

FARMING FOR CARBON & NATURE - DEVELOPMENT RESEARCH REPORT

07 OCTOBER 2020



STUDENTS
ORGANISING FOR
SUSTAINABILITY
UNITED KINGDOM

Contents

1. [Background](#)
2. [Methodology](#)
3. [Key findings](#)
4. [Detailed findings](#)
5. [Going forward](#)
6. [References](#)
7. [Contact](#)



Background

Farming for Carbon & Nature is a proposal to develop a sector-owned carbon offset scheme that, through more sustainable farming practices, will not only promote soil carbon sequestration but also increase biodiversity and student engagement with nature.

UK universities and colleges are passing progressive net-zero carbon reduction targets, often in response to student-led climate emergency campaigns. However, even after reducing carbon footprint as much as possible, they will continue to collectively attract hundreds of thousands of overseas students and procure millions of miles of international travel for academic research. Consequently, they will need to invest in carbon offsetting to achieve their net-zero carbon reduction targets. Our proposal aims to provide one avenue for higher education institutions to engage in a *sustainable* form of carbon offsetting, whilst simultaneously contributing to a more sustainable farming and food system. More information can be found in our [concept note](#).¹

The project is currently in its six-month development phase, ending 31 December 2020. Thereafter a pilot of the scheme will begin over 24 months from 01 January 2021 to 31 December 2022. Subject to the scheme's success, it will be scaled up across the sector (and possibly beyond) from summer 2022.

This research, funded by [The Energy Consortium](#) ("TEC"), has been undertaken during July and August 2020 to further the scheme's development by ascertaining non-developed land ownership, use and management - particularly agricultural - by universities and colleges in the UK.

We are grateful to TEC for its grant, [ShareAction](#) for their support and introductions, other groups whose prior research we have benefited from, and all the institutions that responded to our request for data, provided feedback and/or have joined the steering group. The steering group currently consists of Keele University, Lancaster University, University of Lincoln, Newcastle University, University of Oxford, Royal Agricultural University, University of Sheffield and University of Surrey; and non-HE institutions include [SOS-UK](#), [Sustain](#), [TEC](#) and the [Gold Standard Foundation](#).

This report presents our findings for public use.

Methodology

The research was conducted over an eight-week period between 26 June 2020 and 21 August 2020.

277 UK institutions were contacted directly, comprising of

- 45 land-based or agricultural universities or colleges^{2 3}
- 143 of the other remaining universities
- 31 colleges of the University of Cambridge⁴
- 45 colleges and permanent private halls of the University of Oxford⁵
- 13 colleges of the University of the Highlands and Islands.⁶

In relation to any non-developed landholdings, data requested included (but was not limited to): hectareage; tenancy status; land use; agricultural land grade; soil type; and land management.⁷

We contacted 277 institutions by e-mail in total, covering all UK universities and relevant colleges. We received 42 direct responses, of which 14 provided some or all of the requested data and 28 said they had no relevant land. The research also included compiling data shared indirectly through our networks or from information already in the public domain.^{8 9 10 11 12 13}

Given the nature and timing of the research, we found several limitations

- commercial sensitivity around land ownership data prevented some from sharing information
- those that shared did not always provide all the data fields requested
- staff shortages as a result of furlough (due to the coronavirus pandemic) meant the relevant personnel were not always available
- public sources did not always give a breakdown of non-developed land use or value, and it was unreliable to make a blanket assumption regarding this due to the differing landholdings and investment strategies of each institution

Key findings

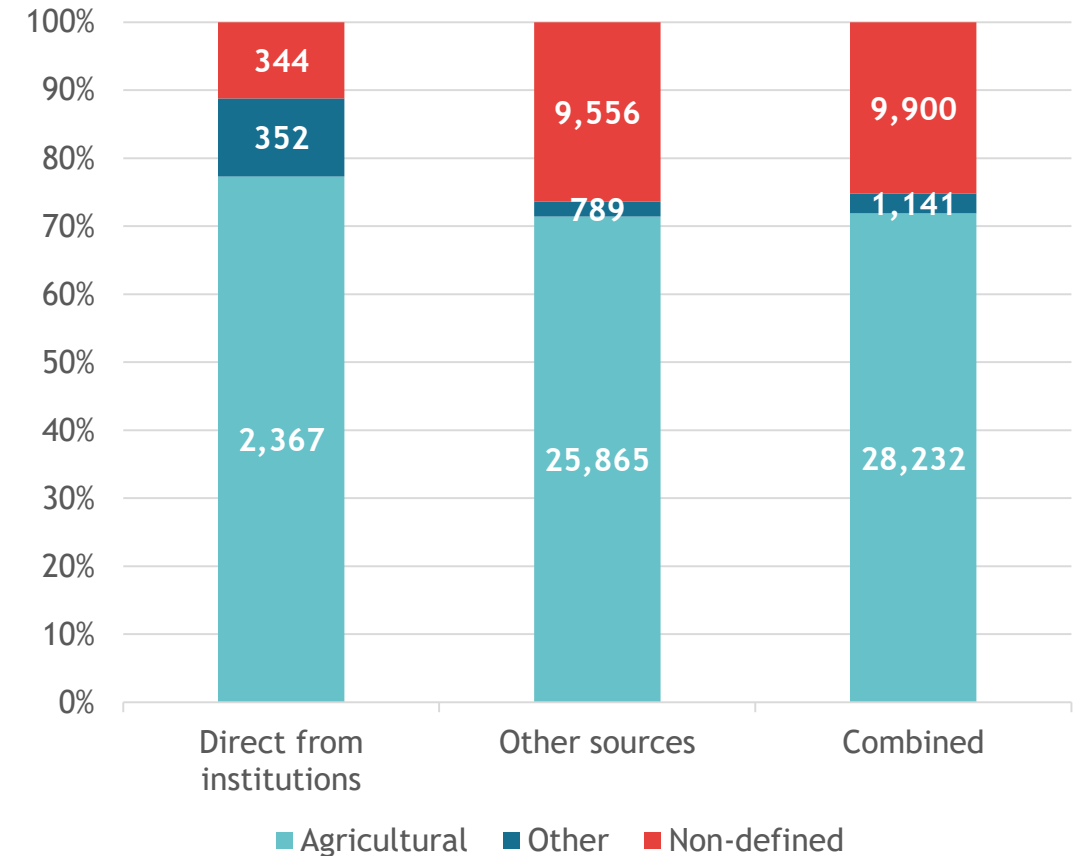
The 14 institutions that directly responded with relevant data reported:

- a total of 3,063 hectares in non-developed landholdings
- at least 77% of non-developed land was used for agricultural purposes
- at least 50% were already employing land management practices that increased soil carbon sequestration and/or biodiversity on-site
- 59% of agricultural land was classified as Grade 3
- the university or college owned 42% of the land, with the rest being tenanted or subject to another arrangement
- the university or college was the land manager in the vast majority of cases, with only 6% of land managed by a third party

Using only data from other sources (excluding the above figures), including phone calls with land agents and a variety of public information (further outlined on [page 12](#))^{8 9 10 11 12 13}:

- there was a total of 36,210 hectares in non-developed landholdings
- at least 71% of non-developed land was used for agricultural purposes

FIGURE 1: Land use and hectarage data from all sources



Detailed findings - data fields provided direct from institutions

The table below outlines which data we received from which institution directly. The actual information has been anonymised because we guaranteed confidentiality for respondents. A blank space means we did not receive that particular data field.

Institution	Total hectarage	Total value	Tenant farmers	Land use	Farm type	Tenancy status	Individual hectarage	Land manager	Agricultural land grade	Soil type	Topography	Location	Tenancy contract dates	Relevant land management practices
Bridgend College	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Coventry University	✓			✓	✓	✓	✓							✓
Keele University	✓		✓	✓	✓	✓	✓	✓		✓			✓	
Newcastle University	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
University Centre Bishop Burton	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
University Centre Myerscough	✓			✓	✓		✓							
University of Bath	✓		✓	✓			✓							
University of Bristol	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
University of Cambridge	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓		✓
University of Lancaster				✓	✓	✓		✓		✓	✓	✓		✓
University of Lincoln	✓		✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
University of Surrey	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
University of the West of England, Bristol	✓			✓			✓							
University of Worcester	✓		✓			✓	✓	✓				✓		

Detailed findings - data provided direct from institutions

Land use and area

There was a total of 3,063 hectares in non-developed landholdings. 86% of respondents owned at least 50 hectares, with over half holding over 100 hectares. This shows a moderate spread amongst institutions, though two institutions made up over 50% of the total.

Agricultural land was by far the most common land use, making up over three-quarters of non-developed landholdings (see *Figure 2* opposite). This included a range of farm types, including arable, pastoral and mixed.

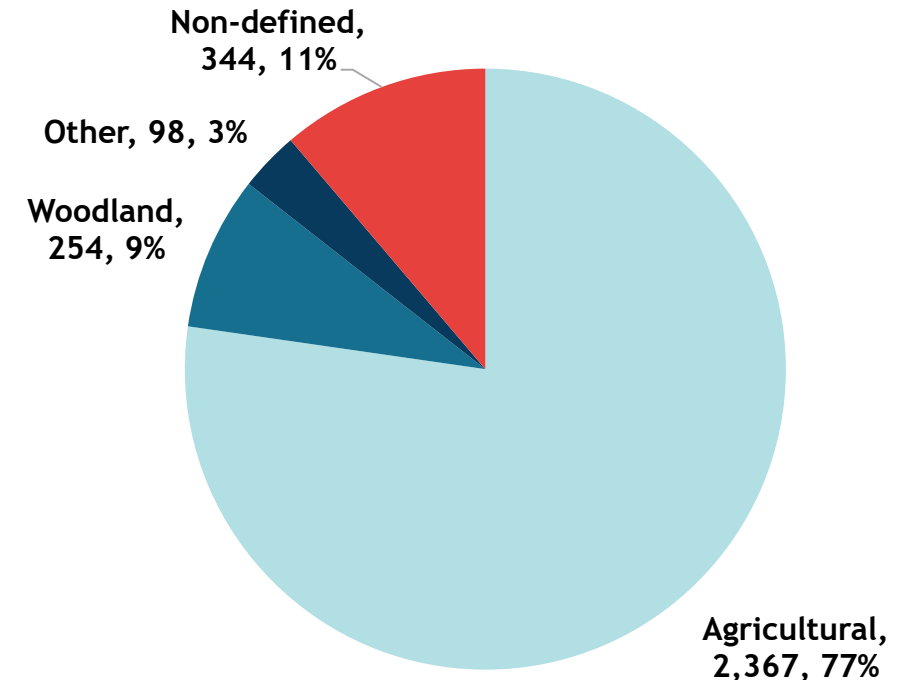
Several institutions also owned woodland and were exploring how to further increase soil carbon and biodiversity in those areas. Other minor land uses included landscaped grassland, sports pitches and non-agricultural research.

Land ownership - universities

72% of the total non-developed landholdings were held by universities established before 1992. Of the 26 universities that said they had no relevant land, 19 were established as universities after 1992.¹⁴

This indicates that older institutions are more likely to have greater non-developed landholdings. A notable exception to this is more recently established institutions that are land-based.

FIGURE 2: LAND USE AND HECTARAGE - DIRECT DATA



Detailed findings - data provided direct from institutions

Tenancy status and land management

The majority of non-developed land - including agricultural land - was university/college-owned *and* managed (see *Figure 3* and *Figure 4* opposite).

This gives more potential influence and flexibility for institutions to move towards more sustainable land management practices where appropriate.

There were few tenant farmers per institution. Of the 10 out of 14 institutions that gave data on this, half had at least one tenant: only one institution had two tenant farmers, with the rest with just one.

Agricultural land grade

Six institutions responded with data on this, covering 1,902 hectares i.e. 80% of all agricultural land data we received. 59% of this was classified as Grade 3, with smaller amounts of Grade 1, 2 and 4 also being held.

Land location

All eight universities or colleges that provided data on this held all of their non-developed land either within or adjacent to the county in which the institution was situated.

FIGURE 3: TENANCY STATUS

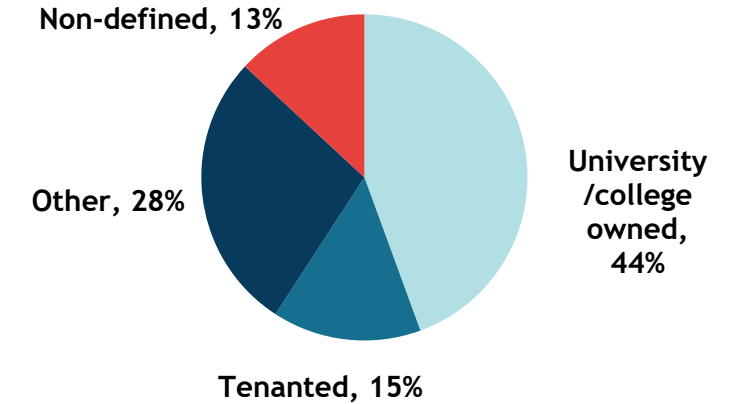
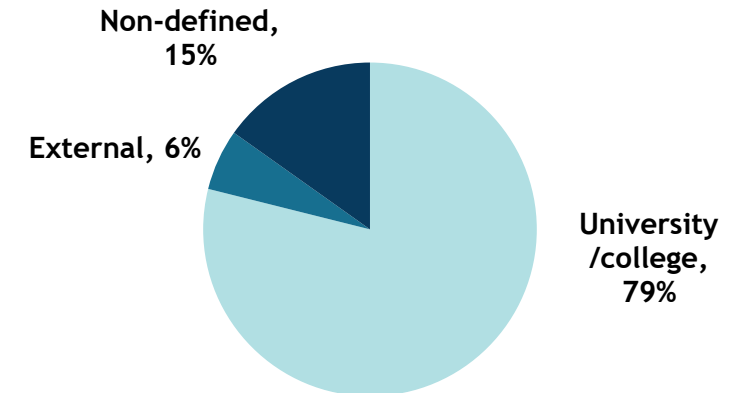


FIGURE 4: LAND MANAGER



Detailed findings - data provided direct from institutions

Existing land management practices

At least half of respondents were already employing certain practices that increased soil carbon sequestration, soil health and/or biodiversity on the land.

The techniques varied between institution but, collectively, included agroforestry, cover-cropping, low- or no-till farming, organic farming, use of hedgerows and woodland restoration.

One university was also providing opportunities to students interested in conservation to manage its woodland.

A couple of institutions who said they didn't have any relevant landholdings for our research were still interested in hearing if the scheme could allow them to improve their land management with respect to green spaces on campus.



Detailed findings - other sources

Land use and area

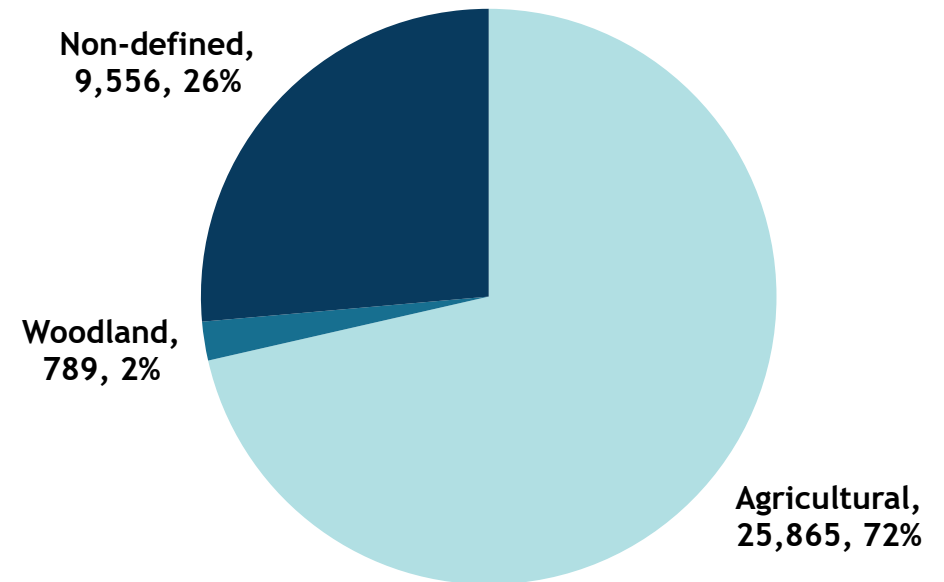
We obtained relevant data for a further 17 institutions from other sources in relation to their total non-developed landholdings, which amounted to 36,210 hectares. The sources include research by *The Guardian* as well as phone calls with university/college land agents.^{8 9 10 11 12 13}

The total agricultural land held by the seven institutions we found such data for was 25,865 hectares. This is 72% of the total non-developed landholdings, making it the most common land use by a considerable margin (see *Figure 5* opposite).

At least seven institutions (50%) held over 1,000 hectares of non-developed land, with six holding over this amount for agricultural land alone. All of them represented ancient universities or their constituent colleges.

This concentration of land amongst certain older institutions is consistent with our findings from direct respondents on [page 7](#).

FIGURE 5: LAND USE AND HECTARAGE - OTHER SOURCES



Going forward

This research will further inform the scheme's development in preparation for the pilot beginning in January 2021 for 24 months.

The research gave an opportunity for institutions to register their interest to be kept updated on the research and pilot, as well as to join the steering group. As a result, 24 universities/colleges asked to be kept updated in total. This is over 50% of those who directly responded to our request for data, which is promising. It includes eight members of the steering group, half of which have joined as a result of engagement through this research project.

This shows there is strong interest in the scheme within the sector. We have also had farmers and other organisations working in this area from outside the sector approach us in order to learn more about the scheme. We are exploring how the scheme can benefit from their expertise whilst still remaining primarily higher-education focussed during the initial pilot.

Overall, many of the respondents to our research (and others who have reached out to us) hold large amounts of agricultural land and/or in-house relevant academic expertise, both of which we hope to utilise to increase the chances of the project's success. There were 39 (out of 45) agricultural/land-based universities or colleges we didn't obtain any data for, either directly or through other sources. A few of these had expressed an initial interest but were unable to follow-up with data. Given their specialism and presumed agricultural landholdings, we plan to find further opportunities to engage them as the project develops.

Following publication of this report, we will convene the steering group in order to discuss the findings and formulate the next steps of the scheme's development. We will keep all interested parties updated as appropriate.

Institutions are still invited to express their interest in joining the scheme or to send any comments or feedback to hello@sos-uk.org.

References

1. Farming for Carbon & Nature concept note, *SOS-UK*
<https://sustainability.nus.org.uk/resources/farming-for-carbon-concept-note>
2. NLBC Member Colleges & Universities, as at 26 June 2020
<https://nlbc.uk/partners/members/>
3. UCAS search for institutions providing agriculture-related courses, as at 26 June 2020
<https://digital.ucas.com/coursedisplay/results/providers?SearchText=>
4. College A-Z, *University of Cambridge*, as at 26 June 2020
<https://map.cam.ac.uk/colleges/>
5. Organisation, *University of Oxford*, as at 26 June 2020
<https://www.ox.ac.uk/about/organisation>
6. Campuses, *University of the Highlands and Islands*, as at 9 July 2020
<https://www.uhi.ac.uk/en/campuses/>
7. Farming for Carbon & Nature land data template, *SOS-UK*
<https://sustainability.nus.org.uk/resources/sos-uk-farming-for-carbon-land-data-template>
8. Oxbridge totally dominates university land ownership, Emanuela Barbiroglio, *Property Week*, 5 July 2018
<https://www.propertyweek.com/analysis-resi-and-data/oxbridge-totally-dominates-university-land-ownership-/5097527.article>
9. Oxford and Cambridge university colleges own property worth £3.5bn, Xavier Greenwood and Richard Adams, *The Guardian*, 29 May 2018
<https://www.theguardian.com/education/2018/may/29/oxford-and-cambridge-university-colleges-own-property-worth-35bn>
10. Oxford and Cambridge university colleges hold £21bn in riches, Richard Adams and Xavier Greenwood, *The Guardian*, 28 May 2018
<https://www.theguardian.com/education/2018/may/28/oxford-and-cambridge-university-colleges-hold-21bn-in-riches>
11. The UK's 50 biggest landowners revealed, *lovemoney.com*, 2 April 2018
<https://www.lovemoney.com/gallerylist/72713/the-uks-50-biggest-landowners-revealed>
12. What do the Oxford Colleges own?, *Who owns England?*, 25 September 2016
<https://whoownsengland.org/2016/09/25/what-do-the-oxford-colleges-own/>
13. Phone calls we were involved in with a number of university and college land agents
14. Types of UK universities, *UKuni*
<https://www.ukuni.net/articles/types-uk-universities>

Connect with us

Website: www.sos-uk.org

E-mail: hello@sos-uk.org

[Facebook](#)

[Instagram](#)

[LinkedIn](#)

[Twitter](#)

If you would like this report in a more accessible format, please let us know your requirements.

Registered charity number: 1184011



STUDENTS
ORGANISING FOR
SUSTAINABILITY
UNITED KINGDOM