

Natural Capital Committee

The Green Book guidance: embedding natural capital into public
policy appraisal

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1. Executive Summary

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 Government has recently introduced 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, achieving Net Zero carbon emissions by 2050 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.

In this paper the NCC has revisited the Green Book natural capital guidance objectives, how existing guidance and processes support these aims in relation to public policy appraisal/evaluation and where changes are needed to better embed natural capital in government decision making. A review of the application of the Green Book natural capital guidance to public sector capital projects and programmes will be undertaken at a later date.

Overall, the NCC has found limited evidence of natural capital being considered in policy appraisal. The NCC advises that this 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 Flag' a proposal (as currently happens with proposals that result in significant costs to business) and recommend further scrutiny by the OEP and/or Treasury.
2. The OEP, as proposed in the Environment Bill, will have a duty to report on progress against 25 YEP objectives. These objectives are underpinned by a natural capital

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>

approach. The NCC recommends that the OEP should have a requirement to take a strategic approach in scrutinising impact assessments related to policy proposals for meeting environmental objectives. 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).
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 provides a good starting point, however current tools/models need significant development. The government should urgently invest in developing a baseline census of natural assets, understanding the associated benefits and models capable of assessing the natural capital 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 \pm £5m threshold in terms of business costs, should be reported publicly and the contribution to natural capital identified.
6. H.M. Treasury should undertake an evaluation exercise to assess the impact of the changes made to the Green Book since 2018.

2. Background

1. The H.M. Treasury Green Book² set 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.
2. Between 2016-18 the Natural Capital Committee (NCC) worked with H.M. Treasury³ 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. This supersedes previous guidance published in 2003 and might be expected to endure for a similar period of time.
3. Since the 2018 update, the Government has introduced significant legislation aimed at achieving a step change for environmental improvements. These include:
 - setting legally binding targets in four priority areas for the 25 Year Environment Plan (25 YEP)⁴ and the incorporation of the Plan within the Environment Bill⁵;
 - the Net Zero commitment to reduce and offset carbon emissions⁶;
 - the introduction of a biodiversity net gain⁷ requirement for those developments and infrastructure with impacts upon certain aspects of the natural environment;

² 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-government>

³ 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>

⁴ H.M. Government, *25 Year Environment Plan* (2018) <https://www.gov.uk/government/publications/25-year-environment-plan>

⁵ Defra, *Government introduces ground-breaking Environment Bill* (2019) <https://www.gov.uk/government/news/government-introduces-ground-breaking-environment-bill>

⁶ 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>

⁷ Defra, *Biodiversity net gain: updating planning requirements* (2019) <https://www.gov.uk/government/consultations/biodiversity-net-gain-updating-planning-requirements>

- the Agriculture Bill⁸ adoption of a Public Money for Public Goods principle for future Government support for farming; and
 - the new Fisheries Bill⁹.
4. 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.¹⁰”
 5. This paper reviews the impact of the revised Green Book guidance for Departments undertaking policy and regulatory impact appraisals¹¹ and considers what improvements are needed to better embed natural capital in decision making.

3. Objectives and approach

6. 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.
7. 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; and
 - C. Making recommendations to improve process, guidance and implementation, based on the findings in parts A and B.

⁸ Parliament, *Agriculture Bill 2019-20* (2019) <https://services.parliament.uk/bills/2019-20/agriculture.html>

⁹ Parliament, *Fisheries Bill 2017-19* (2017) <https://services.parliament.uk/bills/2017-19/fisheries.html>

¹⁰ Natural Capital Committee, *State of Natural Capital Annual Report 2020* (2020) <https://www.gov.uk/government/publications/natural-capital-committees-seventh-annual-report>

¹¹ Including Impact Appraisals, Regulatory Triage Assessments and Post Implementation Reviews but excluding capital spending and other spending decisions that use The Green Book advice.

Given the high volume¹² 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.

8. The initial paper is expected to be followed by a second phase that will present 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 that prepare assessments.
9. This will be used to build a more detailed picture of how embedded the changes within the 2018 Green Book have become in practice. This in turn will lead to recommendations on where future improvements to guidance and its implementation could help to better embed natural capital into economic appraisal and decision making to meet the objectives and targets of the Environment Bill, 25 YEP, Agriculture and Fisheries Bills, Net Zero commitments and other policy ambitions.

4. Methodological advances in Green Book guidance regarding natural capital

Natural Capital in The Green Book

10. 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.
11. 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.¹³
12. 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:

¹² 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.

¹³ Green Book, Chapter 2.

- natural capital asset stocks; and
 - the flows of services derived from natural capital.
13. 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.
14. 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.
15. 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.
16. This approach accords with the ambitions set out in the Environment White 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*”¹⁴. As such the 2018 Green Book shows the Treasury proactively leading in terms of developing guidance standards fit for ambitious policy demands.

¹⁴ H.M. Government, *The 25 Year Environment Plan* (2018), <https://www.gov.uk/government/publications/25-year-environment-plan>

17. 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)¹⁵.*

* - see NCC definition of thresholds for information on tipping points¹⁶

18. 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.

19. 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^{17,18} and provides framework questions for assessing natural capital that help those developing an assessment to consider direct and indirect effects on the environment.

20. 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

¹⁵ 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-government>

¹⁶ Natural Capital Committee, *Natural Capital Terminology* (2019) <https://www.gov.uk/government/publications/natural-capital-committee-natural-capital-terminology>

¹⁷ Natural Capital Committee, *How to do it: a natural capital workbook* (2017) <https://www.gov.uk/government/groups/natural-capital-committee>

¹⁸ 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>

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.

5. Assessment of Green Book guidance and processes

Impact Assessments

21. 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 business¹⁹ are identified are greater than $\pm£5m$, while RTAs are for less than $\pm£5m$ (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 webpages²⁰ to allow public scrutiny of the assessment process.
22. 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)²¹. The RPC issues a RAG (Red / Amber / Green) status for the assessment and provides an opinion to the relevant Government Minister on the appraisal.²² 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.)
23. 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

¹⁹ Where the equivalent annual net direct cost to business (EANDCB)

²⁰ Impact Assessments – Legislation.gov <https://www.legislation.gov.uk/ukia>

²¹ 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>

²² Regulatory Policy Committee, *RPC opinions* (2019) <https://www.gov.uk/government/collections/rpc-opinions>

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

24. Where the costs to business falls below the \pm £5m (between -£5m and +£5m) threshold the Department or Agency will produce its own RTA that will meet the requirements of the Better Regulation Executive²³ 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.
25. 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.

Supplementary guidance for impact assessments

26. The RPC's schematic diagram (see Annex 1)²⁴ 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 guidance²⁵
 - b) BEIS Carbon accounting guidance²⁶
 - c) WEBTAG Transport Appraisal Process²⁷

²³ BEIS, *Better Regulation Framework: Guidance* (2018) <https://www.gov.uk/government/publications/better-regulation-framework>

²⁴ 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

²⁵ Defra, *Assessing environmental impact: guidance* (2013) <https://www.gov.uk/guidance/assessing-environmental-impact-guidance>

²⁶ BEIS, *Carbon Valuation* (2019) <https://www.gov.uk/government/collections/carbon-valuation--2>

²⁷ Department for Transport, *Transport analysis guidance* (2018) <https://www.gov.uk/guidance/transport-analysis-guidance-webtag>

27. H.M. Treasury supplementary guidance on producing impact assessments refers to environment advice on ecosystem services assessment that was developed in 2007²⁸. While the guidance is still valid, it falls short of the Green Book natural capital valuation process (specifically Section 3 of the Guidance Document that identifies how to deliver the 4 step approach). The NCC recommends that this guidance is replaced with reference to Defra’s Enabling a Natural Capital Appraisal (ENCA), which has been produced to meet this aim.
28. 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

29. 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.

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

²⁸ H.M. Treasury, *Green Book Guidance* (2018) <https://www.gov.uk/government/publications/green-book-supplementary-guidance-environment>

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

30. In January 2020, Defra launched the Enabling a Natural Capital Appraisal²⁹ (ENCA) 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.)
31. 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.
32. 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

²⁹ Defra, *Enabling a Natural Capital Approach (ENCA)* (2020) <https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca>

whether the Government is meeting its statutory targets established in the Environment Bill.

What have the changes to The Green Book achieved

33. Since the publication of the updated Green Book in 2018 there have been approximately 280 impact assessments published³⁰. While it has not been possible within the confines of this paper 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 £8.2bn³¹ per annum. For comparison the UK's overall Central Government estimated expenditure for 2020 financial year is £668bn³². 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 process³³.
34. 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. The focus on EU Exit has meant that there have been fewer impact assessments 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.
35. 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 admittedly approximate estimate of this scale we refer to a smaller set of more rigorous assessments carried out by independent consultants to the NCC in preparation for its 2015 Annual Report which provided the initial proposal for the 25 YEP. This assessment reviewed a set of cost-benefit analyses for both conventionally

³⁰ From 01/03/19 to 29/01/20 based on legislation.gov uploads <https://www.legislation.gov.uk/ukia>

³¹ 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.

³² Central Government Spending, *Total UK Government Spending 2019-20*
<https://www.ukpublicspending.co.uk/>

³³ 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.

capitalised and natural capital based public sector investments finding that, on average the latter provided higher benefit cost ratios and thereby typically greater social values than the former.³⁴ This suggests that the current inadequate approach to impact assessments may be omitting possibly even the bulk of potential social values and that the estimated overall societal value of £8.2bn per annum given above should be treated as a lower bound on the impact of implementing the Green Book natural capital guidelines. At the very least such assessments are likely to skew public spending, delivering insufficient investment in natural capital enhancing projects.

36. The RPC provides advice to Departments and Agencies preparing impact assessments on what they will be assessing against³⁵. 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. It is not a surprise then that Departments and Agencies may exclude natural capital costs from impact assessments even if the Green Book advocates the use of natural capital valuation.
37. 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.

³⁴ 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

³⁵ 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>

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.

38. The Environment Bill proposes the creation of the Office for Environmental Protection (OEP) that 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.
39. 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 Flag' impact assessments that will result in significant losses of natural capital, or where proper analysis of the regulatory change, has not been undertaken (potentially underpinned by an MoU between the RPC and OEP). This should be based on the natural capital valuation template that the NCC proposes.
40. The evaluation criteria for passing an impact assessment should be amended to include an 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 RPC should have the option to 'Red Flag' a proposal (as currently happens with proposals that result in significant costs to business) and recommend further scrutiny by the OEP and Treasury.
41. 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 targets (as the current template does for carbon budgeting).
42. 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 further resources/tools need to be developed. 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. These 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.

43. Existing links within the Green Book to Defra's EAU and the RPC's guidance on environment should be updated (and kept up to date) as soon as practicable to refer to the ENCA on-line resource.
44. 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.
45. 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.
46. 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 1 - RPC Guidance Diagram

