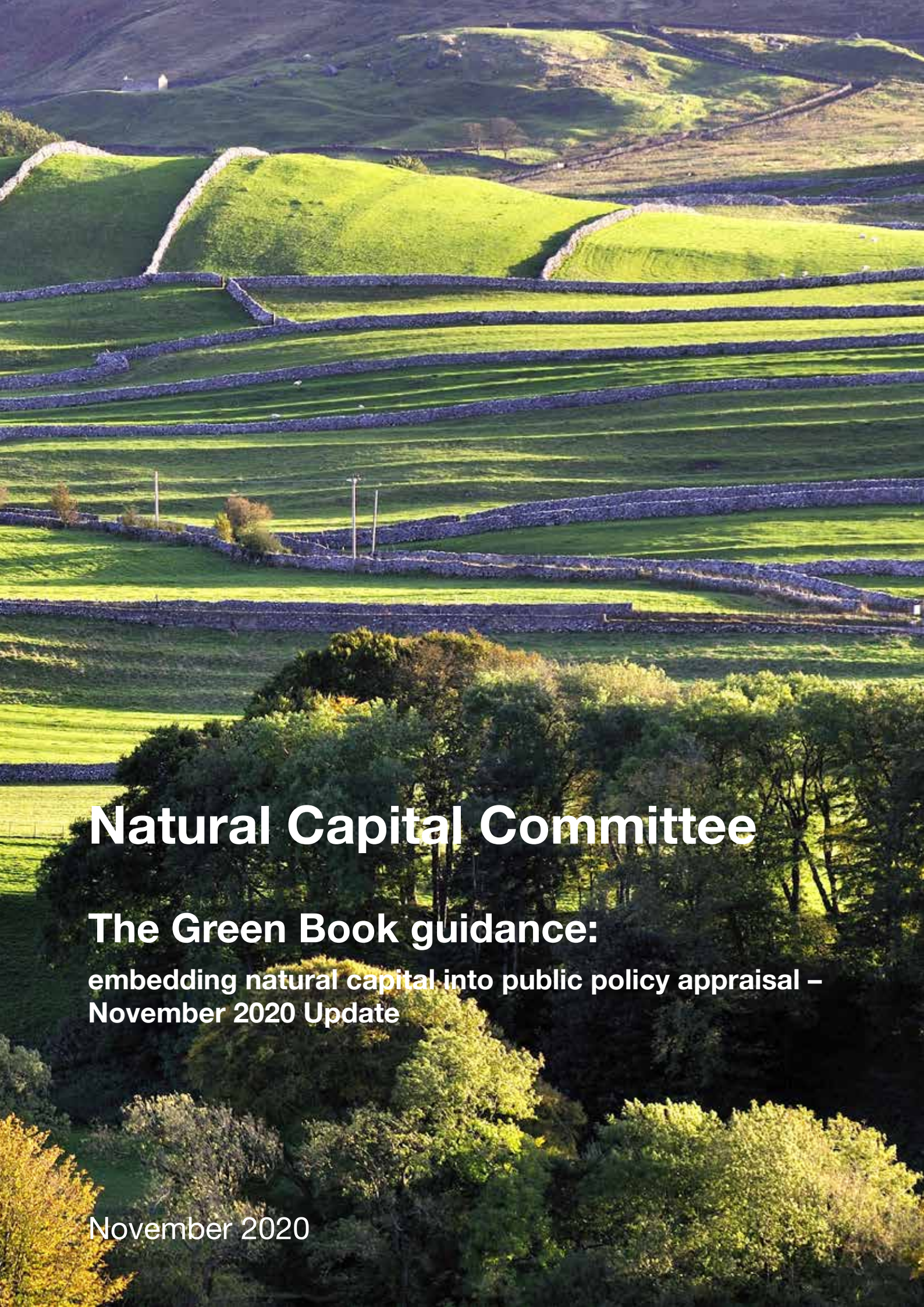


Natural Capital Committee

The Green Book guidance:

embedding natural capital into public policy appraisal – November 2020 Update

November 2020

Contents

Executive Summary

Overall, the NCC has found limited evidence of natural capital being considered in policy appraisal. The NCC advises that this failure to implement Green Book guidance across all relevant decisions should be urgently addressed given the Government's wide-ranging environmental objectives, including the commitment to avoid further degradation of our natural assets.

The Natural Capital Committee (NCC) worked with H.M. Treasury1 from 2016-18 to advise and co-author Green Book guidance regarding the incorporation of natural capital, ecosystem services and the value of associated goods and services into government policy appraisal. The guidance was incorporated into the revised Green Book published in March 2018.

The Environment Bill proposes the introduction of significant legislation aimed at achieving a step change for environmental improvements. This includes placing the 25 Year Environment Plan (25 YEP) on a statutory footing, legally binding long-term targets for environmental improvements and the creation of an Office for Environmental Protection (OEP). These changes mean the need to fully account for natural capital in public policy decisions is even more important. The Treasury's official Green Book guidance for the appraisal and evaluation of proposals to inform decision making provides arguably the most important day to day influence upon the incorporation of the natural environment within such decisions.

The NCC has revisited the Green Book natural capital guidance objectives and how existing guidance and processes support these aims in relation to public policy appraisal/evaluation. The Committee identified where changes are needed to better embed natural capital in government decision making, with intial advice published in March 2020. This has been followed up with a second phase of research based on practitioners' experiences, including surveys and interviews with those preparing appraisals. The findings from the second phase are summarised as:

- The Regulatory Policy Committee / Better Regulation Unit, should assess natural environment impacts as part of the scrutiny process (e.g. red rate). 89% (see Fig 5.) of respondents supported the NCC's recommendation that the reviewing process operated by the RPC should be expanded to include an assessment of natural environment impacts.
- Business Impact Targets (BIT) forces the appraiser to only consider direct costs to business. The BIT does not take account of externalities more broadly; externalities that very often have some kind of environmental impact.
- 75% (see Fig 3.) of respondents consider that the quantification of environmental effects is very or extremely important in the appraisal process.
- Access to relevant tools was identified as a key issue in delivering appraisals that address natural capital, only 40% (see Fig 4.)of survey respondents felt that they had access to the necessary tools.

1 This collaboration included a programme of meetings between the NCC and H.M. Treasury and a number of NCC reports and sections therein including: Natural Capital Committee *Improving Natural Capital: An assessment of progress, Fourth report to the UK Government Economic Affairs Committee* (2017) https://www.gov.uk/government/publications/natural-capital-committees-fourth-state-of-natural-capital-report and Natural Capital Committee *Annual Report 2018: Fifth report to the Economic Affairs Committee* (2018) https://www.gov.uk/government/publications/natural-capital-committees-fifth-annual-report

Overall, the NCC has found limited evidence of natural capital being considered in policy appraisal. The NCC advises that this failure to implement Green Book guidance across all relevant decisions should be urgently addressed given the Government's wide-ranging environmental objectives, including the commitment to avoid further degradation of our natural assets. The Committee's main recommendations, are as follows:

1. The evaluation criteria for passing a policy impact assessment should be amended to include a robust assessment of the impact on natural capital. Where there is likely to be a net loss to natural capital or where policy options are unsupported by robust evidence of natural capital impacts the Regulatory Policy Committee (RPC) should have the option to 'Red rate' a proposal (as currently happens with proposals that result in significant costs to business).

2. The OEP, as proposed in the Environment Bill, will have a duty to report on progress against 25 YEP objectives. The 25 YEP objectives are underpinned by a natural capital approach and the plan states that the "UK intends to use a 'natural capital' approach as a tool to help us make key choices and long-term decisions".[2] The NCC recommends that the OEP should be required to scrutinise impact assessments related to policy interventions that have a significant impact on the environment. The government should consider how the OEP could work in collaboration with the RPC in assessing how well natural capital has been considered (potentially underpinned by a MoU between the RPC and OEP).

3. The NCC advises that a section of the impact assessment summary template should be set aside for reporting the natural capital impacts of a policy change, and how the policy is contributing towards the Environment Bill targets (as the current template does for carbon budgeting[3]).

4. The NCC advises that departments and agencies developing policy should have access to independent, expert advice on the valuation of natural capital. The government's Enabling a Natural Capital Approach on-line resource[4] provides a good starting point, however current tools/models need significant development. Government should urgently invest in developing a baseline census of natural assets and models capable of assessing the natural system wide impacts of policy interventions.

5. Regulatory Triage Assessments (RTAs) undertaken by departments and agencies for assessment of policy and programme changes that are less than the ±£5m threshold in terms of business costs, should be reported publicly and the contribution to natural capital identified.

6. The introduction of statutory targets in the Environment Bill should be accompanied with targeted guidance and support for analysts preparing appraisals that will impact on natural capital and will contribute to the targets being met.

7. The Government should take an active role in promoting the natural capital approach set out in the green book to other nations, and should work with the United Nations (UN) to agree a UN Database for ecosystems valuation.

2 H.M. Government, *25 Year Environment Plan* (2018), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

3 H.M. Treasury *Impact Appraisal Template for Government Policies* (2020), https://www.gov.uk/government/publications/impact-assessment-template-for-government-policies

4 Defra, *Enabling Natural Capital Appraisal* (2020), https://www.gov.uk/government/publications/enca-featured-tools-for-assessing-natural-capital-and-environmental-valuation/enabling-a-natural-capital-approach-tool-summaries

1. Background

8. The H.M. Treasury Green Book[5] sets out the Government's guidance on how new or revised policies, programmes and projects undertaken by government or its agencies should be appraised and evaluated. The intention of the Green Book is to guide assessments to provide objective analysis of the impacts of public spending proposals, analysis which is consistent across government and considers the effects of a proposal in terms of its impacts on social welfare.

9. Between 2016-18 the Natural Capital Committee (NCC) worked with H.M. Treasury[6] to advise and co-author the Green Book guidance regarding the incorporation of natural capital, ecosystem services and the value of associated goods and services into government appraisals. The guidance was incorporated into the revised Green Book published in March 2018.

10. Since the 2018 update, the Government has introduced significant legislation aimed at achieving a step change for environmental improvements. This includes:

    - establishing legally binding targets in four priority areas (cleaner air, cleaner water, less waste and more biodiversity[7]), for the 25 Year Environment Plan (25 YEP)[8] and the incorporation of the plan within the Environment Bill[9];
    - the net zero commitment to reduce and offset carbon emissions[10];
    - the proposed introduction of a biodiversity net gain[11] requirement for those developments and infrastructure with impacts upon certain aspects of the natural environment;
    - the Agriculture Act[12] gives powers to the Secretary of State to give financial assistance for agriculture, based on the adoption of a public money for public goods principle; and
    - the 'new' Fisheries Bill[13]
    - a commitment to protect 30% of UK land for biodiversity; and[14]
    - the Woodland Carbon Guarantee allocating £50m for new tree planting.[15]
    - £640m announced in the March 2020 Budget for the Nature for Climate fund[16]

5 H.M. Treasury, *The Green Book: Appraisal and evaluation in central government* (2018) https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

6 This collaboration included a programme of meetings between the NCC and H.M. Treasury and a number of NCC reports and sections therein including: Natural Capital Committee *Improving Natural Capital: An assessment of progress, Fourth report to the UK Government Economic Affairs Committee* (2017) https://www.gov.uk/government/publications/natural-capital-committees-fourth-state-of-natural-capital-report and Natural Capital Committee *Annual Report 2018: Fifth report to the Economic Affairs Committee* (2018) https://www.gov.uk/government/publications/natural-capital-committees-fifth-annual-report

7 Defra (2020), https://www.gov.uk/government/news/legally-binding-targets-to-help-build-back-greener

8 H.M. Government, *25 Year Environment Plan* (2018) https://www.gov.uk/government/publications/25-year-environment-plan

9 Defra, *Government introduces ground-breaking Environment Bill* (2019) https://www.gov.uk/government/news/government-introduces-ground-breaking-environment-bill

10 BEIS, *UK becomes first major economy to pass net zero emissions law* (2019) https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law

11 Defra, *Biodiversity net gain: updating planning requirements* (2019) https://www.gov.uk/government/consultations/biodiversity-net-gain-updating-planning-requirements

12 Parliament, *Agriculture Act* (2020) https://www.legislation.gov.uk/ukpga/2020/21/section/1/enacted

13 Parliament, *Fisheries Bill 2017-19* (2017) https://services.parliament.uk/bills/2017-19/fisheries.html

14 Prime Minister's Office (2020), https://www.gov.uk/government/news/pm-commits-to-protect-30-of-uk-land-in-boost-for-biodiversity

15 Defra (2019), https://www.gov.uk/guidance/woodland-carbon-guarantee

16 H.M. Government (2020), https://www.gov.uk/government/news/budget-2020-what-you-need-to-know

11. In its 2020 Annual Report the NCC advocated that the Government should develop measures "…of the value of benefits delivered by change in natural capital and the ecosystem services it delivers. These measures should be compatible with the Green Book guidance regarding the incorporation of environmental improvements within economic assessments of government spending and investment decisions. "[17] In the NCC's End of Term Report a further recommendation was made that "… all infrastructure projects should take full account of natural capital by including it in the project appraisal process as per the Green Book guidelines ."[18]

12. This paper reviews the impact of the revised Green Book guidance for departments undertaking policy and regulatory impact appraisals[19] and considers what improvements are needed to better embed natural capital in decision making.

17 Natural Capital Committee, *State of Natural Capital Annual Report 2020* (2020) https://www.gov.uk/government/publications/natural-capital-committees-seventh-annual-report

18 Natural Capital Committee, End of Term Report (2020), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/931695/ncc-end-of-term-report.pdf

19 Including Impact Appraisals, Regulatory Triage Assessments and Post Implementation Reviews but excluding capital spending and other spending decisions that use The Green Book advice.

2. Objectives and Approach

13. The overarching objective of this paper is to advise government on embedding a natural capital approach in public policy decisions. The guidance within the Green Book provides a strong policy context for delivering this advice, and the focus of this paper is to review the processes in place and consider how supplementary guidance is informing public and private expenditure in relation to natural capital. This will help ensure that the high-level framework provided by the Environment, Agriculture and Fisheries Bills are implemented within everyday decision making and project appraisal.

14. This objective will be achieved by:

    A. Highlighting the methodological advances regarding natural capital appraisal arising from collaboration between H.M. Treasury and the NCC within the Green Book guidance;

    B. Investigating how the Green Book has influenced the impact assessments produced by departments, agencies and the guidance documents that they have developed and the impact this is having upon decision making;

    C. Collecting views from key practitioners through surveys and interviews on the effectiveness of the guidance, need for reform and potential actions for improving outcomes; and

    D. Making recommendations to improve process, guidance and implementation, based on the findings in parts A, B and C.

    Given the high volume[20] and value of decisions made under Green Book guidelines this is considered an effective route for ensuring that natural capital fundamentals influence both principles and practice in decision making.

15. The initial paper published in March has been updated with the findings from questionnaire surveys and interviews with policy analysts involved in preparing regulatory impact assessments, regulatory triage assessments (RTAs) and post implementation reviews (PIRs) across various government departments and agencies.

20 Data is only available for impact assessment and post implementation reviews, where in 2019 there were 160 impact assessments. Data is not available on the number of regulatory triage assessments, as these are not routinely published by the government departments and agencies.

3. Methodological advances in Green Book guidance regarding natural capital

Natural Capital in The Green Book

16. The Green Book sets out the Government's guidance on how new or revised policies, programmes and projects undertaken by government or its agencies, should be appraised and evaluated. As such it is a key input to the public sector decision making process, including capital expenditure and is having a major impact upon the implementation of policy and in effect shaping its consequence.

17. The intention of the Green Book is to ensure objective analysis of the impacts of proposals; analysis which is consistent across government and considers the effects of a proposal in terms of its impacts on social welfare.[21]

18. The 2018 edition of the Green Book contained a number of innovative changes in the approach to appraisal from previous guidance. In relation to the environment, the Green Book embraced NCC recommendations on the use of a natural capital based approach to decision making. This included the incorporation within decision making of:

    - natural capital asset stocks; and
    - the flows of services derived from natural capital.

19. The Green Book covers the broad landscape of guidance necessary to apply to the appraisal of the diversity of government spending projects. In writing the 2018 Green Book the principal areas of collaboration and co-authorship between H.M. Treasury and the NCC were in respect of Chapter 6 *"Valuation of Costs and Benefits"* and Annex 2 *"Non-market Valuation and Unmonetisable Values".* These sections comprise the principal guidance regarding the incorporation of natural capital and the environment within the impact assessments prepared to analyse proposed public spending projects.

20. Compared with previous guidance, arguably the most innovative aspect of the 2018 Green Book is its adoption of the natural capital framework (see Chapter 6, especially pp 45-46). A key innovation here is the recognition of the importance of the stock levels of natural capital assets to the assessments of the sustainability (both environmental and economic) of projects. Prior to this Green Book guidance could be (somewhat simplistically) characterised as requiring that all of the costs and benefits of a project should be assessed to ensure a sufficient return on investment. The recognition of natural capital stocks introduces a further issue; the potential for projects to deplete available stock levels of natural assets.

21. The requirement to consider stocks of natural capital rather than just the services they provide is a fundamental change to decision appraisal. No longer is it sufficient that a project should deliver benefits which exceed costs by some set margin. A project also needs to demonstrate its impact upon sustainability in terms of its effect on natural capital stocks. The NCC recommends that the demonstration of effects on natural capital stocks should in future form part of the assessment process and 'flagging' process for whether impacts are understood and acceptable in light of government commitments.

21 Green Book, Chapter 2.

22. This approach accords with the ambitions set out in the environment white: The Natural Choice: securing the value of nature, paper of 2011, the Government's 25 YEP and the Environment Bill. These outline a policy commitment to *"become the first generation to leave (the) environment in a better state than we found it and pass on to the next generation a natural environment protected and enhanced for the future"* (p.5) and that *"the 25 Year Environment Plan will help boost the productivity by enhancing our natural capital".*[22] As such the 2018 Green Book shows H.M. Treasury proactively leading in terms of developing guidance standards fit for ambitious policy demands.

23. The Green Book guidance also incorporates recent scientific research recognising the potential for abrupt collapse in some forms of natural capital in response to increased pressures upon stocks caused by a project or by the cumulative effect of multiple projects.

    "Non-marginal effects such as reaching ecological tipping points might lead to dramatic or irreversible loss in the asset under consideration. This would result in a loss of environmental services and welfare. Cumulative effects of multiple investment decisions upon the underpinning stocks of natural capital should also be considered."* (p.61)[23].

    * see NCC definition of thresholds for information on tipping points[24]

24. Annex 2 of the Green Book provides a check list for assessors to work through and suggests working with Defra's Environment Analysis Unit (EAU) to assess natural capital stocks. This provides a powerful lever for the consideration of the environment in the full scope of legislative activity across government departments.

25. The updated Green Book also sets out a revised and invigorated approach to valuation of the environmental costs and benefits of spending proposals. Chapter 6 of the Green Book shows that this appraisal must include both those goods and services which are priced in markets (e.g. housing, agricultural production, etc.) and those which generate value outside markets (e.g. open access recreation, clean air, etc.). This draws on NCC guidance[25],[26] and provides framework questions for assessing natural capital that help those developing an assessment to consider direct and indirect effects on the environment.

26. While there will always be some scope for improvements, the 2018 Green Book represents a significant step forward in terms of the principles for incorporating natural capital and environment into decision appraisal. The requirements of the Green Book to consider natural capital stocks and the use of advanced approaches for the valuation of the environmental benefits and costs of public expenditure is ground breaking and is a world first in incorporating natural capital thinking into official guidance for appraising public sector decisions and investments.

22 H.M. Government, The *25 Year Environment Plan* (2018), https://www.gov.uk/government/publications/25-year-environment-plan

23 H.M. Treasury, *The Green Book: Appraisal and evaluation in central government* (2018) https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-govervent

24 Natural Capital Committee, *Natural Capital Terminology* (2019) https://www.gov.uk/government/publications/natural-capital-committee-natural-capital-terminology

25 Natural Capital Committee, *How to do it: a natural capital workbook* (2017) https://www.gov.uk/government/groups/natural-capital-committee

26 Natural Capital Committee, *Economic valuation and its applications in natural capital management and the Government's 25 Year Environment Plan* (2017) https://www.gov.uk/government/groups/natural-capital-committee

4. Green Book implementation study Phase 1 – Assessing Green Book guidance & processes

Impact Assessments

27. Impact assessments and RTAs are produced to support the appraisal of new primary or secondary legislation, or in some cases the impact of non-legislative policy change. Impact assessments are produced when the effects on business[27] are identified as greater than ±£5m, while RTAs are for less than ±£5m (Between -£5m and +£5m). Impact assessments should meet the guidance in the Green Book (or explain why they have not), including assessing the impacts on natural capital. Impact assessments are published on the legislation.gov webpages[28] to allow public scrutiny of the assessment process.

28. Where an impact assessment is required (usually for new or revised legislation) the impact on business, civil society organisations, the public sector or individuals are assessed by the Regulatory Policy Committee (RPC)[29]. The RPC issues a RAG (Red / Amber / Green) status for the assessment and provides an opinion to the relevant Government Minister on the appraisal.[30] Impacts on the environment do not form part of the RAG assessment produced by the RPC. The NCC recommends that this should be revised in order to meet the Government's recent environmental commitments (including net zero, Environment Bill statutory targets, 25 YEP commitments, etc.)

29. Based on the review of impact assessments the NCC finds that, while the RPC provides independent, rigorous advice, it focuses primarily on understanding the costs to business. The RPC does not consider the natural capital impacts of a policy and its criteria for flagging compliance (the RAG status) does not reflect how well natural capital is incorporated into the final assessment. There is little evidence of impact appraisals considering natural capital, as per the Green Book guidance.

Regulatory Triage Assessments

30. Where the costs to business falls below the ±£5m (between -£5m and +£5m) threshold the department or agency will produce its own RTA that will meet the requirements of the Better Regulation Executive[31] guidance on impact assessment, including the guidance contained with the Green Book. The RTAs however, are not published publicly and this paper cannot review how well they deliver the Green Book natural capital guidance. It is worth noting however the obligation on departments and agencies to consider the Green Book guidance on natural capital for RTAs.

31. Discussion with Defra's Better Regulation Unit (BRU) which leads on the clearance process of RTA's for Defra, suggest that approximately 50 RTA's were reviewed in 2019. Given the number and value of RTAs the NCC recommends that natural capital guidance should also be adopted for these assessments, and the RTAs should be made publicly available.

27 Where the equivalent annual net direct cost to business (EANDCB)

28 Impact Assessments – Legislation.gov https://www.legislation.gov.uk/ukia

29 Regulatory Policy Committee, *Regulatory Policy Committee: recommendations used when scrutinising impact assessments* (2014) https://www.gov.uk/government/publications/how-the-regulatory-policy-committee-scrutinises-impact-assessments/regulatory-policy-committee-recommendations-used-when-scrutinising-impact-assessments

30 Regulatory Policy Committee, *RPC opinions* (2019) https://www.gov.uk/government/collections/rpc-opinions

31 BEIS, *Better Regulation Framework: Guidance* (2018) https://www.gov.uk/government/publications/better-regulation-framework

Supplementary guidance for impact assessments

32. The RPC's schematic diagram (see Annex 1)[32] provides links to useful sources of information that will help to meet the Green Book guidance. Some of these documents include references to ecosystem services assessment and natural capital valuation, including:

    a) Defra's Assessing Environmental Impact guidance[33]

    b) BEIS Carbon accounting guidance[34]

    c) WEBTAG Transport Appraisal Process[35]

33. H.M. Treasury has (since July 2020) adopted the Enabling Natural Capital Appraisal (ENCA) guidance, produced by Defra, as supplementary guidance for the production of impact assessments as the NCC recommended in the first version of this report (published March 2020) the NCC welcomes this move.

34. ENCA was launched in January 2020,[36] (ENCA) as on-line resource, with a stated ambition of meeting the Green Book objective for incorporating natural capital in decision making. This on-line resource brings together case studies, templates and good practice in the valuation of natural capital and is written with the specific aim of helping to meet the Green Book objective for assessing and appraising public expenditure proposals. The NCC considers ENCA as a good starting point for the valuation of natural capital, but much more information on the valuation of the different components of natural capital, needs to be developed to inform appraisals (e.g. valuation of woodlands, species, etc.).

35. Further investment in tools and metrics will be needed to support ENCA as supplementary guidance to the Green Book. ENCA will also need to be better resourced if it is to be used widely across government.

36. The BEIS carbon accounting process has been incorporated into the impact assessment appraisal template so that proposals can be directly assessed in terms of their contribution to the UK's stated carbon commitments. The NCC recommends that this approach should be used for all of the statutory targets adopted in the Environment Bill (and that these targets should reflect the 25 YEP objectives). The process used for carbon accounting was only used in 11 (55%) of the sample impact assessments that this paper has reviewed, and the NCC proposes that there would need to be criteria for how and when to apply a natural capital valuation against Environment Bill targets, where relevant.

Natural Capital Valuation Tools

37. There have been a number of valuation tools developed to help understand the impacts of new developments and regulation changes on natural capital and the environment. These tools could be better referenced within future revisions of The Green Book to help better analysis of impacts on natural capital and to produce a more robust evaluation.

32 Regulatory Policy Committee, *RPC summary diagram of existing appraisal and framework guidance* (2020) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/858889/RPC_Guidance_Diagram.pdf

33 Defra, *Assessing environmental impact: guidance* (2013) https://www.gov.uk/guidance/assessing-environmental-impact-guidance

34 BEIS, *Carbon Valuation* (2019) https://www.gov.uk/government/collections/carbon-valuation--2

35 Department for Transport, *Transport analysis guidance* (2018) https://www.gov.uk/guidance/transport-analysis-guidance-webtag

36 Defra, *Enabling a Natural Capital Approach (ENCA)* (2020) https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca

Table 1 Sources of valuation tools and studies

Valuation tools or relevant studies	Web link
Enabling a Natural Capital Approach (ENCA)	https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca
Natural Environment Valuation Online tool (NEVO)	https://sweep.ac.uk/portfolios/natural-environment-valuation-online-tool-nevo/
List of valuation tools from Ecosystems Knowledge Network	https://ecosystemsknowledge.net/tool-assessor-list-of-tools
Woodland Valuation Tool	https://forestry.gov.scot/publications/sustainable-forestry/economic-research/680-woodland-valuation-tool
Outdoor Recreation Valuation (ORVal) tool	https://www.leep.exeter.ac.uk/orval/
Environmental Value Look-up (EVL)	http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19514
Natural Capital Planning Tool (NCPT)	http://ncptool.com/
Local Ecological Foot printing Tool	https://www.left.ox.ac.uk/
Valuing Corporate Environmental Impact: PwC methodology document	https://www.pwc.co.uk/sustainability-climate-change/assets/pdf/pwc-environmental-valuation-methodologies.pdf
Green Infrastructure Valuation toolkit (GI-Val)	https://www.merseyforest.org.uk/services/gi-val/
Toolkit for Ecosystem Service Site-Based Assessment	http://tessa.tools/

Source: NCC 2019

38. Natural capital assets operate within a system. Any assessment therefore needs to consider the co-benefits following a natural capital approach to minimise perverse outcomes. For example, increasing stocks of wetland areas will likely improve both water availability and overall water quality. This will also provide valuable recreational benefits and, potentially, habitats for wildlife. Future metrics need to assess and measure the change in natural capital assets and the ecosystem services that flow from them.

39. The NCC recommends that there are well established and tested methodologies for undertaking natural capital assessments, supported by guidance and tools (as set out in Table 1), that would support a formal valuation of natural capital and help to inform whether the Government is meeting its statutory targets established in the Environment Bill.

What have the changes to The Green Book achieved

40. Since the publication of the updated Green Book in 2018 there have been approximately 280 impact assessments published[37]. While it has not been possible to review all of these impact assessments, a sift of those that may have significant effects on natural capital has identified a sample of 20 impact assessments. The financial value of the sample (defined as their societal value) is around £1bn. The sample impact assessments are all from 2019 and if the average societal value of the sample impact assessments is extrapolated to all 160 impact assessments produced in 2019, the overall societal value would be around £8.2bn[38] per annum. For comparison the UK's overall central government estimated expenditure for 2020 financial year is £668bn.[3940] This demonstrates the strategic economic importance of the impact assessments process and how significant an impact there could be on natural capital if it is not valued as part of the process.[41]

41. Of the approximate 280 impact assessments produced over the last two years, a significant proportion (29%) have been due to the EU Exit process and the need to amend legislation that transposes EU Directives. This has led to fewer impact assessments being prepared than in previous years for new legislation, where there might be more significant impacts on natural capital, than for amending existing legislation. This has made it more difficult to analyse the impact of the changes of the Green Book.

42. Given the inadequacy of natural capital assessment within current impact assessments it is obviously difficult to assess the degree of omission that may be occurring. To provide an approximate estimate we refer to a smaller set of more rigorous assessments carried out by independent consultants in preparation for the 2015 NCC Annual Report. This assessment reviewed a set of cost-benefit analyses for both conventionally capitalised and natural capital based public sector investments finding that, on average investment in natural capital provided higher benefit cost ratios.[42] This suggests that the current inadequate approach to impact assessments may be omitting the bulk of potential social values. The overall estimated societal value may be much higher than the referenced £8.2bn per annum. At the very least such assessments are likely to skew public spending, delivering insufficient investment in natural capital enhancing projects.

43. The RPC provides advice to departments and agencies preparing impact assessments on what they will be assessing against[43]. This guidance predates the Green Book update and makes no reference to natural capital. The focus of the advice is clearly on assessing the costs to business and demonstrating how valuations have been worked out. As identified in the Phase 2 research departments and agencies are overlooking natural capital costs from impact assessments even though the Green Book advocates the use of natural capital valuation, due to the lack of procedural advice from the RPC.

44. Discussions with Defra Environment Analysis Unit (EAU) have identified that although there is a clear signpost within the Green Book to discuss the impact of new/amended legislative proposals with the EAU, in practice there are very limited discussions taking place with EAU on the environment or natural capital valuation.

37 From 01/03/19 to 29/01/20 based on legislation.gov uploads https://www.legislation.gov.uk/ukia

38 Based on a calculation of 20 IA's worth a combined £1bn, divided by the 20 to produce an average valuation of £500k and then multiplied by the total 160 IA's undertaken in 2019 to produce a total value of £8.2bn.

39 Central Government Spending, *Total UK Government Spending 2019-20* https://www.ukpublicspending.co.uk/

40 This figure was estimated prior to the outbreak of Covid 19 and represents a 'standard' years expenditure.

41 The sample 20 of the IAs produced since the amendments to The Green Book were undertaken identified that natural capital was not explicitly reported upon in the findings of any of the IAs.

42 Natural Capital Committee, *Improving Cost Benefit Analysis* (2015) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/517027/ncc-research-improving-cost-benefit-guidance-final-report.pdf

43 Regulatory Policy Committee, *RPC recommendations used when scrutinising impact assessments* (2014) https://www.gov.uk/government/publications/how-the-regulatory-policy-committee-scrutinises-impact-assessments/regulatory-policy-committee-recommendations-used-when-scrutinising-impact-assessments

5. Green Book implementation study Phase 2 – Analysis of Practitioner Experience

45. The second phase of this report brings together the findings from surveys and interviews undertaken by the NCC with relevant practitioners drawn from a variety of government departments. It should be noted that due to the Covid 19 pandemic the extent of the survey has been limited in its scope. The survey and interview results have been presented anonymously so that respondents can openly comment on how well the current guidance and appraisal processes are considering natural capital, and where future changes are needed to meet the aspirations set out in the 25 YEP; and the Environment, Fisheries and Agriculture Bills.

46. The survey sought to obtain views and experiences from practitioners who had been producing a variety of appraisals, including Impact Appraisals (IAs), Regulatory Triage Assessments (RTAs) and Post Implementation Review Appraisals (PIRs). Twenty-one questions were posed (a copy of the survey questions is included in Annex 2 of this report). These covered a range of issues around the users experience of assessing proposals, using available guidance, and incorporating environmental impacts. The participants were given the option to take part in further interview questions and the name of their organisation was recorded. The NCC received responses from representatives of the following departments/organisations:

- Home Office,
- Department for International Development[44],
- Department for International Trade,
- Department for the Environment, Farming and Rural Affairs (Defra),
- Department for Work and Pensions (DWP),
- Ministry of Housing, Communities and Local Government (MHCLG),
- Environment Agency,
- Better Regulation Executive,
- Department for Transport (DfT) and the
- Department for Education.

47. Practitioners had a range of experience, from between 1 and 20+ years of preparing assessments, and ranged in seniority from senior analysts to managers. All had helped developed assessments for their departments.

48. In total 16 substantive responses were received to the survey. While this might appear modest from the perspective of statistical analysis, given the expert nature of these respondents and the limited population they were drawn from this represents a relatively substantial expert survey sample. Not surprisingly given this expertise, several clear findings were observed.

44 The Department for International Development (DfID) was abolished in September 2020, (after this interview was undertaken), the Foreign, Commonwealth and Development Office has taken on many of the responsibilities of DfID.

49. The data has been supplemented with responses to follow-up interview questions with respondents selected on the basis of survey responses and area where the NCC wanted to discuss findings and recommendations with people in key roles in organisations that play a significant role in the process. These interviews were again conducted anonymously in order that responses could be provided openly. Respondents to these extended interviews included representatives from Defra, MHCLG, DfT and the Foreign, Commonwealth and Development Office. Given the inevitably small sample size findings should be treated with some caution although this is standard for expert interviews.

50. The recommendations are aimed at the Government departments and regulatory bodies engaged with impact appraisal, including H.M. Treasury, Defra, the Better Regulation Executive and the Regulatory Policy Committee.

Key Findings

51. The survey generated a substantial dataset of response of which only the key findings are reported here. Data for many of these findings are reported in a series of histograms within this section.

52. As illustrated in Figure 1, 73% of respondents (11/15) had attempted to incorporate and evaluate the environment in their appraisals.

53. All respondents indicated that they were aware of Green Book guidance, but as Figure 2 shows, only 29% (4/14) stated that they were familiar with using the guidance for appraisals. This is of some concern both generally, to ensure a consistently high standard of appraisals, and more pointedly to ensure that guidance regarding the incorporation of environmental impacts is followed; more needs to be done if impact appraisals are to routinely consider environmental effects.

Figure 1: For the assessment(s) that you have been involved with, have there been any attempts to capture environmental effects (either as benefits or costs)?

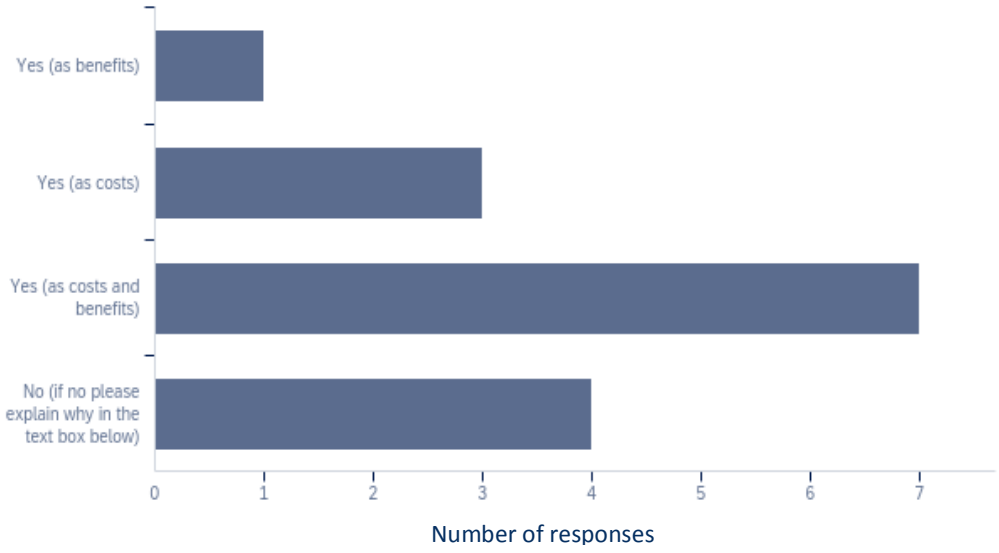
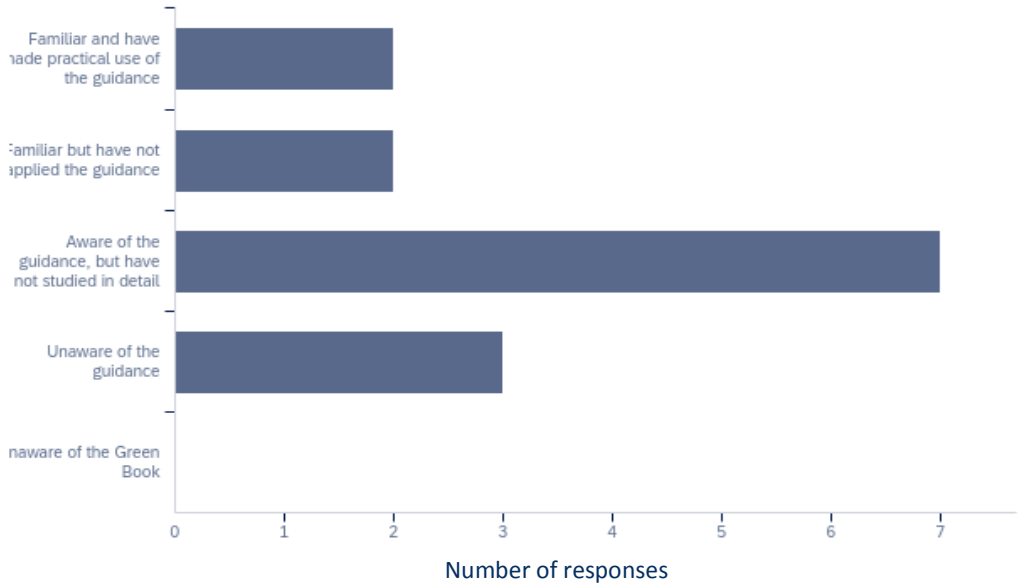


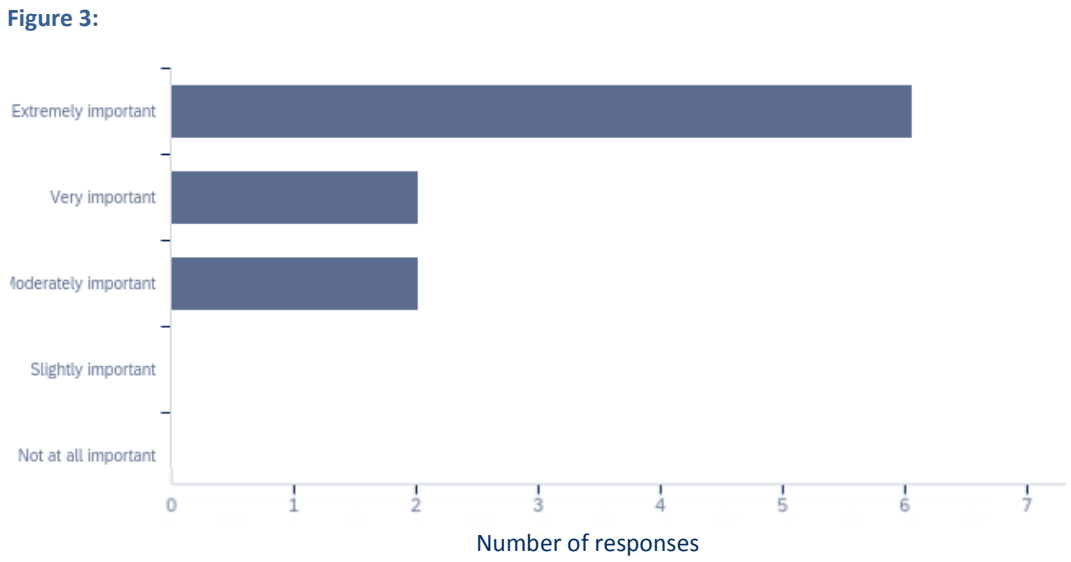
Figure 2: Are you familiar with the H.M. Treasury "Green Book" guidance on the natural environment?



54. The NCC exercise revealed some important disparities between what respondents see as best practice and the actual implementation of appraisal. As Figure 3 shows, 75% (6/8) of respondents acknowledge that the quantification of environmental effects is very or extremely important. However, in subsequent interviews it became apparent that these best-practice principles were not necessarily implemented in practice. As two respondents put it:

    - "In our own work we have not been concerned about natural environment impacts, other than carbon. We consider that it should be covered, but do not feel that regulatory impact appraisal will be the best stage to consider a wide range of environmental impacts."
    - "We need to focus energy on thresholds for determining where we put our efforts. There is a limited resource which means that not all (guidance appraisal) requests can be met. The guidance is too long and too demanding (RPC recently added 70 pages to their guidance), so departments are having to choose which sections they will be in compliance with."

Figure 3: Do you consider the quantification and valuation of environmental elements an important part of the appraisal process?

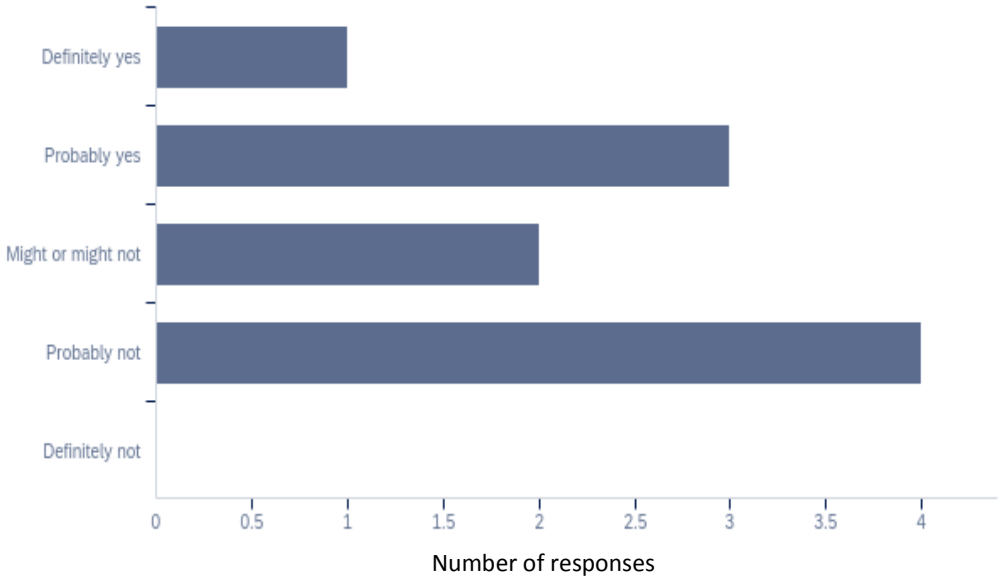


55. The ability to access relevant tools was identified as a key issue in delivering appraisals that address natural capital. As Figure 4 shows, only 40% (4/10) of survey respondents felt that they had access to the necessary tools. In interview questions there was a common thread that any tools should be easy to use, proportionate and only required when a proposal is likely to have significant impacts on natural capital:

    - "Proportionality for assessments is the key, natural capital is usually very marginalised. Where natural capital effects are substantial the appraiser needs to have the right mechanisms for signalling when to undertake an appraisal. Not every impact assessment should be thinking about natural capital as this will be wasteful. Most regulations won't have made any difference to natural capital, so why assess?"
    - "We would welcome standard values for environmental impacts where available (e.g. for green spaces) but standard monetary values would be contentious and difficult to apply through a model. A cross government model is therefore unlikely to be that useful for appraisals."

56. It is clear from these responses that appraisers do not have access to adequate decision support tools to assist with the incorporation of environmental impacts within appraisals.

Figure 4: Do you have access to the necessary tools, resources and methods for undertaking valuation of the natural environment?

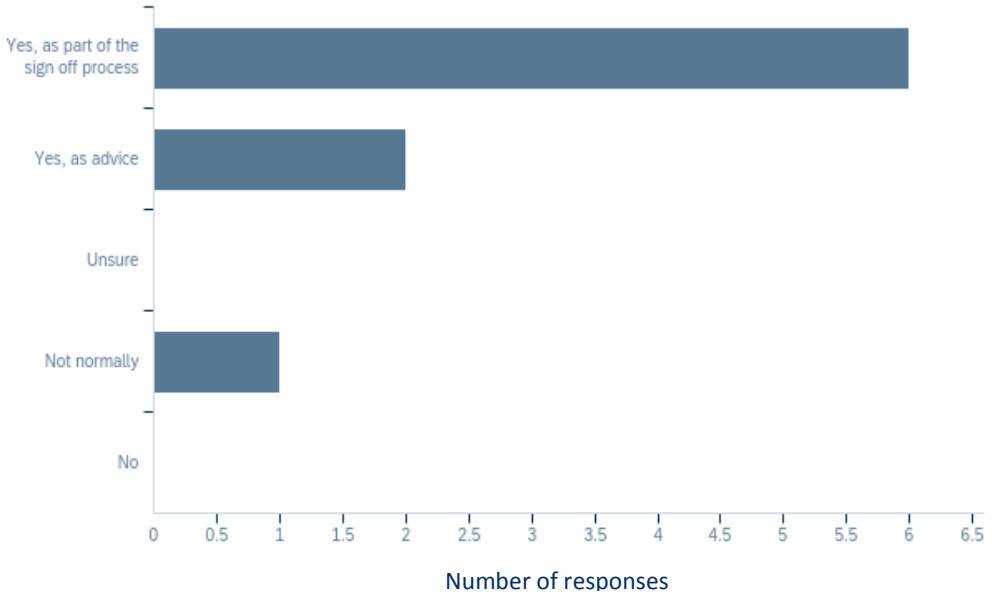


57. This lack of adequate decision support is reflected in the lack of clear consistent responses to survey questions about barriers to producing appraisals. Here 'insufficient evidence and data' was the most frequently cited issue, when asked to expand respondents listed a variety of answers highlighting:
    - "More time needed to produce the appraisal"
    - "Lack of expertise and resource."
    - "Reliability of data - how up to date it is for example?"
    - "Not a formal requirement. Business cases typically focus on environmental benefits rather than costs"
    - "The Business Impact Target (BIT) forces you to only consider direct costs to business. The environmental benefits can't always be quantified as such. The BIT does not take account of externalises more broadly. Externalities very often have some kind of environmental impact (good or bad)."
    - "Cross department responsibilities can mean that those undertaking an impact appraisal often aren't responsible for the policy or guidance that they are working to, and this can mean that there is no potential to change the policy even if the appraisal identifies impacts."
    - "The incorporation of natural capital in the Green Book is good, but practitioners still don't have a 'how to do it guide' that shows you how to tackle particular issues. Lack of understanding, tools, knowledge and experience is very evident. There is a lot of environmental evidence, but at the same time there are some very large gaps within it (e.g. soils) and not much agreement on which evidence is appropriate."
    - "The risk of legal challenge around appraisals is typically low and the chances of being in breach of an environmental responsibility (for a regulatory change) is usually low" (reducing the incentive to undertake the appraisal).

58. There are clearly a wide range of issues with implementing environmental assessment within impact appraisals across departments and there is not a simple answer to raising compliance with the green book guidance. It is possible that all of these reasons apply in combination and can be summarised as 'the environmental assessment looks difficult to produce, we won't have the time/ resources/experience/tools to do it within the timescale that the impact appraisal requires and there aren't going to be significant penalties if we don't produce the environmental assessment.'

59. Following on from the questions around barriers to incorporation of the environment within appraisal, respondents were asked "Do you think that when reviewing appraisals the responsible reviewing body (e.g. the Regulatory Policy Committee / Better Regulation Unit, etc.) should assess natural environment impacts as part of the scrutiny process (e.g. Red rate)?". Figure 5 provides a strong endorsement (89%; 8/9) for the NCC's recommendation that the reviewing process operated by the Regulatory Policy Committee should be expanded to include an assessment of natural environment impacts.

Figure 5: Do you think that when reviewing appraisals the responsible reviewing body (e.g. the Regulatory Policy Committee (RPC) / Better Regulation Unit (BRU), etc.) should assess natural environment impacts as part of the scrutiny process (e.g. Red rate)?



60. Respondents were asked to give a justification for their response to this question, notable comments include:

    - "This incentivises analysts to include environmental valuation in their appraisal"
    - "Natural capital is in absolute decline and we must take direct action. It will only happen if it comes as part of enforceable regulation, rather than an add-on"
    - "Improving the natural environment is key to improving economic and social well-being."
    - "I don't see how else you're going to properly take environmental impacts into account. That said, this is partly dependent on the BIT Review
    - "This would give environmental impacts "teeth" in the regulatory process." Although, in the RPC case I think it would be important to underscore proportionality, but I do think departments should explicitly address environmental impacts, even if that's to explain why they haven't been considered".

61. In the Government response to the NCC's 6th Annual Report (2019) it was noted that "HM Treasury expects all departments to make full use of the relevant Green Book guidance in the appraisal and evaluation of all policies, projects and programmes. The updated Green Book, including the improvements regarding natural capital, will be applied at the spending review later this year."[45] The NCC's conclusion is that, in the absence of explicit processes to ensure implementation, government departments will continue not to follow the Green Book guidance on natural capital for their impact appraisals. This urgent need for action is followed up in our recommendations.

62. The issue of proportionality was raised in a number of interviews. There was widespread recognition that the impact appraisal process has many requirements and is delivered to a pressing timetable often with limited resources. As noted, some respondents revealed that resource limitations were constraining appraisers' ability to comply with all aspects of guidance resulting in departments "having to choose which sections they will be in compliance with."

45 H.M. Government (2019) https://www.gov.uk/government/publications/natural-capital-committees-sixth-annual-report-government-response/the-governments-response-to-the-natural-capital-committees-sixth-annual-report

63. Other respondents, however recognised that Green Book guidance already contains criteria for deciding when to apply an assessment of natural capital. As one respondent stated:

"A change of attitude to the environment would help analysis. An environmental equivalent to the RPC is needed, this would generate an increase in the demand for resources and services. This needs to be wider than just regulation – more of a focus on whether government departments and agencies are adequately considering the environment in their work. Para 6.50 of the Green Book could provide a criteria or test for whether an environmental body would need to sign off the appraisal. This role could be delivered by the Office for Environmental Protection, but it isn't clear whether this will be part of its remit, or if it will have the right resources to act in this way"

The section of the Green Book referred to by this respondent reads as follows:

"6.50 As a first step, the following questions can be used to consider the impact on natural capital. Is the option likely to affect, directly or indirectly:

- the use or management of land, or landscape?
- the atmosphere, including air quality, GHG emissions, noise levels or tranquillity?
- an inland, coastal or marine water body?
- wildlife and/or wild vegetation, which are indicators of biodiversity?
- the supply of natural raw materials, renewable and non-renewable, or the natural environment from which they are extracted?
- opportunities for recreation in the natural environment, including in urban areas?

6.51 If the answer to one or more of these questions is "yes" or "maybe", further assessment is recommended as outlined in Annex 2." (HM Treasury, 2018)[46]

The Environment Bill

64. Interviewees were asked whether they considered "that the statutory environmental targets proposed in the Environment Bill will change the way that they produce future impact appraisals?" Overall there was a general lack of awareness of the Environment Bill and the introduction of statutory targets for air, water, soils and waste. As one respondent remarked: "…the Better Regulation Executive and our department haven't flagged to team members that there is any need to change the approach to appraisals" (due to the planned introduction of statutory targets). It was noted by another respondent that "Forcing people to take action (through the environmental targets) will hopefully focus minds on analysis and delivery." There was a plea that the new targets shouldn't result in lots of new guidance, and that thresholds would be needed to ensure that they were addressed appropriately in appraisals, and wouldn't become a burden on the process. This reinforces the consistent observations by respondents regarding the under-resourcing of high-quality appraisal across departments.

65. There was a suggestion that "Defra ought to be leading the way with Regulatory Triage Assessments, demonstrating how the environment is considered. If other departments are to be encouraged, Defra should be demonstrating the best approach – but there is not much evidence that this is happening currently."

International Co-operation

66. In an interview with a respondent who worked with overseas governments it was noted that the "Chief Economists Network has provided inclusive growth diagnostics – identifying where support in other countries has an effect. This is needed to understand trade and poverty. But the environment is not considered cohesively, and this would be a very useful addition. It would help to demonstrate progress against international treaties and commitments and targets (both national and international) (not just for climate)" …." There needs to be an international resource, e.g. a UN database for ecosystems valuation. Have to be careful that benefit transfers don't result. Policy recommendations need to be on 'use values' for individual countries".

46 H.M. Treasury 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

6. Recommendations

The NCC's recommendations for enhancing the impact of the Green Book and embedding a natural capital approach in policy development are set out below.

67. The Environment Bill proposes the creation of the Office for Environmental Protection (OEP) which will have a duty to report on progress against 25 YEP objectives. These objectives are underpinned by a natural capital approach. The NCC recommends that the OEP should have a requirement to take a strategic approach in scrutinising impact assessments related to policies being developed to meet these environmental objectives.

68. The government should consider how the OEP could work in collaboration with the RPC, assessing how well natural capital has been considered and where to 'Red rate' impact assessments that will result in significant losses of natural capital, or will have an impact on the statutory environmental targets introduced by the Environment Bill, or where the Green Book criteria for natural capital impacts has not been applied (potentially underpinned by an MoU between the RPC and OEP). The Green Book guidance provides criteria for when natural capital impacts should be assessed (Para 6.50 and 6.51) which could be used to trigger the OEP's engagement with the RPC. The NCC's research provides a strong endorsement for this proposal.

69. The NCC proposes that a natural capital valuation template should be added to the impact appraisal summary report, where the Green Book criteria for natural capital has been triggered. This should also ensure that the environmental costs and benefits of the proposal have been fully assessed and valued.

70. The evaluation criteria for passing an impact assessment should be amended to include an assessment of the impact on natural capital, where the assessment criteria have been triggered. Where there is likely to be a net loss of natural capital or where policy options are unsupported by robust evidence of natural capital impacts, the RPC should have the option to 'Red rate' a proposal (as currently happens with proposals that result in significant costs to business) and recommend further scrutiny by the OEP and H.M. Treasury.

71. A section of the impact assessment summary template should be set aside for reporting the natural capital impacts of a policy change and how it is contributing towards the Environment Bill statutory targets (when these are adopted). The current template already does this for carbon budgeting and the inclusion of other natural capital is essential.

72. The departments and agencies preparing or reviewing impact assessments should have access to independent, expert advice on the valuation of natural capital and associated benefits and costs and the likely effects of legislative proposals. Robust natural capital decision support tools capable of assessing the various environmental impacts of different investment options in both quantitative terms and in terms of economic benefits and costs, should be developed and made available. The ENCA on-line resource provides a good start, but existing resources/tools need to be extended and more importantly applied. Given the inadequate state of the current evidence base, such development is likely to yield significant improvements in taxpayer value for money in terms of improved decisions. Tools must be able to assess the impacts of changing decisions (for example altering the type of interventions and location of investments) so that value for money can be assessed and the quantity impacts on natural capital can be evaluated. Feedback from practitioners identifies that a 'how to' manual for analysts would be welcomed and would simplify the process.

73. Regulatory Triage Assessments (RTA's) that are undertaken by departments and agencies for assessments of policy / programme / project changes, that are less than ±£5m in terms of costs to business, should be reported publicly and contribution to natural capital identified.

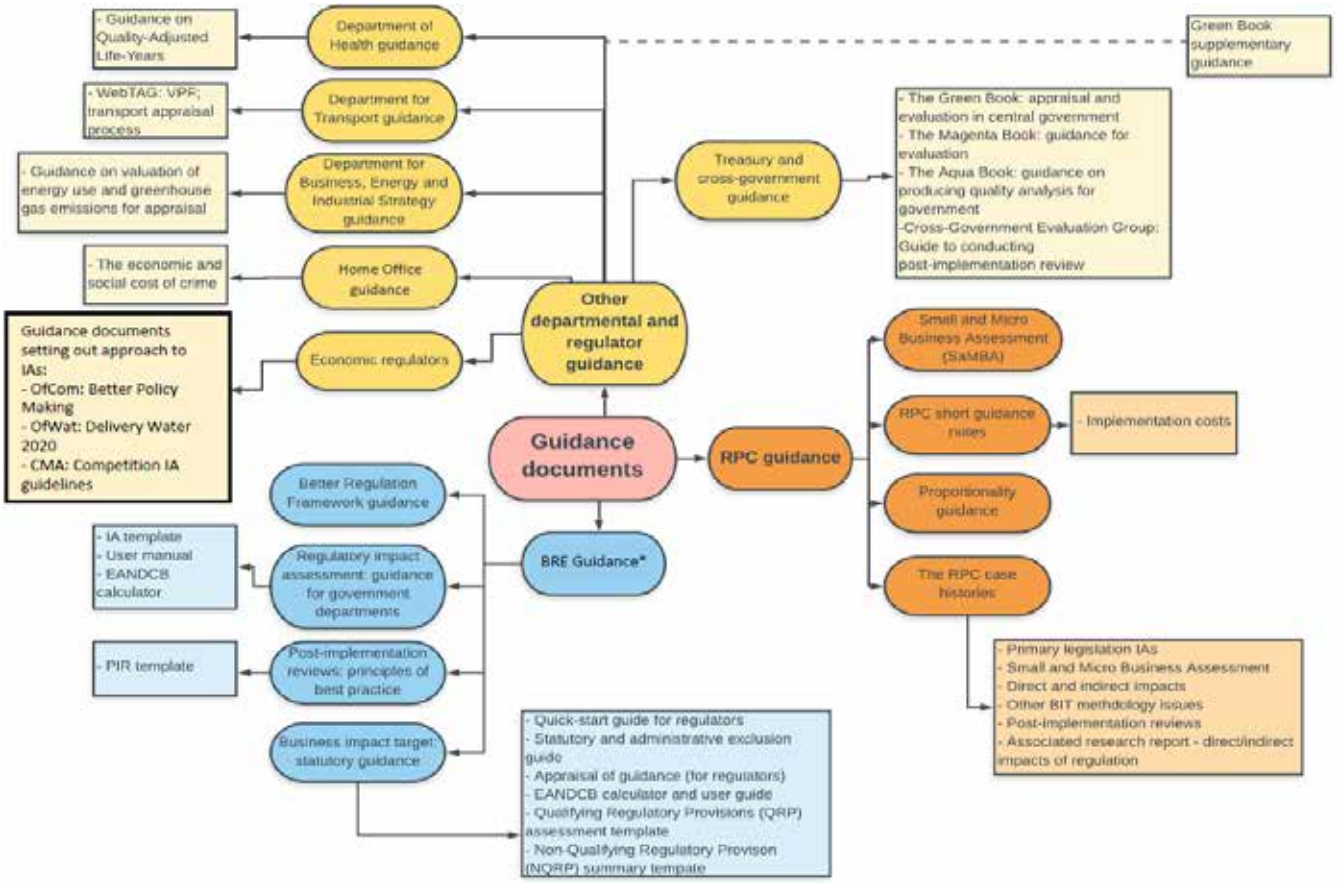
74. H.M. Treasury and Defra need to publicise the changes to the Green Book to make analysts across government aware of the natural capital guidance within the Green Book and the tools available for appraisal. The NCC's research into this issue has identified that there is currently a poor level of understanding and further guidance is needed, particularly with the introduction of statutory targets for natural capital assets.

75. The introduction of statutory targets in the environment bill should be accompanied with targeted guidance and support for analysts preparing appraisals that will impact on natural capital and will contribute to the targets being met.

76. The Government should take an active role in promoting the natural capital approach set out in the green book to other nations, and should work with the United Nations to agree a UN database for ecosystems valuation.

77. H.M. Treasury should undertake an evaluation exercise to assess the impact of the changes made to the Green Book since 2018.

Annex 1 – Figure 6 - RPC Guidance Diagram



Annex 2 – NCC Practitioner Survey: Implementing the HMT Green Book: A cross Departmental assessment

Please type the name of the Department / Team / Agency / Organisation that you currently work for in the box below:

Q2 Please indicate the following types of assessment that you have been involved in preparing (tick all that apply):

- ☐ Regulatory Impact Assessment
- ☐ Regulatory Triage (de minimis) Assessment
- ☐ Regulatory Triage Assessment (pre 2018)
- ☐ Post Implementation Review
- ☐ Business Case
- ☐ Cost Benefit Analysis
- ☐ Spending Review
- ☐ Other (please specify)

Q3 For the assessment(s) that you have been involved with have there been any attempts to capture environmental effects (either as benefits or costs)?

- ☐ Yes (as benefits)
- ☐ Yes (as costs)
- ☐ Yes (as costs and benefits)
- ☐ No (if no please explain why in the text box below)

Q4 Are you familiar with the HM Treasury "Green Book" guidance **on the natural environment?**

- ☐ Familiar and have made practical use of the guidance
- ☐ Familiar but have not applied the guidance
- ☐ Aware of the guidance, but have not studied in detail
- ☐ Unaware of the guidance
- ☐ Unaware of the Green Book

Q5 Have you used the HM Treasury "Green Book" guidance to produce an appraisal of effects on the natural environment (such as on Natural Capital Stocks and or flows?)

- ☐ Yes, including an assessment of the effects on Natural Capital Stocks
- ☐ Yes
- ☐ No - effects on the natural environment were scoped out as not being a relevant impact
- ☐ No - unaware of the guidance
- ☐ No - Other reason (Please give details of the reason why below)

Q6 How good was the guidance within the Green Book at providing a clear methodology and framework for the appraisal of effects concerning the natural environment?

- ☐ Very good
- ☐ Good
- ☐ Neutral
- ☐ Not very good
- ☐ Poor

Q7 Please give an explanation for your choice of response to the previous question?
(How useful was the guidance within the Green Book at providing a clear methodology and framework for the appraisal of effects concerning the natural environment?)

Q8 For your environmental appraisal(s) was there any attempt at quantifying and valuing the potential impacts (positive or negative) on the environment?

- ☐ Yes (for benefits)
- ☐ Yes (for costs)
- ☐ Yes (for costs and benefits)
- ☐ No (if no please explain why in the text box below)

Q9 For your environmental appraisal(s) was the quantification and valuation of the potential effects on the natural environment an important part of the overall assessment?

- ☐ Definitely yes
- ☐ Probably yes
- ☐ Unsure
- ☐ Probably not
- ☐ Definitely not

Q10 Do you consider the quantification and valuation of environmental elements an important part of the appraisal process?

- ☐ Extremely important
- ☐ Very important
- ☐ Moderately important
- ☐ Slightly important
- ☐ Not at all important

Q11 Do you have access to the necessary tools, resources and methods for undertaking valuation of the natural environment?

- ☐ Definitely yes
- ☐ Probably yes
- ☐ Might or might not
- ☐ Probably not
- ☐ Definitely not

Q12 When producing the valuation of the effects on the natural environment, which of the following tools have you used? (tick all that apply)

- ☐ Defra Biodiversity Metric
- ☐ Environmental Valuation Reference Inventory (EVRI)
- ☐ Environmental Values Look-Up (EVL) tool
- ☐ Natural Environment Valuation Online (NEVO)
- ☐ Enabling a Natural Capital Approach (ENCA)
- ☐ List of valuation tools from Ecosystems Knowledge Network
- ☐ Woodland Valuation Tool
- ☐ Outdoor Recreation Valuation tool (ORVal)
- ☐ Natural Capital Planning Tool (NCPT)
- ☐ Local Ecological Foot printing Tool
- ☐ Green Infrastructure Valuation toolkit (GI-Val)
- ☐ Toolkit for Ecosystem Service Site-Based Assessment
- ☐ WEBTAG Transport Appraisal
- ☐ Green Book supplementary guidance: valuation of energy use and greenhouse gas emissions for appraisal
- ☐ Other (please specify?)

Q13 Should there be a government led valuation tool/ resource providing analysts with standard for valuing the natural environment (e.g.: WebTAG for transport)?

- ☐ Strongly agree
- ☐ Agree

- [ ] Somewhat agree
- [ ] Neither agree nor disagree
- [ ] Somewhat disagree
- [ ] Disagree
- [ ] Strongly disagree

Q14 Do the supporting models / techniques for economic valuation of environmental effects produce reliable values? (e.g. Defra Biodiversity Metric, Environmental Valuation Reference Inventory (EVRI), Environmental Values Look-Up (EVL) tool, Natural Environment Valuation Online (NEVO), etc.)

- [ ] Strongly agree
- [ ] Agree
- [ ] Somewhat agree
- [ ] Neither agree nor disagree
- [ ] Somewhat disagree
- [ ] Disagree
- [ ] Strongly disagree
- [ ] Don't know

Q15 Based on your personal experience of appraising environmental impacts please rank the following barriers to producing quantified environmental impacts (Drag and move the option most significant barrier to producing accurate appraisals to 9 least significant barrier to producing accurate appraisals)

- ____ Not considered important by the sponsoring Department / Agency
- ____ Insufficient evidence and data
- ____ Insufficient valuation tools / guidance
- ____ Not a requirement of the review / clearance process
- ____ Not considered as environmental impacts will not trigger a Red rating in the review process
- ____ Poor quality evidence and data
- ____ Poor quality tools / guidance
- ____ Lack of experience with natural environment appraisal
- ____ Lack of resources

Q16 Improving the assessment and reporting of environmental valuation: Please rank the following actions in terms of their significance to you for improving environmental appraisals (Drag and move the options - 1 the most significant to 9 the least significant)

- ____ Training - economic methods to value the natural environment
- ____ On-call expert support in valuing the effects to the natural environment
- ____ Resourcing
- ____ Better modelling techniques / evidence / data
- ____ Greater requirement to report environmental effects within assessments
- ____ Better awareness of Green Book natural environment guidance
- ____ More time to produce appraisals
- ____ Higher priority within the approval process
- ____ Higher priority for the sponsoring Department / Agency

Q17 Please describe the key barriers to undertaking a quantification and valuation of the environmental effects to the natural environment?

Q18 Do you think that when reviewing appraisals the responsible reviewing body (e.g. the Regulatory Policy Committee / Better Regulation Unit, etc.) should assess natural environment impacts as part of the scrutiny process (e.g. Redrate)?

- [ ] Yes, as part of the sign off process
- [ ] Yes, as advice
- [ ] Unsure
- [ ] Not normally
- [ ] No

Q19 Please give a reason for your response to Q18 in the text box below.

Q20 Please describe what changes you would like to see to improve the assessment and reporting of the natural environment in appraisals, or add any further relevant information regarding appraisals that has not been covered in the questionnaire?

Q21 Would you be willing to talk to the Natural Capital Committee Secretariat (based in Defra) to discuss your views / experience in regard to economic appraisal of natural capital?

- ☐ Yes
- ☐ No

Q22 Please enter your work email address below in order that the Natural Capital Committee Secretariat can contact you to discuss your response.

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