Code of Practice for Sustainable Research

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Summary

The purpose of the University's Code of Practice for Sustainable Research is to ensure that those involved in research (and associated consultancy) activities under the University's auspices are well-informed and guided by the University's commitments to embed sustainability into its core functions - including research activities - to achieve carbon net-zero by 2030, to reduce consumption, to increase health and wellbeing, and to work in partnership with others towards these goals.

The Code provides an overview of expectations that the University has linked to the promotion of sustainable research practice covering planning, implementation, and legacy phases of the research process. These expectations apply to its research-active staff members (including those providing technical support to research), visiting researchers using University facilities or premises, and postgraduate research students all of whom are recognised as having a central role in supporting the University in meeting its sustainability commitments and ambitions.

At the planning stage, the University expects researchers to consider the question 'How can I design my research to minimise environmental impacts whilst maximising the social, economic and environmental benefits that it confers?', devising studies which have, for example, clear justification for the use of materials or presence of activities which can potentially harm the environment (such as travel) and that will take steps to mitigate harm.

During the implementation of research, researchers are expected to minimise the day-to-day impacts of their activities, including via environmentally-conscious procurement, consideration of energy, computing and mindful travel.

The University also has a responsibility for the legacy of its research activity and therefore research (and research-linked) staff are expected to share best practices with collaborators, communicate the sustainability credential of their activities and, where relevant, undertake due diligence with regard to the environmental impacts of scale-up of technologies or methods.

The Code also supports the delivery of the UK Research & Innovation Concordat for the Environmental Sustainability of Research and Innovation Practice. Core areas of the

Concordat linked to sustainability leadership, infrastructure, procurement, travel, collaborations and environmental reporting are all relevant to the University's research community which plays a key role in ensuring the broader environmental sustainability of the sector.

The Code is relevant to the undertaking of research activity of all forms across the university, and is not focused solely on research which itself aims to promote sustainable development. It is recognised that much of the research undertaken at the University provides positive impacts to society and to the environment that may outweigh any negative environmental impacts. It is also recognised that many research-active members of the community already apply examples of good environmental practice to their work, and that many Departments and Centres already provide support for best practice and dialogue linked to environmental sustainability. This Code, however, seeks to further support the minimisation and/or removal of these negative environmental impacts from University research practice, including via support for, and the scaling up of, individual and Departmental/Centre practices.

Supporting documentation

The Code is a component of the University's broader strategy on sustainability which describes the body of activity supporting the sustainability of the University. In 2021 the University adopted its Sustainability Plan, which provides the context for the implementation of this Code of Practice for Sustainable Research.

Key Elements

- The Code sets out the responsibilities of the University's research community with an emphasis on designing, conducting and disseminating research in a manner which is mindful of, and seeks to reduce where possible, its negative environmental impacts. It is designed to support the delivery of the Concordat for the Environmental Sustainability of Research and Innovation Practice of which the University is a signatory.
- The Code is designed to offer a framework for supporting researchers to conduct their research more sustainably without compromising the quality of research or the wider social, economic and environmental benefits that result from research activity. It recognises that good practice already exists across the University and seeks to support the upscaling and exchange of examples of best practice across the research community.
- The University recognises that influencing the choices and activities of researchers is only one of many actions that will need to take place across the University, and that researchers may be constrained or enabled by the decisions of others across the University or elsewhere (e.g. projects managed by other institutions). As such, the Code forms one of several strategic interventions that will be implemented to support sustainability across the University, and is likely to adapt over time as the University implements its broader sustainability strategy.
- The University recognises that, while actions of researchers to improve the sustainability of their research may be cost- and/or time-neutral, the availability of resourcing to support researchers will be necessary to enable the community to fully

meet the objectives of the Code. The University also recognises that training and other support may be needed to support researchers (and the research project management and/or professional services community), and that Heads of Department/Centre, principal investigators, supervisors and line managers also have a critical role in supporting researchers in adhering to the Code.

- The University recognises that decisions that improve the environmental sustainability of research activities (e.g. changes to travel activity) may sometimes conflict with potential benefits to the quality of research, with the personal development objectives of staff and students, or with other personal circumstances of individuals. A central principle is that the quality of research, personal development opportunities and health, disability and other personal circumstances should be considered by researchers in conjunction with the environmental impacts of the research, with decisions about how to design, conduct, and disseminate research activities ultimately resting with the researchers themselves.
- Donors and partners in research activities should where possible share the same environmental values as the University. Formal guidelines for consideration of social and environmental values in decision-making linked to funding sources and partners are available.
- The University recognises the importance of the Code being implemented in a manner which is equitable to all researchers, no matter their background, career stage, or personal circumstances. Centres and Departments are therefore encouraged to review the implementation of the Code annually (e.g. via Departmental Research Committees) to ensure that the principles are being adopted in an equitable manner, and line managers and supervisors are encouraged to engage actively with researchers under their supervision (e.g. via personal development reviews) to ensure that the Code does not result in negative outcomes for researchers. The University commits to ensuring that the positive benefits of environmental behaviours and choices will be recognised within processes and policies linked to equality, diversity and inclusion (EDI), career progression and employment.
- It is the responsibility of all those within the University community to work towards the University's environmental objectives, with the University acting to positively enable the research community in the promotion of these objectives. Whilst (beyond existing statutory requirements linked to e.g. legal compliance, health and safety, and waste management, and those already encompassed in the Code of Practice and principles for good ethical governance) there is currently no intention to actively impose any requirements on researchers linked to environmentally-linked behaviours, we do intend to monitor the impact of the Code on the sustainability of research at the University level.

1. Introduction and Scope

1.1. Environmental sustainability is one of the core principles of the University's strategy for 2030. In 2021, the University formally adopted a new Sustainability Plan, which is supported by a dedicated Sustainability Strategy Steering Group, which reports to the University Executive Board. The Plan lays out ambitious targets and objectives, cutting across the UN Sustainable Development Goals. The Plan commits the University to being a global leader in

sustainability research and sustainable development, developing interdisciplinary understanding and solutions to key local, regional and global sustainability challenges. This commitment is in place due to the fact that the University recognises that its activities have important and non-trivial negative environmental externalities, because improvements in the sustainability of the University are values held by staff, students, and stakeholders (including funders) of the University, and because good environmental practice is in the University's best interest due to financial and reputational benefits that it brings. The University recognises that leadership in this space extends to 'practising what we preach' and the actions and activities of the research community within the University are a central component of the delivery of this Plan. With this in mind, the University has committed to the establishment - and implementation - of a Code of Practice for Sustainable Research (this document), the principles of which all research-active members of the University, visiting researchers using University facilities or premises, and postgraduate research students are expected to adopt.

1.2. The main aim of this Code is to facilitate a change in how the University of York conducts its research so that it reduces its environmental footprint and becomes a leader in sustainable, low carbon, research practices that underpin world-leading research.

1.3. This Code of Practice lays out the foundations for the environmentally sustainable conduct of research, and provides direction on the standards expected by the University and the various responsibilities of its research members in upholding these standards. This Code deliberately does not engage with activities that might interface with other aspects of sustainable development (such as the wellbeing of research participants) to which the Code of practice and principles for good ethical governance and the Code of Practice on Research Integrity remain most relevant. These latter two Codes both include reference to environmentally sound research practice, and therefore the Code of Practice for Sustainable Research complements and aligns with these other Codes.

1.4. The Code is intended particularly to support a central tenet of the University Sustainability Plan, its target to reduce net Scope 1 and Scope 2 emissions to zero by 2030 and to reduce indirect (Scope 3) carbon emissions by 30% by 2030 (and to zero by 2050) against 2017-19 average baseline data. The Code is also intended to support other environmental objectives such as reduction in waste and resource use, and the promotion of biodiversity. It is also intended that - via adherence to the Code - University researchers will provide a model to others in the community beyond York, including our funders, partners, and other stakeholders.

1.5. The requirements of the Code (below) are divided into three discrete components, the 'pre-award' stage of research, the 'implementation' phase of research, and finally activities related to dissemination, knowledge transfer, upscaling and/or commercialisation activities (the 'translational and benefits' phase of research). The University recognises that desk-, lab- and field-based research will be associated with different environmental impacts, but the Code applies to all forms of research activity.

1.6. All provisions listed in this Code of Practice apply to all those undertaking research on or off campus, under the University's auspices. This includes all research undertaken on the University's behalf, by staff (including those providing technical support to research),

students and postgraduate researchers, visiting or emeritus staff and researchers (including at the postgraduate level), associates, honorary or clinical contract holders, contractors and consultants. It applies across all subject disciplines and fields of study. Those undertaking research on University premises using its facilities but not in the University's name are expected to abide by the standards outlined in this Code of Practice and to follow the University procedures applicable to the activity they are undertaking.

1.7. The Code will be supported by the development of key performance indicators (still under development) that will be designed to capture uptake of the Code across the University and will be used to inform the support provided to our research community. The knowledge gathered via this monitoring process may also inform the scope and principles of the Code, which is subject to adaptation over time as the University better understands ways in which sustainable research can be fostered.

2. Principles

2.1. The overarching principle for this Code of Practice is the expectation that all researchers at the University will strive to reduce the negative impact of their research activities whilst maintaining the values of research excellence and integrity and working towards the broader mission of a University for Public Good.

2.2. Alongside environmental sustainability, the University's strategy outlines 'collaboration across multidisciplinary boundaries', 'internationalism', and 'equality, diversity and inclusion' as its three other principles. Pursuit of environmental sustainability in research activities should operate alongside these other principles. It is recognised, in practice, that tensions might exist between environmental sustainability and these other principles, requiring active reflection by researchers on the sustainability of research and its balance against broader research objectives.

2.3. We also adopt the principle of 'continuous improvement', recognising that developing the sustainability of research is something that will entail - for example - changes to behaviour, changes to the way in which research is designed, and changes to the way research activities are supported across the University. We therefore do not expect research activities to immediately change in form or function, but rather for the research community to plan for improvement throughout the research process. Adjustments in research design and practice are - however - expected to be necessary for the University to be able to meet its Sustainability Plan targets, and all researchers should be expected to adapt their activities towards these ends.

2.4. The research community should respect the choices of their peers, which may act either in a way which is, or is not, representative of the most environmentally sustainable modes of research activity. To preserve academic independence and freedoms, individuals have the right to balance the environmental credentials of their activities againsts the broader benefits of those activities. The research community should operate in an open and supportive fashion, seeking opportunities to share best practices, and to reflect on and discuss opportunities for change. We expect managers and supervisors to promote and reward supportive dialogue, knowledge exchange, and action.

3. Planning and conducting research

The implementation of this Code of Practice by researchers spans three areas of research activity. The requirements of researchers at each stage are outlined below.

Pre-award/planning stage

3.1. At this stage of the research process the University expects researchers to be asking the central question of 'How can I design my research to minimise environmental impacts whilst maximising the social, economic and environmental benefits that it confers'? Those reviewing proposals (e.g. via internal or external peer-review) should also consider this question in order to promote good practice.

3.2. In devising a study, researchers should therefore have a clear justification for the use of materials or the presence of particular activities (such as travel) which might be environmentally harmful. Research should be designed with consideration of how and where it is carried out, the equipment used, and how standard operating procedures may impact the environment Steps should be taken to mitigate the environmental impacts of research (e.g. steps to reduce resource consumption, to minimise waste and dispose of it in an environmentally safe manner, to reduce the environmental burden of new facilities etc.). Any necessary training required to support researchers/research participants eventually working on the project in undertaking sustainable research practice (e.g. training to conduct remote research activities, or training in new technologies), should be planned for - and costed - at this stage.

3.3. The University expects researchers to seek to minimise - to the extent possible - travel activities associated with planned research. Where travel is planned, this should be costed so that more environmentally friendly methods are budgeted for where practical (for example, international train travel rather than flights).

3.4. The University expects researchers as a minimum to comply in their research planning stages with any sustainability requests of funders, including travel or material-use restrictions, and any requirements for the offsetting of environmental impacts. The University has an Offsetting Policy that should be adhered to when budgeting for any offsetting activity. Where possible, the University expects researchers to seek to exceed the environmental requirements of funders, making it clear - for example - within 'Justification of Resources' statements why more sustainable options have been chosen.

3.5. Researchers (Co-Is, research associates, technicians etc) likely to be involved in the planned research should be consulted on opportunities to reduce the environmental impacts of research activities. These ideas should be discussed in research teams. Where members of research staff feel environmental concerns are not being reflected sufficiently in research design they should raise this with PIs (or other leads) and - if required - with other senior members of staff, whilst respecting the principles outlined above. PIs and/or supervisors have ultimately responsibility for research design. External partners should be encouraged to adopt similar standards, and should be informed of the steps that University of York researchers will be taking to minimise the environmental impacts of research and the rationale for this.

3.6. The University expects its research community to consider the environmental commitments and credentials of funders. If these are deemed to be opposed to the principles of the University Strategy and/or its Sustainability Plan then funding should not be accepted. In cases where these credentials are not clear and/or where there is potential for disagreement between researchers, discussion should take place with Departmental ethics committees and escalated as appropriate through existing due diligence procedures. The University's 'Research Reputation and Social Responsibility Framework' should be referred to for guidance.

3.7. Where any costs associated with the incorporation of environmentally friendly activities into research are not likely to be recoverable from funders, discussions should start at Department/Centre level to identify the feasibility of cost-recovery.

Implementation stage

3.8. This stage covers any day-to-day activities conducted by researchers in their roles within - or for - the University whether specifically related to research activities or not. These activities may be related to specific projects, or to 'academic citizenship' activities and knowledge exchange activities with University stakeholders. It may also include activities linked to the delivery of teaching (but the environmental credentials linked to design and implementation of teaching is not covered by this Code).

3.9. Researchers are expected to minimise the environmental impacts of their day-to-day activities, by taking steps such as the following:

- *Ensuring that materials used in office or lab environments are used efficiently and disposed of in a suitable manner*: This includes resources such as chemicals (in lab environments), water usage, electrical or stationary products. Researchers should engage in dialogue with lab or office managers and/or PIs where opportunities to reduce material consumption and promote re-use are identified.
- *Ensuring that materials and equipment are sourced sustainably*: Where researchers are responsible for procuring products, attention should be paid to the environmental credentials of those materials (from a whole life-cycle perspective encompassing production, in-use efficiency, longevity and disposal) in addition to their cost. Re-use and sharing of materials and equipment should be promoted. Advice from local and central procurement services should be sought as and where appropriate.
- *Green computing*: Including ensuring that non-critical computing and other IT equipment is powered down when not in use and when appropriate to do so. Consideration should also be given to environmental impacts associated with the use of computing services, including cloud computing, which includes consideration of the impacts of data storage (e.g. removing old or unused files), computer processing (e.g. optimising code development; choosing environmentally friendly cloud services) and the necessity of hardware upgrades.
- *Catering and hospitality*: The University expects researchers to consider the environmental credentials of hospitality they provide in meetings/workshops and for guests. This extends to the credentials of any accommodation offered to visitors. The provision of meat-free and/or locally-sourced meals/lunches is also encouraged and

should be the default option for any events. Attention should also be paid to ensuring that over-ordering of products does not take place and food-related waste is avoided.

- *Minimising energy use*: Including ensuring that lights and appliances or laboratory equipment are switched off (including water supplies) when not in use and safe/appropriate to do so, thermostats (e.g. on refrigerator/freezer units, or HVAC systems) are maintained at the appropriate temperature, and windows are closed in office or lab environments when buildings are not in use (e.g. overnight).
- *Minimising travel activities*: Video-conferencing should be the default mechanism for day-to-day communication with external partners unless carbon-neutral travel options are available. Project meetings, workshops and conferences should also be conducted on the assumption that video-conferencing is a viable and encouraged option, but individual researchers should judge the extent to which face-to-face meetings (and therefore travel) may be required. Research teams should also discuss how many face-to-face participants are required, minimising this where possible. The University recognises the value of in-person meetings for career development, networking, and the generation of ideas, and sustainable travel behaviour should not be interpreted as imposing a barrier to such activities. Given these benefits, opportunities by researchers to add value to travel activities (e.g. by arranging side meetings, or additional dissemination or training activities as part of the travel activity) should be pursued where possible.
- *Minimising the impact of travel*: The University recognises that travel is a requirement of research. Where travel is conducted, however, researchers should seek to reduce its environmental impacts. Domestic flights are rarely acceptable unless strictly necessary (e.g. to reach remote areas of non-mainland UK) and require clearance from HoD. Within the UK, public transport should be pursued as a first option for regional and local travel. Taxis or personal vehicles should only be used where public transport is not an option, is a safer method of transport, is more disability inclusive, or is legitimately deemed to be more environmentally damaging. When travelling overseas, if destinations can be reached safely within a reasonable timeframe (e.g. within 24 or less; acknowledging that ‘reasonable’ may differ according to individual circumstances) by land-based public transport and without undue interference with researcher work-life balance, then land-based public transport options should be strongly considered. Additional costs of such options should be factored into project budgets and/or supported by Departmental/Centre co-funding. Where flights are taken, these should be direct (i.e. avoiding interim stops) where possible, with any additional costs again borne by project budgets and or supported by Departmental/Centre co-funding.

3.10. The above list of actions that researchers should undertake to minimise the environmental impacts of their research is non-exhaustive. Ideas for additional steps are encouraged, as is the sharing of such best practice across research groups, Centres, Departments and at Faculty level. Departments and Centres are expected to hold discussions with staff at least annually to discuss the sustainability of research practices and opportunities for improvement. Engagement with the University-supported scheme of Green Impact, or alternatives such as My Green Lab, is also encouraged. Developments to best practice across the University may be reflected in future updates to the Code of Practice for Sustainable Research.

3.11. The University recognises that training, support tools and financial support are likely to be required for researchers to fulfil the requirements outlined above, although effective research design can help mitigate cost increases. In the first instance, where resources are required, researchers should discuss these with PIs, supervisors, and Heads of Department as appropriate.

Translational and benefits stage (Communication, collaboration and research legacy)

3.12. The University recognises that it plays an important role in influencing the sustainability of activities of others which may extend beyond the 'operational' side of research. This includes the manner with which partnerships are conducted between researchers at York and others (research and non-research), the way in which research activities are communicated and disseminated, and the considerations made to how new research findings are scaled up and/or commercialised externally.

3.13. When working in partnership with others, researchers are encouraged to share 'best sustainable practices' (such as those outlined in 3.9), along with details of the University's broader Sustainability Strategy and Sustainability Plan to encourage adoption of similar principles and actions beyond the University.

3.14. Where possible/practical within dissemination activities, researchers are encouraged to include any sustainability benefits of their research outputs or actions. This might include, for example, novel research methods or ways of working that have reduced the environmental impacts of research. Such dissemination may take the form of descriptions alongside wider research findings, or standalone materials focusing on the environmental aspects of research activities. Social media, departmental websites, news articles and blogs are identified as appropriate platforms for such dissemination.

3.15. The research community is also encouraged to coordinate with ESAY, and its 'York Living Labs' programme, to cohere best practices with relevant teaching and operational activities for benefit of all, including students and local communities.

3.16. Where research activities result in products or services which are adopted by others (e.g. by consultancies, external companies, policy makers), due diligence should be conducted on the potential for such products or services to be used in a manner that could be environmentally damaging. Where such risks are identified, guidance should be provided to minimise the likelihood of such damage.

4. Roles and responsibilities

4.1. Responsibility for the development and implementation of this Code of Practice for Sustainable Research lies with the University's Sustainability Steering Group, the University Sustainability Plan Research Theme lead (ESAY's Research Lead), and ultimately with the broader research community. The University Sustainability Steering Group is also responsible for monitoring the impact of this Code as a contribution to the University's sustainability targets, and adapting it as appropriate in order to meet these targets. The

Code of Practice has been endorsed by the Sustainability Steering Group and University Research Committee.

4.2. Primary responsibility for adherence to the Code of Practice for Sustainable Research falls to individual researchers. Individuals should make themselves aware of the requirements of the code, and then make their own decisions on how the Code is relevant to their research activities and how these should be adapted accordingly to support the University's Sustainability Plan.

4.3. PIs and supervisors have particular responsibilities in ensuring that the principles of the Code are integrated into research design, and that the research environment within projects and research teams is conducive to the open and supportive sharing of ideas and best practice to promote sustainable research.

4.4. Heads of Departments/Centre Directors and Chairs of Departmental Research Committees are responsible for ensuring that the research culture within research units is supporting the Code, and that resources are made available for its effective implementation. Where resource requirements are identified, HoDs should bring these to the attention of Faculty Research Groups or central services as appropriate.

4.5. The University has ultimate responsibility for ensuring that training, support tools and/or financial support is provided to researchers for them to adhere to the principles, requirements, and spirit of the Code.

5. Adherence to principles

5.1. In practice, the principles and requirements outlined in the Code are designed to provide clear guidance to researchers on expectations that the University has with regard to the sustainability of their research practices. The Code is intended to create an environment and culture in which sustainable research practices are promoted, become the default options, and are continuously improved. It is not intended to restrict the independence of research when it comes to making decisions about what practices are in the broader best interests of the excellence and integrity of their research, the wellbeing and personal circumstances of the researchers for which they might be responsible, and/or their career development (or the career development of others). The requirements outlined above are therefore designed to offer opportunities for dialogue, reflection and creative problem solving.

5.2. There are no plans at the current time to formally monitor individual-researcher adherence to the Code of Practice for Sustainable Research. The University deems that environmental provisions within the Code of Practice and principles for good ethical governance are sufficiently broad to encompass the expectations for Sustainable Research. The Code of Practice for Sustainable Research therefore acts as a more detailed complement to these broader ethical research expectations of the University.