Ensuring Strategic Decisions Align with the Sustainability Strategy Goals

A framework for decision making

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Executive Summary

The commitments made in the University's Sustainability Strategy imply that all major decisions ('projects'), and many day-to-day procurement activities need to consider their alignment with the Sustainability Strategy Goals. In addition, the Sustainability Strategy is clear that by "**2030 [we will] have embedded sustainability into our teaching, learning, research, and professional services operations**" (p6).

To ensure that the University's Sustainability Strategy commitments are kept front of mind during 'project' review and decision-making processes within the University, we propose that all 'project' proposals or business cases must provide:

1. Impact assessments against each Sustainability Strategy Goal including:
    - Robust quantitative evidence-based estimates of their consequences for the University's Scope 1, 2 and 3 emissions over the lifetime of the project from the baseline (no change) case (Goals 1-3);
    - Qualitative assessments of their contributions to and alignment with **all** Goals (1- 6)
2. Summative Sustainability Strategy Goal Impact RAG ratings of their alignment with **each** of the Goals based on the per-goal assessments.

Given the commitments the University has made, **the rationale for pursuing 'projects' with amber or red Sustainability Strategy Goal Impact RAG ratings should be clearly articulated and justified**.

The assessment and the RAG rating should be embedded within the business-as-usual decision-making criteria in appropriate business case or procurement templates. A new work-package is currently being developed by SIG based on this paper to provide guidance and tailored support to do this. Please contact Ben Anderson (b.anderson@soton.ac.uk) for further information.

Contents

1 Background 3
2 Alignment Framework 3
2.1 Emissions costing 4
2.2 Goal 1: Scope 1 & 2 emissions 5
2.2.1 Scope 1 5
2.2.2 Scope 2 6
2.3 Goal 2: Scope 3 emissions 6
2.4 Goal 3: Business Travel 8
2.5 Goal 4: Education 8
2.6 Goal 5: Research and societal impact 8
2.7 Goal 6: Investments 9
2.8 Combining the Goals – an overall 'Sustainability Strategy Goal Impact Statement' 9
2.9 Summary 10
3 Monitoring the outcomes 11
4 Next steps 11
5 References 11
6 Annexes 12
6.1 Emissions costing 12
6.1.1 Background and values 12
6.1.2 Worked example 13
6.2 Asking questions of suppliers 13
6.2.1 General questions 13
6.2.2 Specific questions (ideal) 14

Document History:

- V1.0 – circulated to SIG & SSG for discussion
- V2.0 – re-draft for comment (expansion from Scopes 1-3 to all Goals)
- V3.0 – As approved by SIG & SSG for wider consultation

1 Background

The commitments made in the University's Sustainability Strategy (October 2020) imply that all major decisions ('projects'), and many day-to-day procurement activities need to ensure they align with the University's Sustainability Strategy Goals. These goals are:

1. **Goal 1: Reduce Scope 1 & 2 emissions to net-zero by 2030**
2. **Goal 2: Measure our total emissions footprint and set targets for Scope 3 emissions reductions**
3. **Goal 3: Adopt a value-based approach to reduce emissions from business travel**
4. **Goal 4: Ensure that sustainability is a part of every University education programme by 2025**
5. **Goal 5: Make sustainability a cornerstone of UoS' research and societal impact**
6. **Goal 6: Implement a sustainable and ethical investment policy**

In addition, the Sustainability Strategy is clear that by "**2030** [we will] **have embedded sustainability into our teaching, learning, research, and professional services operations**" (p6).

The Sustainability Strategy therefore implies that *all* strategic decisions, and *most* smaller scale day-to day decisions need to take account of the Sustainability Strategy commitments and Goals in the criteria used to assess a particular proposal or business case. These decisions may include:

1. Energy supply
2. Significant retrofitting and refurbishment projects
3. Major new build projects
4. Major capital projects or procurement decisions
5. Business travel and transport policy
6. Building occupancy and usage
7. Major research investments or curriculum changes
8. Which spinouts to support, which equity to take or which investments to make

Clearly decisions such as these may have consequences for one or more of the Goals and a mechanism is therefore needed to ensure that decision-making criteria take account of the 'sustainability' consequences of these 'projects'. This will help to ensure that sustainability is given appropriate weighting alongside financial and other criteria.

We therefore propose the implementation of a 'sustainability alignment framework' which can be used to assess the impact of a given 'project' on each of the University's Sustainability Strategy Goals. A 'project' would be expected to consider its impact on **all** Goals. However, it would not be expected to provide a detailed assessment of its impact on Goals that it can clearly demonstrate are either inapplicable or on which it would have no significant effect. This justification would need to be carefully scrutinised.

The following sections describe a draft of this alignment framework that draws on work previously undertaken by Estates (Adam Tewkesbury & Sarah Woodward) on a Project Assessment Matrix for a Carbon Reduction Strategy paper (Adam Tewkesbury & Sarah Woodward 2021, Appendix D). It also builds on a number of discussions with other colleagues across Professional Services and Academic Faculties who have expressed an interest in using this approach as part of business as usual.

2 Alignment Framework

For each Goal, the framework poses quantitative and qualitative questions which can then be operationalised as appropriate by the specific project. In each case we anticipate that the

framework tables would be completed as part of the business case or equivalent development process for scrutiny by the relevant Strategy Board or other decision-making body.

The general approach has two strands – one quantitative and one qualitative:

- Quantitative – estimate the 'business as usual' baseline Scope 1, 2 and 3 emissions of the activity under consideration and then estimate the future 'after change' emissions following the planned 'project'. Use these to;
    - Demonstrate the positive (negative) effect on Sustainability Strategy Goals 1-3;
    - Estimate the 'emissions cost' saving of the 'project' using published carbon prices.
- Qualitative –explain how the project will contribute to **each** of the six Sustainability Strategy Goals.

The following sections explain our suggested approach to emissions-costing and then give more detailed explanations of these two strands as applied to each Goal.

2.1 Emissions costing

In order to appropriately incentivise investment in decisions and projects that reduce emissions and so deliver on the Sustainability Strategy Goals, we propose that *alongside quantitative and qualitative sustainability impact analysis*, the **cost of emissions[1] be factored into all decision making**. This would follow emerging best practice in UK Government policy assessment processes[2].

The estimated emissions costs of the project would then contribute to a broader cost-benefit analysis to assess whether, taking into account all relevant costs and benefits (including impacts on climate change and the environment), a project is likely to add value to the University. Comprehensively and systematically applying emissions valuation across project appraisal in a consistent manner is a key tool to incentivise project teams to find cost-effective ways to deliver the goals of the Sustainability Strategy.

To do this, published carbon £ values should be applied to the 'business as usual' and 'after change' emissions estimates developed for the quantitative Goal 1-3 impact assessment. This would make clear a) the emissions cost of inaction and b) the emissions cost savings to be made.

We recommend that the 'central' carbon value published by BEIS should be used to assess the cost of emissions in a particular decision-making context. These values are shown in Table 10: Carbon values in £ 2020 prices per tonne of CO2 in Annex 6.1 (Emissions costing) along with a simple worked example.

The results of these calculations should then feed into the overall cost benefit analysis to be considered alongside other quantitative and qualitative evidence (such as capital investment and running costs) in the overall decision appraisal.

This step is crucial since unless translated into a tangible incentive, the estimated carbon cost will not act upon the decision process and the goals of the Sustainability Strategy are unlikely to be met. Paying attention to the emissions costs in this way also gives the University a way to de-risk its financial exposure to future emissions penalties, be they implemented through a tax system or otherwise.

[1] i.e. costs currently externalised to the environment and climate system.

[2] See https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation

2.2 Goal 1: Scope 1 & 2 emissions

Goal 1 is concerned with GHG Protocol Scopes 1 and 2 and is committed to reducing Scope 1 and 2 emissions to net zero by 2030. Scope 1 emissions refers mainly to fuels combusted (e.g. gas for heating and hot water, vehicle fuels, etc). Scope 2 refers to electricity purchased from the grid or to steam and hot water purchased for use in buildings (Ben Anderson 2021a).

Our approach to assessing the implications of a 'project' proposal for Goals 1 and 2 builds on the GHG Project Protocol[3]. This protocol "*provides specific principles, concepts, and methods for quantifying and reporting GHG reductions—i.e., the decreases in GHG emissions, or increases in removals and/or storage—from climate change mitigation projects (GHG projects*)". This protocol is based on the assessment of the primary and secondary GHG reduction effects of a given project[4]. These are defined as:

- A **primary effect** is the intended change in GHG emissions, removals, or storage associated with a GHG source or sink caused by a project activity;
- A **secondary effect** is an unintended change in GHG emissions, removals, or storage associated with a GHG source or sink caused by a project activity. In some cases, secondary effects may partially negate primary effects.

We propose that **both primary and secondary effects** should be considered.

2.2.1 Scope 1

The alignment to the Goal 1 Scope 1 target is likely to focus on fuel inputs, especially the use of gas which comprises just over 50% of our current Scope 1 and 2 emissions[5] and ~ 10% of our total GHG emissions (Ben Anderson 2021b) . However, Scope 1 also covers other aspects of stationary combustion (e.g. waste incineration whether for energy or not), mobile combustion (university owned vehicles), fugitive emissions (e.g. refrigerants) and process emissions (e.g. chemical processing, physical processes or land use change). Detailed guidance can be found at https://ghgprotocol.org/ or in (Ben Anderson 2021b).

Table 1: Goal 1 - Scope 1 describes how the qualitative and quantitative strands of the framework apply to Scope 1 emissions.

Table 1: Goal 1 - Scope 1

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will help to reduce the University's Scope 1 emissions to net zero by 2030. Which Scope 1 categories will be reduced or increased? Which primary and secondary effects have been considered?	What is the evidence that this outcome is likely to be achieved?
Quantitative alignment	What will be the net annual and/or lifetime reduction in each applicable category of Scope	Which tools or methods were used to produce these estimates? How are the estimates validated? Which options were considered?

[3] https://ghgprotocol.org/standards/project-protocol

[4] The GHG Protocol has been adopted as the guiding principle for the University Sustainability Implementation Group (SIG) and the Sustainability Strategy's 6 Goals. However, we have not yet fully explored the extent to which the GHG Project Protocol can be applied to non-GHG projects (i.e. business-as-usual decision making) as opposed to projects where GHG reduction is the primary aim.

[5] Prior to the switch to renewable electricity.

1 emissions (T CO_2e) that result from this outcome? What will be the net annual and/or lifetime reduction in the University's emissions costs[6]? Over what time-frame and what is the likely profile of that reduction? What is the £ cost per T CO_2e reduced over the lifetime and how does this compare to the estimated £ per T CO_2e emissions cost[7]?	What are the results of a sensitivity analysis comparing emissions reductions and levels of cost? What was the weighting used to select the option proposed?

2.2.2 Scope 2

The alignment to the Goal 1 Scope 2 target would focus on the impact on electricity use or steam/hot water. Even if we continue to switch our remaining electricity contracts to a zero-carbon source, we might be tempted to ignore this sub-category of this scope. However, purchased electricity will still incur upstream emissions reported under Scope 3 (and is marginally more costly) so reducing overall electricity use is crucial, even were it to become the dominant energy source.

Table 2: Goal 1 - Scope 2 describes how the qualitative and quantitative strands of the framework apply to Scope 2 emissions.

Table 2: Goal 1 - Scope 2

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will help to reduce the University's Scope 2 emissions to net zero by 2030. Which Scope 2 categories will be addressed? Which primary and secondary effects have been considered?	What is the evidence that this outcome is likely to be achieved?
Quantitative alignment	What will be the net annual and/or lifetime reduction in each applicable category of Scope 2 emissions (T CO_2e) that result from this outcome? What will be the net annual and/or lifetime reduction in the University's emissions cost? Over what time-frame and what is the likely profile of that reduction? What is the £ cost per T CO_2e reduced over the lifetime and how does this compare to the estimated £ per T CO_2e emissions cost?	Which tools or methods were used to produce these estimates? How are the estimates validated? Which options were considered? What are the results of a sensitivity analysis comparing emissions reductions and levels of cost? What was the weighting used to select the option proposed?

2.3 Goal 2: Scope 3 emissions

Goal 2 commits to setting "*an ambitious target to reduce our Scope 3 emissions and incorporate this into our roadmap to net zero*". Scope 3 covers indirect emissions that derive from activities of the organisation that they do not own or directly control. These include emissions due to business travel which are dealt with separately under Goal 3 (see Section 2.4 below).

[6] See Section 6.1 (Emissions costing) for details of how to estimate the carbon cost.

[7] See Table 10: Carbon values in £ 2020 prices per tonne of CO2.

Alignment to Goal 2 will become even more critical once a Scope 3 target is set since our current best estimate is that Scope 3 represents ~ 80% (~104,000 T CO_2e) of our total GHG emissions (Ben Anderson 2021b).

It is therefore important to address the following sources of Scope 3 emissions:

Table 3: GHG Protocol Scope 3 Emissions categories

• Upstream ○ Purchased goods and services ○ Capital goods ○ Upstream fuel & energy (non-Scope 1 & 2) ○ Upstream transportation and distribution ○ Waste generated in operations ○ Business travel (see Goal 3 below) ○ Employee commuting ○ Upstream leased assets	• Downstream ○ Downstream transportation and distribution ○ Processing of sold products ○ Use of sold products ○ End-of-life treatment of sold products ○ Downstream leased assets (operation) ○ Franchises (operation) ○ Investments (operation)

We can only do this by taking every possible opportunity to use our service procurement and usage decisions to reduce our Scope 3 emissions from these sources. We would therefore anticipate that, as with Scope 1 and 2, a business case, policy proposal or procurement decision would assess the primary and secondary GHG implications of each applicable Scope 3 sub-category as described in Table 4: Goal 2 - Scope 3.

Table 4: Goal 2 - Scope 3

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will help to reduce the University's Scope 3 emissions (to meet the specified target) Which Scope 3 categories will be addressed? Which primary and secondary effects have been considered?	What is the evidence that this outcome is likely to be achieved?
Quantitative alignment	What will be the net annual and/or lifetime reduction in *each applicable category* of Scope 3 emissions (T CO_2e) that result from this outcome? What will be the net annual and/or lifetime reduction in the University's emissions cost? Over what time-frame and what is the likely profile of that reduction? What is the £ cost per T CO_2e reduced over the lifetime and how does this compare to the estimated £ per T CO_2e emissions cost?	Which tools or methods were used to produce these estimates? How are the estimates validated? Which options were considered? What are the results of a sensitivity analysis comparing emissions reductions and levels of cost? What was the weighting used to select the option proposed?

We acknowledge that at the current time accessing data that can be used to develop these estimates is frequently challenging. Many potential suppliers have yet to assess their own operational Scope 1 & 2 emissions, let alone their Scope 3 emissions and even where they have, they are not yet in a position to allocate those emissions on a per-client or per-contract basis.

We therefore envisage that qualitative assessments using whatever collateral potential suppliers can provide will need to be used until they can provide robust emissions footprint data. With this in mind we have co-developed a series of 'questions' that can be asked on ITT or similar procurement processes to ensure our suppliers align with our strategy goals. These are listed in Annex 6.2 (Asking questions of suppliers) below.

2.4 Goal 3: Business Travel

This goal focuses on one category of Scope 3 emissions – Business Travel. As a result, Table 5 is a specialised version of Table 4.

Table 5: Goal 3 - Scope 3(Business Travel)

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will help to reduce the University's Scope 3 Business Travel emissions Which primary and secondary effects have been considered?	What is the evidence that this outcome is likely to be achieved?
Quantitative alignment	What will be the net annual and/or lifetime reduction in the University's emissions cost? Over what time-frame and what is the likely profile of that reduction? What is the £ cost per T CO_2e reduced over the lifetime and how does this compare to the estimated £ per T CO_2e emissions cost?	Which tools or methods were used to produce these estimates? How are the estimates validated? Which options were considered? What are the results of a sensitivity analysis comparing emissions reductions and levels of cost? What was the weighting used to select the option proposed?

2.5 Goal 4: Education

Embedding sustainability in every University education programme by 2025 is a qualitatively different goal from Goals 1-3 which focus on reducing emissions. Further, quantitative outcome metrics have yet to be set. As a result, Table 6 focuses only on qualitative alignment with the Goal. It should be noted however that 'projects' which consider themselves almost exclusively 'educational' in nature must still consider their impacts on the other five goals. This is particularly the case where curriculum innovation might lead to activities which unintentionally increase or ideally decrease the University's Scope 1, 2 or 3 emissions. The former might include field courses/trips or new resource-intensive educational provision.

Table 6: Goal 4 - Education

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will help to further embed sustainability in the University education programme	What is the evidence that this outcome is likely to be achieved?
Quantitative alignment	To be determined when key outcome metrics for this Goal have been set.	

2.6 Goal 5: Research and societal impact

As with Goal 4, Goal 5 is qualitatively different from Goals 1-3 and quantitative outcome metrics have yet to be set. As a result, Table 7 focuses only on qualitative alignment with the Goal. It should be noted however that 'projects' which consider themselves almost exclusively 'research or societal impact' in nature must still consider their impacts on the other five goals. This is particularly the case where research or impact-focused investments might lead to activities which unintentionally increase or ideally decrease the University's Scope 1, 2 or 3 emissions.

Table 7: Goal 5 – Research and societal impact

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will enable sustainability to be a cornerstone of UoS' research and societal impact.	What is the evidence that these outcomes are likely to be achieved?
Quantitative alignment	To be determined when key outcome metrics for this Goal have been set.	

2.7 Goal 6: Investments

While the main focus of Goal 6 is the implementation of a sustainable and ethical investment policy, from an emissions perspective the University is 'responsible' for an equity share of the emissions of the entities in which it invests. This is included under Scope 3 reporting as described in Table 3: GHG Protocol Scope 3 Emissions categories.

Table 8 is therefore an investment-focused version of Table 4 with an additional requirement to qualitatively explain how the outcome contributes to the implementation of a sustainable and ethical investment policy. While we do not expect many projects that would impact on Goal 6 to come forward independently of the University's Investment Committee, we do expect that the quantitative alignment questions will be considered as part of the selection process for fund managers and investment choices.

Table 8: Goal 6 - Investments

Alignment	*Key questions*	*Detail*
Qualitative alignment	Explain how the outcome of this project will support the implementation of a sustainable and ethical investment policy. Explain how the outcome of this project will help to reduce the University's Scope 3 downstream investment emissions	What is the evidence that these outcomes are likely to be achieved?
Quantitative alignment	What will be the net annual and/or lifetime reduction in Scope 3 emissions (T CO_2e) that result from this investment? What will be the net annual and/or lifetime reduction in the University's emissions cost? Over what time-frame and what is the likely profile of that reduction? What is the £ cost per T CO_2e reduced over the lifetime and how does this compare to the estimated £ per T CO_2e emissions cost?	Which tools or methods were used to produce these estimates? How are the estimates validated? Which options were considered? What are the results of a sensitivity analysis comparing emissions reductions and levels of return? What was the weighting used to select the option proposed?

2.8 Combining the Goals – an overall 'Sustainability Strategy Goal Impact Statement'

It is expected that each 'project' would provide evidence and a brief narrative in response to each Goal as described in Table 1 to Table 8 above and would be expected to consider its impact on **all** Goals. However, it would not be expected to provide a detailed assessment of its impact on Goals that it can clearly demonstrate are either inapplicable or on which it would have no significant effect. These arguments would require careful scrutiny.

In addition we propose that the overall alignment of the project/outcome to the University's Sustainability Strategy Goals be summarised in a qualitative '**Sustainability Strategy Goal**

Impact Summary' using a RAG rating for each Goal (see the example provided in Table 9, adapted from (Adam Tewkesbury and Sarah Woodward 2021, Appendix D)).

The RAG ratings would reflect the evidence captured in the relevant alignment framework table (i.e. Table 1 to Table 8) and so Table 9 provides for a short explanation summarising the per-Goal assessments. The matrix should also record the total estimated emissions reduction and the estimated total emissions cost saving. Reviewers would refer to the detailed framework tables as required. The project would then be expected to use this table to explain the qualified basis for the recommended investment options or decisions.

Table 9: Proposed Sustainability Strategy Goal Impact Summary (example)

Example Summary of Qualitative Impacts once project complete						
	1: Significant Positive Impact	2: Moderate Positive Impact	3: No Impact	4: Moderate Negative Impact	5: Significant Negative Impact	**Explanation**
Sustainability Strategy Goal 1	*					
Sustainability Strategy Goal 2		*				
Sustainability Strategy Goal 3			*			
Sustainability Strategy Goal 4		*				
Sustainability Strategy Goal 5			*			
Sustainability Strategy Goal 6			*			
Total emissions reduction	*					**XXX T CO_2e reduction over YY years**
Total emissions cost saving	*					**£ XXX using £ XXX / T CO_2e carbon price**

2.9 Summary

Overall, to ensure that the University's Sustainability Strategy commitments are kept front of mind during planning, assessment and decision-making processes within the University, we propose that all 'project' proposals or business cases should provide:

1. Per-Goal impact assessments including:
    - Best effort quantitative evidence-based estimates of their consequences for the University's Scope 1, 2 and 3 emissions over the lifetime of the project from the baseline (no change) case (Goals 1-3);
    - Derived estimates of their emissions cost savings using published carbon prices;
    - Qualitative assessments of their contributions to **all** Goals.
2. Summative RAG ratings of their alignment with **each** of the Goals based on the per-goal assessments.

To do this we propose that these two requirements should be embedded within the business-as-usual decision-making criteria in appropriate business case or procurement templates.

Given the commitments the University has made, **the rationale for pursuing 'projects' with amber or red Sustainability Strategy Goal Impact RAG ratings should be clearly articulated and justified**.

3 Monitoring the outcomes

In line with the GHG Project Protocol, the final part of the Framework is the definition of the monitoring arrangements which will be used to collect the data in order to credibly quantify the actual consequences of the 'project' for each of the Sustainability Strategy Goals. This would be expected to apply to all Goals identified as relevant in the Sustainability Strategy Goal Impact Summary table.

This is likely to include (but not be limited to) estimates of GHG reductions or otherwise and so implies at least:

- monitoring GHG emissions from all GHG sources and sinks related to primary and significant secondary effects within the GHG assessment boundary which relate to the 'project';
- monitoring any data related to assumptions underlying baseline emission estimates such as baseline parameters.

4 Next steps

We are currently progressing the following next steps:

- Approval of the paper by SIG and SSG (**completed**).
- Following SIG & SSG approval, discussion of paper at:
    - Professional Services Executive Group
    - Estates Infrastructure Committee
    - Estates Programme Board
    - University Executive Board
- Development of a new SIG work package to:
    - Explore the applicability of the GHG Project Protocol to business-as-usual decision making
    - Co-develop and iteratively field test a more detailed but practical framework (with guidance) with appropriate teams and decision makers.
    - Co-develop a series of 'questions' that can be asked on ITT or similar procurement processes to ensure our suppliers align with our strategy goals - see Section 6.2 (Asking questions of suppliers) for some preliminary examples.

5 References

Adam Tewkesbury and Sarah Woodward. 2021. 'Carbon Reduction Strategy (Draft 09/03/21)'. Southampton, UK: University of Southampton.

Ben Anderson. 2021a. 'University of Southampton Sustainability Strategy: Goal 1-2 Data Gaps - Using the GHG Protocol to Assess the Known Unknowns'. University of Southampton Sustainability Implementation Group Reports. Southampton, UK: University of Southampton.

———. 2021b. 'University of Southampton Sustainability Strategy: Overall Emissions Reporting: A Methodology and Initial Estimates'. SIG Discussion Paper Draft v1.0. Southampton, UK: University of Southampton.

6 Annexes

6.1 Emissions costing

6.1.1 Background and values

Incorporating a cost of emissions in a decision matrix enables proper accounting for greenhouse gas emissions in the decision process. By comprehensively and systematically using emissions valuation across appraisals in a consistent manner, there will be incentives to find cost-effective ways to reduce emissions.

Under the framework described in this paper, a policy or project that increases or decreases GHG emissions relative to a "business as usual" scenario should estimate the change in emissions, and then apply the carbon values to understand the increase/decrease in the University's carbon costs.

The results should then feed into the overall cost benefit analysis to be considered alongside other quantitative and qualitative evidence (such as capital investment and running costs) in the overall decision appraisal. This step is crucial since unless translated into a tangible incentive, the estimated carbon cost will not act upon the decision process. The use of carbon valuation in this process signals the level of ambition that should be factored into these decisions.

We therefore recommend that the 'central' carbon value published by BEIS should be used to assess the cost of carbon in a particular decision-making context. These values are shown in Table 10: Carbon values in £ 2020 prices per tonne of CO2

Table 10: Carbon values in £ 2020 prices per tonne of CO2[8]

Year	*Low series*	*Central Series*	*High Series*
2020	120	241	361
2021	122	245	367
2022	124	248	373
2023	126	252	378
2024	128	256	384
2025	130	260	390
2026	132	264	396
2027	134	268	402
2028	136	272	408
2029	138	276	414
2030	140	280	420
2031	142	285	427
2032	144	289	433
2033	147	293	440
2034	149	298	447
2035	151	302	453
2036	153	307	460
2037	156	312	467
2038	158	316	474
2039	161	321	482
2040	163	326	489
2041	165	331	496
2042	168	336	504
2043	170	341	511

[8] Source https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation#annex-1-carbon-values-in-2020-prices-per-tonne-of-co2

2044	173	346	519
2045	176	351	527
2046	178	356	535
2047	181	362	543
2048	184	367	551
2049	186	373	559
2050	189	378	568

6.1.2 Worked example

Suppose the emissions of a given building were 100 T CO2e/year and we proposed an intervention which would reduce these to 10 T/year over time. Table 11 shows that using the BEIS central carbon cost, our intervention would save £226k over the 10 years in carbon costs alone. This saving should then be part of the financial cost/benefit analysis for the proposal.

Table 11: Carbon costing worked example

	BEIS central carbon cost		Current emissions	After intervention emissions		BAU carbon cost	After intervention carbon cost	
2020	*241*		100	100		*£24,100*	*£24,100*	
2021	*245*		100	50		*£24,500*	*£12,250*	
2022	*248*		100	10		*£24,800*	*£2,480*	
2023	*252*		100	10		*£ 25,200*	*£2,520*	
2024	*256*		100	10		*£25,600*	*£2,560*	
2025	*260*		100	10		*£ 26,000*	*£2,600*	
2026	*264*		100	10		*£26,400*	*£2,640*	
2027	*268*		100	10		*£ 26,800*	*£2,680*	
2028	*272*		100	10		*£ 27,200*	*£ 2,720*	
2029	*276*		100	10		*£ 27,600*	*£2,760*	
2030	*280*		100	10		*£ 28,000*	*£2,800*	
						£ 286,200	*£60,110*	
Carbon cost saving								£ (226,090)

6.2 Asking questions of suppliers

A number of teams across the University have already begun to experiment with the application of sustainability relevant criteria to ITT processes. The following tables summarise some of the criteria or questions asked and offer a basis for future guidelines or standardisation.

6.2.1 General questions

Question	Notes
1. Do you have a Sustainability Policy/Strategy?	If so, ask for a copy. Ensure it is action-based not greenwash - beware CSR 'marketing'

2. What are your plans for reducing your Scope 1 and 2 emissions to 0 by 2040?	Ideally they will know what Scopes are... This will identify their plans for Scopes 1 & 2 which are our Scope 3 emissions Beware greenwash Beware offsetting as a claimed solution (pushes the problem somewhere else, hard to verify)
3. How do you intend to drive down your Scope 3 emissions?	Indicates a readiness to do more than the current SECR requirements (Scope 1 & 2)
4. Please provide your most recent emissions information (including trends) as reported via SECR or some other method	Currently only applies to quoted companies & some partnerships (?)

6.2.2 Specific questions (ideal)

For all questions: *what is the likely profile of these impacts*? – given that we need to get Scope 1 & 2 to (net) zero by 2030...

Question	Notes
1. What is your estimate of the TCO2e emissions of your basket of goods or products offered/service/project over its lifetime – including procurement, initiation and maintenance etc?	Scope 1 & 2 – fuels we burn or electricity/steam we buy Scope 3 – purchased goods & services, capital goods (incl construction), IT etc This would enable us to make quantitative assessments/comparisons of tenders etc Very dependent on quality of data – how are they validating/verifying? Which/whose tools did they use? Beware greenwash. Beware offsetting as a claimed solution (pushes the problem somewhere else, hard to verify)
2. What is your estimate of the additional lifetime TCO2e emissions *reductions* that will ensure from this project?	Follows from above (ideally) Where we may be interested in internal off-sets/removals via land-use change or other equity-share investments in removals activities Important to profile when the reductions will occur – forestry pushes this back to the future…
Scope 1 & 2 specific	
3. What is your estimate of the reduction in our gas/electricity/steam/x use that this will enable?	We can convert to T CO2e for our Scope 1 & 2
4. What is your estimate of the reduction in our fugitive emissions (gas & refrigerant leaks) etc that this will enable?	As above
Scope 3 specific	
5. See 1 above but also e.g. What is your estimate of the reduction in emissions from our purchased goods and services that this will enable?	e.g. sourcing food from lower-emissions suppliers. Low emissions may come from all parts of the supply chain – production, transport, dealing with waste etc

6. What is your estimate of the reduction in our upstream/downstream transport & distribution emissions that this will enable?	Scope 3 (delivering stuff to us)
7. What is your estimate of the reduction in tonnes of different waste streams (recyclable, non-recyclable, WEE etc) that this will enable?	As above but Scope 3
8. What is your estimate of the reduction in staff business travel emissions that this will enable?	Scope 3
9. What is your estimate of the reduction in staff commuting emissions that this will enable?	Scope 3
10. What is your estimate of the reduction in student relocation/ commuting emissions that this will enable?	Induced Scope 3 (we don't actually have to report this under Scope 3, we will probably report as additional info)
11. What is your estimate of the reduction in our upstream leased assets emissions that this will enable?	Scope 3 – where we lease buildings from others (NOCs, UHS?)