in grazed animals. In the UK before legislation was introduced in 1921 to decontaminate imported materials, anthrax disease was associated with exposure to anthrax spores in mills that prepared imported wool and hides, but cases were low at approx.200 cases per year, given the numbers of exposed workers². The total number of deaths from anthrax fell from an average of 80-90 per year in the period 1900-1919 to 5 in 1955. In the last decade, apart from cases of anthrax acquired through the injection of imported heroin, there have only been 3 cases of anthrax in the UK. One was a case of cutaneous anthrax acquired in Kenya and the other 2 cases were in players of African drums covered in goat skins which had been privately imported from Africa.

Yours sincerely

Dr Tim Brooks Clinical Services Director and Head Rare and Imported Pathogens Laboratory E <u>tim.brooks@phe.gov.uk</u>

² Fee, E and Brown, TM (2002). Anthrax and the wool trade. Am. J. Public Health 92:754-757.