

## IEMA Response to Government Green Paper Consultation on Industrial Strategy

### Summary

- i. IEMA is supportive of the development of a UK Industrial Strategy – it has the potential to focus the economy on sustainable, long-term success and act as a platform for creating and supporting the businesses, jobs and workforce of the future.
- ii. There is an opportunity to articulate a bolder vision in the strategy by encompassing all aspects of sustainability and aligning with the UN Sustainable Development Goals which provide economic opportunities for the UK and a framework for long-term prosperity.
- iii. The Green Paper needs more focus on enhancing UK productivity through material and resource efficiency, resource resilience and the circular economy – we see this as a major gap in the current proposals.
- iv. Skills will be critical to achieving the vision in the Green Paper and while we support the need to enhance technical education, investment in sustainability skills and lifelong-learning for those already in employment will be crucial.
- v. The opportunity to explore broader measures to enhance UK productivity should be considered, including the role of fiscal and taxation drivers and workplace health and wellbeing.

### IEMA

1. IEMA is the worldwide membership body for environment and sustainability professionals, with a vision to transform the world to sustainability. With over 14,000 members working in 100 countries, we believe that companies have a critical role to play in enhancing economic and social value in a way that is low carbon, resource efficient, enhances natural capital and respects human rights.
2. Through our global sustainability skills standards and partnerships, we are driving the uptake and improvement of individual and organisational skills and capability to help make businesses and organisations future-proof.
3. We believe that embedding corporate sustainability practices into UK industry, as set out in our recent report “Beyond the Perfect Storm – the Corporate Sustainability Challenge”<sup>1</sup>, has significant potential to help businesses thrive and can play a key

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<sup>1</sup> IEMA (2016) “Beyond the Perfect Storm – the Corporate Sustainability Challenge”

role in enhancing UK productivity and competitiveness. The development of the UK Industrial Strategy is an opportunity to create the conditions for this to succeed.

## Overview

4. IEMA is supportive of the development of a UK Industrial Strategy – it has the potential to focus the economy on sustainable, long-term success and act as a platform for creating and supporting the businesses, jobs and workforce of the future.
5. We welcome the link made in the overall strategic objective to “improving living standards” alongside “economic growth”. We believe that creating and enhancing social value is critical to the UK’s long-term future and support this as an underpinning theme in the Industrial Strategy.
6. However, the overall objective of the strategy also needs to recognise that the creation of economic and social value needs to be done in a way that is low-carbon, resource efficient, enhances natural capital and respects human rights. These underpinning themes align well with the UN Sustainable Development Goals which are future market opportunities and provide a long-term framework for prosperity and should be at the forefront of the Industrial Strategy.
7. As such, we believe a more ambitious vision should be articulated for the Industrial Strategy – **“making Britain the best place to live, work and invest by developing a sustainable and competitive economy that delivers social value and is low carbon, resource efficient, enhances natural capital and respects human rights”**. We believe this not just from a values perspective but also because these will underpin the UK’s sectoral and economic development pathways.
8. There are elements of the strategy that help to paint a picture of a successful future; linking innovation, R&D, skills, digital and low carbon to transform the automotive sector towards electric vehicles and battery technology seems highly appropriate. This is a prime example of where the UK’s long term legally binding target of an 80% reduction in greenhouse gas emissions compared with 1990<sup>2</sup>, and air quality standards set out in the Air Quality Standards Regulations 2010<sup>3</sup>, act as the catalyst for innovation and investment in cleaner, low-carbon, vehicles. Similarly, the UK has become a world-leader in the development and deployment of off-shore wind<sup>4</sup>, harnessing the UK’s natural resources and coupling with investment in skills and technology. This long-term approach backed by legally-binding targets is crucial to provide businesses with the confidence to invest and develop the necessary supply chains.

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<sup>2</sup> HMG (2008) The Climate Change Act 2008

<sup>3</sup> HMG (2010) The Air Quality Standards Regulations 2010

<sup>4</sup> Department for International Trade (2015) UK Offshore Wind: Opportunities for trade and investment

9. High environmental standards help to unlock investment in R&D and the development of innovative products and services which are geared to addressing future sustainability challenges, both here in the UK and internationally. In particular, while some research indicates that productivity gains from high environmental standards can be relatively short-lived, market-based instruments tend to have a more robust positive effect on productivity growth<sup>5</sup>. This is important as the UK has adopted a number of market-based policy instruments in the areas of climate change and waste disposal<sup>6</sup>. It is therefore essential that, as we make plans to leave the EU, high environmental quality standards are maintained, enhanced and consistently enforced and used to create the conditions to support UK business exports. This requires more concerted cross-government action from Defra and the Devolved Administrations.
10. However, some gaps are evident in the Green Paper. For example, there is little in the strategy on driving improved resource and material productivity and the transition to a circular resource economy.....yet this is a major source of industry input costs and has significant potential for boosting overall UK productivity. In addition, it is critical that the UK takes a broader approach to sustainable resource management to address resource security and resilience – as business models are developing from simply producing products to long-term service models – assurance over the long-term availability for critical materials is essential.
11. Likewise, mention of the natural environment is notable by its absence. This is surprising given the critical importance of timber and aggregates for the construction sector; fertile soil and water for the food and drink sector etc. The services provided by the natural environment are the foundations on which some of the UK’s most important sectors depend, and need to be protected and enhanced. This needs a joined-up approach across government to ensure that business, environment and land-use policy are mutually supportive and achieve positive outcomes across all areas.
12. There needs to be a more coherent approach to skills and education to equip the workforce of the future with the necessary capabilities to succeed. The future workforce needs flexibility and must continue to learn and develop to adapt to different contexts. We believe that Government needs to work more closely with businesses and professional bodies to embed life-long learning into workforce development programmes as a key element of enhancing UK productivity.

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<sup>5</sup> Albrizio, S. et al. (2014), “Do Environmental Policies Matter for Productivity Growth?: Insights from New Cross-Country Measures of Environmental Policies”, OECD Economics Department Working Papers, No. 1176, OECD Publishing, Paris

<sup>6</sup> UK Government - Environmental taxes, reliefs and schemes for businesses <https://www.gov.uk/green-taxes-and-reliefs/overview>

13. There is no mention in the strategy on the potential role of financial and taxation drivers to create opportunities for businesses to develop and support innovation. For example, consideration could be given shifting taxes on employment (e.g. by lowering employers' National Insurance contributions) towards non-labour inputs (e.g. materials and carbon/energy) with the aim to enhance resource productivity and accelerate the transition to a sustainable economy.
14. There is growing recognition of health and wellbeing impacts on productivity<sup>7 8 9</sup>. The opportunity should be taken to explore what action Government can take to support enhancements in workplace health and wellbeing as means to enhance UK productivity.
15. We recognise the attractiveness to Government of taking a sector approach in the strategy. However, we believe that this needs to be treated with caution.
  - a. Firstly, the process of inviting sectors to submit proposals for 'sector deals' is most likely to favour incumbent sectors which have the organisational capability to collectively organise to bid for Government funding. However, these are not necessarily the sectors of the future.
  - b. Secondly, this process is unlikely to work with new and emerging sectors such as bio-economy where the nascent nature of their evolution means that they won't be in a position to develop sector proposals.
16. Where sector deals are being created, it is critical that their evaluation includes consideration of plans to reduce carbon emissions, improve resource efficiency and resource resilience, and maintain and enhance natural capital.
17. The impact of Brexit is notable by its absence in the Green Paper. Whatever the eventual deal between the UK and the EU, it will have a significant bearing on the UK's industrial strategy. This is a concern given that business craves long-term policy certainty as a pre-condition for unlocking the investment that will be needed to realise the ambitions in the strategy.
18. Our response will be made publicly available on our website [www.iema.net](http://www.iema.net) and we are happy for DBEIS to publish our response.
19. We would be happy to provide further information or clarify points in our response if this would be of assistance.

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<sup>7</sup> Department for Business, Innovation and Skills (2014) Does worker wellbeing affect workplace performance?

<sup>8</sup> World Green Building Council (2014) Health, Wellbeing & Productivity in Offices - The next chapter for green building

<sup>9</sup> Business in the Community - Wellbeing and work: the facts <http://wellbeing.bitc.org.uk/issues/wellbeing-and-workthe-facts>

## Sustainable Development Goals

20. The UN Sustainable Development Goals<sup>10</sup> (SDGs) set out a global strategy for countries around the world to transition to a sustainable future. The 17 SDGs are a framework for taking positive action to tackle long-term critical sustainability challenges. The UK is a signatory to the UN SDGs.
21. SDG 9 – “ Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation” closely aligns with key elements of the Industrial Strategy, as does SDG 12 “Ensure sustainable consumption and production patterns” (although as noted in 3.4 above, resource productivity is not well addressed).
22. Other SDGs – e.g. SDG 4 “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” and SDG 17 “Strengthen the means of implementation and revitalize the global partnership for sustainable development” are cross-cutting themes which underpin a successful Industrial Strategy.
23. Businesses are starting to use the SDGs as a framework to shape their long-term future, including companies such as BT, Philips and AkzoNobel<sup>11</sup>. Businesses also called for Government across all relevant department (i.e. not only the Department for International Development), to work with business and other stakeholders to develop an SDG delivery plan for the UK<sup>12</sup>. The SDGs will support and underpin transformative pathways and provide market opportunities for those economies that are both leading and well prepared.
24. We believe that the UK Industrial Strategy should be a core element of the UK’s SDG delivery plan, but action is required from BEIS to pro-actively engage with business to understand how this can best be achieved.

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<sup>10</sup> UN (2015) Transforming our world: the 2030 Agenda for Sustainable Development

<sup>11</sup> World Business Council for Sustainable Development - SDG Business Hub <http://sdghub.com/business-action/>

<sup>12</sup> UKSSD open letter to the Prime Minister: Business Backs the Sustainable Development Goals <http://ukssd.co.uk/open-letter-to-prime-minister/>

## Accelerating the transition to a low-carbon economy

25. We strongly welcome the Government's re-confirmation in the Green Paper of the commitment to meeting the legally-binding carbon budgets set out in the Climate Change Act. The UK has made good progress to date in reducing emissions while growing the economy<sup>13</sup> and it is imperative that proactive policies are developed which accelerate action towards the 2050 target.
26. We note that Government will separately consult on its Carbon Emissions Reduction Plan, setting out how to achieve the 5th Carbon Budget for the period 2028-2032, and are disappointed that the draft ERP wasn't published alongside the Green Paper as this would have provided a better way of ensuring that they are mutually supportive. This is crucial, as key sectors seeking deals with Government through the Industrial Strategy will need to play a significant role in reducing emissions, not just in manufacturing operations but also across transport and logistics, use of industrial heat etc.
27. Recent research shows the growth potential of the low-carbon economy<sup>14</sup>, suggesting it could grow from 2% of UK Total Output in 2015, to up to 8% by 2030 and 13% by 2050 – outstripping projected UK growth for the period. This indicates the size of the low-carbon economy in the UK of £210bn (direct turnover) to £600bn (direct and indirect turnover) by 2030, with corresponding levels of UK employment 1.0 and 2.2 million respectively.
28. More broadly, there is significant export potential for UK companies that take a leadership position in developing low-carbon technology, products and services, given the global UK Paris climate agreement to limit greenhouse gas emissions.
29. Given the potential size of the low carbon economy in 2030, and in particular the indirect contribution in terms of economic activity and jobs, Government should:
  - a. Ensure that all sector deals have specific contributions to driving the low-carbon agenda and are aligned to the UK's 5<sup>th</sup> Carbon Budget and 2050 emissions reduction target. This must also include measures to significantly improve energy efficiency.
  - b. Consider a low-carbon sector deal which harnesses UK expertise in low-carbon technology and services (e.g. renewables, smart-grid, ultra-low emissions vehicles, energy storage, carbon finance etc) with a view to accelerating achievement of the 5<sup>th</sup> Carbon Budget, and with a specific export focus and remit.

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<sup>13</sup> Energy and Climate Intelligence Unit (2017) Conscious decoupling: On eve of Brexit, UK leads G7 in both growth and carbon cuts

<sup>14</sup> Ricardo Energy & Environment (2017) UK business opportunities of moving to a low carbon economy – Final Report to the Committee on Climate Change

- c. Establish a specific unit within Government to embed low-carbon across all policy areas and connect to key industry sectors to ensure the potential economic and environmental benefits are realised. For example, ensuring that housing policy effectively supports sourcing low carbon building materials, utilising low carbon construction methods, delivering high levels of energy efficiency in building use, utilising renewable energy in housing schemes etc. This would be an effective way of tackling the UK's housing shortage, supporting UK businesses and meeting the UK's climate change targets.
  - d. Consider how best to utilise the UK's potential for carbon capture and storage and develop a coherent plan for taking this forward.
30. Energy efficiency must be at the forefront of UK energy policy as it offers significant opportunities for cutting energy costs, enhancing energy resilience and cutting carbon emissions<sup>15</sup>. UK policy on energy efficiency has been inconsistent – examples include the numerous changes to the Carbon Reduction Commitment (CRC)<sup>16</sup> Energy Efficiency Scheme which having been introduced in 2010 will end in 2019, and the failure of the Green Deal. The more recent introduction of the Energy Savings Opportunity Scheme as part of the UK implementation of the EU Energy Efficiency Directive offers scope for significant savings<sup>17</sup>, although its effectiveness in realising savings in practice is currently unclear. We strongly believe that there is a need for Government to set a consistent and ambitious energy efficiency policy framework and provide appropriate support to business, with the aim of cutting business demand for electricity, transport fuel, and heat as part of the carbon emissions reduction plan to support the 5<sup>th</sup> Carbon Budget.

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<sup>15</sup> IEA (2016) Energy Efficient Prosperity: The “first fuel” of economic development

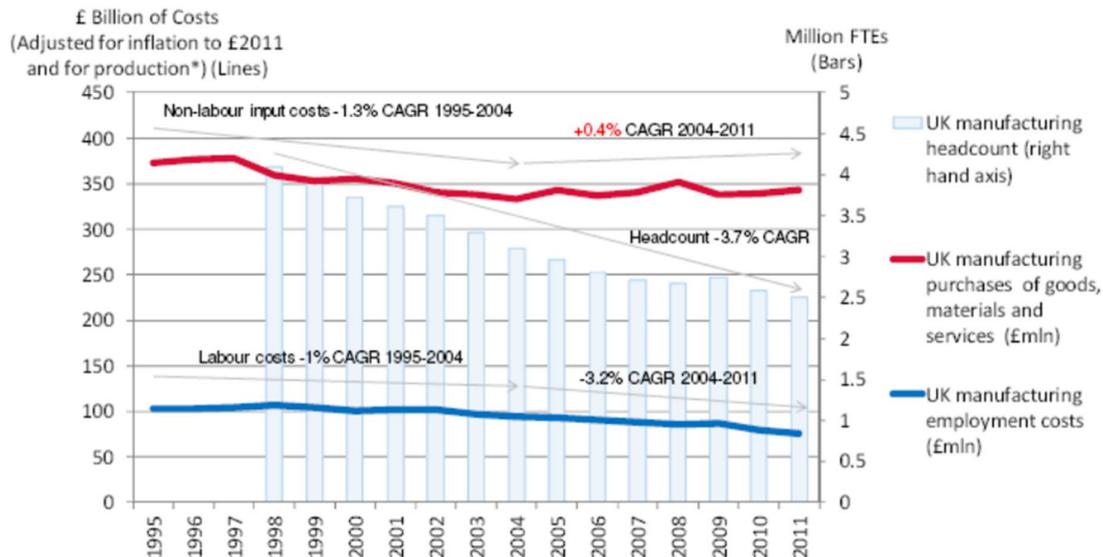
<sup>16</sup> <https://www.gov.uk/government/collections/crc-energy-efficiency-scheme>

<sup>17</sup> Carbon Trust (2016) ESOS: what have we learned about the current energy efficiency opportunities for large UK businesses?

## Enhancing resource and material productivity – towards “resource resilience” and a Circular Economy

31. For much of the last decade, the manufacturing sector has focussed on improving labour productivity. This has reduced headcount and labour costs on a like-for-like basis at over 3% per annum. However, since 2004, purchases of goods, materials and services have increased at a compound annual rate of 0.4%; in 2011 the *UK manufacturing sector's spend on goods, materials and services was 4.5 times its labour spend*<sup>18</sup>.

Figure 1: Historical Inputs Spend by the UK Manufacturing Sector Adjusted for Inflation and in £2011



\*Adjusted for Index of Production indexed to 1 in 2011.  
Sources: Office for National Statistics, Annual Business Survey, C Manufacturing, Release date 15 Nov 2012; Office for National Statistics, Detailed Indices of Production, 2011; World Bank UK inflation data

Source: The Next Manufacturing Revolution (2013) <http://www.nextmanufacturingrevolution.org/>

32. We need to shift the focus from cutting labour to enhancing resource productivity and massively improving resource efficiency. We need to ensure that systems are in place to extract maximum value from resources on a recurring basis, and accelerate the drive to a circular resource economy. This should be a cross-cutting theme in the Industrial Strategy

<sup>18</sup> The Next Manufacturing Revolution (2013) [www.nextmanufacturingrevolution.org/](http://www.nextmanufacturingrevolution.org/)

33. Environmental sustainability will have profound changes on production processes and manufacturing over the next four decades<sup>19</sup>. Volatility of supply, climate change, greater use of regulation and consumer pull for eco-products will drive the development of alternative business models and the emergence of a 'circular economy'<sup>20</sup>. These are not to be seen as constraints – they are also new market opportunities where the UK is well placed to pursue a competitive advantage.
34. Significant cost savings are available for UK businesses<sup>21</sup>. No cost / low cost savings opportunity has been estimated at a total of around £23 billion, with around £18 billion savings opportunity in waste and around £4 billion savings opportunity in energy. Savings opportunities with a payback greater than one year have been estimated at around £33 billion. This gives a total opportunity of around £56 billion.
35. Maintaining a reliable supply of key materials is crucial to any business. But, since 2000, an increasing array of commodities has seen significant price volatility and constraints in short-term supply - from oil and steel to rare earth minerals (essential to modern communication, electronics and renewable technology)<sup>22</sup>. As a major importer of materials, input prices have significantly increased due to the devaluation of sterling<sup>23</sup>.
36. Recent studies have begun to identify that more common materials may be at risk of future global shortfalls. For example, a recent Kingfisher report<sup>24</sup> has identified a potential global timber shortfall of up to 30% by 2030. Well managed forests can supply timber over the medium-term, as a naturally regenerative raw material, but there is a risk that increasing global demand could outstrip supply, with the following business consequences:
- Increased prices for timber, paper and related materials
  - Disruption to existing supply chains
  - Potential for accelerated deforestation

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<sup>19</sup> Foresight (2013) "The Future of Manufacturing – A new era of opportunity and challenge for the UK" – Project Report, Government Office for Science, London

<sup>20</sup> Change from an economy based on the conversion of raw materials into products which end their lives as waste, to an economy where products are re-used, 're-purposed', repaired, re-manufactured and recycled, cascaded, and recovered rather than being used and discarded

<sup>21</sup> Defra (2011) The Further Benefits of Business Resource Efficiency. Oakdene Hollins research report completed for Defra

<sup>22</sup> Defra/BIS (2012) Resource Security Action Plan

<sup>23</sup> Bank of England (2017) Brexit and the pound - Speech given by Ben Broadbent, Deputy Governor Monetary Policy

<sup>24</sup> Kingfisher (2013) Net Positive – the start of the journey

37. Resource resilience must be a key feature of the UK's Industrial Strategy, particularly as the growth in manufacturing servitization<sup>25</sup> and lead to enhanced business risk through long-term resource security/availability<sup>26</sup>.
38. Businesses have a significant role to play in the circular economy<sup>27</sup> and it is vital that the UK develops the policies and infrastructure to retain critical products, components and materials for reuse, remanufacture, and repair. Resource recovery, remanufacturing and repair/service businesses could create prosperity and create innovative new technology and services to export but this will need an appropriate policy framework. There needs to be greater emphasis on cross-departmental policy support measures in BEIS and Defra to improve actions at the top of the waste hierarchy rather than nudging up from disposal to landfill to energy from waste (which requires its own feedstock of waste) – including product design measures and incentives to include recycled/recovered content.
39. It is crucial that the UK maintains its engagement with the EU on the development of the Circular Economy package of measures and is committed to implementing circular economy measures when we leave the EU.

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<sup>25</sup> Aston Business School (2013) Servitization impact study: How UK based manufacturing organisations are transforming themselves to compete through advanced services

<sup>26</sup> IEMA (2014) Business Briefing: Sustainable Resource Management

<sup>27</sup> Weetman (2016) A Circular Economy Handbook for Business and Supply Chains - Repair, Remake, Redesign, Rethink. Kogan Page

## Skills & Jobs

40. Making the transition to a sustainable economy will pose risks for businesses, but also presents significant opportunities. Those companies that are ahead of the game, leading the way to embed sustainability into the very core of their strategy and operations, are the ones most likely to succeed in the face of the challenges.
41. A critical barrier to organisations making the transition is the lack of relevant skills and expertise; ensuring environment and sustainability skills are embedded throughout the organisation is a pre-requisite for all companies being able to gain competitive advantage.
42. Research carried out by IEMA<sup>28</sup> shows that only 13% of businesses are fully confident that they have the skills to compete in a sustainable economy, and investment in developing organisational capability and skills to address the sustainability challenge is significantly lagging behind other areas. This needs to change.
43. IEMA's work on skills for a sustainable economy<sup>29</sup> highlights the key areas where action is needed:
  - a. Sustainability at the heart of decision-making: The active pursuit of sustainable decision-making by enabling economies, organisations and individuals to deliver on opportunities to drive change through skills, knowledge and innovation.
  - b. Recognised sustainability skills: Action to strengthen organisational, regulatory and investor confidence in those delivering sustainability initiatives through greater recognition of the skills and knowledge needed to drive success over the long-term.
  - c. Collaborative systemic change: an acceleration of joint initiatives that drive systemic changes to deliver a sustainable economy through enhanced investment in collaborative skills. Systems thinking needs to be embedded in learning and development frameworks.
  - d. Embedding sustainability: Government, businesses and professions to make sustainability a core component of their strategy and commit to mainstream the skills and knowledge needed to deliver a sustainable economy.
44. Forthcoming work by IEMA on sustainability skills for infrastructure is due to be published later in 2017. Key elements of the work include understanding how sustainability skills and awareness need to be deployed throughout the whole life-cycle of infrastructure – from design and evaluation studies, through contracting and construction, to operation and decommissioning. Given the scale of infrastructure that is being delivered in the UK over the next 5 years<sup>30</sup> and beyond, it is essential

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<sup>28</sup> IEMA (2014) Preparing for the Perfect Storm – Skills for a Sustainable Economy

<sup>29</sup> IEMA (2014) IEMA Position Statement – Skills for a Sustainable Economy

<sup>30</sup> Infrastructure and Projects Authority (2016) National Infrastructure Delivery Plan 2016–2021

that the capability to deliver this in a sustainable way is developed and deployed. Further, in our work with employers and major infrastructure companies, we are actively looking at how these skills can be enhanced between different projects in a way that would give recognition to those with the capabilities and to those seeking to employ them on different projects. We would be happy to outline our work in this area in more detail if that would be of interest.

45. We welcome the focus on technical qualifications and apprenticeships as opportunities for career progression, but believe there is a need to review how funding is provided to all age groups and areas in the UK to enable workers to reskill and take advantage of new opportunities as part of life-long learning. There is a clear role here for Government in helping collaboration and linking up different stakeholders, including professional bodies. Sustainability also needs to be fully integrated into school curricula and supported through different learning pathways.

## Natural Environment

46. The natural environment, and the ecosystem services that are derived from the UK's natural capital "contribute to the economic performance of the nation by supporting economic sectors, regional and national wealth creation and employment"<sup>31</sup>. The UK Government has given a commitment, reiterated most recently in the Great Repeal Bill White Paper "to ensuring that we become the first generation to leave the environment in a better state than we found it"<sup>32</sup>.
47. Key industrial sectors such as construction and food & drink, rely on UK natural capital such as soil, water, forests, minerals, to support economic activity. Long-term degradation of natural capital has the potential to harm or inhibit the prosperity of businesses in these sectors.
48. It is therefore essential that the Industrial Strategy and the forthcoming 25yr Environment Plan and 25yr Food and Farming Plan, are developed to optimise outcomes across all areas and deliver multiple benefits.

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<sup>31</sup> UK National Ecosystem Assessment (2014) The UK National Ecosystem Assessment : Synthesis of Key Findings. UNEP-WCMC, LWEC UK.

<sup>32</sup> Department for Exiting the EU (2017) Legislating for the United Kingdom's withdrawal from the European Union