

Land to the West of Main Street Kelham

Appeal by Peridot Solar

Planning Application Ref: 23/01837/FULM

PINS Appeal Ref: APP/B3030/W/25/3364181

Proof of Evidence of Daniel Baird

[M.I. Soil Sci]

relating to Best and Most Versatile Land

Date: 24 September 2025

Contents

1. INTRODUCTION..... 3

2. PROFESSIONAL BACKGROUND 4

3. AGRICULTURAL LAND CLASSIFICATION 5

4. 2023 ALC REPORT BY LRA..... 8

5. IMPLICATIONS OF ALC LIMITATIONS FOR LAND MANAGEMENT 9

6. NEED TO CONSERVE BEST AND MOST VERSATILE AGRICULTURAL LAND 9

7. IMPACT OF SOLAR ON THE AGRICULTURAL LAND RESOURCE 10

8. CONTROL ON MANAGEMENT OF AGRICULTURAL LAND 11

9. FOOD SECURITY..... 12

10. SOIL HEALTH 13

11. EFFICIENT USE OF ARABLE LAND 14

12. CONCLUSION 15

APPENDIX A. CV – DANIEL BAIRD 16

APPENDIX B. EXECUTIVE SUMMARY**ERROR! BOOKMARK NOT DEFINED.**

1. **INTRODUCTION**

- 1.1 I am Daniel Baird, a soil scientist and agricultural consultant specialising in land use planning, and director of Daniel Baird Soil Consultancy Limited (Baird Soil).
- 1.2 My evidence addresses the technical aspects of the Council's first reason for refusal in so far as it relates to best and most versatile agricultural land ("BMV") [CD2.149] "*A significant proportion of the site would affect the best and most versatile agricultural land, which would be removed from arable farming production for a period of at least 40 years. The loss of this land is not sufficiently mitigated or outweighed by the other benefits of the scheme. The proposal is therefore considered to be an unsustainable form of development, contrary to Policy DM8 and national advice contained within the National Planning Policy Framework (2024) and Planning Practice Guidance.*" I set out to identify the extent and significance of the loss BMV. My colleague, James Cook, who gives the planning evidence on behalf of the Appellant, deals with the planning policies relevant to BMV (although I make references to these policies) and the planning balance, which is not for me to undertake.
- 1.3 In November 2021 Land Research Associates (LRA) undertook a detailed Agricultural Land Classification (ALC) assessment of the site [CD1.46] which supported the planning application. The professional work of LRA is well known to me. and I have confidence in the expertise and objectivity of this specialist provider of ALC assessments. I have reviewed the LRA assessment of the site and I agree with it, as further described below. I have visited and I am familiar with the Appeal Site.
- 1.4 In the preparation of this evidence and in my conduct at the forthcoming inquiry, I have and will continue to adhere to the rules of conduct of the professional body (the British Society of Soil Science) of which I am a member. The evidence which I provide for this Appeal Inquiry[CD6.2] is true and is given in accordance with the requirements of my professional body.
- 1.5 I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

2. **PROFESSIONAL BACKGROUND**

- 2.1 My professional experience assessing agricultural land quality for land use planning purposes, using the current Agricultural Land Classification (ALC) system, dates back to 1992. The attached CV (Appendix A) outlines my professional ALC survey experience. This experience includes time in the Agricultural Development Advisory Service (ADAS) Land Use Planning Unit where I was part of a dedicated ALC survey team working on behalf of the Ministry of Agriculture Fisheries and Food (MAFF), and in the environmental planning consultancy CPM (now Waterman Environmental).
- 2.2 Other professional experience of relevance to soils and agriculture includes time at Defra as a Higher Scientific Officer where I managed research and development programmes providing the evidence base for government policy on soil protection, soil resources and diffuse nutrient pollution from agricultural land.
- 2.3 I have a degree in Soil Science and Land Resources from the University of Newcastle upon Tyne, with a Masters in Land Resource Management from Cranfield University.

3. AGRICULTURAL LAND CLASSIFICATION AND PLANNING POLICY

3.1 Guidance documents for ALC classification in England are national planning policy, the MAFF ALC Guidelines and the Natural England Technical Information Note TIN0492. A copy of TIN049 is included with the inquiry documents [CD6.3] with the ALC guidelines [CD6.1].

3.2 Agricultural land is classified into five grades with Grade 3 land being split into Subgrades 3a and 3b. Agricultural land is graded according to physical characteristics of the land. These include climate and slope as well as characteristics specific to the soil present at the land. Grades 1, 2 and 3a are described in the National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities, last updated 7 February 2025) [CD5.2] Glossary as the “Best and Most Versatile” (BMV) agricultural land in England.

3.3 Paragraph 187 of the NPPF states (with my emphasis): -

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;***
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

3.4 The NPPF gives no guidance on how the economic benefits of the best and most versatile agricultural land are utilised, and local planning authorities have no say in such farm management decisions. The economics of any agricultural food and fibre production are volatile, prompting many farm businesses to seek the shelter of agricultural and environmental support schemes such as the current Sustainable Farming Initiative (SFI) measures that, although lower return than a crop, are more stable. Solar gives a return that is attractive, low risk and independent of the variability of agricultural commodity prices. It is therefore a form of diversification that many farm businesses welcome, economically supporting the farm without compromising its future economic options.

- 3.5 Land can be limited to an ALC grade by a single or multiple factors. The number of separate limitations to a Grade has no bearing on the resulting ALC Grade. ALC grading is based upon the physical characteristics of the land that are beyond the practical influence of the farmer, for instance, soil depth and clay content. Grading assumes a good standard of management to avoid any perverse incentive for a land manager to degrade land in pursuit of planning consent. This also means that ALC grade is not improved by good land management or the correction of previous unsustainable land management.
- 3.6 TIN049 [CD6.3] provides guidance on how a field survey of a site should be conducted to provide an appropriate ALC assessment to inform land use planning decisions. Whilst there are maps published by Natural England which broadly shows ALC grades for the Country they are at a very small scale, predate the current ALC methodology and do not differentiate between Grade 3a and Grade 3b. For the purpose of informing site specific land use planning decisions, field survey of the agricultural land, using the approach described in TIN049, is needed.
- 3.7 Following TIN049, a detailed ALC assessment examines the soil profile at sample points within the site at a density of approximately one per hectare. This is commonly achieved by placing sample points at 100m intersections of the Ordnance Survey National Grid. This method of sample point location selection also removes surveyor bias, a systematic randomised survey. At the sample point locations, the surveyor examines the characteristics and depths of soil horizons present to a depth of up to 1.2m. A hand auger is used to do this supplemented by occasional subsoil inspections pits to assess soil structural conditions.
- 3.8 This field survey work enables a determination of the long-term physical limitations of land for agricultural use, and an assigning of an ALC Grade according to the ALC Guidelines [CD6.1]. The sample point densities of one per hectare allows ALC Grades to be mapped at a scale of 1:10,000. TIN049 [CD6.3] advises that Planning Authorities should ensure that sufficient detailed site specific ALC survey data is available to inform decision making.
- 3.9 The Newark and Sherwood District Council Local Plan [CD4.2] does not have a policy specific to agricultural land quality but it is referred to in Policy DM8.
- 3.10 Policy DM8: Development in the Open Countryside, states *“Proposals resulting in the loss of the most versatile areas of agricultural land, will be required to demonstrate a sequential approach to site selection and demonstrate environmental or community benefits that outweigh the land loss.”*
- 3.11 The statement of Common Ground with the Council [CD9.12] includes the agreement that the installation of solar PV arrays does not result in the loss or downgrading, by sealing or permanent downgrading, of agricultural land (para 9.15 of the SoCG).
- 3.12 Under item 7 of DM8, Equestrian Uses, no mention is made of a need to avoid use of arable land for equestrian paddocks and or gallops and riding routes. Like Solar, this is another form of farm diversification, commonplace across England, where agricultural land can be taken from management for arable rotations and put down to long term, low input pasture to accommodate horses and ponies. There is rightly no requirement for evaluation of ALC grade or demonstration of a sequential approach to agricultural land selection for farmland put into equestrian management. As for land below solar, there is no loss of agricultural land extent or quality to equestrian paddocks.
- 3.13 Policy DM4: Renewable and Low Carbon Energy Generation, does not refer to agricultural land, arable land or agricultural land quality in any way.
- 3.14

4. 2023 ALC REPORT BY LRA

- 4.1 The report on the detailed ALC survey undertaken by LRA [CD1.46] describes the work undertaken to provide a detailed ALC survey, in line with Natural England guidance provided by TIN049 [CD6.3] to inform planning decisions for this site. In addition to reviewing this report and data, I have visited the site and examined soil profiles myself using a hand auger.
- 4.2 As described in the LRA Report [CD1.46] agricultural land within the survey area was found to be in ALC Grade 2 (36.0ha, 55%), Grade 3a (24.3ha, 37%) and Grade 3b (3.5ha, 5%) with the remaining land being classed as No Agricultural (1.9ha, 3%). There is a clear typographic error in Table 1 of the LRA report where the area of Non Agricultural land is given as 31.9ha instead of 1.9ha. I comment on the distribution of the BMV at the appeal site below.
- 4.3 Grade 2, Grade 3a and Grade 3b land within the site contain both areas of land limited to grade by soil droughtiness and areas limited to grade by soil wetness.
- 4.4 A soil wetness limitation is influenced by the soil profile drainage, climate, topsoil clay content and the presence of natural carbonates. Where land is wet for a prolonged period following rain and the topsoil has a high clay content, opportunities to cultivate land or carry livestock are constrained without causing persistent degradation of soil structure (smearing, ruts, compaction and poaching by hooves) that further impedes drainage of the soil. This limitation is of particular importance in the spring and autumn where arable land work is concentrated and time sensitive.
- 4.5 A soil drought limitation is influenced by the soil's capacity to retain crop available water and the climate of the site (rainfall and warmth during the growing season). Periods of shortage of crop available water in the soil during the growing season impact on crop yield and economic viability, limiting crop selection. This limitation manifests over summer months when crop water demand is highest.

5. IMPLICATIONS OF ALC LIMITATIONS FOR LAND MANAGEMENT

- 5.1 Referring to the ALC plan at the end of the LRA Report [CD1.46] each individual field within the site contains land in multiple ALC grades. The constraints for timing of land work for each entire field are therefore normally dictated by the areas within the field with the greatest soil wetness limitation.

Livestock access across a field may be dynamically managed through the use of electric fences, to exclude them from areas that are still wet. This does however require extra farm labour and does not negate the versatility limitation of the land. Livestock, farm vehicles and cultivation must be excluded from land with wet and plastic soils. Failure to do so is likely to result in soil structural degradation (smearing, ruts, poaching by hooves) that is costly and time consuming to remediate, and further exacerbates poor soil drainage.

6. NEED TO CONSERVE BEST AND MOST VERSATILE AGRICULTURAL LAND

- 6.1 For all practical intents and purposes, agricultural land cannot be replaced and non BMV cannot be upgraded to BMV land. Agricultural land taken for built development could conceivably be restored to agricultural use as some cold war airfield runways have been. However, the cost of such restoration for entire fields is disproportionately high in comparison to the current potential return from agricultural production.
- 6.2 Although Grade 3b and 4 land (approximately half of the agricultural land in England and Wales) can commonly produce a high yield of some crops such as winter wheat or a narrow range of higher value crops such as potato, the BMV land is less constrained in terms of flexibility of potential cropping, the consistency of yield and the cost of obtaining the crop.
- 6.3 BMV land is therefore better able to respond to future changes, for instance the introduction of new crops (including non food crops such as for industrial and pharmaceutical application) and some effects of climate change. Avoiding the unnecessary sterilisation of BMV land retains this resource for unknown future economic need. The proposed development is temporary. Any sterilisation of agricultural land is limited in extent to small elements of the development such as the compound for the switchgear housings and Battery Energy Storage System (BESS) installation. There is no degradation of the retained agricultural land resource. The agricultural land, including the best and most versatile agricultural land, will be available for future economic productive use.
- 6.4 The status of BMV land is not dependant on its current application, intensity of use or standard of management. BMV land used for grazing horses and ponies remains BMV land. Similarly, very light land limited to Grade 3b or below by drought, does not improve in ALC grade if managed for high margin vegetable cropping supported by irrigation. Section 2 at page 9 of the ALC Guidelines [CD6.1] notes that grades are defined by reference to physical characteristics of the land. Cropping history and/or yield has no relevance to the determination of agricultural land quality and versatility for planning purposes.

7. IMPACT OF SOLAR ON THE AGRICULTURAL LAND RESOURCE

- 7.1 Solar farm sites are typically leased from the agricultural landowners, with planning consent being temporary.
- 7.2 Disturbance of soils on the agricultural land is limited to the minor area of access track and hard standing associated with the switchgear housings and BESS. For these areas, topsoil is stripped and retained on site in storage bunds with the track material (hardcore) being placed on a geotextile fabric laid over the exposed subsoil.
- 7.3 On decommissioning, where an area of track or hard standing is to be removed, the geotextile enables the hardcore to be cleanly recovered without becoming embedded in the subsoil. Stored topsoil can then be loose tipped back over the area. An agricultural landowner may seek to retain sections of solar farm access track where these run along field margins. This is as they can provide all weather access to the field and improve efficiency of work, for instance allowing heavy traffic at harvest without the development of muddy and rutted field margins.
- 7.4 Solar panels are typically mounted on frames secured using narrow steel plies driven vertically into the ground. The same plant, a small vibrating pile driver, is also used to draw such piles back out of the ground.
- 7.5 UK solar farm design includes ample space between and below solar panel arrays so that a forage crop can continue to grow and smaller livestock, typically sheep, can graze. The BRE Agricultural Good Practice Guidance for Solar Farms [CD6.4] includes multiple case studies of successful livestock grazing in working solar farms.
- 7.6 The vegetation below and between solar panels needs to be managed so that it does not grow to shade panels and so that woody perennials do not become established.
- 7.7 A green cover within an operational solar farm is also preferred over maintaining bare ground using a herbicide as it avoids a muddy surface that impedes maintenance work.
- 7.8 It is therefore routine for farmland in a solar farm to continue in agricultural production through the operational phase of the solar farm. This agricultural use of the land is not required to maintain its status as agricultural land, but it demonstrates clearly that the agricultural land is not lost for the duration of the solar farm.

8. CONTROL ON MANAGEMENT OF AGRICULTURAL LAND

- 8.1 Agricultural land management in England is influenced by national agricultural and environmental policies. Since 2005 UK farm support payments have been transitioning from direct support of production towards 'Cross Compliance' where support payments are made for environmental measures and services.
- 8.2 Development planning has no control over a farmer's choice of land management, including crop selection or intensity of land management. A farmer can turn a field (including BMV land) over to producing pine trees for the Christmas market, without any need to seek planning permission. Farmers may also put arable land down to a period of fallow to alleviate the decline in soil health caused by arable land management. This can include farm support payments under the Sustainable Farming Initiative (SFI) that displace arable cropping, putting arable land down to biodiversity support such as nectar and pollen mixes to support invertebrates.
- 8.3 In the Decision Notice from the LPA [CD2.149] reason for refusal No. 1 states "A significant proportion of the site would affect the best and most versatile agricultural land, which would be removed from arable farming production for a period of at least 40 years." This reason for refusal ignores that an LPA does not have (and should not have) any right to direct landowners as to how their agricultural land is managed. If this site, independent of any application for a solar farm, were to be let on a 40 year grazing licence, or to be let long term for equestrian grazing, the LPA would have no say in the matter. It is not appropriate for the LPA to claim that being 'removed from arable farming for a long period' is grounds for the refusal of a planning application.

9. FOOD SECURITY

- 9.1 DEFRA are responsible for reporting on Food Security for the UK. The most recent report is the United Kingdom Food Security Report 2024 [CD5.29]. This report notes that UK self sufficiency in food production has been broadly stable for over two decades. This period of time includes the UK transition from support of agricultural production to Cross Compliance that started in 2005. Climate Change is identified as a key risk to global food production (page 11) and long term decline in natural capital (including healthy soil and clean water) is described as a pressing risk to UK food production (page 12) . Land use and land use change are not identified among these risks.
- 9.2 The DEFRA Food Security Report does not identify a current deficiency in UK food security, and does not cite any incentives that reduce arable cropping area as risks to food security. Such policies include increasing woodland extent, use of land for flood attenuation and biodiversity net gain areas (reverting arable land to low input pasture).
- 9.3 On Page 181 the report notes that in 2023, 133,000ha of UK agricultural land (2.2% of UK arable land) was used for bioenergy crops, an increase of 9% from 2020. Data from Forest Research [CD6.8] shows that the energy production per unit area of land (MWh/ha/y) of such bioenergy crops is substantially lower than from solar farms. The highest performing energy crop in the Forest research data is Miscanthus (Elephant Grass) at 63MWh/ha/a with a solar farm at this location expected to produce well in excess of an order of magnitude more power. Biodiesel from oilseed crops is shown as 11.3MWh/ha/a approaching 1% of the anticipated solar farm power output.
- 9.4 Arable bioenergy crops do not provide the improvement in soil health that can be expected from the extended fallow under solar PV, and do not provide the same opportunity to graze sheep.
- 9.5 Claims that solar farms present an unacceptable risk to UK food security have become common recently. There is however no support in the Defra UK Food Security Report that the UK either has a current food security problem, or that the development of solar farms will have any significant detrimental effect on UK food security. In a recent Planning Inspectorate appeal decision (ref: APP/G2713/W/23/3315877) [CD13.6] the Inspector states at paragraph 26 *“The appellant highlighted numerous government documents that state, and statistics that show, that there is no food security problem in the country and that the level of food production is good, and none of this was disputed by the Council. This accords with the fact, noted above, that they are paying farmers to take land out of production and/or utilise less intensive production methods. Moreover, I note that the majority of crops grown on the appeal site at present are largely used for industrial purposes rather than supplying the food chain, whereas if it were to be used for grazing of sheep it would be contributing food for human consumption. As such, I am satisfied that the proposed use of the land would not be detrimental to the nation’s food security.”*

10. SOIL HEALTH

- 10.1 As noted previously, the ALC grade is assessed assuming a good standard of land management. This means that superior land management does not influence ALC grade as well as poor land management.
- 10.2 Defra R&D project SP08016: Best Practice for Managing Soil Organic Matter (SOM) in Agriculture [CD6.2] provides concise evidence to support the recovery of soil organic matter (key to soil health) through the reversion of arable land to low input grassland. Farmers have been paid £489/ha/year for this land management under Sustainable Farming Initiative WBD4: Arable reversion to grassland with low fertiliser input [CD6.6] A solar farm on arable land provides the same environmental benefits (including reductions in surface water runoff and nutrient losses to water) without the need for the £489/ha/year incentive payment to a farmer.
- 10.3 The Defra Environmental Improvement Plan 2023 [CD6.5] recognises at page 12 the importance of soil health with a commitment to bring at least 40% of England's agricultural soils into sustainable management by 2028. Incentives needed to achieve this are estimated at £2.4 billion per year at page 165. As the Environmental Improvement Plan explains, bringing soils into sustainable management is not just important for the soil resource, but is instrumental in improving environmental quality (such as delivering clean and plentiful water) and improving our mitigation of climate change.
- 10.4 A solar farm on arable land therefore presents a significant opportunity of a sustained fallow period that will enable a recovery of soil health, bringing agricultural soil into sustainable management. This will in turn provide other environmental benefits as well as leaving the soil resource with a superior functional capacity for supporting agricultural production at the end of the solar farm consent period, thus supporting food security (see above).

11. EFFICIENT USE OF ARABLE LAND

- 11.1 Farmers are able to grow crops for energy production rather than food production and the Defra UK Food Security Report [CD5.29] notes on page 181 energy crops occupying approximately 2% of UK arable land. Forestry Commission publish potential yields of biofuels expressed in terms of MWh per hectare per year [CD6.8] The most productive crop is miscanthus, also known as elephant grass. This crop in the UK will average 63MWh/ha/year, the plant material being cut and burnt to generate power. A miscanthus crop is normally in the ground for 20 years with a two year period of establishment before it is cropped. Biodiesel from an oil seed crop will average 11MWh/ha/year.
- 11.2 In contrast, the Applicant anticipates an energy output from this site of approximately 1000MWh/ha/y (correspondence with Peridot Solar). We therefore see in excess of an order of magnitude greater generation per unit area from a solar farm compared to the best performing biofuel crops, with the simultaneous benefits of recovery of soil health and the grazing of sheep. A solar farm is clearly a significantly more efficient use of agricultural land than any biofuel crop.

12. CONCLUSION

- 12.1 A detailed ALC assessment shows the site to contain best and most versatile land.
- 12.2 The temporary development proposed will not lead to any loss of extent or degrading of quality of the agricultural land below and between the rows of Solar PV.
- 12.3 Defra UK Food Security reports do not identify any threat to UK food security from solar farms or from bio-energy crops. A solar farm requires substantially less than 10% of the agricultural land area of the best performing bioenergy crops per unit of energy production.
- 12.4 Arable land benefits from a significant fallow period when used for a temporary solar farm, enabling the recovery of soil health depleted by arable management. The Defra UK Food Security report notes that actual threats to our food security include climate change and soil degradation. Therefore, solar farms benefit, not threaten, our long term food security.
- 12.5 Farmers in England can currently receive a substantial farm support payment for reverting arable land to low input pasture. This same land management change will be provided for the duration of the solar farm, providing the same environmental sustainability benefits that the farm support payment seeks to deliver.
- 12.6 The Newark and Sherwood District Council gave as a reason for refusal, the removal of best and most versatile land from arable farming production for a period of at least 40 years. This reason for refusal, made against the recommendation of the planning officer, is not supported by local plan policy DM8 or national planning policy guidance. Direction to farmers on the management of agricultural land is outside of the authority and competence of a local planning authority.

APPENDIX A. CV – DANIEL BAIRD

1. QUALIFICATIONS AND EXPERIENCE

Daniel Baird M.I. Soil Sci.

Managing Director of Daniel Baird Soil Consultancy Limited, trading as Baird Soil

Professional Institution Membership

British Society of Soil Scientists – Full Member. M.I. Soil Sci.

Qualifications.

- MSc. Land Resource Management. Silsoe College, Cranfield University, 1997
- BSc. (Hons) Soil and Land Resources. University of Newcastle upon Tyne, 1991
- Environmental Impact Assessment: Procedures and Process. Oxford Brookes University School of Planning, 2002
- Soil and Water Management. BASIS 2017

Professional Experience – Soils and Agriculture Consultancy

Daniel Baird Soil Consultancy Ltd

November 2015 to present

Specialist soil and agriculture consultancy to the planning and development sector. Agricultural Land Classification survey and advice, Farming Circumstances assessment, Soil Resource appraisal and beneficial reuse, Soil Conservation and Management, Catchment Sensitive Farming.

Daniel Baird Soils and Land Quality

November 2012 to October 2015 and July 07 to April 08

As above.

CPM Environmental Planning and Design. (now Waterman)

August 1998 to February 2004.

Consultant Soil Scientist and EIA co-ordinator.

Soil and land resource survey, farm business appraisal, co-ordination of environmental impact assessments, proof of evidence for planning inquiries, Geological SSSI Condition Statements on Network Rail estate, farm business appraisals and project management.

ADAS Statutory (Now Natural England)

1992 - 1993

Agricultural Land Classification assessment for MAFF Land Use Planning.

Professional Experience – Soils and Agriculture R&D Management

Biotechnology and Biological Sciences Research Council (BBSRC)

November 2006 to July 2007

Programme Manager for BBSRC Swindon Office

Represented BBSRC on five Defra LINK Programme Management Committees co-funding novel research in the fields of food quality, manufacture, horticulture, livestock and arable science. Management of research grant applications and peer reviews. Assisting with the BBSRC Bioenergy Initiative.

Defra - Living Land and Seas Science Division

February 2004 to October 2006

Higher Scientific Officer.

Management of Defra R&D and evidence base for Soil Resources, Soil Protection and Diffuse Nutrient Pollution from Agriculture programmes.

Professional Experience – other Renewable Energy Planning

Wind Ventures (Aug 2010 to Nov 2012) and **Ecotricity** (April 2008 to Aug 2010)

