Skills, Economy and Growth Scrutiny Commission

All Members of the Skills, Economy and Growth Scrutiny Commission are requested to attend the meeting of the Commission to be held as follows:

Tuesday, 25th February, 2020

7.00 pm

Room 102, Hackney Town Hall, Mare Street, London E8 1EA

Tim Shields
Chief Executive, London Borough of Hackney

Contact:
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Members: **Cllr Mete Coban (Chair), Cllr Polly Billington (Vice-Chair), Cllr Richard Lufkin, Cllr Sam Pallis, Cllr Steve Race and Cllr Gilbert Smyth**

Agenda

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Hackney

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Hackney

Skills Economy and Growth Scrutiny Commission 25th February 2020 **Minutes of the previous meeting and Matters Arising**	Item No **4**

OUTLINE

Attached are the draft minutes for the meeting on 6th January 2020.

Action 1
Cabinet Member for Employment, Skills and Human Resources to send to the Commission the list of standards for the apprenticeship network membership.

Response – To be circulated to Commission.

Action 2 & 4
The Cabinet Member for Planning, Culture and Inclusive Economy to liaise with the Commission about contributing to the development of the process for the Neighbourhood CiL allocation over the next 4 months.

The Chair to write to the Cabinet Member for Planning, Culture and Inclusive Economy to confirm the role of councillors or the Commission in exploring how the political oversight is shaped.

Response – Update at the meeting.

Action 3
The Cabinet Member for Planning, Culture and Inclusive Economy to provide feedback on the outcome of the discussions with the new commercial owners for Hackney Walk on Morning Lane.

Response – Update to be circulated to Commission.

ACTION

The Commission is requested to agree the minutes and note any actions and matters arising updates.

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Hackney

London Borough of Hackney
Skills, Economy and Growth Scrutiny Commission
Municipal Year 2019/20
Date of Meeting Monday, 6th January, 2020

Minutes of the proceedings of the Skills, Economy and Growth Scrutiny Commission held at Hackney Town Hall, Mare Street, London E8 1EA

Chair	**Councillor Mete Coban MBE**
Councillors in Attendance	**Cllr Polly Billington (Vice-Chair), Cllr Richard Lufkin, Cllr Sam Pallis, Cllr Steve Race and Cllr Gilbert Smyth**
Apologies:	
Officers In Attendance	**Suzanne Johnson (Head of Economic Regeneration), Marcin Manikowski (Deputy Enforcement Manager), Andrew Munk (Head of Employment and Skills), Olga Vandenbergh (Business Communications & Engagement Manager, Regeneration Delivery Team) and Georgina Barretta (Policy Infrastructure Team Leader)**
Other People in Attendance	**Councillor Guy Nicholson (Cabinet Member for Planning, Business and Investment) and Councillor Carole Williams (Cabinet Member for Employment, Skills and Human Resources)**
Members of the Public	**1 member of the public**
Officer Contact:	**Tracey Anderson** ☎ 020 8356 3312 🖂 tracey.anderson@hackney.gov.uk

Councillor Mete Coban MBE in the Chair

1 Apologies for Absence

1.1 No apologies for absence.

2 Urgent Items / Order of Business

2.1 No urgent items.

2.2 Order of business is as per the agenda.

3 Declarations of Interest

3.1 There were no declarations of interest.

4 Minutes of Previous Meeting

4.1 The minutes of the previous meeting held on 16th September 2019 were approved.

RESOLVED	Minutes were approved.

5 Cabinet Member Question Time – Employment, Skills and Human Resources

5.1 The Chair welcomed to the meeting Councillor Carole Williams, Cabinet Member for Employment, Skills and Human Resources from London Borough of Hackney.

5.2 The Cabinet Member provided a verbal update in response to the questions submitted in advance of the meeting. They were related to apprenticeship programme and post 18 skills and adult learning.

5.3 In response to Members questions about the council's apprenticeship programme. The main points from the response are outlined below.

5.3.1 The Council has a multi award winning apprenticeship programme, the programme is progressing very well and has won awards in 2018 and 2019 for the employment and skills team work in developing and managing the scheme.

5.3.2 In response to the breakdown of apprenticeships across the council. There are:

- 20 in Chief Executive
- 55 in Finance and Corporate Resources
- 65 in Neighbourhoods and Housing
- 25 in Children, Adults and Community Health.

5.3.3 A dashboard is produced regularly that provides further detail on the above apprenticeships. The Cabinet Member offered to make this information available to the Commission if they wished to review each category in more detail.

5.3.4 The Council's corporate apprenticeship scheme is paid at least the London living wage (LLW) and compares well to other London boroughs. Only 37% of London Boroughs pay their corporate apprentices the LLW.

5.3.5 The council wants to continue its work on apprenticeships by working with local businesses across the borough to share best practice and drive up the quality of apprenticeships. The council has set up an apprenticeship network.

5.3.6 The criteria for membership of the network requires employers to sign up to paying, at least, the rate of the national minimum wage. The council also asks employers with social obligations e.g. with Section 106 obligations to join the network.

5.3.7 To date 30 organisations have signed up to the network and an additional 15 are going through the membership process.

5.4 In response to Members questions about post 18 skills and adult learning. The main points from the response are outlined below.

5.4.1 The Council's aim is to improve skills for all residents through adult learning.

5.4.2 The council is exploring the possibility of a pilot for paid work experience for over 50s, similar to the Hackney 100 and apprenticeship programme.

5.4.3 The council is currently redesigning adult skills and integrating adult learning service with employment and skills service. There are proposal to co-locate the 2 services.

5.5 **Questions, Answers and Discussions**

(i) Members made the following enquires:

a) In relation to the network Members asked for more information about how it is used to support SMEs?
b) What type of companies they signing up to the network?
c) Asked for more information about the criteria to be part of network.
d) Member pointed out the challenges facing SMEs in relation to operational costs and their ability to cover the cost of an apprentice. Members asked how the council can support them with apprenticeships
e) Asked if the council could provide a demonstration of the impact of the network and the measure in place?

The Cabinet Member for Employment, Skills and Human Resources explained they have a range of businesses signed up to the network covering educational, performing arts and adult social care sectors.

In response to the measures they will look at the quality of employment, the number of business that join the network and the outcomes. E.g. number of apprenticeships etc. The Council is also aiming to have the organisations in the network using a dashboard. There are plans to include the outcomes of the network in the dashboard they currently produce for their internal monitoring. This would give the council a breakdown of the impact across the borough and information about the type of businesses, age range of hackney residents participating in addition to gender and ethnicity too. There are no measure for social class but they do look at disadvantaged groups e.g. NEETS.

A sample of business participating are:

- Hobbs – a 3D academy providing training to residents aged 18 - focused on architecture
- HSSMI – digital engineering company based at Loughborough University
- Aviva and Regal Homes.

(ii) Members enquired what percentage of apprenticeships result in permanent roles?

The Cabinet Member for Employment, Skills and Human Resources and Head of Employment and Skills confirmed approximately 77% of the Council's apprentice's transition into a job, a further apprenticeship or higher education.

(iii) Members enquired about the strategic purpose of the network asking if its aim was to support the most enthusiastic and committed employers in the borough or to have as many employers as possible join the network. Therefore would success be that all employers join or success for the network is having the most advanced and ambitious employers.

The Cabinet Member for Employment, Skills and Human Resources explained it was not for the most advanced and ambitious. The Council's aim is to work with a range of businesses. The council would like to have a network with a diverse range of businesses across sectors and not just the high tech high skilled sector. The Cabinet Member pointed out they have a number of apprentices in a range of sectors e.g. council and construction.

The Council would like to drive up employment practices and standards across a number of sectors including construction. The Cabinet Member wants a criteria that is about the percentage of apprentices across the borough. Making sure the measures demonstrate the outcomes for Hackney as opposed to just sheer numbers.

(iv) Members enquired of the Council was still defining the outcomes and if it would include how to improve the quality of apprenticeships.

The Cabinet Member for Employment, Skills and Human Resources confirmed they were still defining the outcomes and explained this would be part of the work for the Inclusive Economy Strategy.

(v) In terms of developing the quality for the network Members enquired what activity was being conducted as part of the network that establishes what works and what does not.

The Cabinet Member for Employment, Skills and Human Resources advised this work was in the process of being completed. It will be part of their assessment work. Highlighting the network launched last year. After a period of operation they would reflect to assess what has been achieved in the first year and what they would like to change to make improvements on the outcomes achieved for future years.

From the discussion Members summarised their understanding of a successful network as one that:
1. Has a diversity of employers across different sectors
2. That the criteria is about their ambition to deliver apprenticeships for the Hackney work force.
3. The network will aim to improve the quality of apprenticeships and the outcomes rather than just the number of apprenticeships.

The Cabinet Member for Employment, Skills and Human Resources agreed.

(vi) Members enquired if all the companies signed up to the network are Hackney based or based outside the borough boundaries?

The Cabinet Member for Employment, Skills and Human Resources confirmed yes and no. The Cabinet Member explained they have companies like Aviva which has a site in the borough but is not a Hackney specific business.

(vii) For clarity Members asked if the companies signing up to the network were doing so because they have a presence in Hackney.

The Cabinet Member for Employment, Skills and Human Resources responded to some extent.

The Head of Employment and Skills pointed out having a presence helps and enables the council to have some leverage on the company but it was not a specific criteria to join the network. It was highlighted the council is currently in conversations with business in East Bank in Newham to encourage them to sign up to the network too.

(viii) **Members referred to the borough boundaries in Hoxton East and Shoreditch Ward and referenced that it has areas of deprivation, some higher levels of unemployment but closely located to an area of significant employment opportunities. Members pointed out there is a large number of companies in that borough and a small number of borough residents. Members enquired if the council worked with other boroughs like the City of London to connect their apprenticeship programme and network with organisations in that borough too?**

The Cabinet Member for Employment, Skills and Human Resources explained the challenge is that some of the corporate businesses have their own apprenticeship programmes. However the Cabinet Member did not exclude there may be opportunities to explore partnering with the council and offering apprenticeships through the council's network to hackney residents.

The Cabinet Member pointed out that tech city and digital Shoreditch has grown across the borough to different location and there is a large number of high end businesses they can work with elsewhere in the borough.

(ix) **Members referred to the comments about construction and highlighted the borough has a large volume of construction projects currently in the borough; some of which are managed by the council and others have come though the council's planning system. Members commented there seems to be disparity between the number of companies that participate and how they meet targets for apprenticeships or work experience. Members enquired how the council was evaluating how effective the council is in monitoring construction projects, in terms of the quality of employment they are offering, particularly for the projects the council has huge engagement with.**

(x) **In reference to the Cabinet Members points of wanting to "drive up employment practices and standards across a number of sectors including construction". Members asked for her views on this and the role the council would have in achieving this?**

(xi) **Members referred to the London wide work by the Deputy Mayor of London about the good work standards and asked if the council had signed up to this?**

The Head of Employment and Skills confirmed the Council has signed up to the good work standard through HR. The officer also pointed out the criteria for the apprenticeships network is aligned with the London wide good work standard and hold them to a higher standard than the Greater London Authority (GLA).

The Cabinet Member for Employment, Skills and Human Resources advised there is more work for the council to do to look at how they can drive up standards across the workforce and not just apprenticeships. Particularly in the changing labour market and the changing economy. The council needs to use the Inclusive Economy Strategy to change employment outcomes for people and ensure they do not have large numbers of hackney residents in low pay, low skilled or low standard work. But rather that local residents are able to share in the wealth of the borough.

The Head of Employment and Skills informed the Commission where they have Section 106 obligations the council has leverage. They will apply the criteria of the apprenticeship network to those agreements, explaining the organisation will be required by planning to report on local labour and apprenticeships on a regular basis. This is recorded in a dashboard each quarter. As at June – September 2019 there were 42 new apprenticeship starts across 14 different businesses in constructions. As a result of the apprenticeship network these apprenticeships are of a set standard. The council uses Section 106 to apply the apprenticeship network standards where possible which is more than other London boroughs do currently.

(xii) Members enquired about the process or action taken during and after the project if it is known a project will not meet its targets?

The Head of Employment and Skills advised the target is 'at least one full framework apprentice for every £2 Million of construction contract value. Or the equivalent number if a shared apprenticeship model is offered'. If they do not meet this target Planning can issue a fixed fee as a fine. However the Council aims to have a constructive relationship and generally will seek to have discussion prior to that stage. If the view is they cannot take on the number of apprentices because of the nature of the scheme, they will consider if they can do some work experience placements or alternative employment. When an agreement is made an employment and skills work plan is set up. The officer pointed out a scheme like the Britannia development is providing a range of different outcomes not just jobs and apprenticeships.

(xiii) Members commented it would be useful to see the targets and outputs per project, the action taken and the reasons given for not meeting the targets.

The Head of Employment and Skills also advised that they also push for non-construction apprenticeships too like head office roles. A challenge they face with constructions apprenticeships is the time frame for apprenticeships. An apprenticeship training framework is often a minimum of 12 month – 18 months. Sometimes the build project can be less e.g. 16 weeks / 20 weeks. In these cases its difficult so what they try to do is move apprentices across different schemes. But this is not always possible. The council is looking at moving across boroughs too.

(xiv) Members asked what the council would like to see from national Government to help them to enhance the work they have achieved with the apprenticeship scheme.

The Cabinet Member for Employment, Skills and Human Resources advised the biggest ask would be to have more flexibility with the levy and how it can be used. Hackney uses the levy within the boundaries of the law but in terms of delivering apprenticeships across the borough with partner organisations and businesses, they could do more of this with more flexibility in the scheme.

(xv) Members enquired what this flexibility would entail.

The Cabinet Member for Employment, Skills and Human Resources advised it would entail being able to use the levy in different ways and being able to share apprenticeships. Having the ability to deliver more part time flexible apprenticeships. The council is managing to do it for their scheme but not all businesses can make this provision.

(xvi) Members enquired if companies could donate or spend their apprenticeship levy vouchers with the council?

The Head of Employment and Skills informed the Commission the apprenticeship levy could not be used to pay an apprentice's salary. For SMEs this was a big barrier. Companies can transfer up to 25% of their levy. The council is currently helping to support companies to transfer the levy through the network. Locally some larger organisations (including the council) transfer money to smaller companies (SMEs). The officer explained the ability to make the transfer to another company is not a simple process so the council is providing support to enable this locally.

In discussions Members commented the complexity of the process is limiting the ability of other companies to do this and the council too. Members highlighted that Hackney borough would benefit from that type flexibility in the scheme to help support SMEs that would like to offer apprenticeships.

In discussions Members commended the journey of the council in relation to establishing the corporate apprenticeship programme, reflecting the Cabinet member has taken it from the scrutiny review through to implementation by Cabinet.

(xvii) Members enquired about the scope to share with other neighbouring boroughs the information about how Hackney has established a successful apprenticeship programme and its best practice.

The Cabinet Member for Employment, Skills and Human Resources thanked Members for the recognition of the journey. In terms of sharing the experiences of Hackney the Cabinet Members informed the Commission she is a member of, a number of, London wide boards that meets quarterly. At these meetings they discuss the apprenticeship programmes. They also share their experiences, data and the breakdown of information collated.

From the London wide discussions the Cabinet Member has observed that when the apprenticeships programmes sits within HR in an organisation it has not necessarily made same level of progress like the Hackney scheme. The Cabinet Member pointed out in Hackney they have a dedicated employment and skills team that manages the apprenticeship programme and looks after the apprentices. They are key to driving up the standards and making it an award winning scheme.

The Cabinet Member pointed out having it sit within a dedicated team is extremely important and having corporate and political oversight makes a difference to achievements with the scheme.

(xviii) Members made the following enquires:

a) How closely do you work with the national apprenticeship body?
b) In relation to supporting apprentices. If an apprentice is unsure of what apprenticeship to apply for what guidance and advice is offered in regards to training and work or the type of apprenticeship to go for.
c) How many disability confident employers are part of the network and how many people with a learning disability or disabled are support through the programme?
d) What support is offered at application stage to apprentices when they apply?
e) What mental health support is available to apprentices?

The Cabinet Member for Employment, Skills and Human Resources advised at application stage the employment and skills team give pre application support and they hold open days – they have held an apprenticeship fair. There is an assessment day where the team will talk through the roles that exist, what apprenticeships are available and what might suit the individual - taking into consideration their skills, experience and their interests. The Cabinet Member pointed out it is not uncommon for a person to come with one apprenticeship in mind but ending up with another apply for a more suitable apprenticeship and it has worked better for them.

In regards to the disability confident employers. The council is a disability confident employer. This is not a criteria for membership to the network. Therefore they would not turn away an employer if they were not disability confident employers.

(xix) Members enquired if the criteria included a set list of standards or was this bespoke to each employer?

The Head of Employment and Skills confirmed there is a list of standards.

The Cabinet Members offered to share the list of standards with the Commission.

ACTION	**Cabinet Member for Employment, Skills and Human Resources to send to the Commission the list of standards for the apprenticeship network membership.**

The Head of Employment and Skills advised they have a supported internship for people with a disability. This is currently in partnership with the Homerton

NHS Foundation Trust University Hospital. The aspiration is to grow this programme in line with the inclusive economy strategy aims.

The officer pointed out where the Council has social value leverage they will ask employers if they can accommodate work placements for a person with a disability.

The Cabinet Member for Employment, Skills and Human Resources confirmed the council does not work closely with national scheme.

The Head of Employment and Skills informed the Commission the manager has provided training to the Civil Service on how to operate an apprenticeship programme.

The Cabinet Member Employment, Skills and Human Resources advised they offer general mental health support to all staff through HR policies. Mental health support was not covered by one specific policy through various HR policies.

The dedicate apprenticeship team within employment and skills provide pastoral support and works closely with the apprentices.

(xx) Members enquired if the pastoral support was assigned throughout the time of the apprenticeship.

The Head of Employment and Skills advised there is training support given to managers hosting an apprentice in addition to the pastoral support to apprentices.

(xxi) Members enquired what proportion of apprentices have an Education Health Plan (EHP) or are on the SEND register within the current scheme.

The Cabinet Member for Employment, Skills and Human Resources confirmed the council does have a supported internship for residents who have a learning disability.

The employment and skills team is working closely with the HLT SEND team to consider where an internship might be suitable for some people. They also consider where the funding support attached to the plan might be used to support an internship.

The Head of Employment and Skills informed the Commission they currently have 8 people employed by the Council and the Homerton Hospital. The vision is for the numbers doing the internship to grow. The employment and skills team is in the process of recruiting a member of staff to work with the SEND team to visit schools to talk to parents and young people about the pathways into supported internships.

(xxii) Members enquired how the council envisaged building up capacity for this scheme going forward and if they had expected outcomes in mind?

The Head of Employment and Skills informed the Commission the aim is to have as many people as possible aged 16-25 with a plan to consider employment and to move into an internship. This would involve a culture shift and change in mid set from seeing SEND young people aged 25 plus slip out of support. This would also require more supported internship placements. To establish this programme the council has led by example and is talking to business. Through the inclusive economy strategy work they will be seeking to influence and navigate business to think about how they can host supported internships.

The Cabinet Member for Employment, Skills and Human Resources pointed out it was important that the Council's workforce is representative and this was a key step towards achieving this. This work was about improving the employment experience for the proportion of the workforce within the borough who have a disability.

(xxiii) Members referred to the success of network and enquired about the council's framework for measuring success or a timeline for evaluation? Members also enquired if the evaluation would be carried out externally or was it an internal process?

The Cabinet Member for Employment, Skills and Human Resources advised they are having conversation to consider the best methods for evaluation. Currently there is no further detail to report.

The Head of Employment and Skills informed this would also form part of the work for the inclusive economy strategy.

Members commented it was important to establish what will be measured from the outset and what the Council expects to achieve in year 1, year 2 and year 3.

(xxiv) Members asked for further information about the work experience pilot for residents aged 50 and over?

The Cabinet Member for Employment, Skills and Human Resources informed the Commission they wish to deliver a training programme that is similar to the Hackney 100 programme and delivers against 2 of the Council's manifesto commitments.

The Council has discussed having 2 cohorts. One cohort will include ESOL learners and residents over 50 years of age (launching in the next few months). The council is looking at tailoring the provision delivered by adult community learning services. The second cohort will be 16-24 year olds (launching later this year - September).

(xxv) Members enquired how many people would be in a cohort.

The Cabinet Member for Employment, Skills and Human Resources confirmed they are planning to have 8-12 people in a cohort.

(xxvi) Members asked for further information about the drivers for the integration of the adult learning and employment and skills services.

The Cabinet Member for Employment, Skills and Human Resources informed Members some of the drivers are linked to the changes in the adult education budget, changes within labour market, changes in the welfare system and political priorities. The Council's aspiration is to consolidate services to deliver the employment outcomes they envisage in the 2018 manifesto commitments.

The outcomes will be the delivery of employment opportunities and having a pathway from adult education courses to the employment skills discussed.

(xxvii) Members enquired if the Council was making a saving from the integration and if it was making savings would they be reinvested in adult education.

The Cabinet Member for Employment, Skills and Human Resources confirmed there will be savings from the integration but this was not the driver for the change. The Cabinet Member confirmed savings would be reinvested in adult education services.

(xxviii) Members asked why the integrated approach for the 2 services was considered the best option to achieve the outcomes.

The Cabinet Member for Employment, Skills and Human Resources advised there was some duplication between the 2 teams. The employment and skills team has grown since the first set of mayoral manifesto commitments in 2016. The council does need to think more about how the 2 services work together. There is regular liaison between the 2 teams. The council wants to be clearer about adult education outcomes and have a pathway for adult learners to move into the employment opportunities.

The Head of Employment and Skills added that another driver was the division of the adult education budget by the GLA. The GLA was moving towards a more outcomes based approach. The officer highlighted whilst the funding remains constant they are looking at a range of outcomes which includes some of the traditional outcomes and more measurable outcomes like employment. This is one of the reasons why several councils have looked at this type of integration as an option. Hackney Senior Management Team considered a range of options from having separate services to a deeper level of integration than they are pursuing now. The officer pointed out the curriculum team would remain untouched in adult learning and will continue to have a separate management structure.

(xxix) Members suggested the Cabinet Member returns at a future date to give an update on the integration and how they have managed to maintain the long term ambitions of employability alongside the value of adult learning.

The Cabinet Member for Employment, Skills and Human Resources agreed to return with a further update.

The Chair commended the work of the Cabinet Member and the council teams in relation to the development of an award winning apprenticeship programme and adult learning services.

The Cabinet Member for Employment, Skills and Human Resources placed on record her thanks to all the employment and skills staff for their work.

6 Cabinet Member Question Time - Planning, Culture and Inclusive Economy

6.1 The Chair welcomed to the meeting Councillor Guy Nicholson, Cabinet Member for Planning, Culture and Inclusive Economy from London Borough of Hackney.

6.2 The Cabinet Member provided written responses to the questions submitted in advance of the meeting. They were related to Community Infrastructure Levy and Hackney Walk. The reports in the agenda were taken as read and the discussion moved to questions and answer.

6.3 In reference to Hackney Walk the main points highlighted were:

6.3.1 The commercial ownership has changed and was transferred to Inguia Capital Group (ICG). Originally commercial ownership was with Hackney Walk. This was transferred it to Lab Tech who have recently transferred it to Inguia Capital Group (ICG).

6.3.2 Officers explained in terms of ownership Network Rail hold the freehold. The commercial assets were passed to a company called The Arch Company last year to manage. Arch Co commenced a 150 year lease from network rail last year.

6.3.3 Hackney Walk purchased a 25 year lease in 2016.

6.3.4 The Arch Company is a new company that manages network rail's assets. Approximately 5000 arches.

6.3.5 The Hackney Walk lease for 25 years was passed to Lab tech who have now passed the ownership to ICG.

6.3.6 The Council is proposing to meet with the new lease owners in the coming days. In addition it was noted the Council's Head of Economic Regeneration has regular meetings with The Arch Company and Network Rail.

6.3.7 The officer pointed out the current planning permissions for the Morning Lane arches have a fashion use clause. There means the current use is only permitted for fashion use. The council would like to see this changed and was working with the previous owners to include in their plans for the site obtaining a change in use to mixed use.

6.3.8 The Council supports changing the use to mixed use.

6.3.9 The Council was expecting Lab tech to put in a planning application for change of use. The Council will discuss the plans for the site with the new commercial owners.

6.3.10 The council is not considering acquiring the lease or properties.

6.4 **Questions, Discussion and Answers**

(i) Members referred to point 8 on page 30 of the report which highlights that the funding pot would have 2 elements - borough wide and ward level. Members made the following enquires:

a) How the fund would be allocated for the 2 elements and if it would be an equal distribution per ward?

b) For the borough wide how will this be calculated in relation to the ward?

c) Will it be 50% ward element and 50% borough wide?

The Cabinet Member for Planning, Culture and Inclusive Economy advised in regards to the Neighbourhood CIL the detail about the distribution of the funds is still being developed.

The Cabinet Member pointed out the Commission could be involved in providing their thoughts to inform officer discussions in shaping the Neighbourhood CIL allocations in terms of a) what it can look like, b) how its monitored and the focus for its use to the community.

The Cabinet Member referred to the Hackney a Place for Everyone (HAPE) consultation which highlighted Hackney has an inclusive community. One of the assets supporting this inclusivity and helping to build relationships in the community is a number of major cultural events in the borough e.g. Hackney Carnival.

The Cabinet Member highlighted the event has grown over the years and this year the numbers were quite significant. The challenge for the Council now, is to look for other investors into the Hackney Carnival. The last event was planned with the MET because the event classification has been moved up to being one of the leading cultural events for London. This reclassification means elements of the policing costs fall to the MET through the GLA MET police funding. However it was noted, as the event gets bigger it needs more resources in all aspects from the organising stage through to the management of the day e.g. volunteers, participation programme etc.

This is starting to raise questions like the frequency of the event. The Cabinet Member pointed out the council could choose to have a rotation like the Glastonbury event which has 3 years on and 1 year rest. These conversations will help shape the future event and the future allocation of resources. From there the council can consider what level of CiL resources could be used as a contribution towards the event. The Cabinet Member assured the Commission not all the funding resource would be spent on the carnival.

The Cabinet Member pointed out there are legalities on how they can deploy the funds and stipulations on what they can spend the funding on. Therefore it will be important to link the investment back through to the inclusive economy strategy and other relevant policies. The other aspect is to ensure the commissioning framework recognises the aim which is to bring people together.

As the borough changes - new developments come on stream, new neighbourhoods are formed or evolve and new members join the community. The council can consolidate and broker relationships between the existing and new communities, through the Neighbourhood CiL investment, the Inclusive Economy Strategy and Cultural Strategy.

Therefore it should be noted that the Neighbourhood CiL covers different areas of spend to that of other forms of investment like the Section 106, which covers employment, training and skills as outlined by the Cabinet Member for Employment, Skills and Human Resources.

Taking this into consideration what has been highlighted is the need for an equitable distribution across the borough. The Cabinet Member pointed out if the CiL was spent based using its current criteria and based on generation areas (mainly from 2 Wards in the borough). This would not lead to an equitable distribution of investment across the borough. It was noted there are contributions from other wards in the borough but largely most of the contributions come from developments in the southern part of the borough.

It was also pointed out that the Woodberry Downs development was exempt due to then level of affordable housing and the community infrastructure portfolio. The level of investment in this scheme makes it exempt from Community Infrastructure Levy (CiL) contributions.

It was also highlighted that the areas covered by the London Legacy Development Corporation (LLDC) are also exempt from making a CiL contribution to the borough. The CiL generated in these areas currently goes to the LLDC's CiL funding pot not the borough's CiL funding pot.

(ii) Members referred to the aim for the CiL to be aligned with community priorities. Members made the following comments and enquires:

a) Members commented there are a number of community groups in wards doing initiatives and looking for funding to supplement their work.

b) Members referred to the officer group looking at priorities and asked about the resident engagement with this group to help shape the priorities?

c) Members also asked about the resident engagement for ward level funding too?

d) If the council proposed to have a minimum application amount or a staggered grant that local people could apply for?

e) Asked how the Council was planning to work with local residents to support people to apply for the funding outside of VCS organisations? Making it available to a wider group of stakeholders.

The Cabinet Member for Planning, Culture and Inclusive Economy advised the next 4 months will be spent shaping the Neighbourhood CiL allocation. The Cabinet Member welcomed contributions from the Commission to help shape the development of this work.

The Council is learning about allocation from the Shoreditch Art funds for the 2 Hoxton Wards. This sum of money was accumulated over the last 2 years (under Section 106 for public arts). The pot of funding is currently being managed by the area regeneration and cultural development team to connect the arts and cultural sectors in the 2 wards. Although there is a slightly different legal regime for Section 106 compared to Neighbourhood CIL. This will help all parties understand the required accounting, reporting and activities needed. This aims to redefine art in the context of it being a people led experience and not necessarily a piece of art work in the community. In this instance this is being led by arts organisations.

Notwithstanding this, it did not mean they would exclusively focus on a cultural investment fund from the Neighbourhood CiL. But that the Council was thinking about how they could create a small grants initiative that fulfils the criteria around bringing people together to address neighbourhood change at a local level and in a meaningful way; whilst still being accountable.

This will need to be monitored by the council but having a role for professional artists, arts organisations, cultural practitioners (some of which have networks) and also use this as an opportunity to create match funding - this can be time not necessarily money- as a criteria to support residents. This will ensure there is an opportunity to help, compliment, assist and enhance projects.

The idea is that there is a small scale portfolio alongside a medium scale portfolio. That being said the larger scale events like the Hackney Carnival become a separate entity from a separate funding source.

The Cabinet Member pointed out there will be a criteria that will look at wards where there may be no applications. The council will then work with the community to bring in initiatives to help develop that activity or enable residents to put forward a programme.

The Chair asked the Cabinet Member to liaise with the Commission so they can contribute to the development of the process for the Neighbourhood CiL allocations over the next 4 months.

ACTION	**The Cabinet Member for Planning, Culture and Inclusive Economy to liaise with the Commission about contributing to the development of the process for the Neighbourhood CiL allocation over the next 4 months.**

(iii) Members made the following enquires:

a) **Asked about the amount proposed for investment in cultural activities?**

b) **Asked how the council proposed to avoid easy / cosmetic investment that usually had limited impact and does not result in sustainable inclusive activity or can be quite costly to maintain?**

c) **Referred to the objective of bringing people together and asked if the council would be open to looking at other types of activities outside of specific cultural activities. Specifically if these activities could be considered as fulfilling the aim of bringing people together e.g. using communal gardens.**

d) **Referred to the fact that 80% of the funding pot will go on big infrastructure. Members asked about the criteria for the investment on big infrastructure work?**

e) **Taking into consideration the Council's ambition to be carbon neutral. Members asked what sustainability requirements the council applies to the CiL?**

The Cabinet Member for Planning, Culture and Inclusive Economy informed the Commission the total infrastructure bill for the borough is currently estimated to be about £1 billion. The CiL levy has raised £24 million locally, this indicates a big gap in the funding required to complete the physical infrastructure needs. Therefore the focus must be on delivering collective policies like zero carbon, reducing emissions as well as investment into wider public realm – like open parks and public spaces.

In reference to the question about cosmetic investment. The Cabinet Member explained this was the reason why the Neighbourhood CIL was focused on people activity investment rather than the infrastructure activity.

The fund does not intend to create unsustainable schemes in a fiscal or physical sense. The Cabinet Member pointed out as long as there is development in the borough the pot will continue to increase. The plans for the funding pot are being developed in line with the timeline for this Council's administration - £3.5 million – at the end of this administration they expect the funding pot to be replenished.

Generally the £3.5 million Neighbourhood CiL is there to commission people led activity. Some will be used to fund the Hackney Carnival although it will not be the primary focus of the fund.

The challenge for the council with this work is to consider how to take development, mentoring and enabling and turn that into some form of sustainable platform going forward. Rather than it just being a great onetime event for the community.

The Cabinet Member pointed out 2 Hoxton Wards have a funding pot for cultural work. Having this is enabling the criteria to be tested. The learning from this journey should help to identify what an organisation should do to create a lasting legacy with the community.

(iv) Members commented the council has been accumulating the Neighbourhood CiL since 2015 and now the funding pot has been established. Members asked how will it be spent and why had it taken so long to identify how it will be spent?

The Cabinet Member for Planning, Culture and Inclusive Economy informed the Commission the legislation about the Neighbourhood CiL focuses on why the levy should be claimed from developers and new developments but it is vague about what happens after the pot has been accumulated.

The Cabinet Member explained there was no policy framework in place to support the spend criteria. This is in place so there is now a basis to invest that money. This should enable there to be a more equal distribution across the borough.

(v) Member referred to the transparency and political oversight of the fund. Members pointed out that Hoxton East and Shoreditch have benefited from CiL investment but it was not very clear the investment would come from a CiL contribution. Members asked how the Cabinet Member had worked to include political oversight in the development of the structures and frameworks and in the investment decisions of the CiL.

(vi) Members pointed out local ward councillors would be a good sources of information or could help support the decision making to ensure the right investment decisions are made.

In response to the first question the Cabinet Member for Planning, Culture and Inclusive Economy agreed. He highlighted that the Mayor concurs with the points made by Members and has also questioned the political oversight in decisions made. The Cabinet Member pointed out the legal oversight is in place the Council is meeting its legal duties in relation to this fund.

The Cabinet Member welcomed the desire for political oversight on spend and would reinforced the message from the Commission. The Cabinet Member understood the desire from Members to be clear about why project B is getting Section 106 or CiL funding in comparison to project C.

The Cabinet Member agreed this was currently missing in the process and will be addressed in the next 3-4 months.

The Cabinet Member pointed out there is a very clear corporate structure and currently the political oversight is in the form of retrospective reporting on spend in the Capital OFP report sent to the Cabinet meeting.

(vii) Members asked if the Inclusive Economy Strategy would act as the framework or a driver for the Neighbourhood CIL, CiL and Section 106 allocations.

The Cabinet Member for Planning, Culture and Inclusive Economy confirmed this was for the Neighbourhood CiL. Although the strategy will also cover Section 106 and CiL.

(viii) Members referred to the list on page 31 in the agenda referencing 2010 regulations. Members pointed out this list did not mention any of the sustainability points they have discussed in the meeting. Members highlighted although the funding pot for Neighbourhood CiL is small having greening activity for pocket parks around the borough could still be extremely useful.

The Cabinet Member for Planning, Culture and Inclusive Economy clarified if they was creating pocket parks this would be an infrastructure activity and fall under CiL investment. The Cabinet Member clarified if it was to fund resident led activity in the pocket park this would be Neighbourhood CiL. To build a pocket park would be classified as an infrastructure project.

(ix) For clarification Members asked if there was a project / activity that was about maintaining an infrastructure through resident activity would this be Neighbourhood CiL.

The Cabinet Member for Planning, Culture and Inclusive Economy advised it could be Neighbourhood CiL or something of that nature.

6.5 **Hackney Walk Questions, Discussion and Answers**

(x) In discussions Members pointed out the previous businesses based in Hackney Walk Morning Lane sold products that were out of the price range of local residents. Members urged the council when thinking about future plans to have conversations with the new commercial owners about having businesses that the local community can relate to and will find accessible. Members enquired if the council would be having conversations with the new owners about this?

The Head of Economic Regeneration confirmed they are having these conversations with the new owners. The regeneration team agrees having the right mix of businesses for the local community was really important. Although in the planning application process this was not in scope or within the role of the planning team, it would be a key objective for the regeneration team.

The regeneration team proposes to work with the planning team to have conversations about requiring some form of letting strategy from the new owners linked to the planning application. This could require a submission to the regeneration team to satisfy the letting strategy condition.

(xi) Members asked for clarification in relation to the properties being discussed and referenced as Hackney Walk.

The Head of Economic Regeneration confirmed the properties referenced in the report as Hackney Walk related to the Nike store building, all the arches and the other book end building opposite the Nike building.

(xii) Members pointed out that retail is under huge transformation and needs to consider different uses. Members asked if the council had an idea when the new commercial owners would put forward new proposals.

The Cabinet Member for Planning, Culture and Inclusive Economy referred to the arches in Boeheim Place and pointed out this was still managed by Hackney Walk (Dukeminister). Although it has higher occupancy levels it still requires a subsidy to keep it active. The Cabinet Member pointed out this is being subsidised by the current commercial owners not the council. However Boeheim Place is providing a very different environment to Hackney Walk in Morning Lane and equally giving people a different experience too.

The Cabinet Member acknowledged although it was a short distance between the 2 places it appears to have been difficult to fill the units and create the experiences that encourages people to want to work and shop, socialise there.

In relation to the employment statistics for Morning Lane the Council has noted that out of the 160 employments roles 44 are Hackney residents. The Cabinet Member credited the joint working of the employment and skills and regeneration teams in building the relationships to enable this achievement.

(xiii) Members commented that the council has made some contribution towards the refurbishment of Hackney Walk. Members referred to The Arch Company plans to develop a tenant charter and that it would cover all the properties under its stewardship (5000 plus). Members pointed out it might not work for some areas and referenced a consultation about this by the company last April. Members asked if the council had participated in the consultation and if the Council has seen the tenant charter to consider if it fits well with Hackney.

The Cabinet Member for Planning, Culture and Inclusive Economy confirmed the Council did make a Section 106 contribution of £135k towards the investment. The Cabinet Member pointed out Hackney Walk and the Mayor of London Regeneration fund invested over £16 million.

The Cabinet Member confirmed excluding Hackney Walk the borough has other arches that fall under The Arch Company which the tenant’s charter would apply to. For these arches the Council’s regeneration team have been working with The Arch Company to ensure the charter is more sensitive to the local economy.

The Cabinet Members also pointed out there are other arches in the borough run by TfL too. TFL are managing their own commercial property portfolio and have expressed a desire to be a more considerate commercial landlord.

(xiv) Members asked with hindsight of the last 9 years. Is there anything the Council should have done differently in relation to Hackney Walk?

The Cabinet Member for Planning, Culture and Inclusive Economy explained the investment package into Hackney Central was quite extensive. This also included investment in the Narrow Way prior to the pedestrianised walk way. In addition to that over 30 business undertook direct investment, getting support with retail advice into improving their business marketing strategy and shop front improvements. There was also public realm investment in and around

Hackney Central. The package provided some good investment and positive outcomes from that original investment.

The fact that Morning Lane is an element of that investment that is struggling has been frustrating. Although this is a challenge. From the Council's prospective they have an effective regeneration team that is working to change this.

The Chair asked for the Cabinet Member to provide feedback following the meeting with the new owners of Morning Lane Hackney Walk.

ACTION	**The Cabinet Member for Planning, Culture and Inclusive Economy to provide feedback on the outcome of the discussions with the new commercial owners for Hackney Walk Morning Lane.**

(xv) For clarification Members asked if the 5.3 million from the GLA was all spent and part of the £16 million spend package referenced.

The Cabinet Member for Planning, Culture and Inclusive Economy confirmed the GLA funding was all spent and was part of the £16 million investment into Hackney Walk.

7 Making the Local Economy Work for Hackney - Recommendation Discussion

7.1 The Chair informed the Commission the scrutiny review report was in draft and that he would circulate the draft report on email to start the Commission's sign-off process.

7.2 Members talked about including political oversight as a recommendation in their review report. The Commission will consider making a recommendation about political oversight in relation to the inclusive economy strategy work in their scrutiny review report.

8 Skills, Economy and Growth Scrutiny Commission 2019/20 Work Programme

8.1 The Commission discussed the following in relation to the work programme.

8.2 Changes to SEG meeting dates. The remaining 2 meetings have been changed to the following dates.

- **Tuesday 25th February 2020**
- Move April meeting to March. This has been changed to **Wednesday 25th March 2020**. This date does fall into Purdah by 2 days.

8.2.1 The Chair informed the Commission the February meeting will be an introductory session to the topic of Just Transition which will be the Commission's new review. The Chair explained this session will provide information about the topic (as outlined below) and help the Commission to define the scope of the review.

- Understand the topic area
- Any best practice
- What research has been undertaken
- What the Unions think about the topic.

8.2.2 The Commission discussed and agreed the guests to invite for this session. Members suggested having experts, locally focused groups and the Council come and speak on this topic at the meeting in February. Members suggested inviting the Hackney ZEN project.

8.2.3 Members highlighted when they commence the review they want to find SMEs and local SMEs (if possible) who are innovative in the area of sustainability to participate in the review.

8.2.4 The Chair asked Members to send through any further suggestions on email to the overview and scrutiny officer.

Members agreed.

8.3 In regards to the Cabinet Member question time discussion under item 6 and the offer for the Commission to participate in the development of political oversight for the CiL. Members wanted to follow this up as an action for the Commission. Members discussed suggesting a working group is set up over the next 3-4 months to feed into the officer's work on political oversight.

8.3.1 Members wanted to ensure the allocation of CiL and Neighbourhood CiL has a criteria that is clear and transparent, the application process is communicated to all residents and that it is not only allocated by officers there is councillor involvement too.

8.3.2 Members discussed and agreed to write to the Cabinet Member for Planning, Culture and Inclusive Economy to ask him to confirm the role local councillors or the Skills, Economy and Growth Commission the development period over the next 3-4 months.

ACTION	**The Chair to write to the Cabinet Member for Planning, Culture and Inclusive Economy to confirm the role of councillors or the Commission in exploring how the political oversight is shaped.**

9 Any Other Business

9.1 None.

Duration of the meeting: 7.00 - 9.15 pm

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Hackney

Skills Economy and Growth Scrutiny Commission 25th February 2020 **A Just Transition To A Greener, Fairer Economy in Hackney**	Item No **5**

Outline

The Skills, Economy and Growth Scrutiny Commission will be commencing a scrutiny review to look at Just Transition to achieve a fairer greener economy.

Hackney Councillors approved a motion to do 'everything within the Council's power' to deliver net zero emissions across its functions by 2040. The move to decarbonise our economy has the potential to offer exciting opportunities for Hackney but at present, without a comprehensive just transition policy to deliver the necessary support and impetus for change, means that some of our most vulnerable businesses and residents can be left behind.

The Commission is discussing this topic with the council, academics and think tanks who have looked at this area in detail to get an understanding of the policies and practices being recommended to help create a fairer, greener economy.

Invited guest

- Tim Page, Senior Policy Advisor, from the Trade Union Congress (TUC)
- Rebecca Newsom, Head of Politics, from Greenpeace
- Nick Robins, Professor in Practice - Sustainable Finance from the London School of Economics and Political Science (LSE)
- Cllr Jon Burke, Cabinet Member for Energy, waste, transport and public realm from London Borough of Hackney
- Sonia Khan, Head of Policy and Strategic Delivery from London Borough of Hackney
- Suzanne Johnson, Head of Economic Regeneration from London Borough of Hackney
- Laura Parry, Senior Transport Planner from Hackney Zero Emissions.

The discussion will cover

1. Introduction to the concept of Just Transition
2. Why we need Just Transition
3. The route to Just Transition - how we turn this into a reality
4. Best practice
5. Advice/suggestions for the Commission to focus on for a scrutiny review.

In addition to the above points we asked the Council to provide information about the following:

- Council's thinking on Just Transition in relation to its pursuit of building a greener economy
- The Council's Inclusive Economy Strategy and a greener economy
- The opportunities a greener economy presents to the Borough's workforce and businesses
- The challenges of shifting towards a greener economy.

Reports

For this discussion item various reports have been provided as background information. Please see list below.

- How Government Should Address The Climate Emergency – Greenpeace
- Government Investment For A greener and Fairer Economy – Greenpeace
- A Just Transition to a greener, fairer economy – TUC
- Financing inclusive climate action in the UK An investor roadmap for the just transition – LSE.
- Banking the just transition in the UK - LSE

Action

The Commission to note the presentations and ask questions.

GREENPEACE

HOW GOVERNMENT SHOULD ADDRESS THE CLIMATE EMERGENCY

INTRODUCTION

"The Rt. Hon. Gentleman asked about the declaration of a climate emergency. The thing is, I do not know what that would entail. I could stand here and say, "I believe there is a climate emergency," and he could say that, too…The question is: what are we going to do about it?"

The Rt Hon Claire Perry MP,
Minister of State for Energy and Clean Growth, April 2019[4]

We are in the midst of a climate emergency. The world is nowhere near meeting the internationally agreed goal to limit global warming to 1.5 degrees. The last five years were the hottest ever recorded. There are a growing number and intensity of extreme weather events[1]. These are causing millions of people – particularly some of the most vulnerable communities across the world – to suffer huge losses to homes and livelihoods[2]. In fact, we are currently on track to see at least three degrees of warming, which will see billions more people's lives affected. Coral reefs will disappear, crops will fail, people and animals will go hungry.

The UK holds a unique place in history as the home of the industrial revolution and one of the greatest historic emitters of greenhouse gas emissions. We have been the birthplace of some of the greatest innovations, feats of engineering and cutting edge entrepreneurship in the world. We are now one of the leading creators and makers of the new technologies that can massively cut our carbon footprint, power our homes, factories and offices, and protect, harness and utilise the land, wind, waters and sun that are abundant on these isles. Talent, creativity and optimism is needed now more than ever before to avert the very worst impacts of climate breakdown.

The world needs instigators; those who can inspire and pioneer a modern revolution that changes the way the world works. If we are one of the countries that rise to this global challenge, future generations could prosper and flourish. We have the chance now to help lead the world to finally act.

The Intergovernmental Panel on Climate Change has made clear that global emissions must be cut by 45% by 2030 to set us on the right track. Climate scientists have spoken with one voice; we must listen and we must act.

To inspire and help create global change, we need to throw our weight behind our innovators, engineers and builders to transform our economy and society. We need to bring our electricity, transport and heating systems into the 21st century. We need to dramatically increase renewable power, and ensure that communities reap the rewards by creating thousands of new, decent, secure jobs for workers in clean industries. We need to climate proof our homes, factories and offices, making them warm in winter and cool in the summer, which will cut carbon and our bills. We need to protect, nurture and enhance our land and oceans so they can absorb greenhouse gases and allow a wide range of plants and animals to thrive. We need to maintain healthy and sustainable food production, resilient in the face of a changing climate. And we need to consume less in order to cut our global carbon footprint.

Acting locally will have an impact globally. That's why we need to support and properly fund local authorities and communities to deliver the transformation on the scale required. Mistakes made during the dismantling of the UK's coal mining industry must not be repeated. Reskilling workers and supporting their transition from older, more polluting industries to the new green economy should be prioritised. The new industrial revolution could have no better home than here, where the old one took root. But this must not be entrusted to the whims of an unregulated market. It needs to be done fairly and to be steered by a visionary and responsible Government, supported with significant investment.

Finally, the decarbonisation plan must not cut corners through relying on international offsets[3]. Nor should the way we count our emissions ignore aviation and shipping, or the climate impact from imports of palm oil, industrial animal feed or manufactured goods. Any plans to suck carbon dioxide out of the air should be based on what we know works – reforestation, improving soil carbon storage capacity, and habitat restoration, including peatland.

Solar panel technician with drill installing solar panels on roof ©zstock/shutterstock

> "If there was ever an idea that we could approach this as a 'sequential' transition – moving from power, to transport, to heat, to industry and agriculture – then that thought needs to be re-examined… We will need to shift from the current piecemeal approach, relying on departments and sectors to make incremental improvements, to something much more broad-based."
>
> **Chris Stark, Chief Executive, Committee on Climate Change, March 2019[5]**

ROADMAP

Below is a snapshot of the immediate action across multiple sectors needed from Government to take responsibility for our emissions and put us on track to help limit global warming to 1.5 degrees. A cross-economy, joined-up strategy is required. These actions need to be underpinned by a legislative framework requiring delivery of 'net zero' greenhouse gas emissions significantly sooner than 2045, including emissions connected to things we consume like food, which have a global footprint through their supply chain. New Government procurement rules should be introduced immediately to prohibit any future contracts with providers whose business plans are not compatible with limiting global warming to 1.5 degrees.

These measures can be used as an indicator of whether those in power are taking up the challenge to lead international efforts to tackle the climate emergency.

1. END NEW FOSSIL FUEL EXTRACTION AND PHASE OUT EXISTING PRODUCTION

There are more fossil fuels already discovered than can be burned for a safe climate. Searching or drilling for more is simply not an option. The real challenge is supporting those people and communities dependent on existing fossil fuel extraction to have a sustainable economic future.

- Halt new coal, oil and gas exploration and development, including banning fracking
- Refuse all permissions for new or extensions of existing coal mining. All thermal coal mining should cease by 2024
- Cancel the 31st (and subsequent) offshore oil and gas licensing rounds and existing oil and gas licenses on which no work has yet been carried out
- Repeal the duty on the Oil and Gas Authority to maximise economic recovery of petroleum
- Review how fast existing oil and gas production facilities need to be phased down to achieve net zero carbon well before 2045 - and implement phase-down accordingly
- Turn the proposed oil and gas industrial strategy sector deal into the oil and gas transition sector deal. The sector deal should focus on reskilling people to work in renewables and other low-carbon growth sectors
- Terminate all subsidies for oil and gas production, including transferable tax credits and other tax breaks introduced over the last ten years as part of the Government's late-life policy for supporting the fossil fuel industry
- End UK government export finance to any projects that are not compatible with a global zero carbon economy, within the framework of sustainable livelihoods for all citizens. This includes an end to all support for fossil fuel extraction. Fossil fuels currently dominate export finance[6]

2. TRIPLE RENEWABLE POWER FROM WIND AND SOLAR BY 2030

The next decade is critical for extending UK carbon reductions across every sector of the economy. This needs to be driven by the electricity sector, which needs to almost totally decarbonise. The only cost-effective and actually deliverable way to do this is to roll out renewables - in particular wind and solar - so that nearly 80% of our power is generated from renewables by 2030.

The Thanet Offshore Wind Farm is located off the coast of Thanet district in Kent, England. ©Will Rose/Greenpeace

OVERARCHING MEASURES

- Release funds more frequently and in larger amounts from the £557m pot already committed for Contracts for Difference (CfD), to enable renewables expansion on the scale required
- Apply the polluter pays principle and make users pay for the CO_2 they put into our atmosphere by raising the carbon floor price in the power sector from £18/tonne CO_2. The existing policy of raising the price to £70/tonne CO_2 in 2030 should be implemented as far as is required to decarbonise the power sector. The money raised must be channelled into reducing the impact of the price rises on the less well off, for example delivering home energy efficiency
- Establish a long term policy framework for renewables as they move towards delivering 100% of the UK's power needs, guaranteeing stable revenue, even when below market price[7]
- Create a demonstrator pathway for tidal, wave, geothermal and other forms of renewables which have the ability to head down the cost curve with greater deployment
- Ofgem should abandon the Targeted Charging Review of network costs, which loads more costs onto renewable power and does not fully value local and community energy
- Ofgem should be given an overall mandate to speed the transition to a net zero carbon economy

OFFSHORE WIND

- Set a target for at least 45GW by 2030[8]
- Create a commercialisation pathway (through innovation funding and Government financial support) for floating offshore wind, which will significantly enlarge capacity and lower biodiversity impacts
- Provide public support and investment into key parts of the supply chain (e.g. docks and fabrication yards), to enable more rapid deployment and increase local content
- Conduct strategic assessments relating to environmental impacts (to minimise biodiversity impacts), and the potential for shared offshore grid connections to land. Strategic development of offshore connections to lower costs of power transmission could save up to €40bn if offshore wind is developed at scale[9]
- The Crown Estate should make more seabed available for offshore wind development, ahead of other uses such as aggregates, fishing and oil and gas exploration/ extraction (which should in any case be phased out)

SOLAR

- Set a target for at least 40GW by 2030[10]
- Mandate a floor price for the new export guarantee for solar, equivalent to or greater than the average annual spill price paid to large generators. The original export guarantee and Feed In Tariff scheme should also run until the new scheme begins
- Remove unfair business rates tax treatment on solar
- Implement the provisions the UK has agreed to in the EU 2030 package on protecting the rights of citizens to become producers of power

ONSHORE WIND

- Set a target for at least 30GW by 2030[11]
- Reform planning guidance for local authorities to clarify that objections from a minority of people should not be given undue weight in planning decisions
- Allow onshore wind to bid for contracts for power delivery at least cost

3. MAKE SURE THE ELECTRICITY GRID IS EQUIPPED TO COPE WITH A HIGH PERCENTAGE OF RENEWABLES

It is important to ensure the electricity system works efficiently and reliably with a high volume of variable renewable power. This means deploying a range of existing and new technologies to upgrade the grid and balance and store power.

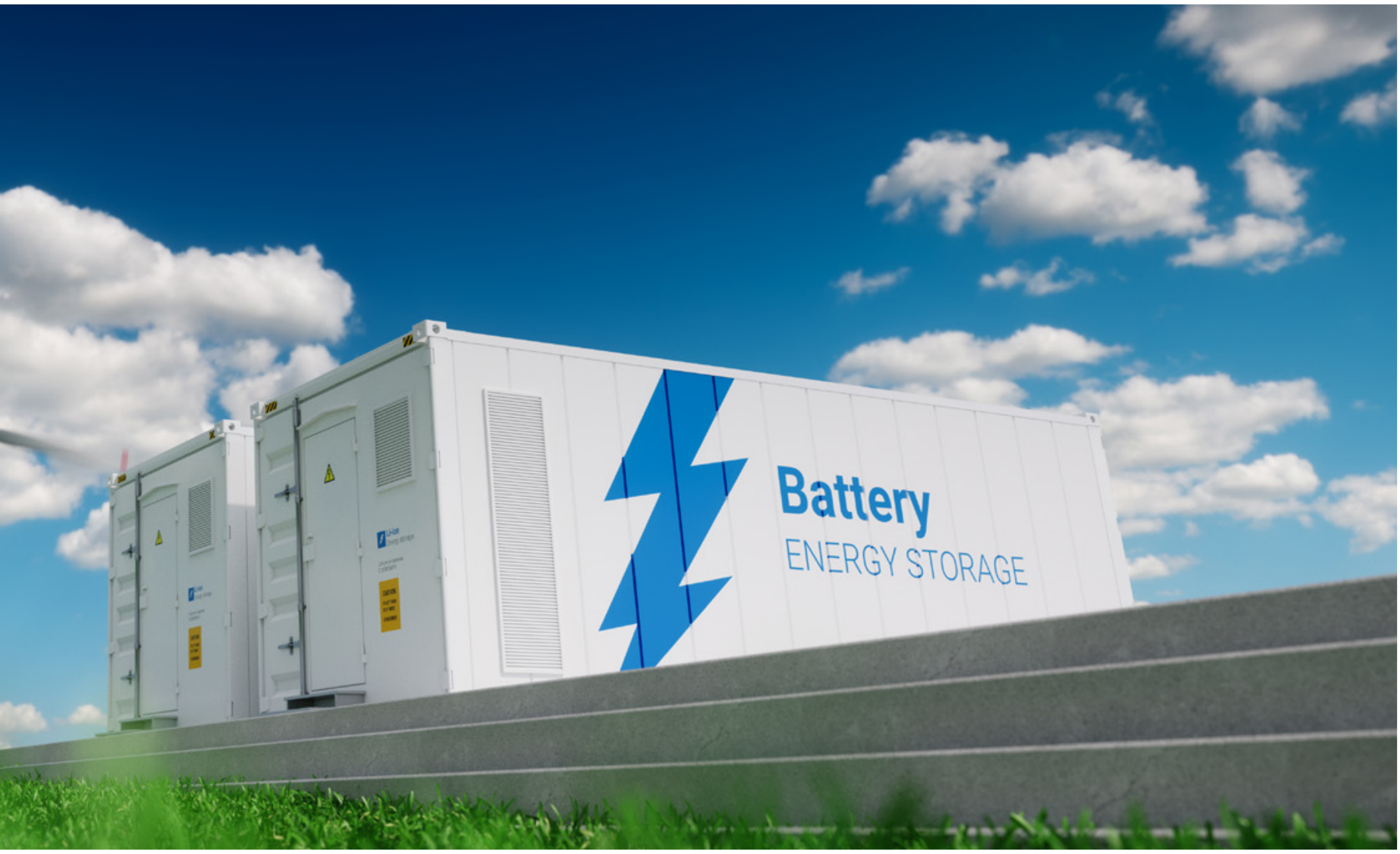
OVERARCHING MEASURES

- Drive investment in storage, smart energy and interconnection with other countries right across Europe to allow our grid and those of other countries to better handle large amounts of variable renewables. Indicative targets should be set for 2030 of 15GW for interconnection, 38GW of storage and 18GW of Demand Side Response (DSR)
- Change capacity market rules so that new technologies like storage and DSR are able to compete fairly, following the EU legal decision that judged the UK to have been biased towards fossil fuel back up generation
- Support an expansion in the role and function of regional grid operators, so that they are more actively involved in managing the energy system – including local trading and balancing, procurement of flexible services like storage etc. – rather than just allowing power to flow on their lines. In effect, Distribution Network Operators (DNOs) should shift to Distribution System Operators (DSO)
- Introduce a flexibility market, compatible with existing auctions for power,

Concept of energy storage system. Renewable energy - photovoltaics, wind turbines and Li-ion battery container in fresh nature. © Getty Images/iStockphoto to incentivise demand response and reduction as a tool for providing system security, rather than simply relying on additional power generation for back-up – with a view to phasing out the capacity market completely.

GRID STORAGE AND BALANCING TECHNOLOGIES

- Smart storage: Remove regulatory barriers to smart power and storage. This should include removing restrictions on "stacking" of revenues for storage projects in the capacity market. This would make it possible for storage projects to secure revenue from several policy mechanisms
- Interconnection: Establish a market framework for interconnection that has lower risks for investors, allowing for further developments whatever the Brexit outcome. For the longer term, draw up a strategic plan for an offshore grid connecting the UK with offshore wind farms and other European countries to maximise offshore wind delivery at lower transmission cost
- Pumped storage: Establish a market framework for pumped storage development, potentially mimicking that for interconnectors
- Green hydrogen: Invest significantly in innovation for green hydrogen and larger-scale energy storage, to support their expansion as a grid balancing option. There are plans to deploy green hydrogen at scale in Germany and the Netherlands[12]



4. DELIVER ZERO CARBON EMISSIONS FROM ROAD TRANSPORT

Transport is now the sector with the greatest carbon emissions. These emissions have remained stubborn in recent years, so there needs to be strong political action now to address the issue. Overall there needs to be a major shift to lower carbon modes of transport - public transport, walking and cycling - which need significant support, plus decarbonisation of all vehicles that remain. Underpinning this should be a recognition that 'transport' is not a good in itself. Communications and connectivity are required for a thriving and healthy 21st century economy; moving people around is only one way to deliver that.

In terms of road transport, technology for decarbonisation is at different stages for different vehicle classes. The challenge for cars and vans is cost of electric vehicles and availability of charging infrastructure. Consequently there is a need to move costs progressively onto fossil fuel emissions, whilst providing reassurance about the availability of charging. Fully zero emission heavy goods vehicles (HGVs) are not available yet, so there is a need for legislation that bears down on emissions whilst providing support for manufacturers to innovate and develop the technology.

Black Electric cab ©Greenpeace

PHASE OUT CARBON INTENSIVE ROAD TRANSPORT

- Ban the sale of new cars and vans with petrol and diesel engines by 2030, with an intermediate target of 35% of car sales by 2025 being zero emission
- Ban all sales of new petrol and diesel HGVs before 2040[13], with compulsory interim CO_2 cuts for new HGVs of at least 15% by 2025, and 40% by 2030[14]
- Require compulsory CO_2 cuts for new off-road machinery and construction equipment that are diesel powered - of at least 40% by 2030
- End the sale of HGVs requiring on-board diesel-powered cooling by 2025
- Stop any biofuels coming into vehicle fuels that are not derived from genuine waste material
- Unfreeze and gradually increase fuel tax over the next decade - the freezing of this tax has cost the Treasury £46bn since 2011[15]
- Increase Vehicle Excise Duty (tax on the cost of new cars and vans) by £300 per year, every year, for high emitting vehicles, with a sliding scale for lower-emitting vehicles[16]
- Develop and move to a new model for paying for road use, which is not dependent on fuel duty, as revenues progressively fall - e.g. road pricing, with lowered rates for rural car drivers
- Introduce a targeted scrappage scheme for households on lower incomes and small businesses in the most polluted urban areas, to support them to switch from their polluting vehicles to cleaner alternatives - potentially a 'mobility allowance' that incentivises active travel and public transport above private vehicle use

SPEED UP THE TRANSITION TO ELECTRIC VEHICLES

- Set a purchasing guideline target for local authority cars to be 90% electric by 2025, and vans to be 90% electric by 2027
- Require that all new cars entering the Whitehall ministerial fleet of vehicles are electric by 2022
- Introduce a comprehensive package of government support and financial assistance to retrain and re-skill workers in the auto industry. 88% of existing workers have skills that are directly transferable[17]
- Work with vehicle manufacturers, unions and local authorities to deliver and invest in a joint-industry production facility for vehicle battery manufacture in the UK

ROLL OUT A NATIONAL NETWORK OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

- Require that all new developments with private parking have a minimum of 30% of spaces with charge points. All existing public parking facilities (e.g. NCP, supermarkets, shopping centres, commercial developments etc) must also provide at least 10% of spaces with charge points by 2021. These are initial targets that may need further scaling up depending on how the car market develops
- Require all new homes with off-road parking to have a smart electric charging point
- Ensure the full budget of £530 million (comprising a combination of both public and private funding) is available for the public charging network to 2030[18]
- Require distribution network operators and local authorities to identify suitable charging sites where grid costs will be low, whilst giving powers and money for local authority costs to be recouped if necessary
- Ensure that as soon as possible all home charging units are smart and can shift charging times depending on supply pressures/surplus
- Require that Ofgem builds in flexibility to the electricity grid, and allows grid companies to invest ahead of the immediate need to stimulate and effectively accommodate faster update of EVs (and electric heating in buildings)

5. SHIFT AWAY FROM CAR BASED TRAVEL, THROUGH MAJOR INVESTMENT IN PUBLIC TRANSPORT, WALKING AND CYCLING

We're no longer living in the days when cars can be considered king. Clean energy is a valuable commodity which should be used very efficiently if for private transport. Roads should not continue to be extended in urban areas to the detriment of communities and wider public health. In designing our towns and cities there needs to be a shift in mindset in favour of public transport - which is more equitable and comes with considerable social benefit. Road space should be preferentially allocated away from cars and towards the lowest energy types of transport, and those which are healthiest, prioritising walking and cycling.

Shifting the UK to a less car-based transport model is a huge job requiring multiple interventions. Even since 2010 the cost of bus travel has gone up much more than the cost of car travel[19]. Better and lower cost public transport is crucial, as is greater investment in walking and cycling, and a shift of power and money to the local level for effective delivery.

Enviro Bus ©Alexander Dennis.com

OVERARCHING MEASURES

- Support a general realignment of transport modes, away from private vehicle use, towards public transport, walking and cycling. Alternative modes should have significant investment and a target should be set to reduce overall UK-wide car mileage by 3% per year - delivering a 30% reduction by 2030[20]
- Require minimum standards for public transport in towns - for example, ensuring every town has an hourly or more regular bus service, operating 7 days a week along major roads and to nearby villages
- Incentivise radical experimentation in public transport access and use appropriate for UK regions. For example, the programme in Tallinn, Estonia, a city approaching half a million people, which has made all bus and tram travel free and delivered economic benefits as a result[21]

FINANCIAL AND PLANNING MEASURES

- Immediately end the £56bn HS2 project[22] and the £15bn new road building programme[23] - releasing funds for local public transport and new / upgraded regional rail networks, especially in the Midlands and the North
- Introduce a target to spend at least 10% of transport expenditure on walking and cycling by 2024[24]. This would allocate around £3.1 billion per year[25] - consistent with recommendations from the National Infrastructure Commission[26], and in line with the amount of investment required to meet the government's existing target to double cycling activity by 2025[27]
- Mandate a workplace parking levy in town centres, generating cash for upgrades to cycling, walking and public transport facilities[28]
- Boost funding for local authorities to reconfigure road space, prioritising greater use and access for public transport, walking and cycling, relative to private vehicle use. Over time, local authorities should also redesign/ re-green key areas of existing road space, as road use reduces overall, in line with the modal shift away from private vehicle use
- Increase local authority funding for bus services back to at least 2010 levels, to ensure greater service reliability and regularity[29]. In practice the amount of money required may well be more, given the requirement to significantly increase public transport provisions. Funding will also come from other local sources like parking levies
- Revise the National Planning Policy Framework and planning guidance to give priority to development on brownfield and urban sites that have accessible public transport links, as opposed to new green site development[30]. Urban planning should ensure that new developments have easy access to medical services, schools and shops to minimise generated transport journeys

RAIL TRANSPORT

- Support regional rail networks to expand, electrify and produce solar power on their own land[31] (which rail networks have the power to do[32])

BUS TRANSPORT

- Re-regulate buses to allow for simpler delivery of a national bus strategy, including requiring all new buses to be fully electric from 2025
- Immediately provide free bus travel for those on income support or low incomes. This service should be extended to more people e.g. students, young people etc. over time, as road space is reconfigured and public transport services increase in reliability and regularity
- Allow local authorities and city mayors to regulate bus services in major urban areas to allow coordination, stability, network effects and single ticketing (like London Oystercard)[33]

FREIGHT

- Eliminate some of the carbon footprint of freight through a concerted strategy to move onto (electrified) rail and e-cargo bikes for 'last mile' delivery

6. ENSURE ALL UK BUILDINGS ARE ZERO CARBON

Making buildings more sustainable is probably one of the toughest sectors to deal with because they are so close to people's everyday lives. Joined-up action between improving building efficiency and heat supply is essential and can only be done effectively at a local level as local authorities are best placed to find the most appropriate way to reduce energy needs and make the heat zero carbon. In turn this means a step change in empowerment, funding and support for local authorities as they develop, gain consent and deliver projects.

UK buildings are generally draughty and leak a lot of energy. Efficiency has some of the greatest potential to improve people's quality of life, through warmer homes and easing the costs of energy bills. Our existing housing stock requires considerable improvement, coupled with stopping building anything that will then need retrofitting in the next 25 years. Both new and old properties need proper inspection and enforcement of standards, which has historically been very weak.

The strategy for supplying green heat is more complex because we need to support the development, trials and cost-reduction of new technologies. We need to scale up known solutions (heat pumps for buildings off gas grid and district heating), trial at scale promising technologies (hydrogen and hybrid systems), and support research and development for new alternatives. District heating gives options in denser urban areas (e.g. geothermal heat). It is currently often deployed using gas, but will need to transition to other zero carbon fuels in the next two decades.

Man installing thermal roof insulation layer - using mineral wool panels. Attic renovation and insulation concept © Getty Images/iStockphoto

OVERARCHING MEASURES

- Establish a Delivery Agency for UK buildings to oversee, coordinate and support delivery of fully decarbonised building stock well before 2045
- The Delivery Agency should establish an inclusive, comprehensive process to involve and orient stakeholders as a national plan is developed, which identifies strategies for different locations and building types, as well as skills development focused on those whose existing skills in fossil fuel heating will be rendered redundant
- The Agency should act as a centralised compliance and enforcement body to ensure delivery against building efficiency standards in new-build but also projects in existing buildings such as enforcement of regulations in the rental sector. Construction below existing standards is already costing new home owners £70-£260 per year extra in fuel bills[34]
- Mandate and support local authorities to produce local plans for delivery of zero carbon buildings

MAXIMISE ENERGY EFFICIENCY

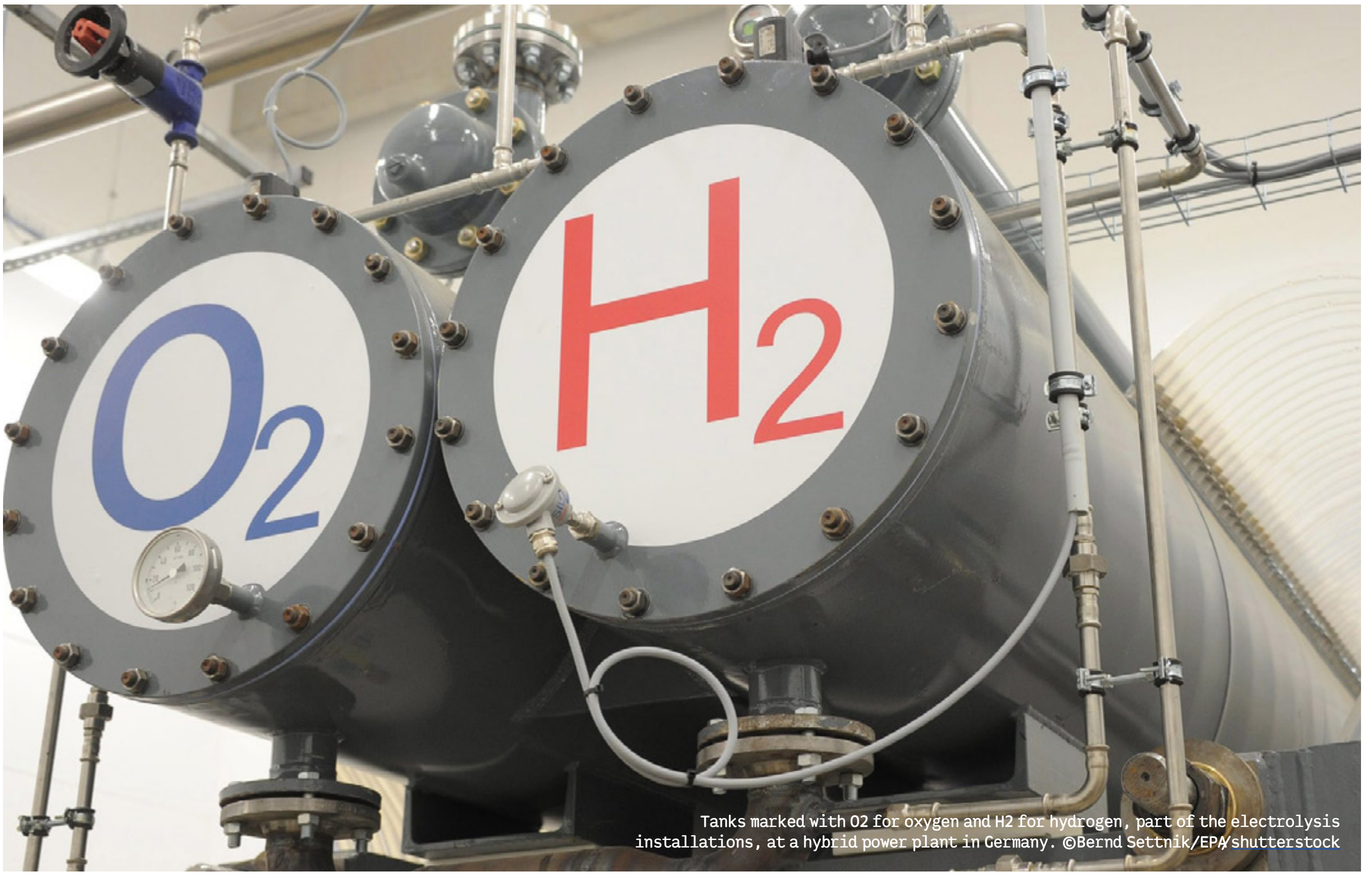
- Match and go beyond EU Eco-design regulations on energy efficiency in electrical appliances[35] - which has thus far arguably been the most effective policy for UK CO2 emissions cuts[36]
- Introduce regulations for new homes to be equivalent to passivhaus standard, and commercial buildings to the same equivalent standard by 2025
- Introduce a regulation for net zero energy in new buildings by 2030 - including development of solar on all suitable new-build roofs
- Make energy efficiency in existing buildings an infrastructure priority and provide funding of £1.7 billion per year for delivery of Government's existing target of EPC band C for all properties by 2035, ideally earlier[37]. This money must focus on fuel poor and social housing in the first instance but then leverage private funds into the able to pay sector. A target should be introduced to deliver insulation in all suitable cavity walls, lofts and solid walls, funded from the £1.7bn/ year pot
- Fund additional innovation projects of around £300 million per year like the roll-out of Energiesprong to drive energy efficiency in existing houses and commercial buildings[38]

MAKE BUILDING HEATING SYSTEMS ZERO CARBON BY 2045

- Ban the use of fossil fuel heating, including gas boilers, in new homes from 2025, in line with the Committee on Climate Change's recommendation[39]
- Set a date for the end of new installations of oil and LPG boilers in existing buildings in off-gas grid locations
- The Delivery Agency should initiate and oversee a large programme of 'action research' to determine the best way to decarbonise UK heating. Suitable processes must be established to learn and evolve solutions from trials, particularly given technological and behavioural/citizen changes and uncertainties
- Establish a programme of large scale trials for both low carbon electrical and hydrogen usage, and provide £3.5bn government investment in district heating over the next decade[40]
- Place an obligation on gas distribution companies to progressively reduce to zero before 2045 the carbon content of the gas they supply
- Provide support for local authority experiments in local empowerment and governance to determine how street and area based solutions can be delivered with local consent
- Establish a new regulatory regime and investment framework for heat, to ensure fair distribution of costs for new infrastructure, and guarantee early adopters are not disincentivised[41]. This could be done via taxation rather than regressively increasing consumer energy bills
- Ensure any bio-energy feedstocks for green gas/ anaerobic digestion are confined to genuine wastes

7. SPEED UP DECARBONISATION OF INDUSTRY, AND ENSURE THE SECTOR IS ZERO CARBON AND CIRCULAR BEFORE 2045

The industrial sector is one of the hardest sectors to fully decarbonise and make more sustainable in its resource use. Each of the many industrial sectors needs to develop its own expertise to find the best approach. In the short term, improving materials use - sometimes known as resource productivity - can minimise emissions. Radical decarbonisation technologies (such as Carbon Capture and Storage (CCS) for low-carbon cement, or steel produced using hydrogen and renewable energy) need to be developed alongside creating markets for them to expand and push down costs (e.g public procurement or introducing new building standards).



Tanks marked with O2 for oxygen and H2 for hydrogen, part of the electrolysis installations, at a hybrid power plant in Germany. ©Bernd Settnik/EPA/shutterstock

OVERARCHING MEASURES

- Ban consumption of all fluorinated gases by 2026. Doing so would be amongst the most powerful policy levers the Government could follow immediately to curb UK emissions
- Create a clear plan with tangible deliverables for decarbonising all heavy industry sectors over the next two decades - building upon and strengthening the existing Roadmaps[42]

INNOVATION AND MARKET DEVELOPMENT

- Support development, testing and market growth for new technologies through establishing and sufficiently funding a network of low carbon heavy industry clusters by 2030, likely to include the locations of South Wales, Humberside and Teesside. This would build on the initiative announced for the first cluster in December 2018[43]. Funding should be focused particularly on supporting innovation in steel and cement decarbonisation, as well as retraining and reskilling workers from the existing sector, to guarantee UK leadership and high quality jobs as the global market for these products is set to expand
- Boost public procurement where possible to encourage the establishment of early markets for low-embodied carbon materials or substitution
- Launch a major cross-sectoral collaborative push with government, local authorities, business and academic institutes in order to develop and test next-generation low-carbon materials[44]
- Support the use of new data sharing and AI technologies to accelerate learning and performance testing
- Mandate markets for low embodied carbon materials, especially in construction as demonstrated by commercial manager Landsec[45]

CIRCULAR ECONOMY

- Set a target to double resource productivity significantly sooner than the Government's current target of 2050[46]. In contrast, Germany has a target of doubling resource productivity by 2020. This would mean that every bit of metal, energy, wood, glass, cotton or plastics consumed delivers twice as much use to society
- Design a metric for embodied carbon in products, especially construction, automotive, and electronics which can be used as enforceable product standards
- Extend the standards currently in EU Eco-design standards so that manufacturers need to improve the resource efficiency of all products and appliances by more than 2% per year through increased lifetime/durability, ability to be repaired and recycled
- Place an obligation on manufacturers of products and appliances to immediately start covering 100% costs of recycling and reuse (and in the short-term waste management) of the materials embedded in them

8. SIGNIFICANTLY REDUCE MEAT AND DAIRY CONSUMPTION AND REFORM OUR AGRICULTURAL SYSTEM

This sector has to respond to a number of emergencies: climate, biodiversity and public health, to name just three. These issues can only be solved through rethinking our food and agricultural system in the round, which is global in nature. We cannot simply focus on improving the efficiency of food production to reduce carbon emissions. The destruction of ecosystems, air and water pollution, disruption of local livelihoods and public health challenges (such as nutritional deficiencies and obesity) must also be factored in and addressed. Ultimately, this means giving land back to nature to store carbon and restore wildlife, shifting away from environmentally destructive agriculture, dependent on high inputs of pesticides, nitrogen fertilisers and industrial animal feed. A more sustainable, healthy and local food and farming model needs to be incentivised that is largely plant-based. All intensively produced meat and dairy should be phased out.

However, this transition needs to go hand in glove with proper safety nets and a transition plan. This means supporting our farming communities to shift to more sustainable production methods, and ensuring that people on lower incomes or in more precarious circumstances have access to affordable, healthier, more sustainable food. Given the scale of change required in this sector, these proposals are just initial suggestions to shift the system. It is vital that Government keeps a close eye on developments and adjusts as we go, being prepared to intervene sharply where the need becomes clear.

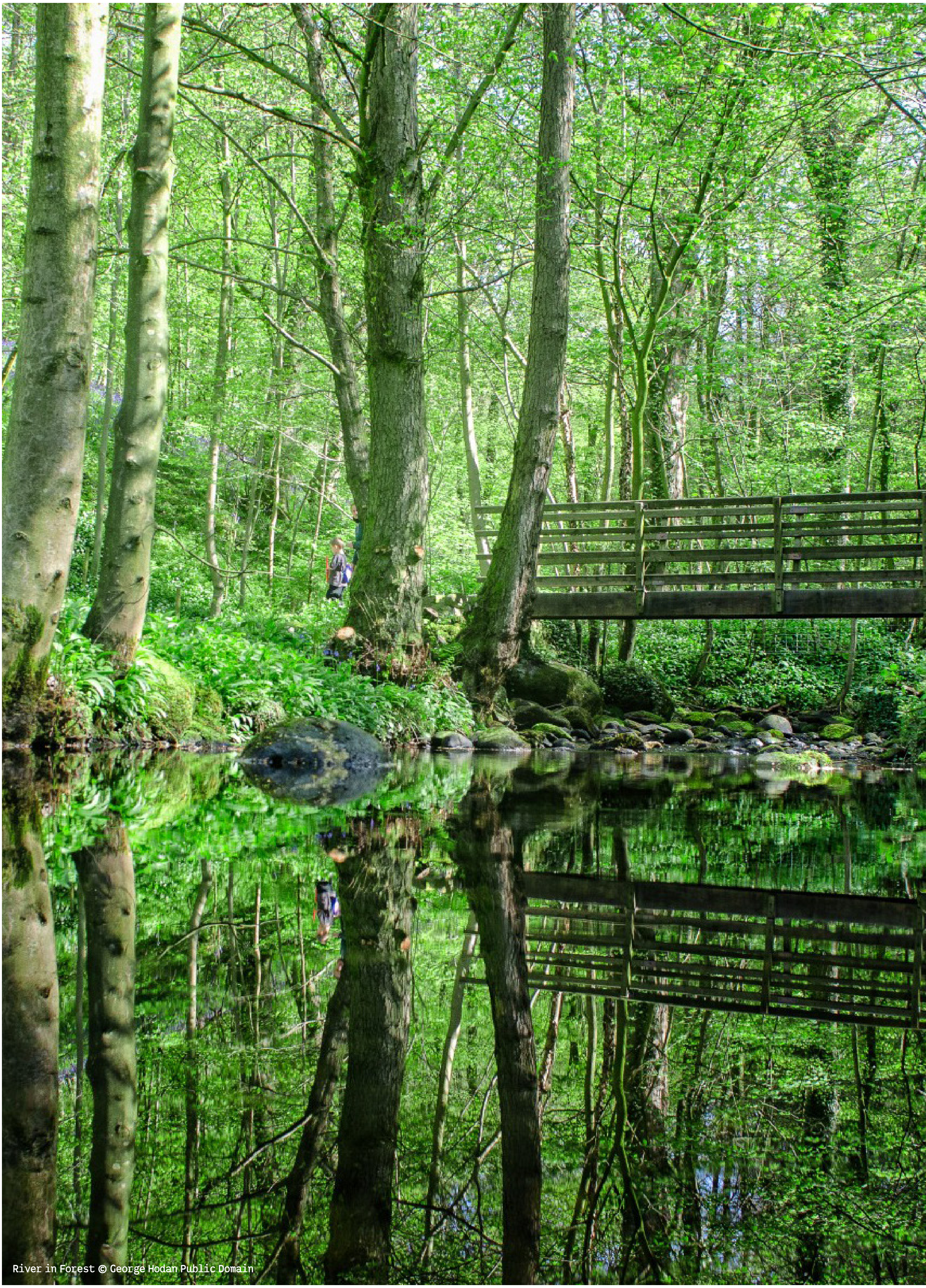

UCSC farm rows, 24 July 2008 ©David Silver/ (CC BY-SA 2.0)

PHASE OUT AGRICULTURE THAT DESTROYS THE NATURAL WORLD

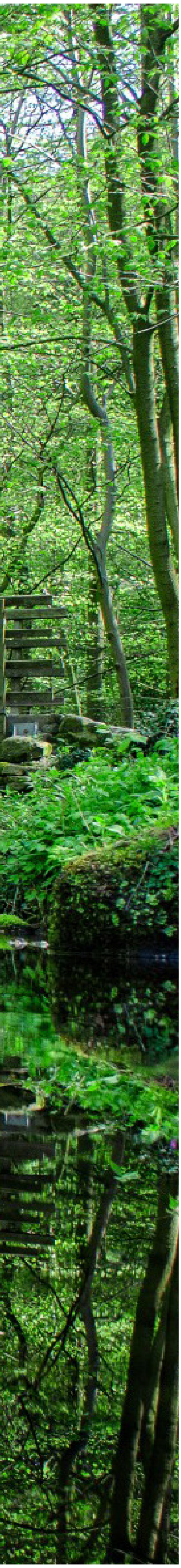
- Introduce a tax on industrial animal feed, which is driving the destruction of ecosystems locally and globally[47]. The tax should rise steadily over time, towards an ultimate phase-out of industrial animal feed by no later than 2030.
- Introduce a tax on artificial nitrogen fertiliser, which would increase over time, learning from examples in Austria, Sweden and Netherlands[48]
- Introduce a taxation regime to reduce pesticide application by at least 50% by active weight over the next 10 years, as achieved in Denmark, with a view to ultimately phasing out pesticide use altogether. In addition, reform pesticides regulation to immediately rule out the most polluting and carcinogenic substances[49]
- Revenue from nitrogen and pesticide taxation should fund a public extension service to support farmers in moving away from high agricultural inputs towards agroecological methods. The Government should also establish a Commission on Farming to ensure the transition away from nature-destructive agriculture including diversification and retraining where required – recognising the integral role of farming and food production to rural economies
- End new permits for large-scale intensive animal production and limit density of animals on pasture fed systems
- Establish consumption based greenhouse gas emissions accounting, where products like palm oil or soya consumed in the UK but produced abroad include the impact of greenhouse gases emitted, in order to deliver a genuinely net zero economy [50]

REDUCE MEAT AND DAIRY AND TRANSITION TO A NEW FOOD AND FARMING MODEL

- Put a target in law of net zero emissions from agriculture and land use by 2040 at the latest[51]
- Introduce targets to significantly reduce meat and dairy consumption, in line with scientific advice (e.g. EAT-Lancet report, which recommends a reduction of red, white and processed meat by 80% from current levels)[52]
- Immediately reform Public Health England and other official UK health guidelines for meat and dairy consumption, in line with scientific advice (as above)
- Use Government spending and fiscal powers to incentivise plant based diets and decrease per capita consumption of meat and dairy. Emphasis should be on reducing consumption of factory-farmed meat and dairy products, with exemptions allowed for local pasture-fed, ecological livestock
- Revenue from fiscal measures to incentivise plant based diets and the tax on industrial animal feed should fund extensive purchase or other support for sustainable, and where feasible locally-sourced, plant based food for public institutions. Public procurement for schools, hospitals, prisons and other public institutions, conform with EAT-Lancet recommendations
- Redirect £3bn of current agricultural subsidy support towards public goods such as agroecology, agroforestry, woodland creation, projects to build soil carbon in degraded agricultural soils and natural ecosystem restoration. Some of these funds should be earmarked specifically for innovation in agricultural techniques and production systems that reduce greenhouse gas emissions
- Progressively reduce and ban biodegradable waste going to landfill by 2025
- Allow treated waste food to be used for animal feed in agroecological pig farms



River in Forest © George Hodan Public Domain



9. RESTORE NATURE TO BOOST CARBON STORAGE

Aside from the intrinsic value of natural landscapes and habitats across the world that we urgently need to restore and protect, ecosystems are a significant store and potential sink for carbon. Restoring nature means taking pressure off the land through a reduction in extractive activities, including demands for fuel, feed and mining. It also means protecting our oceans. The world's oceans absorb almost as much CO2 as all land-based forests and plants combined. If it wasn't for marine creatures removing carbon from the atmosphere as they feed at the water's surface and transferring it to the deep sea, the atmosphere would contain an estimated 50% greater concentration of CO2 and the world would be far hotter. We need to protect and restore space on land and at sea to revitalise wildlife and maximise carbon storage.

RURAL AREAS AND FORESTS

- Work closely with devolved authorities to create a climate and nature-friendly land use strategy for the UK
- Deliver a peatland restoration plan to get all degraded peatland back to favourable conservation status by 2030
- Introduce an immediate ban on burning of blanket bog[53]
- Plant at least 700 million trees by 2030, ensuring species are suitable for local habitats and ecosystems[54]
- Introduce a zero global deforestation footprint target for UK consumption by 2020 – extending to direct supply and indirect trade
- Establish a legal requirement for companies to be transparent about where their commodity supply chain originates – including palm oil, soya, cocoa, beef & leather, pulp & paper and timber
- End land used for supplying industrial animal feed to the UK in order to boost carbon storage and biodiversity in global ecosystems
- Ban biofuels based on food crops for transport, including aviation
- End imports and use of woody biomass for energy, including for Bioenergy Carbon Capture and Storage, unless demonstrated to be from genuine wastes
- Require in the National Planning Policy Framework the creation and enhancement of urban green spaces so that even urban communities can play a part in carbon savings and nature restoration

OCEANS

- Advocate internationally for a strong UN Global Ocean Treaty capable of creating a network of ocean sanctuaries covering at least 30% of global oceans by 2030
- Deliver at least 30% fully protected marine protected areas (covering representative ecosystems) in UK domestic waters, and UK overseas territories, by 2030
- Introduce an immediate moratorium on deep sea mining through halting all further activity within UK exploration contracts, until implementation of a strong UN Global Ocean Treaty providing protection for at least 30% of the world's oceans (covering the full range of marine habitats, biodiversity and ecosystem functions)

Greenpeace activists climb onto the top of a Manchester-London plane after it parked at London Heathrow Airport's Terminal One and cover the tailfin with a banner that reads "Climate emergency NO 3rd runway" in protest against the airport expansion for short haul flights. ©Nick Cobbing/Greenpeace

10. CONSTRAIN DEMAND FOR AVIATION AND SHIPPING AND REDUCE THEIR CARBON FOOTPRINTS

Neither the aviation nor shipping sectors have simple technological solutions for emissions but will, along with all other sectors, need to be net zero carbon well before 2045. Alongside meat consumption, this is a sector where in the absence of clear solutions, demand needs to be constrained whilst investigation of technology and alternative approaches for genuinely low carbon solutions are explored.

The situation is complicated because as international transport sectors, both shipping and aviation are governed by international agencies rather than national governments. These agencies have historically been lacklustre (or worse) about tackling their environmental footprint, despite supposedly having climate protection in their remit. Parts of the shipping industry seem determined to tackle the climate problem. Very little of the aviation industry is.

The Government cannot simply rely on the sectors themselves to self-regulate. More affirmative leadership is urgently required to constrain demand within UK national boundaries and set a global example - particularly because the UK has one of the highest emissions per capita from flying in the world[55].

- Ban all new UK runways, including at Heathrow
- Establish a Frequent Flier Levy - one tax free return flight a year per person then increase tax progressively for each flight beyond that, so that the burden of taxation falls on those who fly most frequently[56]
- Channel funds from the Frequent Flier Levy to an aviation emission reduction fund which can support projects for technological development the aviation industry wouldn't e.g. hydrogen or electric planes - and share the results internationally
- Ensure all UK domestic shipping is zero carbon well before 2045, building on Sweden's lead[57]
- Lead international efforts to create roadmaps for sharp reductions in actual aviation and shipping sector emissions, with a view to being zero carbon well before by 2045[58]

Community pic ©Dave Fuller/repowering

11. UK GOVERNMENT LEADERSHIP AND RESPONSIBILITY IN ENSURING A FAIR AND DELIVERABLE LOW-CARBON TRANSITION

A transition to a low carbon future that doesn't have fairness embedded in it is far less likely to succeed, and will have much less legitimacy. It is also undesirable in and of itself. Yet it is not a given that a rapid climate transition will lead to the creation of high volumes of decent, secure new work here in the UK. A proactive and well-funded strategy is required, led by central Government, working in collaboration with empowered local authorities, unions and other relevant stakeholders, so that the green transformation is also one in which UK communities feel engaged and can flourish.

INTERNATIONAL RESPONSIBILITY

- Ratchet up the UK's international contribution under the Paris Agreement (Nationally Determined Contributions for 2030), to ensure it is in line with containing global warming to 1.5C, and reflective of the need for international leadership from the UK, given its historic emissions
- Continue to deliver the full allocation of climate finance for less developed countries, agreed under UNFCCC rules

RESPONSIBILITY TO UK COMMUNITIES

- Sufficiently fund central and local government to support and facilitate a just, fair and democratic transition from industries like fossil fuels to renewables
- Develop and sufficiently fund regional industrial diversification strategies, including investment in training, reskilling and relocation where required and where local consent is obtained, for areas that are currently dependent on high carbon sectors (particularly oil, gas, coal, high intensity farming and vehicle manufacture). This will ensure that the next generation can access economic opportunities, and prevent a repeat of the social devastation caused by the shutdown of the coal mines
- Work with unions to ensure greater protection in new low carbon sectors, to ensure that jobs in clean energy are safe, secure and receive a decent wage. Past examples where workers were paid half the minimum wage to help construct an offshore wind farm should not be repeated[59]
- Ensure significant local content proportions for clean technology deployment. This includes ensuring a steady pipeline of infrastructure projects (e.g. through the wind and solar capacity targets above), as well as using levers like public procurement, regulation and investment to support supply chains to expand in the UK

LOCAL AUTHORITIES

- Ensure local authorities have the necessary powers, money, skills, expert support and reporting/ evaluation/ enforcement functions to deliver on local dimensions of the transition to a net zero carbon economy. This is particularly pertinent for delivery in sectors like low carbon heating and transport infrastructure.

ENDNOTES

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GOVERNMENT INVESTMENT FOR A GREENER AND FAIRER ECONOMY

CAFOD
Catholic Agency for Overseas Development

Friends of the Earth

green alliance...

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ISLAMIC RELIEF

theWI
INSPIRING WOMEN

rspb giving nature a home

WWF

River in Forest © George Hodan Public Domain

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Solar panel technician with drill installing solar panels on roof ©zstock/shutterstock

1. SUMMARY

CAFOD, Friends of the Earth, Green Alliance, Greenpeace, Islamic Relief, the National Federation of Women's Institutes, the RSPB and WWF are calling on the government to allocate at least £42 billion of public expenditure per year to help address the climate and nature emergency at home and abroad, and seize the huge economic, social and public health benefits this will bring. This equates to around 5% of government spending, or around 2% of GDP[1]. The government currently spends around £17 billion on climate and nature, which needs to be increased by a further £25 billion of additional spending.

Public spending on this scale will secure warm homes for all UK citizens, build a modernised energy system, mitigate nature's retreat and enhance the natural environment, provide cleaner and better transport and make the UK more resilient to climate impacts.

The UK government has resolved to be a world leader in addressing the climate and nature emergency and seizing the opportunities it brings through a legally-binding net zero greenhouse gas emissions target by 2050 and a commitment to leave the environment in a better state for the next generation. While the end date for net zero should be brought forward significantly, the litmus test of the new Government's credibility in tackling this problem will be the policies and financial commitments it makes over the next 18 months to transform every sector of the economy and restore our natural landscape through a just transition.

A combination of policy, regulatory and financial tools are required to shift behaviour, redirect the economy, embed a just transition across the UK and take responsibility for supporting the transformation globally:

- Existing spending and infrastructure commitments should be reviewed to ensure compatibility with climate and nature restoration
- Government investment on climate and nature must be significantly boosted, with a tailored strategy to transform each sector, while protecting and enhancing the wellbeing of all workers
- Significant policy support and funding should be provided to empower local authorities, businesses, citizens and communities to deliver the transformation
- A commitment to a just transition should be embedded across government policy and financial decisions at all levels. This should be supported by a new responsibility placed on the Treasury to ensure equitable social and economic impacts of the transition
- Significant additional funds from genuinely new and additional sources of public finance must be provided to contribute to international climate and nature action[2]
- The climate and nature emergency should become a defining mission for much of the existing publicly funded innovation and research budgets

Government investment on this scale must begin immediately to drive forward the transformation required. We expect this level of expenditure will help leverage significant additional private investment. However, there may well be additional policy measures that the government could introduce to help privately fund some of the £42bn, should this be a preferred route. For example, the government could establish an Environmental Impact Fund, as proposed in the 25 year plan, which could help to meet environmental targets cost-effectively[3]. Initially, this could be set up through an up-front commitment of government funding, which could then be used to leverage additional private sector investment, thereby minimising the requirement on the public purse.

Enviro Bus ©Alexander Dennis.com

Such investments provide a crucial opportunity to make the UK economy fit for the 21st century, and will help address the economic, social and health inequalities which currently blight the lives of communities across the UK. The UK's low carbon and renewable energy economy was already worth £44.5bn in 2017[4]. We now have a world-leading offshore wind industry that is attracting export contracts around the world and delivering thousands of local jobs, thanks to early government investment to date. If the last 8 years are any indication, early investment in clean technologies can lead to significant cost reductions and attract large sums of private capital. The shift from public to private spending in the power sector, as highlighted in the table below, exemplifies this.

If this additional spending seems a lot, we should remember that we are facing an emergency with no modern parallel. It needs to be treated as a long term investment in the future like education; the UK spends over £41 billion on secondary education alone[5].

We know the costs of not investing this amount now will be much larger over the long term. As Lord Stern's 2006 review estimated, the economic costs of not tackling climate change would be 5% of GDP in 2050, or 11-14% of GDP when wider impacts like health are included. Progress has not been significant enough to negate that analysis - in fact Stern believes that the financial implications of not spending more in the short term are likely to be greater than he estimated before[6]. The wider benefits of this investment will also be significant. From cleaner air to warmer homes, lower health costs, reduced risks of flooding, a flourishing countryside, and thousands of jobs in the industries of the future. The rate of return on investments in climate and nature are higher than many other major government expenditure projects.

This document is intended to provide an initial indicator of the minimum scale of need. The figures estimated below are not comprehensive. They are based on the best available information on what is required, drawing upon costings that exist for such interventions. Costings for many vital actions do not currently exist - for example additional spending for international climate and nature protection. More detailed and thorough analysis by government is required to build on this and develop a full picture[7]. £42 billion per year should be considered an absolute minimum expenditure.

The sums are also calculated on the basis of the spending required over the next 3 years. Beyond this period, government investment will need to be scaled up even further, as local resources and institutions for delivery are extended and better equipped for the transformation required. It is critical government plans beyond 3-yearly cycles to deliver the most impactful and cost-effective solutions.

Sector	Existing annual spending to maintain	New annual spending needed	Total government spending needed per year for the next 3 years
Transport	£2.79bn	£11.55bn	£14.33bn
Nature	£3.57bn	£5.62bn	£9.19bn
Buildings	£1.8bn	£3.6bn	£5.4bn
Power	£8.5bn	£0	£8.5bn
Industry	£0.09bn	£0.207bn	£0.3bn
Just Transition	£0	£4.32bn	£4.32bn
Total	£16.75bn	£25.3bn	£42.05bn

Bikes and bus wait at junction, London ©Greenpeace

2. USING THE TAX SYSTEM TO SUPPORT THE TRANSITION AND CREATE INCENTIVES FOR BEHAVIOUR CHANGE

Alongside increasing investment to restructure the economy, the tax system should be used to provide a balance of incentives in order to effectively tackle the climate and nature emergency. Certain fiscal measures can be used to disincentivise damaging environmental behaviour and raise revenue to fund the transformation, while fiscal rewards can be provided to encourage good practice and ensure that fairness is embedded in the transition. Several possible tax options are outlined below, as an illustration. Environmental taxes are not silver bullets and need to be used carefully, as part of a package of measures that help to aid the sustainable transformation and support a just transition, particularly for workers and communities connected to existing polluting industries.

Furthermore, a root and branch review of existing government spending is required to ensure the compatibility of new infrastructure projects with net zero emissions and the requirement to restore and enhance nature. This means that some projects, such as HS2 (£56 billion), the new road-building programme (£25 billion), and developments to support the construction of new airport runways, like at Heathrow, should be reviewed through the lens of what impact they have on the climate and nature. This should be done in the expectation that substantial savings could be made, which could be dedicated to supporting the sustainable investments outlined below.

Some examples of possible fiscal incentives that could be introduced are as follows:

- Phase out all subsidies for oil and gas production, including transferable tax credits and other tax breaks introduced over the last ten years as part of the government's late-life policy for supporting the fossil fuel industry

- Unfreeze and gradually increase fuel tax over the next decade, with short-term exemptions for those in rural areas where public transport provisions are non-existent or less available, backed up by clear regulatory standards and Vehicle Excise Duty incentives to push fossil fuel cars to become more efficient. The freezing of this tax has cost the Treasury £46bn since 2011[8]

- Establish a Frequent Flier Levy – one tax free return flight a year per person, after which tax would be increased progressively for each additional flight so that the burden of taxation falls on those who fly most frequently[9]. Revenue generated from this levy could contribute to the investments required in other zero carbon transport options

- Introduce an incineration tax, as considered at the November 2018 Budget[10]. This should be raised gradually over time, as other waste minimisation policies are introduced (e.g. reduction and reuse targets) and waste infrastructure is developed (e.g. recycling facilities)[11]

- Explore making the polluter pay through carbon taxes, ensuring those taxed have capacity for behaviour and/or investment change, and that it is implemented in such a way that is not regressive – either through tax design or because the dividends are directed to reducing social inequality and empowering communities to shape the green transition in a way that will benefit their local area[12]

3. GOVERNMENT SPENDING REQUIRED IN DIFFERENT SECTORS

A. TRANSPORT

Transport is now the UK's largest source of greenhouse gases and levels of emissions from surface transport and aviation have increased since 1990, rather than declined. Transport is also a major source of exposure to health-threatening air pollution, which causes up to 36,000 premature deaths every year[13].

Electric cars are part of the mobility solution and the UK rightly aims to be one of the leading manufacturers. But electric cars still contribute to congestion and dangerous particulate pollution through braking and tyre wear. Even a rapid transition to electric cars will not reduce greenhouse gas emissions fast or far enough. Much more investment in public transport, cycling and walking, micro-mobility and reducing the need to travel is needed as part of a shift from car use to more sustainable and healthy options.

The spending requirements outlined here are what we have identified broadly as 'climate relevant' investments that should come from the overall government transport budget.These investments are relatively small compared to total transport spend, which is £31.2bn[14]. Some of this should be re-directed (e.g. from the new road-building programme) and, where necessary, new funds provided to address the pressing climate needs below.

The public investment needed in transport over the next few years includes:

- £1.5 billion per year should be allocated for a UK-wide scrappage scheme to support some of those with the most polluting vehicles to transition to more sustainable transport options[15]. In addition, £215 million per year is needed for action at targeted pollution hotspots near schools, as estimated by UNICEF[16]. This is in addition to the £0.5bn per year the government is spending on Clean Air Zones, Clean Air Fund, and through Highways England, which needs to become an annual expenditure[17]
- £50m as an additional annual investment towards the charging infrastructure for electric vehicles to achieve coverage across the UK, including rural areas[18]. The government is also supporting UK-wide charging infrastructure through a £200 million contribution to a £400 million public-private charging infrastructure project to be spent over three years, plus funding Highways England to install chargers
- £2bn a year on a nationwide strategy to improve walking and cycling. This raises the spending to £25-35 per capita per year, equivalent to investment levels in countries like the Netherlands, where active travel levels are higher[19]. The current annual spending on active walking and cycling is £220 million[20]
- £1.3 billion per year additional expenditure on buses, on top of £2bn per year existing expenditure. This is to restore the bus routes that have been cut significantly since 2014 and add new routes where local authorities deem necessary[21]
- £186 million per year to switch buses and coaches across the UK to electric[22]
- £5.52 billion additional funding per year to enhance the UK's railways - specifically works to improve the core north-south UK mainlines, extend electrification, reopen lines and create new lines[23]
- £1 billion per year on trams. In 1927 there were 14,000 trams in operation across the UK yet today very few UK cities benefit from trams[24]

In total this equals an investment of approximately £14.33bn per year on sustainable transport. £2.79bn of this is existing government spending, and £11.55bn is the additional amount required.

This figure does not include funds to trial free bus travel for the under 30s. Making all bus travel free has been estimated at £3 billion per year[25].

SOCIAL AND ECONOMIC BENEFITS FROM ACTION ON TRANSPORT

- Physical inactivity costs the UK £7.4 billion per year and is responsible for 1 in 6 deaths[26]

- According to Public Health England, the health and social care costs of air pollution in England could reach £5.3 billion by 2035, unless action is taken[27]

- The most deprived communities are exposed to some of the worst levels of indoor and outdoor air pollution, contributing to an approximately 10 year gap in life expectancy between the highest and lowest socioeconomic group[28]

- The National Infrastructure Commission have called for more spending on urban public transport and active transport to address congestion, which is said to cost the UK economy £8 billion per year[29]

B. NATURE

Nature has intrinsic value. It also provides a wide variety of essential life-support services to humans from food production to fresh water, clean air, resilience against natural disasters, and livelihoods for local communities. Natural landscapes are also significant stores and potential sinks for carbon – and so vital in the fight against climate change. Furthermore, nature provides joy and wonder, contributes to our wellbeing and benefits our mental health. For all of these reasons, we urgently need to halt the dramatic decline of natural landscapes and habitats, as well as take additional steps to enhance these places for future generations. Protection through regulation is important, but spending is also required. Public spending could also encourage the emergence of complementary private markets, such as the National Infrastructure Schemes for environmental goods and services from farmland, should this be a preferred route for delivery by government.

Natural environment policy in the UK is largely a devolved issue. As such, money should be allocated to the Governments across the UK based on the scale of need in each country.

The annual public investment in nature needed over the next few years includes the following:

- £2.6 billion per year for environmental land management and nature restoration, to ensure no net loss to UK habitats within predominantly UK agricultural based landscapes[30]. Existing spending on biodiversity in the UK is around £445million per year (which falls into the existing Defra budget noted below)[31]

- £0.8bn additional spending per year to enhance existing habitats and create new ones (including reforestation) across the UK. In England, this should be in line with the more ambitious targets set out in the government's 25 Year Environment Plan[32]. After the spending review period, ambition and related funding for habitat enhancement will need to be increased beyond that set out in the 25 year plan - particularly to support activities such as reforestation

- According to the ONS, the UK government spends £14.7 billion a year on environmental protection, of which £11.5 billion is for solid waste management. This leaves an estimate of £3.2 billion for all other environmental protection measures[33]. The existing Defra budget of £2.1 billion per year (including agency funding) falls within this total[34]. The remaining £1.1 billion is for other environmental protection measures overseen by other government departments. The full £3.2 billion should be maintained. The UK currently receives £428 million/ year environmental funding from the EU[35]. We assume this is currently accounted for in the ONS annual £3.2 billion environmental protection spend. The £428 million should therefore be treated as new expenditure, alongside retaining the other existing £2.77bn to make up the total. The Defra budget should be increased by another £1 billion per year on top of this, to take the overall budget back to around 2010 levels. This is vital in the context of additional enforcement and regulatory costs related to Brexit, as well as providing funds for other uncosted areas, such as dealing with invasive species and biosecurity. In England, a significant sum from this extra investment should go to Natural England, which is currently so stretched that it is struggling to fulfil its statutory duties and responsibilities.

- Current spending on flood and coastal resilience is around £800 million per year[36]. The National Infrastructure Commission estimate that, depending on the level of resilience needed under a 4C temperature rise, approximately £1 billion extra funding a year is required to support the Environment Agency with domestic adaptation[37]

- £116 million a year to contribute to the implementation of all technically feasible measures to get water bodies to good status, in line with the Water Framework Directive[38]

- £1 billion from the government's Waste Infrastructure Delivery Programme should be allocated to upstream activities including better product design, new business models, and domestic reprocessing infrastructure during the Spending Review Period to target waste reduction and limit the requirements for new treatment infrastructure (£333 million per year)[39]. This sum is already accounted for within the existing Defra budget noted above, but should be spent differently, according to these improved principles

- £70 million a year for the protection and management of the UK's entire network (350+) of Marine Protected Areas (MPAs), ensuring that all MPAs are properly protected, and including monitoring and enforcement costs[40]

- £6.4 million per year for the maintenance of the Blue Belt (Marine Protected Areas (MPAs) in the UK Overseas Territories)[41]. This includes surveillance and enforcement, scientific monitoring, management costs for Ascension Island MPA and support for community-led marine conservation. As per the source of previous government funds to support the Blue Belt, these new funds should come from the Conflict Stability and Security Fund (CSSF), rather than the aid budget

- An average of £3 million a year for the establishment, monitoring and maintenance of seagrass, saltmarsh, mudflat and oyster bed restoration sites. A total of £9 million is required over the Spending Review period, and higher sums should be allocated in the first two years

- £45 million a year for sustainable fisheries management, post-Brexit. This sum maintains existing EU fisheries funding of approx. £40 million per year, plus additional funds to help improve monitoring and enforcement and reduce bycatch[42]

In total this equals an investment of approximately £9.19bn per year. £3.57bn of this is existing government spending, and £5.62bn is the additional amount required.

SOCIAL AND ECONOMIC BENEFITS FROM ACTION TO RESTORE NATURE

We know that people feel better and have better mental well-being when experiencing nature, and feel better about the world knowing that there are areas of wilderness. Improved access to nature-rich places could help address the current shortfall in funding available to address rapidly increasing mental health problems, in particular for young people. There are further quantified monetary benefits that nature provides to human society including:

- In economic terms, the Natural Capital Committee's State of Natural Capital Report (January 2015) provided an economic analysis of the benefit cost ratios (BCRs) of a range of natural capital investments[43]. For example, it highlighted a benefit cost ratio of at least 5:1 for a woodland planting programme; 4:1 for a catchment case study; salt marsh restoration in the region of 2 to 3:1 and inland wetlands restoration projects of up to 9:1

- The UK National Ecosystem Assessment (2014) estimated that in 2011 the bundle of services (water quality, flood control, recreation, tourism and amenity) provided by inland and coastal wetlands (many of which are Natura 2000 sites) was worth between £0.7 – 5.7 billion per year[44]. Studies undertaken for the benefits of Sites of Special Scientific Interest report (2011) highlight that the public would be willing to pay £827m for the benefits currently provided by SSSIs in England (the designation which underpin nearly all terrestrial UK Natura 2000 sites) and that the benefits of increasing funding to enable all sites to reach favourable condition are estimated at £666 million in England[45]. This study was used in a recent assessment of the overall benefits and costs of Defra regulations to estimate a 7:1 benefit from biodiversity regulations for SSSIs. In some cases there will be costs associated with not taking action, for example non-native invasive species are estimated to cost £1.7 billion per year in damage and management costs incurred

- There are 3.2 million hectares of woodland in the UK and the Office for National Statistics says they provide a carbon capture service worth £1 billion, based on the government's assumed value of carbon (this number of trees removed 16.5 million tonnes of carbon dioxide in 2015)[46]

- DEFRA estimate that if everyone had access to green space the savings to the health system could be £2.1 billion per year[47]

- As the frequency and intensity of extreme weather events is linked to climate change, restoring nature - the easiest and cheapest way of mitigating climate change[48] - can save thousands of lives and billions in damage caused by disasters (globally, $32bn worth of damage was caused by only 2 of the many hurricanes in 2018)[49]

C. BUILDINGS

Many of the UK's homes were constructed without insulation. This results in a waste of heat, discomfort and, for many, exorbitant energy bills. Investing in energy efficiency addresses these issues, as well as reduces greenhouse gas emissions. In addition, most homes are heated by gas whereas eco-heating, such as heat pumps, are more energy efficient and can be powered by renewable power. Spending in this area should be an immediate priority, particularly given the substantial benefits to public health and energy bills, relative to the cost of government investment required. History also shows that households are reticent to make such interventions to their homes independently, without incentives or other direct support from government.

The public investment in buildings over the next few years needs to include:

- A minimum £1bn of additional public capital every year on housing energy efficiency which should leverage a further £3.5bn of private investment[50]. This is in addition to the £700 million currently invested. On top of this, an additional investment of £300 million per year should be used to innovate deep energy efficiency approaches such as Energiesprong and Passivhaus[51]
- £2.3bn of additional public capital per year for low carbon heating in addition to the £1.1 billion currently invested. This could leverage an additional £2.5bn of private contributions[52]

In total this equals an investment of approximately £5.4 billion per year. £1.8bn of this is existing government spending, and £3.6bn is the additional amount required.

This figure does not include necessary investment in trialling a large-scale area heating and energy efficiency transformation programme. The figures are also a first step of much higher levels of spending required to transform heating in future years.

SOCIAL AND ECONOMIC BENEFITS FROM ACTION TO UPGRADE OUR HOMES AND OFFICES

- This action would deliver improved public health outcomes by avoiding ill-health from cold homes, through improved comfort. The cost to the NHS of health conditions made worse by poor housing is estimated to be between £1.4 and £2.0 billion each year in England alone[53], with the costs of productivity loss (including lost education and employment opportunities) potentially as high as £18.6 billion[54]. It would also improve outdoor air quality, with a present value of £4.1 billion[55]
- Statutory targets to tackle fuel poverty in England and elsewhere in the UK would be met with this investment. This could enable considerable expenditure savings in the long run, as the cost of treating fuel poverty's worst effects amount to a significant share of Winter Fuel Payments, Cold Weather Payments and Warm Home Discount expenditure
- Government investment in energy efficiency reduces the costs of decarbonisation for all households and businesses – heat decarbonisation could cost £6.2 billion less per year to 2050[56] – and decreases the overall level of public subsidy needed
- It would create skilled employment opportunities, through the renovation and construction work needed, and the supply chains around them. This means a net increase in annual employment of around 100,000 full-time equivalents over the period 2020-2030, with most jobs created in the services and construction sectors[57]

D. POWER

To date, the UK has had remarkable success in transforming the power sector and delivering dramatic cost reductions, thanks to the support provided to the renewables industry by successive governments, including through the £8 billion a year subsidy funded via a levy on electricity bills. This has resulted in wind and solar power now being cheaper than new gas-fired power stations. The UK is also now a global leader in offshore wind, securing export contracts across the world. This progress needs to be built on.

The public investment in power over the next few years includes:

- The £8 billion per year subsidy for existing renewable power plants, which has delivered huge reductions in the future costs of renewable power[58]
- Continuing to support the development of renewable power using the Contracts for Difference scheme. The £0.5bn government has committed to spend on Contracts for Difference needs to maximise

the procurement of cheaper renewables, including onshore wind and solar as well as develop currently more expensive emerging technologies like floating offshore wind and tidal

In total this equals an investment of approximately £8.5 billion per year. All of this is existing spending.

This figure does not include necessary investment in developing energy storage approaches, nor the investment needed into the smart grid. While much of this investment might be by the regulated energy companies, including network operators, it is likely that government financial support is also needed, particularly for further research and development. The total also doesn't include anything to support decentralised energy, such as onshore wind or small scale solar for domestic households, communities, farmers and small businesses. These projects are vital both for involving the public in the climate transition and increasing their direct benefits from it, as well as a crucial component of the smart grid (local exchange of generation and supply with decentralised balancing arrangements). Again, most support for these projects might be achieved through regulatory approaches, but financial support may be needed and should be thoroughly explored by government.

SOCIAL AND ECONOMIC BENEFITS FROM ACTION TO CLEAN UP OUR ELECTRICITY SYSTEM

- In 2017, an estimated £79.6 billion turnover was generated directly and indirectly in the UK by businesses active in the low carbon and renewable energy (LCRE) economy. This compares to £73.6 billion turnover in 2016 and £71.8 billion turnover in 2015. These businesses accounted for a total of 396,200 full-time equivalent employees in 2017, compared with 390,600 in 2016 and 377,300 in 2015[59]

- Analysis for the Committee on Climate Change suggests the UK's low carbon economy has the potential to grow at 11% per year between 2015 and 2030, which is five times faster than predicted for the rest of the economy[60]

E. INDUSTRY

Currently, industry accounts for around 25% of all carbon emissions in the UK, with more than two-thirds of these coming from energy intensive industries which are often located next to each other in clusters. These industries need support to decarbonise. Radical decarbonisation technologies (such as Carbon Capture and Storage (CCS) for low-carbon cement, or steel produced using hydrogen and renewable energy) need to be developed. The UK stands to be a global leader in these low carbon industrial technologies, with the right support now.

The public investment over the next few years needs to include:

- The government has allocated £170 million to set up a 'net zero' hub of heavy industry. Given the scale and urgency of the climate challenge, similar hubs need to be supported in other parts of the country. The government should allocate an additional £350 million for two other low carbon clusters to support a rapid decarbonisation of the industry. These sums should be spread over 6 years, giving an annual total of approximately £87 million per year

- The government has identified a £315 million Industrial Energy Transition Fund to be spent over 5 years. This is woefully inadequate and will only enable UK businesses to realise about one fifth of the total estimated additional profits from resource efficiency[61]. The Fund should therefore be spent over the 3 year spending review period, and added to by a further £320 million, to support a manufacturing upgrade programme. This equals an annual investment fund of £212 million

In total this equals an investment of approximately £0.3 billion per year. £0.091bn of this is existing government spending, and £0.207bn is the additional amount required.

This figure does not include the discounts on carbon pollution taxes in return for investment in energy efficiency. Nor does it include government support for developing carbon capture and storage.

F. INTERNATIONAL SUPPORT FOR TACKLING CLIMATE CHANGE AND PROTECTING NATURE

As one of the world's largest historic polluters, and with a track record of success in international climate and environmental diplomacy, the UK has both a responsibility and an opportunity to support developing countries pursue low-carbon and nature positive, resilient development pathways. Climate change is exacerbating poverty and inequality, and reversing hard fought development gains in countries and vulnerable communities that have done the least to cause the problem.

The government's current five-year commitment to international climate finance comes to an end in financial year 2020-21, and is presently financed entirely from the aid budget. If support were to continue at the same level on an annual basis thereafter, over the next five-years this would represent 10% of the aid budget. This would make any increases to UK international climate finance impossible without diverting spending from other crucial development priorities such as education and health. This is despite the fact that the UK and other developed countries committed under the UNFCCC process to provide "new and additional" finance for climate action. It is vital therefore that genuinely "new and additional" sources of public finance are established urgently, both for international climate finance and for nature restoration.

The following actions must therefore urgently be taken:

- A new five-year commitment to international climate finance, in line with the UK's commitments under the UNFCCC to provide predictable and reliable climate finance
- A new strategic fund to ensure UK climate finance is spent on genuinely transformational climate action
- Increase ambition on UK international climate finance by urgently establishing the new and additional sources of public finance needed, and limit finance from official development assistance (ODA) to no more than 10% of the aid budget
- Retain the UK's current commitment to 50% of its climate finance for adaptation to climate change impacts in poor and vulnerable countries
- Phase out all UK Export Finance (UKEF) that is currently directed to fossil fuels, and ensure all UKEF projects are aligned with the Paris climate agreement[62]
- Use the UK's international influence to lobby for a change in OECD-wide rules on export finance so that all projects must be Paris aligned
- Ensure all UK aid is nature-positive, supporting more integrated interventions that improve people's lives and enhance the natural environment[63]
- Increase spending, in line with the UK's global fair share, to support global efforts to protect and restore nature[64]. These funds must be genuinely new and additional sources of public finance and must under no circumstances come from existing ring-fenced finance for the aid budget
- Stop harmful investments that destroy nature and contribute to climate change, such as investing in fossil fuels, deforestation, conversion and exploitation of carbon- and nature-rich ecosystems
- Negotiate an ambitious deal for people and nature at the Convention on Biological Diversity's meeting in October 2020 that is integrated with the 2030 development agenda and the Paris Agreement

It is therefore clear that significant additional funds from genuinely new sources of public finance are required to contribute to international climate and nature action. These actions cannot be fully costed at present, and the most pressing priority is for the government to provide explicit reassurance that future international climate finance from ODA will be limited to no more than 10% of the aid budget.

G. JUST TRANSITION

A transition to a low carbon future that doesn't have fairness embedded in it is far less likely to succeed, and will have much less legitimacy. It is also undesirable in and of itself. Yet it is not a given that a rapid climate transition will lead to the creation of high volumes of decent, secure new work here in the UK. A proactive and well-funded strategy is required, led by the UK central Government, working in collaboration with empowered local authorities, businesses, unions and other relevant stakeholders, so that the green transformation is also one in which UK communities feel engaged and can flourish.

- Explicit financial support should be provided, for local and regional distribution, to aid skills development, retraining and local investment - particularly in areas where there are workers in carbon-intensive or exposed industries. The proposed Shared Prosperity Fund of £2.16 billion per year should be at least doubled for this purpose, as a starting point[65].

ENDNOTES

1 Total government managed expenditure is £789.5bn (based on 2017/18 figures) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/726886/PESA_2018_Chapter_5_tables.ods available at https://www.gov.uk/government/publications/how-public-spending-was-calculated-in-your-tax-summary/how-public-spending-was-calculated-in-your-tax-summary
GDP was £2033bn in 2018, according to ONS https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/abmi/pn2
2 Urgent explicit reassurance from government is needed that future international climate finance from official development assistance (ODA) will be limited to no more than 10% of the aid budget, so as not to have a knock on impact
3 https://www.edie.net/news/11/25-year-Environment-Plan--Seven-key-talking-points-for-sustainability-professionals/
4 https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2017
5 PESA table 5.2 https://www.gov.uk/government/publications/how-public-spending-was-calculated-in-your-tax-summary/how-public-spending-was-calculated-in-your-tax-summary
6 https://www.theguardian.com/environment/2016/oct/27/10-years-on-from-the-stern-report-a-low-carbon-future-is-the-only-one-available
7 Note that where money is currently being spent from EU sources for vital nature and climate measures, we assume that new money will be needed to cover these areas post Brexit
8 https://greenerjourneys.com/wp-content/uploads/2018/06/THE-UNINTENDED-CONSEQUENCES-OF-FREEZING-FUEL-DUTY-JUNE-2018.pdf
http://afreeride.org/
10 http://ukwin.org.uk/2018/10/30/2018-budget-threatens-an-incineration-tax/
11 A £50/tonne Incineration Tax would raise around £850m a year, based off current incineration capacity http://ukwin.org.uk/btb/incineration_tax.pdf
12 The Grantham Research Institute has recently completed research into carbon pricing and recommend "medium level" carbon prices, differentiated by sector and complemented by regulation and technology support. The introduction of these differentiated polluter pays taxes would raise around £20 billion per year until 2030. It would also reduce the need for subsidies in some areas (e.g. through the Contracts for Difference scheme) (reference: Burke J, Byrnes R and Fankhauser S (2019) How to price carbon to reach net-zero emissions in the UK. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science, http://www.lse.ac.uk/GranthamInstitute/publication/how-to-price-carbon-to-reach-net-zero-emissions-in-the-uk/)
13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/734799/COMEAP_NO2_Report.pdf
14 PESA table 5.2 https://www.gov.uk/government/publications/how-public-spending-was-calculated-in-your-tax-summary/how-public-spending-was-calculated-in-your-tax-summary
15 15 English Metro Mayors called for £1.5bn for a nationwide scrappage scheme. At least this amount should be allocated and distributed on a UK-wide basis https://www.uk100.org/city-leaders-across-country-join-forces-to-call-for-diesel-scrappage-fund-worth-up-to-3500-to-each-car-and-van-driver/
16 https://downloads.unicef.org.uk/wp-content/uploads/2019/02/Healthy-Air-for-Every-Child-A-Call-for-National-Action.pdf?_ga=2.262413642.777107572.1561455473-1117127247.1561455473
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18 National Grid, Jan 2019, Supporting the growth of electric vehicles
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21 https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1425/report-files/142507.htm#_idTextAnchor018
22 A grant from government to Transport for London showed the additional cost of purchasing a new electric bus, over and above the cost of a conventional diesel one, is currently about £55,000 https://www.mayorwatch.co.uk/government-awards-london-7m-for-new-electric-buses/. Extrapolating this to the 35,000 buses in England, 2,458 buses and coaches in Wales, 12,000 in Scotland and 1383 in Northern Ireland means approximately £2.7bn extra funds are needed to replace the entire bus fleet with electric. (https://gov.wales/sites/default/files/statistics-and-research/2019-03/public-service-vehicles-buses-and-taxis-april-2017-to-march-2018_0.pdf ,https://www.transport.gov.scot/media/33814/sct01171871341.pdf table 1.29 and https://www.infrastructure-ni.gov.uk/sites/default/files/publications/infrastructure/NI-transport-statistics-2017-2018.pdf p8). The average age of a bus is 7.6 years (see https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666759/annual-bus-statistics-year-ending-march-2017.pdf) so an assumed lifetime of 15.2 years means the total replacement cost would average £2.8bn/15 = £186million per year. There are clear air quality reasons for wanting to front load this cost and target support towards areas of problematic air quality in first instance, so the £186 million per year amount is an absolute minimum required over the next 3-5 years. This cost will decline over time as the price of electric buses declines; however this annual total should be provided in at least the next 3 year period, and will continue to be required. Note this calculation makes no allowance for fuel savings or costs for charging infrastructure. Both numbers will be significant but very difficult to calculate because of variable local circumstances
23 See page 54 in NEF Rail Network For Everyone report https://neweconomics.org/uploads/files/A_Rail_Network_for_Everyone_WEB.pdf. The £5.52bn figure does not include all core rail operations and maintenance costs
24 Calculation based on the cost of the 3 phases of Manchester tram system, which was £1.4bn in today's money. https://en.wikipedia.org/wiki/Manchester_Metrolink. Beyond the next 3 years, significantly more than £1bn a year will be required, as costs become clearer, the scale of a national tram programme is fully scoped, and complementary policy measures are developed to enable full delivery. https://www.wired.co.uk/article/trams-edinburgh-manchester-uk-transport-system
25 https://policy.friendsoftheearth.uk/insight/transforming-public-transport
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27 https://www.gov.uk/government/news/new-tool-calculates-nhs-and-social-care-costs-of-air-pollution
28 https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution
29 https://www.nic.org.uk/news/cost-of-congestion-shows-need-to-enable-local-leaders-to-tackle-the-issue/
30 Assessing the costs of environmental land management in the UK: A report for the RSPB National Trust and Wildlife Trusts in 2017 https://nt.global.ssl.fastly.net/documents/assessing-the-costs-of-environmental-land-management-in-the-uk-final-report-dec-2017.pdf
31 In 2016/17, £445 million of UK public sector funding was spent on biodiversity in the UK; a real-term decrease of 9% since 2015/16 and of 17% over the last 5 years https://jncc.gov.uk/our-work/ukbi2018-e2-biodiversity-expenditure/
32 Taken from a report for WWF in 2019. This estimates the annual costs of achieving monetisable (costed) 25 year plan targets that can be delivered through

Environmental Land Management at £1.6 billion. Some of these actions will be included in the actions costed at £2.6bn/ year to UK restore habitats. However, the £1.6 billion estimate is for agricultural land in England only, and around two-thirds is for reducing soil degradation and water pollution which will enhance aquatic, farmland, marine and soil habitats, but mostly indirectly. Furthermore, it did not prove possible to calculate the cost of delivering some 25 year environment plan targets, such as cutting ammonia emissions. To be conservative and avoid double counting, while accounting for the need to extrapolate costs for the whole of the UK, not just England, we take 50% of the £1.6bn estimate to meet the government's objectives to enhance nature for future generations

33 https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/environmentalprotectionexpenditureuk/2017

34 https://www.parliament.uk/documents/commons-committees/environment-food-rural-affairs/Estimates/Defra-Supplementary-Estimate-Memorandum-2018-19.pdf

35 Natural England estimates that the UK receives £428 million per year from the EU for regional development, Horizon 2020, LIFE, INTEREG and the Maritime and Fisheries Fund, which contributes towards dedicated species actions, landscape amenity values and promoting engagement with the natural environment in areas that don't fall within the agricultural system ("An estimate of the scale of EU Funding for delivering environmental outcomes in the UK" Natural England (2017))

36 See Table 2 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/747328/Funding_for_flood_and_Costal_Erosion_in_England_Oct_2018.pdf

37 https://www.nic.org.uk/wp-content/uploads/Flood-modelling.pdf

38 Calculation based on the Environment Agency's 2014 consultation on the draft update to the river basin management plan. http://www.bawag.co.uk/1/documents/economic-analysis-extended-report.pdf. Significant additional funds are required from the water industry and Environmental Land Management payments (accounted for separately above). Extrapolating from the EA figures to UK-wider costs, this takes the UK-wide total public and private investment to £41 billion between 2015 and 2052

39 We assume this to be additional to existing spending on waste

40 Extrapolation to UK MPA network, based on management cost estimates for MPAs in North Devon in: Eftec & ABPmer (2018) Assessment of management costs for Marine Protected Areas in North Devon, Report to WWF UK, 2018

41 As calculated by the Great British Oceans coalition https://greatbritishoceans.org/

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59 https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2017#exports-from-the-uk-low-carbon-and-renewable-energy-economy-grew-to-50-billion-in-2017

60 https://www.theccc.org.uk/publication/uk-energy-prices-and-bills-2017-report-supporting-research/

61 https://www.ifm.eng.cam.ac.uk/uploads/Resources/Next-Manufacturing-Revolution-full-report.pdf

62 Over a five-year period to 2018, UK Export Finance (UKEF) spent £2.6 billion to support the UK's global energy exports. Of this, 96% (£2.5 billion) went to fossil fuel projects https://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news-parliament-2017/uk-export-finance-report-published-17-19/

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PUBLISHED SEPTEMBER 2019

A just transition to a greener, fairer economy

A TUC report

Changing the world of work for good

CONTENTS

THIS STATEMENT

The move to decarbonise our economy has the potential to offer exciting opportunities for the UK. But at present, the lack of a comprehensive just transition policy or coherent industrial strategy to deliver the necessary support and impetus for change, means that many well paid, highly skilled, unionised jobs, are under threat.

The trade union movement will support the fight against climate change to help protect the planet for our children and grandchildren. And we'll stand up for those workers whose jobs are at risk if we don't take action to make the transition to a greener economy a just one. This just transition statement sets out a number of challenging, ambitious policies that will support those workers. We call on the government to implement these recommendations in both the interests of the workers of this country and the planet on which we all live.

THE NEED FOR A JUST TRANSITION

The trade union movement recognises that there is overwhelming scientific evidence of the need to decarbonise our economy. Energy-intensive industries, including the energy, transport, manufacturing and construction sectors, will be key to achieving this transition, but this is a project that will require change right across our economy, and trade union members have the expertise to deliver it. The voices of workers who are at the forefront of dealing with the challenge of climate change must be at the centre of achieving a successful transition to the economy we will need.

“The voices of workers who are at the forefront of dealing with the challenge of climate change must be at the centre of achieving a successful transition to the economy we will need.”

Such a change, if left to solely to the market, could have massive economic and social consequences, in terms of jobs, skills and knowledge lost and communities destroyed. We need a different approach to the failed neoliberal approach of the 1980s, which left workers behind, and communities devastated.

The international trade union movement has called for a 'just transition' to a greener economy, where new jobs that are just as good in terms of pay, skills, pensions and trade union recognition replace those that are lost. Following union pressure, the concept of a just transition was included in the preamble to the 2015 Paris Agreement and in the Silesia Declaration at the climate talks in 2018.

The move to a low-carbon economy has implications and potential opportunities for industrial policy and the quality of employment. However, the opportunities will not be realised unless the workers most affected have a seat at the table where key decisions are taken. They should be able to contribute to solutions, not be told after decisions have been made.

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And, of course, climate change affects our brothers and sisters – especially our sisters – across the world. UN figures show that 80 per cent of those displaced by climate change are women. The Paris Agreement identifies global solutions to a global problem; it has made specific provision for the empowerment of women, recognising that they are disproportionately impacted by climate change, and a just transition must provide fairness and overcome injustices experienced by all workers, male and female, young and old, black and white, in the global north and south.

> "Climate change affects our brothers and sisters – especially our sisters – across the world. UN figures show that 80 per cent of those displaced by climate change are women."

MAKING A JUST TRANSITION A REALITY

1. A clear and funded path to a low-carbon economy

UK trade unions have long supported a balanced energy policy, measures to reduce carbon and other harmful emissions from energy intensive industries such as steel and cement manufacture, a just transition to electric vehicles, and an integrated low emission public transport system, all of which will help us meet our climate change commitments, while delivering a reliable, resilient and affordable energy supply for the whole country.

At present, our efforts to plan for this goal are held back by the lack of a clear commitment by government, or a plan for how to achieve this.

Addressing the energy sector, the Committee on Climate Change, a committee of experts, has reviewed the scientific evidence on how best to deliver the change we need. But it needs to build a consensus on how this change should be delivered so that it works for workers and consumers alike. The government should set up a cross-party commission on long-term energy and energy usage strategy, involving affected workers, unions, industries and consumers, to plan a path that will deliver a just transition to a clean, affordable and reliable energy supply for the future alongside reductions in emissions. As part of its remit, this commission should carry out a study of the social impacts of such a transition, its regional impacts and necessary mitigation measures.

This commission should ensure that political decision-making is not separated from the economic consequences of transition.

Government must be prepared put in the investment needed to deliver this change, through progressive taxation, as well as to ensure that the regulatory framework supports a just transition. Like high energy use sectors such as steel and construction, the energy industry needs long-term certainty in order to plan, and there needs to be effective strategic oversight and accountability.

But investment is needed well beyond this. Government must also fund necessary infrastructure investment and to support transition in affected sectors including automotive, aerospace, steel and construction, alongside household energy efficiency programmes, a public service response to tackle extreme weather, and public service responses in housing, planning, regulation and public transport, helping to bring the UK’s public and private investment up to at least the levels of other developed countries.

> “Companies and organisations moving to a lower carbon model should put in place Transition Agreements – agreed with unions.”

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2. Workers must be at the heart of delivering these plans

The workers and communities across the UK most affected by the move towards low-carbon industries must have a central voice in how this is implemented. The best and most obvious way to achieve this is by working with trade unions. Trade unions were founded in the heat of the last industrial revolution to represent workers, and remain the best way to ensure that workers interests are protected throughout any period of industrial change.

Workers also have transition-related knowledge. A company or organisation moving from a fossil-based to a cleaner energy system, or whole sector transitioning towards cleaner technologies, will have to adapt specific processes and workers are most likely to understand how to do this effectively. It makes business sense to give workers a stronger voice and higher visibility in such circumstances. Workers' voice starts in the workplace. Companies and organisations moving to a lower carbon model should put in place Transition Agreements – agreed with unions – that cover a range of issues, including the overall number of jobs or workers employed, pay and conditions, job security, working time, job descriptions, duties assigned to job roles, training and skills, apprenticeships, retirement policy, monitoring and surveillance, performance management, health and safety implications and equal opportunities. Companies should also work with unions to identify and deliver best environmental practice at a workplace level.

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Workers' voice needs to be heard at every level decisions are made. That means including just transition arrangements in bargaining at sectoral level, and ensuring that affected workers and unions are represented in all local, regional and national bodies making decisions on industrial policy.

And to ensure that everyone can fully benefit from unions' representative role, unions must have access to all workplaces, to discuss the importance of transition as well as the benefits of joining a trade union.

3. Every worker should have access to funding to improve their skills

Workers in energy intensive sectors, as well as those developing transitioning technologies, have the skills and expertise that will be required to help these sectors transition to lower carbon models, and it's vital that these skills are maintained. Investing in good, new, sustainable jobs while helping workers in carbon intensive industries transition to those jobs in the wider economy will ensure that skills and experience are not lost.

We will also need to develop new skills across the workforce for new types of role, so government must dramatically increase its investment in skills.

> “Unions must have access to all workplaces, to discuss the importance of transition as well as the benefits of joining a trade union.”

Apprenticeships have long been the best guarantor of skills excellence in industry. The trade union role in agreeing the substance and the quality of apprenticeships has ensured consistent high standards.

And we will require new mechanisms to identify transferable skills and knowledge. Some workers will have similar, but not identical skills, to those needed in another sector, so we need to put in place institutions, including at a local level, which bring together unions and employers to identify what training and support they need to upgrade and utilise their existing skills.

Government should give workers the confidence to train, starting by establishing lifelong learning accounts for all adults so that everyone has a personalised budget for training, and introducing a right to career reviews and face-to-face guidance on training to help them access it.

Alongside classroom-based learning, experience is also important. This is particularly true as processes in some energy sector workplaces can happen infrequently. The value of experience in workers transferring to new jobs should be recognised.

The proper funding of the adult education sector is essential if the demand for new skills as a result of the move towards a greener economy is to be met. A well-funded and free-to-workers ‘skills for transition’ programme must be delivered in and out of workplaces.

And those who have left work need the support of a decent social security system to ensure their living costs are met while they train.

4. New jobs must be good jobs

Climate change is a huge threat, but decarbonising the economy will create massive job opportunities too. Our ambition is that every new job created right across the economy is of an equivalent standard to those that workers in many industrial sectors have now, with trade union recognition, decent pay, terms and conditions, high standards of health and safety, and a fair pension. At present, we know that too many people across the wider economy don’t enjoy these rights. And there are growing concerns, fuelled by a lack of transparency, about the quality of the new jobs we are creating. These jobs are also less likely to be in companies that recognise unions. This does not meet the test of a just transition.

The ‘green economy’ (and beyond) must recognise unions and bargain with them to ensure good quality jobs with terms and conditions at least as good as those in energy, transitioning and carbon-intensive sectors. They must also strive to make sure their workforces are representative of the UK as a whole.

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> "The 'green economy' (and beyond) must recognise unions and bargain with them to ensure good quality jobs with terms and conditions at least as good as those in energy, transitioning and carbon-intensive sectors."

Government has a key role in making this happen, as a funder and procurer of new energy and broader infrastructure. When government invests in new infrastructure it should use its procurement powers to ensure that jobs generated benefit workers in the local community and throughout the supply chain. It must also insist that jobs created provide workers with trade union recognition, and that employers have fair recruitment, industrial relations and pay policies for all workers. Companies winning government contracts must adhere to agreed standards of corporate behaviour; for example, contracts should not go to companies based in tax havens and companies must be registered in and pay tax in the UK.

Industrial policy to deliver a just transition should be focused on creating jobs where they are needed most: in the regions and nations of the UK. The UK must retain a strong manufacturing base and must not simply export carbon-intensive jobs overseas. We need a range of thriving industrial sectors, underpinned by investment in innovation and research. And the public sector has an essential role to play in enabling the infrastructure to deliver a just transition to a greener, fairer economy.

Within companies and organisations, cost savings from industrial restructuring should be reinvested into areas that promote and provide more and better jobs. New skills or responsibilities should be recognised through negotiated pay increases.

Trade unions have always fought for their members jobs, rights and pay, and an economy that delivers decent work for all who need it. There is compelling evidence that unions are good for workers, good for companies and good for our economy. If we deliver on the principles set out in this statement we can meet the challenge of climate change head on, ensuring a better future for everyone.

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Changing the world
of work for good

Financing inclusive climate action in the UK

An investor roadmap for the just transition

Nick Robins, Andy Gouldson, William Irwin,
Andrew Sudmant and James Rydge

In collaboration with

The Investing in a Just Transition initiative

Launched in February 2018, the Investing in a Just Transition initiative is working to identify the role that institutional investors can play in connecting their action on climate change with inclusive development pathways. The initiative is led by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science (LSE) and the Initiative for Responsible Investment at the Harvard Kennedy School, working in collaboration with the Principles for Responsible Investment (PRI) and the International Trade Union Confederation (ITUC). The initiative has produced a global guide for investor action, and 140 institutions with more than US$8 trillion have signed an investor statement on the just transition.

The Investing in a Just Transition UK project

In 2019 the Grantham Research Institute at LSE and the Sustainability Research Institute at the University of Leeds started a process of research and dialogue to identify the specific role that investors can play in the just transition in the UK. This part of the project is being delivered in collaboration with the PRI and the Trades Union Congress (TUC). The project is funded by the Friends Provident Foundation, with support from the 30 Percy Foundation. Funding from the Grantham Foundation for the Protection of the Environment and the UK Economic and Social Research Council through the Centre for Climate Change Economics and Policy is also gratefully acknowledged.

www.lse.ac.uk/GranthamInstitute

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This report is intended to inform decision-makers in the public, private and third sectors. It has been reviewed by internal and external referees before publication. The views expressed in this report represent those of the authors and do not necessarily represent those of the host institutions or funders.

Foreword

Professor Nicholas Stern

Chair, Grantham Research Institute on Climate Change and the Environment

The transition to the zero-carbon economy offers the world a highly attractive route to growth and prosperity. Indeed, it is the only sustainable growth story available. It can offer tremendous new job opportunities, cities where we can move and breath, and robust and fruitful ecosystems. However, the transition must be radical and rapid and could involve disruption and dislocation for some industries and communities.

A 'just transition' is about more than managing a zero-carbon transition. There are other important changes in economic structures occurring at the same time: the shift to services, labour-saving, technologies, Artificial Intelligence/robotics and globalisation. As a matter of social justice as well as building the political will to act on the transition, all these dislocations have to be managed constructively and cohesively. We have in many ways managed such changes badly in the past. How this is done in the future will probably affect our success or failure in the zero-carbon transition.

To manage this change we need to start now and provide clear, credible and long-term policy signals and investments across a range of areas. Working together, clear and sound public policies can unlock the private finance at the scale required.

We understand the policies that are required, we have the finance for investment and we have the technologies and knowledge to set off strongly. The 'just' transition is a critical part of this story.

Contents

Foreword *cont.*

Fiona Reynolds

Chief Executive Officer, Principles for Responsible Invesment (PRI)

PRI is very pleased to continue to collaborate with the Investing in a Just Transition Initiative, which recognises the critical role investors around the world are playing in helping to secure a transition that is equitable, humane and fair for workers.

As we applaud and encourage investors taking a proactive role to mitigate climate change, we must also be mindful of the flow-on effects to workers as the transition takes place. Not properly managed, the transition may put some workers' jobs at risk. In turn, it is the most vulnerable in our society who are most exploited, and it is imperative we avoid this in the carbon transition. In being mindful of the impact on workers, but also in actively planning to support affected individuals and communities, investors can ensure their climate change efforts also consider the impact on the broader social economy. Proper consideration of economic, social and governance factors is imperative for the transition to low-carbon economy to be just and fair for all stakeholders affected.

While a global concept, a just transition will play out differently in local markets. This report, focusing on the UK, highlights the role investors can play in the UK through case studies and practical guidance around investment strategy, corporate engagement, capital allocation and more. We hope this latest work will continue to guide investors in securing a just transition for all.

Paul Nowak

Deputy General Secretary, Trades Union Congress (TUC)

Tackling climate change and protecting the planet for future generations is an overarching priority for the TUC. We know urgent action will have to be taken to meet the Government's commitment to deliver a net-zero carbon economy by 2050. But it is vital that the transition to a low-carbon economy is just – one that works for working people, their families and communities. As we saw during the 1980s and 1990s, industrial transition left solely to the market can have hugely negative economic and social consequences.

To deliver this change, we need government, business and unions to pull together. The investor community is also essential. This report sets out key issues and actions for investors to take. It explains how the just transition is not an 'extra' but needs to be at the heart of strategy. Investor voices need to be heard in policy circles, and sharing best investor practice will be crucial. The case studies illustrate the value of anchor institutions, including unions and business, and highlight the system-wide innovations needed to drive the needed market transformations.

The climate emergency should also be a chance to build a greener, cleaner planet, and new, well paid and highly skilled jobs. Trade unions will strain every sinew to realise those opportunities. We look forward to working with the investor community on the journey before us.

Executive summary

Key messages and high-level recommendations

- To deliver the UK's new legislated target of reducing greenhouse gas emissions to net-zero by 2050, the country must strive for a 'just transition', inclusive of workers, communities and consumers. All parts of the economy will be affected and the net-zero transition will be strengthened by strong participation and engagement.
- For institutional investors, contributing to a just transition offers a way of reducing systemic risks, realising fiduciary duties, identifying material value drivers and generating positive social impacts. It also responds to the growing demand from end investors to connect their savings with societal benefits as well as financial returns.
- The just transition has become a recognised priority in the UK but as yet there is little experience of what it means in operational terms. To address this, our analysis is rooted in the place-based realities of the Yorkshire and Humber region. Our examples show that a shared approach is needed to evaluate business performance on the just transition; that there is a crucial role for local 'anchor institutions' with scale and community links; and that system-wide innovations, such as new regulations or markets, are needed.
- The just transition represents a generational opportunity for the UK to connect the environmental, social and economic dimensions of climate action. Delivery will not always be easy but is entirely possible and manageable. A comprehensive strategy is now needed in the UK to translate this potential into a practical reality.

There are five priority areas for investor action as part of this comprehensive approach, which build on the framework contained in the 2018 global investor guide to the just transition:[1]

- **Action Area 1 – Investment strategy:** Investors need to place the just transition into the heart of their strategy and signal its importance along the investment chain.
- **Action Area 2 – Corporate engagement:** Investors should incorporate just transition goals and aspirations into their engagement with the companies they own.
- **Action Area 3 – Capital allocation:** Investors can shift their allocation of capital towards assets that are aligned with the just transition.
- **Action Area 4 – Policy advocacy and partnership:** Investors should use their voice to call for governments in the UK to introduce a strategic framework for the just transition.
- **Action Area 5 – Learning and review:** Investors should build capacity to deliver experimentation at scale for the just transition with effective monitoring, evaluation and sharing of outcomes.

The global imperative for a just transition

Climate change is arguably one of the greatest injustices in history, given the projected extent and duration of its negative impacts on current and future generations, rooted in past greenhouse gas emissions, the vast majority from developed countries. The transition to net-zero greenhouse gas emissions also needs to be an inclusive process, delivering social justice for workers, communities and consumers. The imperative of the just transition is embedded in the 2015 Paris Agreement on climate change, with a focus on managing the process of change for the world's three billion workers. The just transition rests on a well-established body of international law and policy, notably around human rights (including labour rights) and sustainable development. Importantly, the imperative of net-zero is one of many disruptive transitions that are underway – others include automation and digitisation – all of which need to be managed together.

1. *Climate Change and the Just Transition: A guide for investor action* (Robins et al., 2018).

Delivering a just transition in the UK

In the UK, the scope of the just transition has expanded beyond the world of work to the implications for citizens overall, including communities and consumers. The Scottish Government, for example, has launched a Just Transition Commission with a mission to set out how to develop "a carbon-neutral economy that is fair for all". In May 2019 the Committee on Climate Change in its report *Net Zero – The UK's contribution to stopping global warming*, also concluded that the transition will need to "be fair and perceived to be fair". The transition needs to include a responsible approach to decarbonisation, an inclusive process of clean growth, and resilience to the physical shocks of climate change that also incorporates a strong social focus. The place-based dimension of the just transition will be crucial, particularly given the extent of regional imbalances across the UK.

We have identified five central elements of delivering a just transition in the UK:

1. **Maximising the benefits** for society in terms of the quantity and quality of work that is generated, achieving reductions in poverty and inequality, and building stronger and resilient communities across the regions and nations of the UK.

2. **Mitigating the social risks** from the transition, particularly for workers and regions dependent on high-carbon sectors, as well as vulnerable and low-income consumers in all parts of the UK.

3. **Empowering those affected by change** so that they are actively involved in decision-making, whether in the workplace, in communities or in key local and national policy processes, making sure that this is open to all in terms of gender, ethnic group, age or income.

4. **Anticipating the changes,** through careful assessment of what is needed to achieve the UK's climate goals, and of key trends – not least in technology – so that social implications can be addressed ahead of time and plans adapted as circumstances change.

5. **Mobilising investments** from the public sector, business and finance, and citizens across the UK to build the human, social and technological capacities that will be needed to deliver a successful and inclusive transition and so that our places and communities are resilient to the impacts of climate change.

The central role for finance and investment

Finance will be critical for a just transition, not just in terms of the increased quantity of capital required, but also to fulfil the need for an improved *quality* of capital that incorporates environmental, social and governance (ESG) standards. Internationally, a set of compelling reasons have been identified for why investors should support a just transition, touching on systemic risk, fiduciary duty, material value drivers and opportunities to generate a positive impact through investment. In the UK, our key finding is that supporting a just transition is not only the right thing for investors to do but is also the *smart* thing to do, helping to secure broad public backing for ambitious climate action and making investors' own portfolios more robust in a fast-changing economic and environmental landscape. The Government's Green Finance Strategy published in July 2019 also highlights the importance of delivering a just transition. Brexit has made it pressing to develop fresh thinking and action on the relationship between public and private finance to deliver a just transition, not least with the likely withdrawal of funding from the European Investment Bank.

A growing number of institutional investors in the UK are making commitments to support the just transition, alongside collaborative efforts of investor alliances (for example, local authority pension funds, and faith and charity investors). A number of investors are already providing important insights and perspectives on the just transition. Box S1 summarises the insights of 11 investment institutions (detailed in the main report).

Box S1. Investor insights and perspectives on the just transition

1. **Aviva:** Committing to supporting a just transition
2. **Impax:** Making the transition efficient, effective and equitable
3. **Aberdeen Standard:** Connecting human rights and the just transition
4. **Legal & General:** Inclusive capitalism and the just transition
5. **Hermes Real Estate:** Responsible property investment and the just transition
6. **Abundance:** Crowdfunding municipal bonds for the transition
7. **Bridges:** Exploring the role of social impact bonds in the just transition
8. **Northern Local Government Pension Scheme:** Incorporating the just transition into investment policy
9. **Vigeo Eiris:** Measuring just transition preparedness in UK energy utilities
10. **Friends Provident Foundation:** Engaging with UK utilities on the just transition
11. **Church of England Pensions Board:** Learning lessons from South Africa's Courageous Conversations

Understanding the practical implications: Yorkshire and the Humber case study

The just transition remains a relatively new agenda for both policymakers and investors. Turning this aspirational goal into lived reality raises a range of profound challenges, such as how those affected by the transition will be involved in decision-making and how the transition will affect individuals, communities and regions differently. The zero-carbon transition will not take place evenly across the UK and the different spatial and sectoral impacts need to be understood by policy- and decision-makers so that opportunities can be maximised and any risks can be anticipated. Investors need to understand how these place-based impacts are linked to their portfolios.

To ground our analysis, we have focused on Yorkshire and the Humber, in the North of England, as a case study region. We profile seven companies from the region, covering different asset classes: listed equities, bonds and fixed income as well as real estate. Some are global corporations, others national and regional champions, along with innovative start-ups and community enterprises. Importantly, these examples do not necessarily offer ready-made solutions for the just transition, and none explicitly uses the framing of a just transition to describe its work. But they point to the actions that investors can take, through corporate engagement, capital allocation and policy dialogue. Table S1 (p8) summarises the lessons from the example companies in our case study region.

Three overarching lessons from Yorkshire and the Humber

1. Shared approach: There is an urgent need for a shared approach to evaluate business performance in the just transition, bringing together different ingredients such as the Sustainable Development Goals, human rights and impact investing frameworks.

2. Anchor institutions: Institutions such as local authorities, leading businesses, trade unions and universities, as well as long-term investors, can play a central role in the creation of an ecosystem in which the just transition can flourish.

3. System-wide innovations: There is a vital need for system-wide innovations to drive market transformation for a just transition, whether in terms of new structures for dialogue, new regulations, or creating new financial markets and instruments that better respond to the social nature of the transition. Additional focus needs to be placed on bringing together the zero-carbon and resilience dimensions of the transition.

Table S1. Lessons for investors from the Yorkshire and Humber company examples

1. Decarbonisation	**Drax Power Station,** Selby *Listed equities*	Drax has the potential to be an anchor institution in a net-zero industrial cluster on the Humber estuary, based on the deployment of bio-energy with carbon capture and storage (BECCS). Drax's current use of biomass and plans for gas expansion are controversial, however, and the development of BECCS would require new policy incentives. **Lessons for investors:** Investors can engage with Drax to ensure its plans are aligned with the Paris Agreement and wider sustainable development objectives.
1. Decarbonisation	**Advanced Manufacturing Research Centre (AMRC),** Sheffield *Listed equities*	Built on the site of a former colliery after redevelopment by the Harworth Group, and with the support of local, national and European funding, the Advanced Manufacturing Research Centre (AMRC) has generated additional well-paid jobs in high productivity sectors with expertise in light-weighting and composite materials. **Lessons for investors:** AMRC demonstrates how smart redevelopment in former high-carbon areas can create a platform for capital inflows and regional revitalisation.
2. Clean growth	**Siemens Gamesa and Green Port,** Hull *Listed equities*	The Green Port development in Hull, a joint venture between Siemens Gamesa and Associated British Ports (ABP), has created direct benefits for the workforce and the wider economy through the expansion of offshore wind. **Lessons for investors:** This example shows how policies at the corporate level for people and society – such as Siemens' framework agreement with unions – along with policy incentives and investment in skills can be implemented in a particular place.
2. Clean growth	**Wellington Place,** Leeds *Real estate*	Wellington Place is the leading development project for commercial office space in Leeds. It has been designed and implemented with a conscious focus on place-making and generating wider benefits for the region. **Lessons for investors:** Asset owners can play a strategic role in providing long-term patient capital for urban regeneration that produces market-leading environmental, workplace and community benefits as part of an active place-making strategy.
2. Clean growth	**Citu,** Leeds *Real estate*	Citu is building a 'Climate Innovation District' in Leeds, turning a central brownfield site into a mixed-use neighbourhood with strong green credentials. **Lessons for investors:** With the right design, new residential buildings can be 70 to 80 per cent more energy-efficient than existing UK homes, with strong community benefits, including reduced fuel poverty. The example also shows the need for public finance from local and national government to support breakthrough innovations.
2. Clean growth	**Energise Barnsley,** Barnsley *Fixed income*	Energise Barnsley is a community benefit society that developed solar PV on council-owned buildings, cutting bills for low-income households, financed by a bond open to local and national investors. **Lessons for investors:** Community ownership and crowdfunding have potential as tools to build a more decentralised energy system.
3. Resilience	**Yorkshire Water** (region-wide) *Fixed income*	Yorkshire Water has introduced a comprehensive framework for sustainable finance that combines both social and environmental aspects, issuing its first sustainability bond in April 2019. Over time, resilience and decarbonisation requirements will lead to new challenges as well as potential job opportunities. **Lessons for investors:** The sustainable finance framework offers an approach that could enable fixed income investors to back the just transition.

A roadmap for investor action in the UK

Looking ahead, investors can play a potentially significant role in supporting the just transition in the UK – as fiduciaries on behalf of millions of savers, as allocators of capital to the real economy, and as stewards of assets, ensuring that their voice is heard by both business and policymakers. Drawing on the lessons from our work in Yorkshire and the Humber and nationally across the UK, we have tailored our previously published global framework for investor action on the just transition to produce the following five-point roadmap for the UK.

Action Area 1 – Investment strategy: Investors need to incorporate the just transition into their investment strategy and signal the importance of the social dimension of the climate crisis along the investment chain. The just transition needs to be incorporated, for example, in the ways that investors deliver their obligations under the Stewardship Code. In addition, they need to build effective partnerships across the investment system and beyond so that they can understand the priorities for those affected by the transition and achieve critical mass. A priority for immediate action is to set clear investor expectations on the just transition, based on national and international standards for environmental and social performance. Providers of sustainability ratings and research can play a key role in evaluating corporate performance on the just transition.

Action Area 2 – Corporate engagement: Investors are ramping up their engagement with the businesses they own to ensure alignment with the Paris Agreement. This now needs to be extended to include the social dimension to support a just transition. In the UK, the power generation sector is a first priority for engagement, to facilitate the planned phase-out of coal-fired power generation and the expansion of renewable energy. This could focus on ensuring labour and community standards as well as maximising the benefits of decentralised energy models. A second priority could be construction and real estate to upgrade the UK's building stock in a strategic and inclusive fashion. We estimate that 60 per cent of construction jobs could be affected by the transition, requiring considerable reskilling. This engagement could also extend to the banking sector to ensure that lending to real estate is aligned with the just transition.

Action Area 3 – Capital allocation: Investors can shift their allocation of capital to specific assets aligned with the just transition, particularly through place-based strategies. One priority is to build a thriving 'sustainable bond' market in the UK, covering the environmental and social pillars of the just transition, including local issuance by leading companies, communities, public authorities (for example, via crowdfunding), and national-level issuance (for example, through a sovereign bond). Another priority is to build on the growing interest in impact investment to develop new investment products, including infrastructure, enterprise and property as well as community-owned assets, that seek to support a just transition.

Action Area 4 – Policy advocacy and partnership: Policy reforms are necessary to provide investors with the incentives that encourage sustained action. As a result, investors should call for government in the UK to introduce a strategic framework for the just transition that recognises the importance of decentralisation and devolved decision-making along with the need to engage all stakeholders in its design. The framework could cover the key policy dimensions – including macroeconomic, industrial, regional, labour market and wider environmental policies – and public finance, notably with a dedicated financing mechanism for sustainable infrastructure, such as a National Infrastructure Bank. A forward-looking plan to strengthen the UK's skills for the net-zero transition is essential and a core interest for universal investors, given the importance of human capital for wealth generation.

Action Area 5 – Learning and review: As the just transition is still a relatively new dimension of the climate change agenda for investors, an important element of the proposed collaborative approach will be to develop experimentation at scale with effective monitoring, evaluation and sharing of outcomes. This means establishing effective ways of listening to, learning from and partnering with key stakeholders affected by the transition. Place-based engagement will also be important in the evaluation and learning phases, to ensure that investor action is not detached from stakeholders. Finally, investors should incorporate the just transition in their own reporting: this can be done by building on the framework developed by the Task Force for Climate-related Financial Disclosures (TCFD).

The UK within the world: taking steps forward at the global level

UK investors have a global reach, and it is important for them to apply the just transition internationally, for example through engagement with global corporations (including international supply chains), as well as by allocating assets into investments in developing countries that would facilitate a just transition there. In the latter respect, investors could also collaborate with the Government on how to make the just transition an effective core component of the UK's International Climate Finance programme. As the UK faces the challenges of leaving the European Union, this is a critical time for the country to define a new approach to its biggest challenges and its international role. Furthermore, 2020 will close with the UK hosting the UN's climate conference, COP26, in Glasgow. This provides a major opportunity to show how financing a just transition in the UK can also connect with wider efforts to achieve ambitious steps forward in climate action at the global level.

Introduction

Investing in a just transition: lessons from research and dialogue

The transition to net-zero greenhouse gas emissions needs to be an inclusive process, delivering social justice for workers, communities and consumers: this is the agenda of the just transition. This report sets out the role that investors can play in delivering a just transition in the UK. It seeks to understand the growing momentum in favour of a just transition and to illustrate the implications through a set of place-based examples from Yorkshire and the Humber, before setting out recommendations for investor action. These recommendations are based on the framework set out in our global guide, *Climate Change and the Just Transition: A guide for investor action* (Robins et al., 2018).

Our core finding is that supporting the just transition is not only the right thing for investors to do, but is also the *smart* thing to do, both helping to secure broad public backing for ambitious climate action and making investors' own portfolios more robust in a fast-changing economic and political landscape. This conclusion is based on a one-year process of research and dialogue on the role that investors could play in supporting a just transition in the UK (see box).

In the rest of this Introduction, we lay out the framework for the report in terms of scoping the just transition agenda, defining the investor role and placing the just transition in the national context.

The Investing in a Just Transition UK project

The project is being led by the Grantham Research Institute on Climate Change and the Environment at LSE together with the Sustainability Research Institute at the University of Leeds, in collaboration with the UN-backed Principles for Responsible Investment (PRI) and the Trades Union Congress (TUC). The project has also been guided by an advisory committee from finance and investment, trade unions, business and policy and has drawn from the experience and insights of the growing number of investors that recognise the need to link the environmental and social dimensions of the transition.

We released an interim report in February 2019, which estimated that one in five jobs in the UK could be affected by the transition. That report also suggested that the just transition in the UK offers investors a strategic opportunity to connect climate action with positive social action across the country (Robins et al., 2019).

Scoping the just transition

The just transition has now become a critical part of the international climate change agenda, but there is no commonly accepted definition. However, an important starting point is to ensure that climate action and, more broadly, efforts to build a sustainable economy, are designed and delivered so that they improve social justice, particularly with the interests of workers and communities in mind. The International Labour Organization (ILO) released a consensus set of guidelines in 2015 which show how this shift can support the goals of decent work and quality jobs across the full spectrum of government policies (ILO, 2015).

An aspirational vision of what a just transition will entail is provided by the Just Transition Centre and the B Team (2018):

> *A just transition is an economy-wide process that produces the plans, policies and investments that lead to a future where all jobs are green and decent, emissions are at net zero, poverty is eradicated, and communities are thriving and resilient.*

In the UK, the just transition is now being used as a high-level ambition, one that encompasses the full human dimensions of climate action, in terms of the interests of workers, communities, consumers and citizens more broadly. Our work suggests that a just transition to a resilient, net-zero economy involves a focus on five key elements:

1. **Maximising the benefits** for society in terms of the quantity and quality of work that is generated, achieving reductions in poverty and inequality, and building stronger and resilient communities across the regions and nations of the UK.

2. **Mitigating the social risks** from the transition, particularly for workers and regions dependent on high-carbon sectors, as well as vulnerable and low-income consumers in all parts of the country.

3. **Empowering those affected by change** so that they are actively involved in decision-making, whether in the workplace, communities or in key local and national policy processes, making sure that this is open to all in terms of gender, ethnic group, age or income.

4. **Anticipating the changes,** through careful assessment of what is needed to achieve the UK's climate goals and of key trends – not least in technology – so that social implications can be addressed ahead of time and adapted as circumstances change.

5. **Mobilising investments** from the public sector, business and finance, and citizens across the UK to build the human, social and technological capacities that will be needed to deliver a successful and inclusive transition and so that our places and communities are resilient to the impacts of climate change.

Identifying the investor role

The transition will affect all sectors of the economy, from power to transport, construction and agriculture. It will also affect all households and individuals. Investors have a central role in the just transition, as trusted stewards of their customers' money and as economic actors. For investors, the just transition provides a way of bringing together the environmental, social and governance (ESG) pillars of responsible investment.

In this report, our focus is on the actions that investors can take as:

- **Asset owners,** such as pension funds, insurance firms and foundations, in terms of setting investment beliefs, signalling expectations throughout the financial system, and driving accountability for results consistent with the just transition.
- **Asset managers,** in terms of allocating capital across different asset classes – notably public and private equities, fixed income and private debt as well as real assets such as infrastructure and real estate – in ways that support a just transition.
- **Individuals,** as ultimate savers and beneficiaries, making sure that their assets not only actively support a just transition, including through physical as well as social resilience, but also help to reconnect the financial system to the real economy, particularly in terms of local development.

Investor example 1

Aviva: Committing to a just transition

In its 2018 climate-related disclosure, Aviva states the following:

> *Aviva is committed to supporting a Just Transition to a low-carbon economy that will improve the resilience of our economy, society and the financial system in line with the 2015 Paris Agreement on climate change. We have already invested £4.4bn in green assets since 2015.*

Angela Darlington, Group Chief Risk Officer and Kirsty Cooper, Group General Counsel and Company Secretary, Aviva, 2019

A focus on national action in a global context

This report focuses on what the just transition means in the UK and what investors could do to support this. It comes against the backdrop of the deep divisions revealed by Brexit, as well as the recent surge in popular, political and economic support for accelerating climate action. This was symbolised by the UK Government's decision in June 2019, approved unanimously by Parliament, to legislate for the UK to become a net-zero-carbon economy by 2050. In many ways, the growing backing for a just transition in the UK speaks to the recognition that both policy decisions and the process of economic change need to be far more responsive to inequalities and imbalances across the country.

Clearly, there is also a broad global agenda for investors to pursue on the just transition, in terms of the conduct of global corporations, standards in international supply chains and the urgent need to channel capital to developing countries that are most vulnerable to climate impacts and least responsible for carbon emissions. This agenda is picked up as a priority for future work in Chapter 4.

Structure of the report

Chapter 2 looks in more depth at what the just transition means for investors in the UK, highlighting the different aspects of this ambitious agenda and profiling examples of how investors are already taking action.

Chapter 3 brings together the results of a deep-dive into the implications of the just transition in the Yorkshire and Humber region. This chapter features seven company examples that help to assess and address what the high-level concept of the just transition could mean in operational terms for investors.

Finally, Chapter 4 presents a roadmap for investor action in the UK through recommendations on how to translate the growing awareness of the investor case into determined action.

A note on how we have identified and classified green skills and jobs that will be affected by the zero-carbon transition can be found in the technical appendix at the end of the report.

2. The emergence of the just transition agenda

Target: a just transition to a net-zero emissions and resilient UK economy

In June 2019, the UK legislated to reduce the emissions of greenhouse gases to net-zero by 2050, setting a course for the time when the country's contribution to global warming from territorial emissions will end. The UK is the first major economy to set such a target. The decision followed the publication in May of the Committee on Climate Change's landmark report setting out the case for net-zero and how to achieve it (Committee on Climate Change [CCC], 2019a).

Under the 2008 Climate Change Act the UK was already committed to an 80 per cent reduction on 1990 levels of emissions by 2050 and has thus far achieved a 40 per cent cut, making it one of the leaders in the G20 on this measure. The new, net-zero, target seeks to bring the UK into line with the 2015 Paris Agreement. This move follows an unprecedented national focus on the importance of accelerating climate action, with the approval by Parliament of a motion declaring an environment and climate emergency in the wake of the Extinction Rebellion protests and School Strikes for Climate. There has also been growing interest in a Green New Deal programme to mobilise finance for accelerated climate action, including a just transition (Lawrence, 2019).

Realising a net-zero target will involve profound changes to the UK's economy and society. All sectors of the economy, all businesses and organisations, large and small, all government departments, national and regional, all households and all individuals will be affected. Importantly, the CCC's analysis showed that the overall costs of the transition are manageable and could also generate significant economic opportunities and social benefits. These include new green industries and jobs, cleaner air and improved health. The CCC also stressed that the transition "must be fair and perceived to be fair", concluding that a "broader strategy will be needed to ensure a just transition across society, with vulnerable workers and consumers protected" (CCC, 2019a).

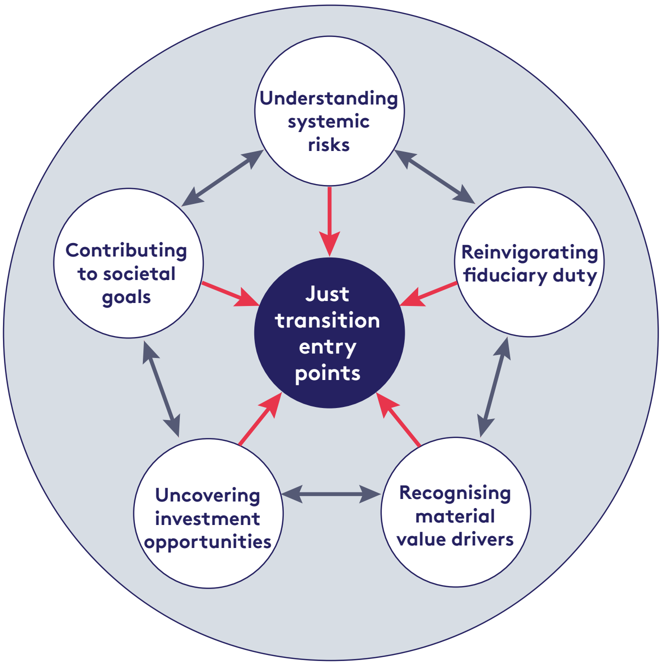
Financing a just transition: the strategic case for investor action

Making this shift will require the mobilisation of the UK's financial system to manage climate risks and channel capital towards decarbonisation and sustainable development more broadly. In April, Bank of England Governor Mark Carney declared that the transition will require "a massive reallocation of capital", adding that "if some companies and industries fail to adjust to this new world, they will fail to exist" (Bank of England, 2019).

A net-zero economy will be a more capital-intensive economy and the CCC estimates that it will involve extra investments of around 1 per cent of GDP per year in 2050. At a national level, this is a manageable sum as overall investment has fluctuated at between 15 and 24 per cent of the UK's GDP over the last 30 years (CCC, 2019a). Even so, the total amount of investment required is significant. This makes the role of the financial sector, including investors, highly strategic in the transition.

The transition will require not just a greater quantity of capital, but also an improved quality of finance, with an increased long-term focus and alignment with the needs of a real economy undergoing structural change. Globally, institutional investors are committed to integrating environmental, social and governance (ESG) factors into their core operations. A growing number of investors are also exploring how to align their investments with the Sustainable Development Goals (SDGs), particularly in terms of impact investing. For investors, the imperative of delivering a just transition brings together the social and environmental dimensions of climate change, supported by a number of strategic reasons for action. These include reducing systemic risks, realising fiduciary duties, recognising material value drivers (drivers linked to shareholder value), and generating positive impact. The case for universal investors – such as pension funds and insurance companies – to advocate for a just transition is particularly strong, given that their returns are derived from overall economic health rather than specific stock picking. For example, universal investors will benefit if workers across an economy have the skills to succeed in the transition.

Figure 2.1. Reasons for investor action on the just transition



Source: Robins et al. (2018)

This rationale for action is laid out in Figure 2.1 above and explained in more detail in *Climate Change and the Just Transition: A guide for investor action* (Robins et al., 2018). An example of how a UK fund manager, Impax, understands this high-level case for action is provided in the box.

Investor example 2

Impax: Making the transition efficient, effective and equitable

By Ian Simm, Founder and CEO

The transition to a more sustainable global economy is set to create enormous economic benefits. Yet, this shift is likely to be disruptive and these benefits will be unevenly spread. At this early stage, we are particularly focused on three topics:

i) Framing the response in terms of investors' primary obligations/duties. The entire reprogramming of our economy for sustainable development is an enormous task that will succeed only if multiple actors in society engage effectively. It is essential that investors consider the implications of 'just transition' analysis for their three core activities, namely, establishing investment beliefs, seeking investment opportunities, and managing risk.

ii) Analysing the just transition in context. As market forces alone are unlikely to shape a sustainable economy in time to avoid catastrophic climate change, government intervention is inevitable, whether directed towards creating new markets or the development of new standards. Public policy analysis often utilises a 3E framework (i.e. laws and regulations should be *effective*, *efficient* and *equitable*), which can also be applied to the discussions of what interventions are 'just' (or 'equitable' in the 3E framework).

iii) Developing a framework that is holistic and constructive. If the focus of a just transition is restricted to those currently working in threatened industries (and the communities in which they live), we are likely to overlook key issues. The rights of current workers should be considered in the context of the employment opportunities available to future generations.

These are challenging topics without easy answers. Investors can take a number of steps to contribute to a just transition, while also furthering their own interests through enhanced stewardship activity, raising these issues with companies in which they invest and encouraging policymakers to commit to managing just transition issues. Doing so effectively could dramatically improve the attractiveness of long-term investments.

(Adapted from https://impaxam.com/news-and-views/blog/a-just-transition/)

Understanding the global context: inclusive development and employment implications

Climate change is arguably one of the greatest injustices in history in terms of the extent and duration of the damage to humanity. Climate change already harms the lives of billions and these impacts will intensify and extend for centuries into the future, particularly if the rise in temperature is not capped at well below 2°C and ideally 1.5°C above pre-industrial levels (the goal of the Paris Agreement). Many of those most affected by climate change live in poverty, and have contributed least to its causation. It is therefore a matter of fundamental global justice to deliver the goals of the Paris Agreement and protect current and future generations. More than this, the activities that contribute to climate change can lead to many other injustices, notably the immense health implications of air pollution from fossil fuel combustion as well as the impacts on vulnerable communities from deforestation and unsustainable land use. In response to these injustices, there are a growing number of legal challenges being brought against companies, who, it is argued, have failed to act on known climate impacts (Setzer and Byrnes 2019).

In sum, the transition to a climate-resilient, net-zero economy presents a global opportunity to deliver inclusive development in the 21st century, not just avoiding the damage of climate change, but also offering the potential for tackling poverty, and inequality, and ensuring protection and respect of human rights. To seize this opportunity, the transition itself needs to be just and how it is achieved should be fair for all. This places the just transition as a way of implementing the framework of the Sustainable Development Goals. The UN Guiding Principles on Business and Human Rights also provide a good framework for how to approach the just transition, helpfully differentiating between business risk and human rights impact (UN Human Rights, 2011).

It is in this context that the 2015 Paris Agreement states that governments should "take into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities" (United Nations, 2015). At the COP24 UN climate conference in 2018, 53 countries (including the UK) signed the Just Transition Declaration, which recognised the need to factor in the needs of workers and communities to build public support for a rapid shift to a zero-carbon economy. Investors have also signalled their support through a statement backed by over 140 institutions with more than US$8 trillion in assets under management (PRI, 2019).

To date, analysis of the global employment implications of the transition point to the generation of a relatively small number of net additional jobs (OECD, 2017; NCE, 2018; ILO, 2018). The International Labour Organization (ILO), for example, estimates an additional 18 million net additional jobs by 2030 from the energy transition, in a world of 3 billion workers (ILO, 2018).

The Pope's view of climate change: a source of injustice

In June 2019, Pope Francis stated that, faced with the climate emergency, "we must take action accordingly, in order to avoid perpetrating a brutal act of injustice towards the poor and future generations". Pope Francis remarked that a just transition to cleaner energy, if managed well, can generate new jobs, reduce inequality and improve the quality of life for those affected by climate change. He called for "decisive action, here and now" and said that the Church is fully committed to "playing her part" (O'Kane, 2019).

Investor example 3
Aberdeen Standard Investments: Connecting human rights and the just transition

Aberdeen Standard Investments is taking an approach to the just transition that has built on previous work on human rights. It has updated its climate policy to include the just transition as a key area for corporate engagement. In the last year it has scoped the agenda and connected the just transition to four human rights issues:

- Vulnerable workers in high-carbon sectors and renewables supply chains
- Land rights and community consent
- Food security
- Energy poverty

The company will examine particular holdings and assess whether they are exposed to just transition risks on a sector and geographical basis. It is incorporating the just transition into its corporate engagement strategy and its impact investing activities, including its Global Equity Impact Strategy, aligned with the Sustainable Development Goals. It is also looking to apply the just transition to private market investments and listed equities.

However, there is far less understanding about how the transition will impact the overall composition of employment, the quality of jobs created or the dynamics with other transitions going on simultaneously, notably digitisation and automation. An emerging theme is that the macro implications for the world of work could well be manageable with the right policies and actions from unions and communities, business and finance (NCE, 2018). These macro implications, whether positive or negative, could be geographically concentrated in particular regions, with potentially significant spillovers into the local economy, and are likely to correlate with baseline susceptibility to environmental risks through flood or drought risk, air pollution or other issues.

Many investors recognise the importance of this global context. For example, Aberdeen Standard sees its work on the just transition as explicitly linking climate change and human rights (see box).

Growing engagement with the just transition in the UK at different scales

Over the past year, the just transition has risen rapidly up the policy and market agenda in the UK. In large part, this is based on the convergence between the climate change agenda and growing concern about inequality and injustice. According to the Institute for Public Policy Research's Economic Justice Commission, the UK is the most regionally imbalanced economy in Europe (IPPR, 2018). The Institute for Fiscal Studies recently launched a five-year study of inequalities in the UK, chaired by Nobel Laureate Professor Sir Angus Deaton, which highlights that "as at no other time in recent history, inequalities dominate the economic and policy debate" (IFS, 2019).

The UK's ability to make the shift to a climate-resilient zero-carbon economy will depend in large part on the success with which it connects the transition with social justice and inclusive growth across the country. The Committee on Climate Change, for example, highlights the need to address and manage the impact of the transition on employment and the cost of living, and to engage those most affected in order to avoid resistance to change (CCC 2019a). There is a systemic risk for investors if a just transition is not realised, but there is also a strongly positive opportunity to empower local communities, one that investors can help to underpin (Rydge et al., 2018).

Across the country, there is a growing momentum building behind a just transition from government, trade unions, businesses and investors.

Government engagement

At a policy level, the Scottish government has already established a multi-stakeholder Just Transition Commission to provide advice on how the country can develop a "carbon-neutral economy that is fair for all" (Scottish Government, 2018). With a two-year mandate, the purpose of the Commission is to advise Scottish Ministers on how to apply the ILO's just transition guidelines (ILO, 2015). The Commission has drawn up a comprehensive work plan examining what the just transition means for a set of priority sectors, including energy, transport, buildings, industry, land and agriculture, as well as finance and investment. The Commission states that its recommendations are designed to support policy decisions that will: "maximise the economic and social opportunities that the move to a carbon-neutral economy by 2050 offers"; "build on Scotland's existing strengths and assets"; and "understand and mitigate risks that could arise in relation to regional cohesion, equalities, poverty (including fuel poverty), and a sustainable and inclusive labour market" (Scottish Government, 2019).

Union engagement

In July 2019, the Trades Union Congress (TUC) released a statement on the just transition, setting out four priorities for action (see box, p17). In the case of offshore wind, the GMB and Unite unions have highlighted the need for local workers at the BiFab yards in Fife (mothballed at the time of publication) to benefit from the huge expansion in offshore wind (GMB Union, 2019). The Prospect union has also pointed to the recent fall in installations in the renewable energy sector and the need to "ensure the highest standards of safety and workforce well-being in UK renewables" as part of a "coherent, whole-system approach to energy policy" based on social partnership (Prospect, 2019).

Business and investor engagement

The business community is also recognising the importance of managing the social and spatial dimensions of the transition. For example, the Aldersgate Group, an alliance of UK businesses, research and civil society groups calling for a more sustainable economy, recently published a report recommending that government "support the workforce in the UK's transition, mapping potential investment decisions against regions facing high unemployment risk" and also to "ensure the UK has a pipeline of skilled workers for new and growing industries" (Aldersgate Group, 2019).

TUC: "A just transition to a greener, fairer economy"

The TUC's Just Transition statement recognises that the move to decarbonise the economy has the potential to offer exciting opportunities for the economy and employment. However, it argues that "the opportunities will not be realised unless the workers most affected have a seat at the table where key decisions are made. They should be able to contribute to solutions, not be told after decisions have been made" (Page, 2019).

To make the just transition a reality, the TUC identifies four priority areas:

1. A clear and funded path to a low-carbon economy, developed by a cross-party commission, involving affected workers, unions, industries and consumers.
2. Workers must be at the heart of delivering these plans, including through Transition Agreements at the company level and just transition arrangements in bargaining at the sectoral level, and ensuring that workers and unions are represented in all local, regional and national level decisions on industrial policy.
3. Every worker having access to funding to improve their skills, by establishing lifelong learning accounts for all adults so everyone has a personalised budget for training. A well funded 'skills for transition' programme, cost-free to workers, must be delivered.
4. New jobs must be good jobs, with the ambition that every new job is of an equivalent standard to those that workers in many industrial sectors have now, with trade union recognition, decent pay, high standards of health and safety and a fair pension.

The statement highlights that government has a key role to play as a funder and procurer of new energy and broader infrastructure. Industrial policy to deliver a just transition should be focused on creating jobs where they are needed most in the UK's regions and nations.

The UK has also made a strategic commitment to promote the growth of green finance, building on the strengths of the City of London. Focusing primarily on the environmental dimension, there is recognition of the need for green finance to contribute to place-based needs across the country too. For example, the Green Finance Task Force recommended in 2018 that the UK government focus on linking green finance with inclusive prosperity at the local level (GFI, 2018) and work is underway to accelerate the development of a pipeline of investor-ready local clean energy projects (UK100, 2019). In July 2019, the Government published its Green Finance strategy, which, for the first time in a UK government policy document, emphasised the importance of the just transition (HM Government, 2019b). The Government and the City of London have also established the Green Finance Institute (see box, p18).

Investor example 4

Legal & General: The role of investors in inclusive capitalism

Legal & General's CEO Nigel Wilson has called on business to "articulate and back inclusive capitalism", an approach that could have strong linkages with the just transition. For L&G, inclusive capitalism supports environmental, social and governance (ESG) measures. According to Wilson, "investing in urban regeneration, affordable housing, clean energy and small business finance is the mark of a socially and environmentally conscious business. Investment managers must first keep track of their own behaviours in the marketplace, as well as those of their investee companies" (quoted in Bloomberg Markets & Finance, 2018).

L&G has also developed new investments that could help address some of these issues. For example, it has established a new subsidiary manufacturing modular homes in Leeds to address the UK's shortage of affordable housing (L&G, 2019).

Local government engagement

Finally, the just transition has emerged from the bottom up as a priority in local initiatives to accelerate climate action. A number of UK cities have now passed motions declaring a 'climate emergency', including Edinburgh, London, Leeds, Oxford and Sheffield. In some places, for example Oxford, this declaration has been accompanied by an agreement to create a Citizens' Assembly to consult on the council's response. Some cities are planning their own pathways to net-zero. In March 2019, for example, Leeds City Council adopted a science-based Carbon Roadmap, which laid out targets for the city to reach net-zero emissions by 2050. The Roadmap highlighted ensuring a just transition as a key challenge (Leeds Climate Commission, 2019; see box on p23).

The UK's Green Finance Strategy: Delivering a just transition

The UK Government's Green Finance Strategy aims to "align private sector financial flows with clean, environmentally sustainable and resilient growth [and] to strengthen the competitiveness of the UK financial sector" (HM Government, 2019b). It sets out a range of actions to mainstream environmental factors in the financial system, mobilise private finance for clean growth and capture the opportunity for the UK of growing global demand for green finance. The new Green Finance Institute will be a key body in making this happen.

In terms of next steps, the Strategy highlights the importance of delivering a just transition: "As our economy changes it is vital we make sure that this growth is inclusive, benefitting people across the UK, supporting workers as industries transform and ensuring the costs as well as the benefits are shared fairly, protecting consumers, workers and businesses."

The Treasury is conducting a review into the costs of decarbonisation, including how to achieve this in a way that works for households, businesses and public finances. A number of sector deals, for example on offshore wind and automotive, are also designed to create 'green-collar' jobs across the country. In addition, there is considerable potential to capture positive synergies between the UK's work on green finance and its efforts to scale up impact investment that aims to generate a positive, measurable impact on society and the environment alongside a financial return. The new Impact Investing Institute has been established to accelerate the growth and increase the effectiveness of this promising market.

Setting out the just transition landscape

Looking across these developments, it is clear the just transition has taken on a comprehensive scope in the UK, going beyond the world of work (see Figure 2.2).

- For **workers**, it means anticipating employment shifts, enabling them to contribute their own ideas and experience to the transition, respecting rights at work, developing the skills that will be needed, ensuring decent pay and conditions, protecting health and safety, and delivering social protection (including benefits and pensions).
- For **communities**, it means understanding the spillover effects of the transition for affected places, respecting communities' rights to be consulted about how to manage climate impacts, and their involvement in new decision-making mechanisms, and supporting community empowerment in the transition (for example through new ownership models).
- For **consumers**, it means giving priority focus to supporting those with inadequate access to sustainable goods and services (notably those living in fuel poverty, without access to transport or unable to pay their water bills). It also means removing barriers to consumers taking an active part in the transition, not least in the world of finance and investment.
- For **citizens** overall, it means creating effective frameworks for participation in the transition, building on traditional mechanisms to include new tools (such as Citizens' Assemblies) so that both the procedural and distributional aspects of the transition are dealt with openly and fairly.

These human dimensions then intersect with three priorities across the climate agenda:

- **Decarbonisation:** Mitigating the social risks involved in the reduction in emissions in high-carbon sectors and revitalising high-carbon regions.
- **Clean growth:** Maximising the social benefits from the economic opportunities of new products and services in terms of jobs, community empowerment and fairness for consumers.
- **Resilience:** Protecting people and communities from the physical impacts of climate change, with a focus on the most vulnerable.

Cutting across all of these is a strong focus on place, to make sure that the transition generates balanced development across the country and is rooted in the priorities expressed by different localities (Figure 2.3). The intersection of the human dimensions and the focus on place is depicted in Table 2.1 (p20).

Figure 2.2. The human dimensions of the just transition

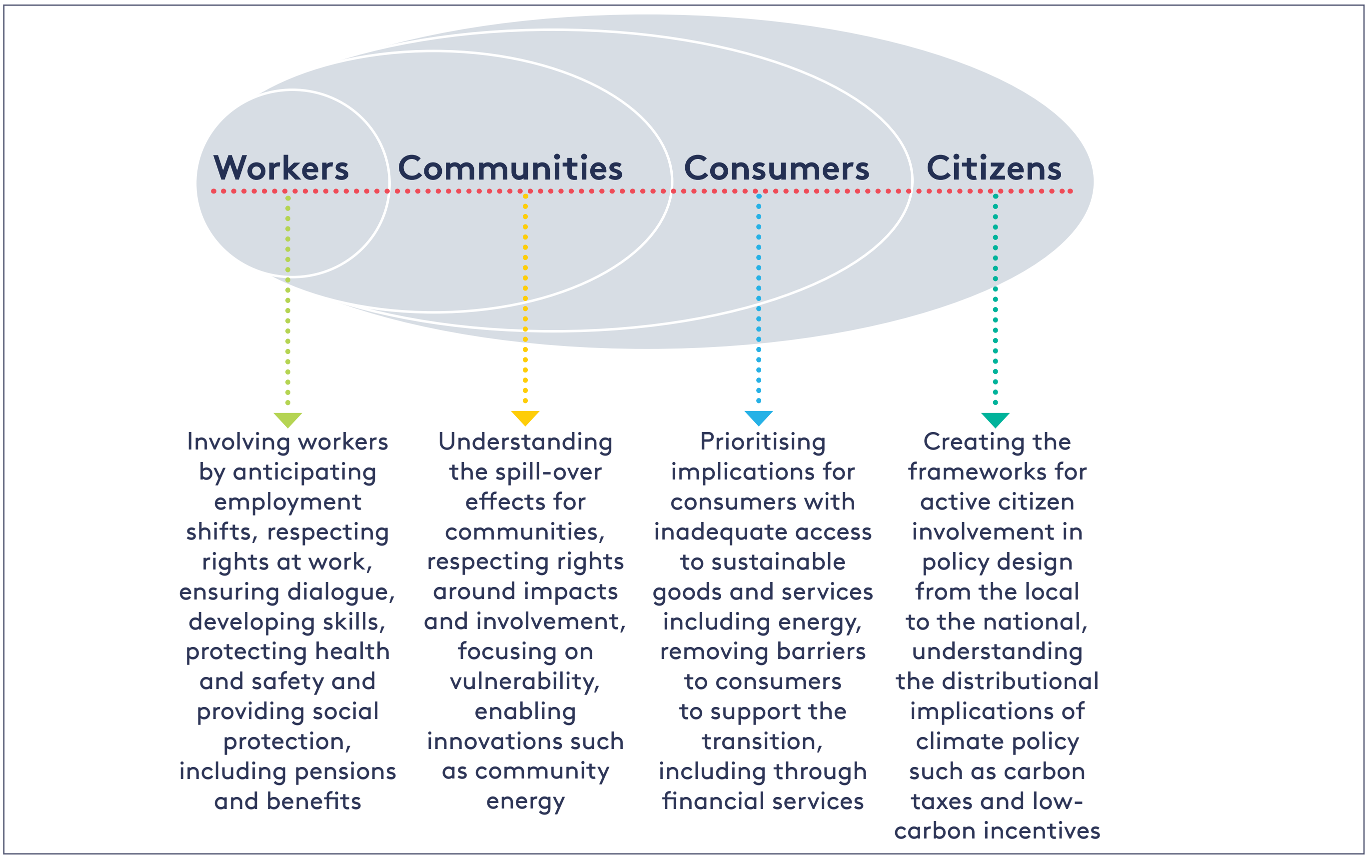
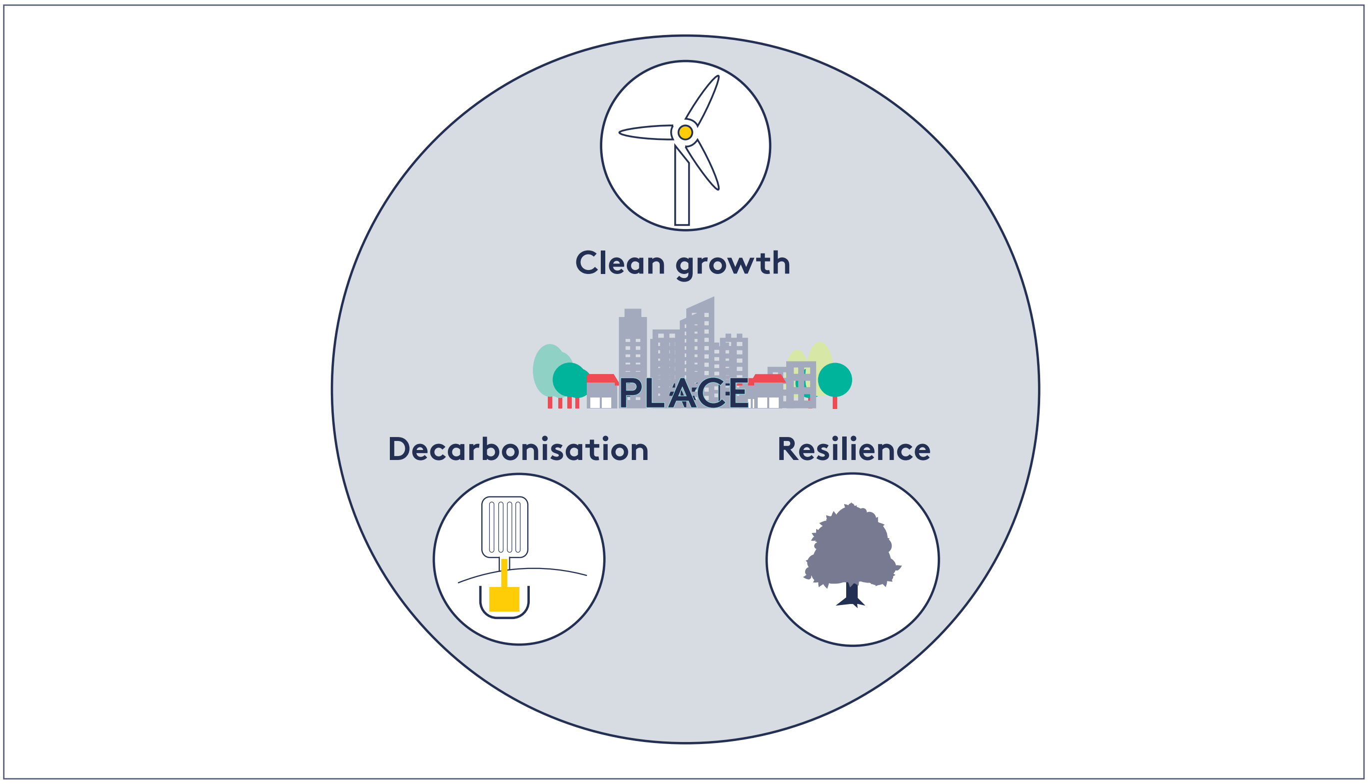


Figure 2.3. Key components of the just transition



Source: Robins et al. (2019)

Table 2.1. Setting the scope: Illustrations of the different dimensions of the just transition

	Workers	Communities	Consumers	Citizens
Decarbonisation	Ensuring responsible decarbonisation in sectors including fossil fuel energy, transport, industry.	Responding to the spillover impacts on industrial communities; revitalising regional economies.	Tackling energy poverty; ensuring fairness in carbon pricing; providing support for household decarbonisation measures.	Managing the distributional and participative issues of phasing out fossil fuels (e.g. on those unfairly impacted by changes or excluded from decision-making).
Clean growth	Delivering good jobs in clean growth areas: renewables, energy efficiency in buildings, and electric vehicles (EVs) and their supply chains.	Companies and investors ensuring a strong social licence to operate; empowering community action; protecting community rights (e.g. land rights around renewable energy).	Delivering universal access to sustainable energy; promoting prosumers (consumers who also produce energy) and citizen-investors.	Addressing the distributional and participative issues of designing a new energy system (e.g. broadening the beneficiaries).
Resilience	Ensuring workers are resilient to heat stress and other physical impacts of climate change to protect wellbeing, incomes and productivity.	Ensuring communities have resilience plans (including trees, green space, adequate building codes, flood recovery and heatwave plans).	Ensuring households have access to affordable cooling to prevent overheating/ heat stress, and are resilient to flood risk.	All citizens to have a voice on resilience measures, ensuring planning is not only directed by central governments and/or vested interests.

Challenges in delivering the just transition

Turning the aspirational goal of a just transition into lived reality and practical action raises a range of challenges. These include:

- Developing commonly accepted definitions and metrics that enable key stakeholders including investors to develop practical plans for implementation.
- Allocating responsibility for a just transition between governments, business, workers, communities and also investors.
- Identifying the incentives and duties needed to stimulate effective action by investors.
- Addressing both the procedural and distributive dimensions of the just transition.
- Recognising the potential unintended consequences of the just transition, including its use by vested interests as a force for delay.
- Ensuring effective policy linkages at different levels of government: poorly planned, inefficient or conflictual interplay between devolution, regional and sub-regional policy and national approaches could be a significant barrier.
- Striking the balance between integrating the just transition through incremental reform of existing practices and more innovative approaches that bring transformational change to current systems.

There is little experience to date on what the just transition means in operational terms and how progress could be measured and evaluated. To help respond to the challenge of translating the high-level concept of the just transition into practical action, we have looked in more detail at how the transition could play out across the region of Yorkshire and the Humber, examining lessons for investors from seven example companies. These are detailed in the next chapter.

3. Exploring the practical implications of a just transition

Currently, there is no standard framework for evaluating how investors can assess the consistency of their portfolios with the just transition. The ILO has produced high-level policy guidelines, while the Just Transition Centre and the B Team have released a guide for business (ILO, 2015; JTC and B Team, 2018). To add to those guidelines, using the categories set out in Chapter 2 we have drawn up a qualitative assessment framework for how investors could implement the just transition, covering the following dimensions:

- **Environmental:** Strategy, governance, risk management, policy advocacy and metrics for delivering science-based emission reductions and strengthening physical resilience in the context of wider sustainability goals on circular economy, resource efficiency, pollution control and healthy ecosystems.
- **Workplace:** Strategy, governance, risk management and metrics for delivering rights-based workforce management, including the number of jobs, job security, respect for labour rights, employee representation, good pay and conditions, diversity and equality, skills and training, health and safety, and responsible management practices along supply chains.
- **Communities:** Strategy, governance, risk management and metrics for contributing to healthy communities, including respect for human rights, stakeholder engagement and targeting vulnerable communities, especially those left behind by deindustrialisation, and contribution to regional revitalisation.
- **Consumers:** Strategy, governance, risk management and metrics for contributing to inclusive access to sustainable goods and services (e.g. energy, finance, food and water).

We have not included the citizen dimension in this framework as it is of less direct relevance for investors.

To give substance to this framework and illustrate the real-world challenges facing investors and others in delivering the just transition, we have analysed seven examples from the region of Yorkshire and the Humber, located in North and Northeast England. Before exploring the findings of the examples, we provide a brief analysis of the just transition challenge faced by the region.

A regional focus on Yorkshire and the Humber

With a population of 5.3 million – approximately 8 per cent of the UK's population – Yorkshire and the Humber generates 6.4 per cent of the UK's GDP and 10 per cent of its carbon emissions (HM Government, 2018c; OECD, 2019). Once at the heart of the Industrial Revolution, in recent decades the region has experienced immense change. In some areas the decline of the coal, iron and steel industries, which gathered pace from the 1980s, has left a legacy of poverty, lack of opportunity and a sense of communities being left behind. Naturally, there is a strong desire to ensure that any future transitions do not leave a similar legacy and instead act as a positive stimulus for the region. This was the rationale, for example, for the TUC establishing a Low-Carbon Task Force in the region in 2015, bringing together partners to help develop a regional low-carbon transition plan (TUC, 2015).

Quantifying the implications of the transition for jobs in the region

As a process of structural economic change, the zero-carbon transition will involve altering the mix of skills needed in the economy. Some skills will be needed less than now or not at all in the future; others are likely to be needed more; and entirely new skills will also be required.

Our analysis indicates that one fifth of jobs in the UK today use skills that are likely to be affected by the transition (Robins et al., 2019).[2] Approximately half of these – one in 10 overall – use skills that are likely to be needed more in the green economy. One in 10 uses skills that are likely to be needed less.

Yorkshire and the Humber is one of the three regions of the UK most affected in these terms, along with the East and West Midlands. Across the region, just over 22 per cent of the workforce could be affected. Reflecting the national picture, around half of these are expected to see the skills they currently use in their jobs fall in demand in the transition and another half are expected to see the skills they use in their jobs increase in demand.

The implications are greater, however, in certain key sectors, as illustrated in Table 3.1, where we classify jobs with skills that will grow in demand as 'transition aligned' and those that will see falling demand as 'transition exposed'. Overall, 60 per cent of jobs in the construction sector use skills that will be affected by the transition, for example. This is not surprising given the need to upgrade standards across the entire building sector as well as to employ new technologies in, for example, domestic heating. The manufacturing sector will also be highly affected, at 49 per cent of jobs, but with the distinction that more of these jobs use skills that will increase in demand, at 32 per cent, compared with 17 per cent of jobs with skills for which demand will decrease. Transport and motor trades is another particularly affected sector, again in line with its need to decarbonise, and also due to changes in the pattern of mobility through promotion of mass transit, cycling and walking.

Table 3.1. The five sectors likely to be most affected by the zero-carbon transition in Yorkshire and the Humber

Sector	No. of jobs in Yorkshire and the Humber	Transition exposed (%) (falling skills demand)	Transition aligned (%) (rising skills demand)	Total % affected
Construction	114,200	30%	30%	60%
Manufacturing	273,290	17%	32%	49%
Transport and storage	131,860	26%	19%	45%
Motor trades	48,170	26%	19%	45%
Mining, quarrying and utilities	25,130	26%	15%	41%
Region total (all sectors)	**2,367,010**	**11%**	**11%**	**22%**

Other sectors, such as health, accommodation food services (which includes restaurants, cafés and hotels) and public administration, are not likely to be significantly affected by the change in skills demand in the transition to net-zero. However, these sectors will be impacted by the physical shocks of climate change, such as, for the health sector, an increase in hospitalisations due to extreme climatic events, and, for the food services sector, potential supply disruptions.

Within the region, our estimates also point to concentrated implications for certain localities. Some local authorities could be little affected, with around 10 per cent of jobs affected, while in others up to 27 per cent of jobs could be affected (see Table 3.2). Two of these areas are locations for examples included in this report: Selby is home to Drax power station, and the Rotherham Metropolitan Borough is the location of the Advanced Manufacturing Research Centre [although its address is Sheffield]. Wakefield is notable for its high exposure and large population relative to other local authorities.

2. These estimates are based on research by Alex Bowen, Karlygash Kuralbayeva and Eileen Tipoe (2018), using employment and skills data from the United States from the National Centre for O*Net Development (NCOD, 2018). More information on the approach can be found in the Technical Appendix.

Table 3.2. The five local authorities likely to be most affected by the zero-carbon transition in Yorkshire and the Humber

Local authority	Total no. of jobs	Transition exposed (%) (falling skills demand)	Transition aligned (%) (rising skills demand)	Total % affected
North Lincolnshire	71,505	13%	14%	27%
Selby	36,085	14%	13%	27%
Wakefield	149,670	12%	11%	23%
Ryedale	24,175	11%	12%	23%
Rotherham	99,305	12%	11%	23%

A growing number of efforts are underway across the region to anticipate these and other changes, with the aim of generating positive outcomes. One of these is being led by the Leeds Climate Commission.

Leeds Climate Commission: Developing an inclusive carbon roadmap

The Leeds Climate Commission is an independent, cross-sectoral, multi-stakeholder group that has brought together key organisations and actors to identify and stimulate investment in the opportunities associated with the zero-carbon transition for the city.

In March 2019, Leeds City Council passed a motion to declare a climate emergency based on the preparation of a science-based Carbon Roadmap produced by the Commission. The Roadmap concluded that "technically and to a large extent also economically it is entirely possible for Leeds to become a carbon neutral city" (Leeds Climate Commission, 2019). It set a number of ambitious targets for the city's journey to zero-carbon with a 70 per cent cut by 2025, 85 per cent by 2030, 95 per cent by 2035, 97 per cent by 2040, 99 per cent by 2045 and 100 per cent by 2050.

Importantly, the Commission highlighted in its analysis of the city's next steps that "a key challenge is to ensure that the transition is a just and inclusive one – with steps being taken to ensure that people and places are not left behind and that all social groups and economic sectors participate in and benefit from the transition." The Commission is also working on innovative ways to mobilise finance for this pathway.

Leeds City Council has also published an inclusive growth strategy covering 2018–2023, which commits to a low-carbon future alongside high quality housing, creation of better, well-paid jobs, and developing the skills and strong small and medium-sized enterprises (SMEs) needed for the economy (Leeds City Council, 2018).

Other cities and authorities in the region are developing industrial strategies, which will aim to drive clean and inclusive growth in the region. They are currently in development for three areas: West Yorkshire Combined Authority; Humber; and York, North Yorkshire and East Riding (HM Government, 2018b). In June 2019, the Humber Local Economic Partnership published its Industrial Strategy Prospectus (Humber LEP, 2019).

The Humber Industrial Strategy: Targeting net-zero by 2040

The Humber, a large tidal estuary, is home to a major industrial centre that has the highest carbon dioxide emissions of anywhere in the UK, and 30 per cent more than the next largest industrial cluster (Humber LEP, 2019). It faces climate resilience challenges due to its low-lying topography but also strategic opportunities from the drive to a net-zero economy.

In June 2019, the Humber Local Economic Partnership (LEP) published a prospectus for its industrial strategy for consultation. The prospectus presents an ambitious programme including a target of achieving net-zero emissions in the region by 2040, a decade ahead of the country as a whole. The strategy includes plans for new industries focused on clean energy generation – predominantly offshore wind, decarbonising industries like steel and chemicals, and expanding into new opportunities in engineering and assembly. It will take a cross-cutting approach, committing to "a whole-place approach to decarbonisation", with focuses on ideas, people, infrastructure, business environment and places.

Alongside this, the Environment Agency is working in partnership with 12 local authorities, businesses and other groups from around the estuary, and the Humber LEP, to deliver a strategy that will shape the management of flood and coastal risks while enabling sustainable growth now and for the next 100 years.

Learning from practice: regional examples to explore the just transition

We have identified seven examples from Yorkshire and the Humber to illustrate the challenges raised by the just transition and the roles that investors could play. The examples are built on a review of publicly available information and discussions with key players from each company or organisation. Figure 3.1 shows their locations.

The case study process was designed in the following way:

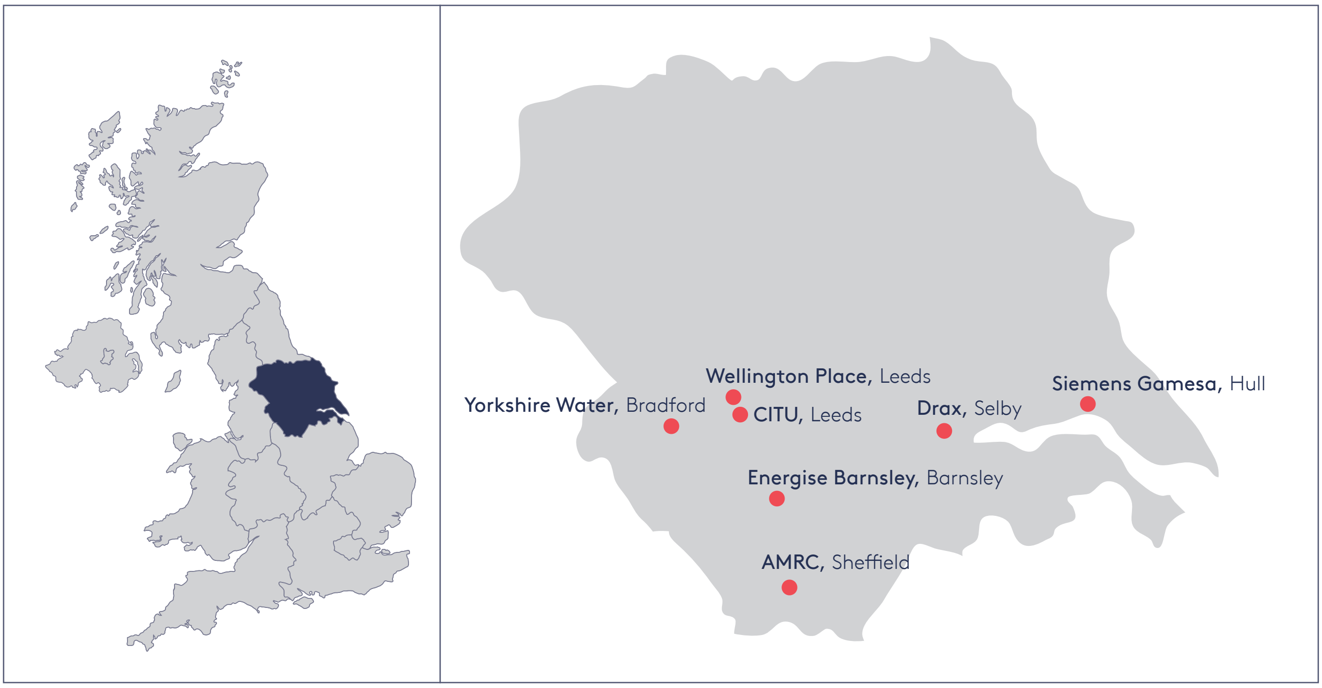
- **Themes:** The examples have been chosen to illustrate the just transition themes in the UK of decarbonisation, clean growth, resilience and, cutting across each of these, the importance of place.
- **Dimensions:** The examples seek to draw lessons for the assessment framework outlined at the beginning of the chapter, looking at environmental, workplace, community and consumer dimensions.
- **Assets:** The examples are intended to include a range of different assets that investors hold, notably listed equities (Drax, AMRC/Harworth and Siemens), real estate (Wellington Place and Citu), and fixed income bonds (Energise Barnsley and Yorkshire Water).
- **Actions:** The purpose of the examples is to inform the roadmap, notably around actions that investors could take in terms of investment strategy, corporate engagement, capital allocation, policy advocacy and learning.

What we have done for the first time is to connect the high-level ambition of the just transition with real-world examples of how the social dimensions of climate change play out in practice. The examples are not designed to present solutions to the challenge of the just transition but to generate insights for future action.

Figure 3.1. Maps to show location of the region and examples within it

Location of Yorkshire and the Humber within the UK

Location of our seven examples within Yorkshire and the Humber



Decarbonisation examples: Drax Power Station and AMRC

Decarbonisation means reducing greenhouse gas emissions to zero. Doing this will have profound implications for high-carbon economic sectors, such as energy, transport, industry and agriculture (CCC, 2019a). For a just transition to be achieved, this phase-out of carbon-generating activities needs to be managed in a way that is fair for the workers and communities involved.

The phase-out of coal-fired generation is a global climate priority and the UK has set the goal of closing its last coal-fired power stations by 2025. Yorkshire was once at the heart of the UK's coal industry, with 64 coal mines. The decline in UK coal production and use started in the 1950s and has been accelerated recently by energy system shifts and environmental policy. The UK's experience shows how it can take decades to rebuild the socioeconomic fabric of former mining communities (Caldecott et al., 2017).

The Drax and AMRC examples presented here highlight the complex choices that high-carbon firms and localities face during their move away from fossil fuels.

Drax Power Station, Selby

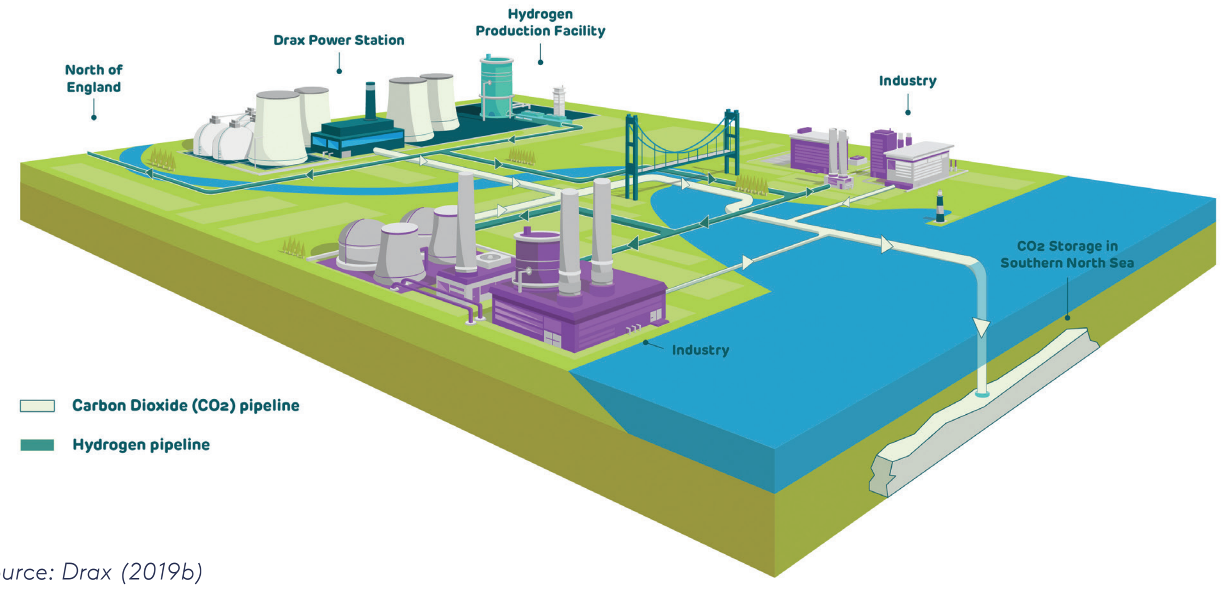
Profile

Built in 1973, Drax is the UK's largest power station, generating 5 per cent of the country's electricity. It has converted four of its six coal-fired boilers to biomass and now produces 12 per cent of the UK's renewable electricity (Drax, 2019). It is part of the Drax Group, which is listed on the London Stock Exchange and employs over 2,500 people across all sites. The area around the town of Selby, the location of Drax power station, has already experienced significant change with the closure of the Selby Pit complex in 2002 and more recently the Eggborough power plant in 2018.

The just transition issues at stake

The social implications of decarbonisation will depend fundamentally on the technology pathway that Drax chooses. Currently, Drax is at the beginning of a second phase in the decarbonisation process. The first phase involved the switch from coal to biomass for most of its boilers; the second involves moving to net-zero production through the installation of bio-energy with carbon capture use and storage (BECCS) technology. Drax has been piloting BECCS technology and is part of a consortium to develop a 'net-zero cluster' on the Humber estuary (see Figure 3.2).

Figure 3.2. What a net-zero-carbon cluster could look like in the Humber region



Source: Drax (2019b)

This transition is not without controversy or risk. Carbon emissions are still produced from biomass generation and Drax remains the UK's largest single point source of emissions. Regulators currently judge these emissions to be offset through the lifecycle of the biomass, but this is contested by a range of environmental NGOs and researchers (for example, see Alexander, 2019). In addition, Drax has announced plans to replace its remaining coal capacity with additional gas production, which would need to install CCS technology or use a zero-carbon fuel such as hydrogen by 2050 to be compatible with the Government's net-zero target. Crucially, the policy and incentive regime to enable BECCS to be commercially viable has yet to be designed.

By making the transition to a fully net-zero facility as part of a wider regional industrial cluster, Drax could support a just transition for its workforce, the surrounding community, and the wider economy in Yorkshire and the Humber. This 'net-zero cluster' would have the potential to protect existing jobs in high-carbon sectors as well as to act as a magnet for industries to the region attracted by the potential of a net-zero future. However, there are a number of planning, funding and policy challenges that would need to be addressed for this to be achieved.

Insights from the assessment

Drax places the management of its environmental and social performance within the wider framework of the Sustainable Development Goals, identifying six where it can have significant impact (including SDG7, Affordable and Clean Energy, SDG13, Climate Action, and SDG15, Life on Land).

We assess Drax using our framework as follows:

- **Environmental:** The classification of biomass as renewable remains disputed. Drax believes that its certification schemes and forest management practices are sufficient to produce net forest regrowth. The CCC recommends that biomass be used for end-uses that maximise sequestration, notably through BECCS. To make BECCS sustainable in the long-run, Drax needs to show how the feedstock required can be delivered in a way that securely delivers net-zero and also enhances biodiversity conservation.
- **Workplace:** Drax's current workplace practices cover human rights, health, safety and wellbeing, diversity and inclusion, and employee engagement. Around 19 per cent of the workforce is covered by collective bargaining agreements with trade unions. So far, Drax has said little on how workers are involved in the transition process. Scenario analysis of the diverging impacts of possible decarbonisation pathways on workers is needed.
- **Community:** Drax actively measures its wider social impact: a study from Oxford Economics estimated that the company supported 17,500 jobs across the UK in 2017. The community implications of different decarbonisation pathways (including the development of a 'net-zero cluster') need to be examined further, including through broad-based dialogue.
- **Consumers:** It is vital that the costs of making the shift to a net-zero energy system via BECCS at Drax are shared fairly and do not burden low-income consumers, for whom energy bills may already be unaffordable. This points to the need to marry supply-side measures with demand-side action to improve energy efficiency.

Lessons for investor action

For investors, the Drax example points to two priorities for investor action:

- First, shareholders need to engage with the company not only to ensure that its climate strategy has environmental integrity but also to raise the importance of worker, community and consumer interests so that the process of change is inclusive and resilient.
- Second, investors need to recognise the critical importance of effective incentive frameworks in their *policy advocacy* to ensure that the deployment of BECCS is environmentally effective, cost-efficient, and also socially equitable.

Advanced Manufacturing Research Centre (AMRC), Sheffield

Profile

Founded in 2001, the Advanced Manufacturing Research Centre (AMRC) operates on the site of the former Orgreave Colliery, following significant redevelopment of the site by Harworth Group plc, the successor to UK Coal, to provide high productivity jobs. AMRC is a partnership between the University of Sheffield and private sector manufacturers, most prominently Boeing, Rolls-Royce and McLaren, and specialises in the use of research to develop new processes and techniques in precision material applications. Although the new jobs are currently being driven by the automotive and aviation sectors, innovations at AMRC point to the potential for light-weighting and more efficient manufacturing processes.

The just transition issues at stake

Cities and regions previously dependent on high-carbon industries, such as Sheffield, need effective strategies that revitalise the economy, attract capital inflows, and generate decent work for affected communities. AMRC shows how a long-term partnership between the university sector, business and government can create a successful platform that supports additional well-paid jobs through a strategy focused on technological innovation.

The just transition has a profound public good dimension, often requiring a blend of public and private finance. The AMRC and the wider Advanced Manufacturing Park (AMP) at Orgreave have benefitted from considerable public investment alongside private sector capital. The AMRC is supported by the Engineering and Physical Sciences Research Council (EPSRC), the European Regional Development Fund (ERDF) and the UK Government. Yorkshire Forward, the now-closed Regional Development Agency for Yorkshire and the Humber, was important in the original set-up of the centre, part-funding buildings and allowing the university to gain matched funding from the ERDF. The site is also located in the Sheffield City Region Enterprise Zone, which offers benefits including business rate relief, enhanced capital allowances and simplified planning.

Insights from the assessment

- **Environmental:** AMRC is currently focused on engineering sectors that have a high carbon footprint (such as aviation and automotive). However, the Centre's expertise in light-weighting and composite materials can also be applied to technology and products that are aligned with the transition to net-zero, particularly in the electric mobility transition.
- **Workplace:** The colliery employed 500 lower-skilled workers at its closure. AMRC currently employs around 670 workers, and the AMP over 1,500 in high productivity, higher-pay, advanced technology sectors, with better working conditions than experienced in the colliery. Skills development is a critical dimension of the success including apprenticeships at the manufacturing companies on site. The overall direct impact on Sheffield, however, is reasonably modest, with the AMP accounting for only 3 per cent of the City Region's advanced manufacturing and engineering jobs (Breach, 2019).
- **Community:** The AMRC suggests that former coal-dependent industrial areas can be regenerated to support new industries. Bringing these activities together creates clusters of people and ideas in the Sheffield City Region and increases the productivity of economic activity elsewhere (Katz and Wagner, 2014). However, individual developments will not in themselves transform an area, and could also have varied impacts on communities. There is a gap between the high-skilled manufacturing around the AMP and the sector more broadly in Sheffield. Overall, only 20 per cent of exporting firms in the Sheffield City Region are high-skilled businesses, versus a national average of 49 per cent (Breach, 2019). This suggests a potential low level of linkage to the communities that have historically worked in the city's industrial economic base.

- **Consumers:** Technological innovation in manufacturing techniques will be needed as industrial processes change to zero-carbon. This will be critical to driving down the cost of the transition and benefitting consumers through improved living standards.

Lessons for investor action

The AMRC example provides three lessons for investor action to support the just transition:

- First, investors need to support strategic public investment to develop innovation clusters in high-carbon regions as part of their *policy advocacy*.
- Second, investors need to *engage* with leading development companies and landowners in high-carbon regions (such as Harworth Group[3]) to ensure high environmental and social standards. This could be done by equity investors or those investing in discrete infrastructure projects.
- Third, investors need to participate in place-based partnerships as part of their *capital allocation* strategies. It is striking that the key partners of AMRC are all industrial; in the next phase of the transition, financial firms and investors could also play a key role.

Clean growth examples: Siemens Gamesa, Wellington Place, Citu and Energise Barnsley

Clean growth involves the rapid expansion of economic activities that are consistent with a pathway to a net-zero emissions and sustainable economy. Clean growth is one of the five 'grand challenges' in the UK's Industrial Strategy and offers strategic opportunities for enhanced prosperity and high-quality jobs. It covers a broad range of sectors including the manufacture and deployment of renewable energy, energy-efficient and green buildings, zero-carbon transport, and sustainable land-use and agriculture.

The just transition challenge is to ensure that growth in low-carbon products and services creates jobs consistent with the global goal of 'decent work' and that it brings benefits for the wider community. New models of localised energy can play an important role in tackling consumer issues including fuel poverty and energy access.

Siemens Gamesa and Green Port, Hull

Profile

The Green Port Hull partnership was launched in 2010 to serve the growing offshore wind developments in the North Sea. In 2011, Siemens and Associated British Ports agreed to develop the Alexandria Dock site in Hull. In 2015, Siemens opened its new factory after making a £160 million investment and the first vessels were launched in 2017.

The just transition issues at stake

Offshore wind represents a strategic opportunity to deliver clean growth and high-quality jobs across the UK. The sector currently supports 7,200 jobs and this could grow to 27,000 jobs by 2030 (HM Government, 2019c). The recent sector deal between the Government and industry has also committed to increasing the representation of women in the workforce to at least a third by 2030.

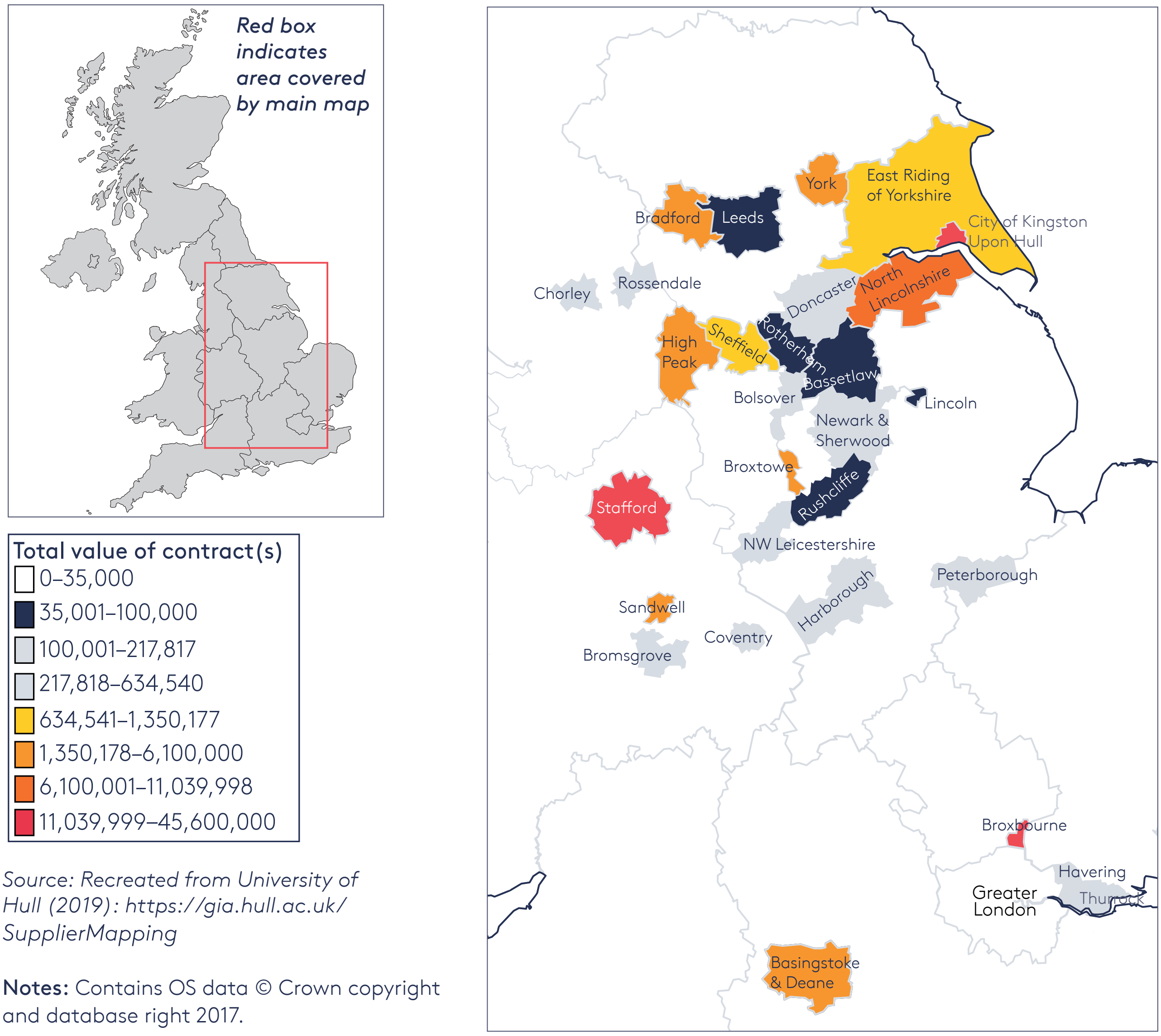
The Green Port development at Hull shows how corporate investment in the expansion of clean energy can bring wide social benefits to a region through the creation of new high-productivity jobs and local supply chains. It has involved partnership with workers and unions at the facility as well as with local authorities, universities and suppliers across the region. The Green Port development highlights the need to think about an ecosystem of change involving local companies, investors, local authorities, local communities, surrounding universities and central government. The University of Hull has established Project Aura, supported by public finance, to develop and deliver skills, knowledge and innovation for the offshore wind industry.

3. Land and property regeneration company Harworth Group estimates that its wider portfolio has the potential to add £3.6 billion in gross value added to the UK economy (Harworth Group, 2019).

Importantly, it also shows how sustainability commitments at a leading global corporation such as Siemens can be translated into reality in a particular place. Globally, Siemens' sustainability policy is structured around its Vision 2020+ strategy and is rooted in the Sustainable Development Goals: its workforce policies relate to key just transition issues such as education (SDG4), gender equality (SDG5), decent work (SDG8) and reduced inequality (SDG10) (Siemens, 2018). Siemens also has an International Framework Agreement with the IndustriAll Global Union, which represents 50 million workers globally. In the agreement, Siemens commits itself to respect fundamental workers' rights as enshrined in core labour standards (IndustriAll, 2012). In Hull, these policies are delivered through its dedicated renewable energy subsidiary, Siemens Gamesa.

Figure 3.3 shows, at an aggregate level, which areas have benefitted financially from the Green Port development in terms of primary spend. The largest centres of spend are in Yorkshire and the Humber, especially in Hull, and in North Lincolnshire, Bradford and, more distantly, Stafford and Hertfordshire (Broxbourne).

Figure 3.3. Regional value of supply chain contracts in England for the Siemens Gamesa Green Port plant



Source: Recreated from University of Hull (2019): https://gia.hull.ac.uk/SupplierMapping

Notes: Contains OS data © Crown copyright and database right 2017.

The map shows the aggregated value of the contracts awarded to each supplier in respect of the region in which suppliers were based. "N.B. It should be noted that the map and information it depicts represent high level preliminary research for the construction phase of the Siemens-Gamesa OSW blade manufacturing facility. The supply chain mapping work is under continual revision and subject to developments in line with the commencement of operations at the Siemens-Gamesa site and our use of interactive mapping tools" (University of Hull, 2019).

Insights from the assessment

- **Environmental:** Siemens has a strategic commitment to low-carbon growth: in 2017, revenues from its Environmental Portfolio – including offshore wind – accounted for 47 per cent of its total revenue. Siemens Gamesa has committed to carbon neutrality across its value chain by 2025, aiming to be the first major industrial company to achieve this (Siemens Gamesa, 2019). This target aligns expectations and creates certainty around the future direction of the company, which is a major employer and anchor[4] institution in Yorkshire and the Humber.
- **Workplace:** Globally, Siemens employs 379,000 people, of which 14,000 are in the UK, and it has created over 1,000 new jobs directly at the Alexandria Dock site. As part of the development of the Green Port site, Siemens agreed union representation through Unite the Union, which was directly involved in the design. Both management and union representatives report very good labour relations at the site overall.
- **Community:** Siemens Gamesa committed to maximising local economic benefits from the project, including local jobs and developing new local supply chains. To date, over 95 per cent of the jobs created by this investment are located in the Humber region. Siemens also decided to build up a local supply chain in the area rather than simply drawing on existing suppliers for its wind operations in Denmark and Germany. Recent estimates suggest that this investment had an economic multiplier of 1.47, generating gross value added of £71.3 million (University of Hull, 2017). Siemens also measures its contributions to society, which are collated at each location through a 'Business to Society' programme (Siemens, 2019).
- **Consumers:** The Green Port example shows the importance of effective policy incentives such as the Contracts for Difference in the offshore wind sector, which have effectively driven down the cost of renewable energy and thus reduced the cost of the transition for consumers.

Lessons for investor action

The Green Port example provides two lessons for investor action to support the just transition:

- First, it points to the type of social standards that major corporations will need to have in place if they are to contribute to a just transition and thereby provides an example that investors can use in their *shareholder engagement* with other companies.
- Second, it illustrates the importance of a comprehensive policy framework to drive positive investment flows and highlights priorities for *policy advocacy* with national governments in terms of incentive regimes and public investment in the development of clean growth clusters.

Wellington Place, Leeds

Profile

Wellington Place is the largest new office development in Leeds, Yorkshire's largest city. It is led by MEPC Plc and is funded by two pension funds: BT Pension Scheme (through Hermes Investment Management) and the Canada Pension Plan Investment Board. Planning started in 2006 and the final building is due to be completed in 2026; so far, investment in construction has totalled £150 million (Hatch Regeneris, 2019). Future expansion could result in Wellington Place hosting one in 10 jobs in central Leeds.

The just transition issues at stake

Powerful links exist between the just transition and the need to regenerate many of Britain's towns and cities. Property investors can play a significant role in supporting the shift to a resilient zero-carbon economy by complementing the integration of long-term environmental goals with a focus on workplace performance and community benefit. For major developments, place is now becoming

4. In the context of regional development, an 'anchor institution' can be defined as one whose scale, rootedness and community links are such that they are acknowledged to play a key role in local development (Morris et al., 2010) – see p37.

a critical factor for real estate investors, to secure financial performance but also to generate positive impacts in the locality.

The transition to net-zero will require the introduction of best-in-class sustainability criteria for design and operation of new buildings as properties are developed and redeveloped, along with the flexibility to upgrade to full net-zero standards. Equally, how commercial property is developed or redeveloped in terms of the people dimension is increasingly a key performance factor. Real assets and construction are also important to the skills transition as the economy decarbonises.

Wellington Place highlights the proactive role that long-term asset owners can play in providing patient capital for urban regeneration. The project is being developed according to Hermes' Responsible Property Investment (RPI) strategy (see box).

Investor example 5

Hermes: Responsible property investment and the just transition

Hermes' Responsible Property Investment (RPI) strategy views environmental, social and governance (ESG) risks as business-critical to its duty to deliver holistic returns: by this Hermes means "outcomes for our clients that go far beyond the financial and consider the impact our decisions have on society, the environment and the wider world" (Hermes, 2018). The RPI strategy and programmes cover ESG factors, with a social focus on employees, tenants' wellbeing and safety, place-making, communities' socioeconomic development, supply chain worker rights and modern slavery.

More recently, Hermes set out how to create positive impacts through its Responsible Property Investment for the SDGs:

- "Meaningful place-making that fosters civic pride
- "Healthy, engaged and productive occupiers and communities that drive desirable social and environmental outcomes for all stakeholders
- "Achieving a just transition to a low-carbon, circular economy in order to help prevent further adverse climate change and resource scarcity" (Hermes, 2019).

Insights from the assessment

- **Environmental:** On overall building performance, Wellington Place is currently rated BREEAM[5] 'Excellent', one level below the top rating, 'Outstanding' (Hermes Investment Management, 2019). The next step is to explore how the building can surpass these standards and demonstrate net-zero alignment, and become a local leader in Leeds City Council's ambition for a rapid transition to net-zero.
- **Workplace:** Developing skills is a key part of the just transition and this has been a focus at Wellington Place. In total, 100 apprenticeships were completed during construction through to 2018, with an estimated earnings uplift of £6.1 million (Hatch Regeneris, 2019). The contractor, Wates, has also entered partnerships with two local social enterprises to employ and train homeless people on the site. Wates has tracked that 80 per cent of working days are completed by people who live within 40 miles of the site.
- **Community:** From the beginning, Wellington Place has had an explicit commitment to place-making, so that the benefits of the site spill over into the local community. Regeneris has identified wellbeing benefits of around £1.7 million per year at the site due to high quality public space, events and activities programmes (Hatch Regeneris, 2019). One fifth of construction spend is within 10 miles of the site, benefitting communities (ibid.). Wellington Place has become an anchor investment in the wider regeneration of Leeds's West End, improving the commercial viability of regenerative developments on other sites in the area.
- **Consumers:** For real estate developments such as Wellington Place, the 'consumers' are the commercial tenants and their employees. Over 3,900 people now work in offices on the site, 60 per cent of whom live in Leeds, and 85 per cent are employed in high value sectors identified as priorities for the region. Future expansion could take this to over 18,000 employees.

5. BREEAM is a sustainability assessment method for masterplanning projects, infrastructure and buildings. See breeam.com.

Lessons for investor action

Wellington Place highlights three lessons for investor action to support the just transition:

- First, it points to the critical role that long-term asset owners can play in terms of *capital allocation* that supports real estate development which has explicit goals to deliver environmental, workplace and community benefits.
- Second, Wellington Place highlights the importance of *policy dialogue and partnerships* at the local level so that individual investments can deliver wider positive spillovers in line with the climate and inclusive growth objectives of cities and towns.
- Third, it shows that today's market-leading practice is not necessarily sufficient to deliver either the environmental or social requirements of a just transition given the urgency and the scale of the UK's new net-zero target. This points to the need to review *investment strategy* so that it is consistent with the country's new goals.

Citu, Leeds

Profile

Citu is a privately owned low-carbon housing developer based in Leeds. Founded in 2004, it has two core developments: the Climate Innovation District in Leeds and Little Kelham in Sheffield.

The just transition issues at stake

The UK will not meet the net-zero target without the complete decarbonisation of its housing stock. In addition to the considerable challenge of converting and retrofitting existing dwellings, all new homes must be low-carbon, energy- and water-efficient and climate-resilient from the outset (CCC, 2019b). Built infrastructure is also vital for community cohesion and construction is an important source of employment.

Citu has pioneered an innovative development model that aims to go further than existing standards for new residential buildings. Citu homes use around 10 times less energy for heating compared with the average UK house, for example. The Citu example shows the limitations of the UK's financial system in supporting the breakthrough innovations that will be needed for a just transition. Public finance has been critical to enable this early stage company to grow in the absence of commercial capital from banks or investors. Citu has been supported with debt finance from Homes England for its Sheffield development as well as from Innovate UK to underpin the establishment of its manufacturing facility. In addition, Leeds City Council's Revolving Investment Fund (RIF) supported Citu with senior debt to aid the development of the Climate Innovation District. The RIF is a £20 million fund set up by the Leeds City Region LEP to supply loans for infrastructure and construction projects. It aims to "address failures in the provision of commercial finance" as well as "accelerate economic growth and job creation" (Leeds City Region, 2017).

Insights from the assessment

- **Environmental:** Citu is distinct as a developer in that its properties and districts are focused on delivering low-carbon lifestyles. Its buildings have a carbon footprint seven to 10 times lower than the average UK house (Citu, 2019).
- **Workplace:** The construction of low-carbon housing stock can provide new employment opportunities, including skills and training elements. As well as delivering leading environmental practices, small businesses such as Citu will also need to demonstrate strong workplace practices if they are to contribute fully to a just transition.
- **Community:** The freeholds of the developments are owned by Community Interest Companies (CICs), with each resident a part-owner. Beyond the residents in the developments, further work is needed to ensure that the wider community also benefits from these innovative business models.
- **Consumers:** Well insulated, resilient and resource-efficient housing reduces the costs of climate change and low-carbon transformation for consumers and households. The target market for Citu's developments is relatively affluent, however.

Lessons for investor action

The Citu example generates two instructive lessons for investor action about the financing of breakthrough innovations for climate action:

- First, it shows the vital role for public investment to provide access to capital for promising small and medium-sized enterprises and makes this a critical aspect of *policy advocacy* at the local and national levels.
- Second, it highlights the gap in the current commercial financing market and the potential for impact investors to change their *capital allocation* strategies to provide patient and flexible financing, for example through place-based investment funds focusing on stimulating inclusive clean, climate-resilient growth.

Energise Barnsley, Barnsley

Profile

Launched in 2015, Energise Barnsley is one of the largest local authority and community energy rooftop solar PV and battery storage projects in the UK. Its mission is to show how a formerly coal-dependent community can move to clean energy and generate strong social benefits in the process.

The just transition issues at stake

Small-scale and community-owned energy developments offer a way of expanding renewable generation with significant co-benefits for society, notably by targeting installations towards those suffering from fuel poverty and channelling a share of the profits towards social projects. On average, fuel poverty affects 11 per cent of the population in England, but this rises to 24 per cent in parts of Barnsley (HM Government 2018a, 2019a).

Structured as a community benefit society, Energise Barnsley has delivered solar arrays (groups of solar panels) on 321 council-owned homes and 16 council buildings in Barnsley. This has been achieved through a close partnership with the local council, a community energy developer, an impact investor and a utility. In 2016, Energise Barnsley raised £1.2 million from local and national investors via the Ethex platform through a five-year bond with a 5 per cent coupon.

The success of Energise Barnsley rested on the availability of secure feed-in tariffs; these were, however, substantially reduced by the Government in 2016 and removed entirely for new projects in 2019. Nonetheless, the continuing fall in clean energy technology costs mean that considerable opportunities exist – but market frameworks are still needed for these to become viable. Key policy measures to support community energy in the future could include providing incentives for network operators to engage with community energy, reinstating tax relief for investment in genuine community energy projects, and encouraging energy efficiency in communities, small business and the public sector (Green Alliance, 2019).

Insights from the assessment

- **Environmental:** Over the lifetime of the project, the solar panels will save over 18,000 tonnes of carbon dioxide, with savings continuing for as long as the panels are still operational.
- **Workplace:** Community energy projects have historically focused on generating social benefits beyond the workplace. Workplace practices are also important, however, particularly in the installation phase. Energise Barnsley ensured that local workers were included in the supply chain, using 18 local contractors. In addition, it chose British Gas as a major contractor, in part due to its high health and safety standards.
- **Community:** The Community Fund will distribute £20,000 in the first year and £10,000 each year thereafter over the 20 year project lifetime. Being community-led brings greater trust, reduced risk in the planning process and the retention of more economic value in the community. The sector has launched its own social impact tool through Community Energy England as a first step in gathering and reporting impact at a sector-wide level (Community Energy England, 2019) and it is important that projects, companies and investors support this.

- **Consumers:** Energise Barnsley provides real savings to low-income households from the deployment of solar energy of an estimated £130–150 per year (Ethex, 2016).

Lessons for investor action

The Energise Barnsley example offers two important lessons for investors in terms of capital allocation and policy advocacy around the just transition:

- First, for many institutional investors, social investments such as community shares and bonds have traditionally not met required rates of return or have exceeded risk thresholds. For many, they are also a new asset class, and as such there may be little in-house expertise with which to assess investment risks and opportunities. There is now, however, a rapidly growing impact investment market, with the Global Impact Investing Network estimating that it doubled in size in 2018 alone. These investors have capital to allocate to projects with high social and environmental impacts alongside financial returns, such as community energy. Those with a place-based investing strategy, such as local authority pension fund pools, may also be able to invest small amounts of capital in similar projects.
- Second, investors can play an important role signalling to governments that credible and coherent policies are needed that allow for the development of local energy projects. This could, for example, lead to the securitisation of projects. The small scale of local energy projects and the due diligence costs for investors often make them challenging to fund individually.

Resilience example: Yorkshire Water

Managing flood and coastal erosion risk in the coming decades is a critical task for the UK. The Environment Agency's Long Term Investment Scenarios (LTIS), most recently updated in May 2019, set out the major challenges in the context of a changing climate, but also in relation to asset deterioration and a growing population, recognising that this issue is multidimensional (Environment Agency, 2019). The report concluded that the optimum long-term annual average investment in flood resilience is now around £1 billion.

This is not just a public sector issue. Private sector firms, including private sector water utilities such as Yorkshire Water, will need to consider resilience and invest accordingly while at the same time decarbonising their operations and ensuring a just transition for their workforce.

Yorkshire Water

Profile

Created in 1973 and privatised in 1989, Yorkshire Water delivers 1.3 billion litres of drinking water a day to Yorkshire and the Humber and is the second largest landowner in the region. It is currently owned by the Kelda Group, which in turn is ultimately controlled by four financial investors, including Citigroup, HSBC, GIC and Prudential. It relies on the debt capital markets for the bulk of its investment capital.

The just transition issues at stake

Yorkshire Water's transition challenge is multi-dimensional. Within the next 25 years, England's water supply could be insufficient to meet demand; climate change will also intensify flood and wildfire risks, with consequences for water supply. Companies such as Yorkshire Water will need to protect their catchments and increase water efficiency, introduce net-zero energy and land management strategies, and ensure that workers, consumers and communities are included in the process of change. In the next 25 years, Yorkshire Water will also need to supply water to an estimated additional one million people as the local population expands. As a private company providing essential social and environmental services, the just transition challenge will involve successfully balancing responsibilities to different stakeholders in the context of a more challenging climate. The transition will also be capital-intensive; Yorkshire Water currently invests around £1.5 million in maintenance and infrastructure per day (Yorkshire Water, 2018).

Yorkshire Water has developed a Total Impact and Value Assessment (TIVA) to guide its strategic direction. It uses the Six Capitals model, as developed in the Integrated Reporting Framework by the International Integrated Reporting Council: human capital (e.g. the workforce's capabilities and wellbeing); social capital (e.g. community relationships and customer trust); intellectual capital (e.g. knowledge and technical processes); manufactured capital (e.g. infrastructure and technology); financial capital (e.g. financial health and efficiency); and natural capital (e.g. the services provided by the environment).

Based on the TIVA model, Yorkshire Water released a Sustainable Finance Framework in 2019 to align its bond-raising strategy with both social and environmental priorities. This moved beyond the standard 'green bond' approach to include social priorities such as access to services and socioeconomic advancement as well as environmental priorities (such as renewable energy, sustainable water management and biodiversity). Although the Framework does not explicitly reference the just transition, it provides a strong platform to connect the social and environmental dimensions of Yorkshire Water's business (Kelda Group, 2019). Its first sustainability bond was issued in April 2019, raising £350 million with a 22 year maturity.

Yorkshire Water sees itself as an anchor institution within the region, and its wide reach and long-term focus could be deployed to support the just transition, for example by partnering with community energy initiatives across the region.

Investor example 6

Abundance: Crowdfunding municipal bonds for the transition

The UK lacks the thriving municipal 'green bond' market that can be found in other European countries (such as Sweden). In the UK, local authorities must seek the cheapest source of finance possible, and the Public Works Loan Board (PWLB) currently offers funds at concessionary public sector interest rates (DMO, 2019). Crowdfunding models could, however, overcome this barrier by offering investors an interest rate with higher rewards than holding cash but low enough to provide finance that is sufficiently cheap for councils to meet requirements.

This model is currently being trialled for renewable energy by the University of Leeds and Leeds City Council (Davis and Cartwright, 2019). The pilot is aiming to install solar arrays on council buildings, funded by a crowdfunded municipal bond through the Abundance platform, and has been supported by the Department for Digital, Culture, Media and Sport, and Local Partnerships. The project plans to launch bonds open to citizen investors in Leeds later in 2019. The first 'Community Municipal Bond' model was issued by Abundance and Swindon Council in 2016, raising £1.8 million at 6 per cent over 20 years through local and national investors.

Investor example 7

Bridges: Exploring the role of social impact bonds

Bond structures are flexible and can be used to target different outcomes. In social policy, they have been developed to allow impact-driven investors to support outcomes-based social programmes focused on improving the lives of disadvantaged groups. The social sector organisations commissioned by the Government to deliver these programmes are paid for achieving successful outcomes, not just for delivering a service. This means they have more flexibility to tailor their approach to individual needs, plus a clear incentive to deliver the best possible results. Meanwhile, government gets more clarity and transparency about what works, without wasting money on things that do not.

Bridges is an impact-driven investment firm, which has a specialist team that provides working capital and management support for these programmes. It has supported a project in Yorkshire that uses these bonds to fund a programme to help young people who are homeless or at risk of being homeless – a cohort that often has complex and varied needs, requiring a range of different services. The bond was commissioned via the Government's Fair Chance Fund and the programme is delivered by a charity called Fusion Housing. Fusion was able to provide a much more tailored and better coordinated service and delivered markedly better results than under normal provision. Over a three-year period, Fusion worked with 350 young people – 100 more than the original aim – and exceeded all its outcomes targets by an average of 10 per cent. A similar approach could be used to support communities negatively affected by the transition away from high-carbon energy by, for example, structuring bonds to generate returns linked to re-employment rates or increased earnings.

Insights from the assessment

- **Environmental:** Yorkshire Water has committed to deliver net-zero performance by 2030 and is scaling up investments in land management, resilience and water efficiency. The proceeds of its first sustainability bond will be focused on environmental upgrades.
- **Workplace:** Yorkshire Water currently employs over 3,500 people with well-established mechanisms for collective bargaining and employee dialogue (Yorkshire Water, 2019a). In recent years, technology has cut the labour intensity of some functions. However, an increased focus on natural capital stewardship and resilience has resulted in a net increase in workers. The company will have new skills, hiring and apprenticeship needs as the transition progresses.
- **Community:** Partnership and dialogue will be vital to ensure that the transition is fair for the local community. Yorkshire Water's current planning framework involves local dialogue in conjunction with the Price Review Framework laid out by the Water Services Regulation Authority, Ofwat.
- **Consumers:** The Yorkshire Forum for Water Consumers already publishes an independent statement on the company's performance, evaluating the quality of its customer engagement. This process involves extensive customer research on affordability as well as issues such as carbon performance, where there is 86 per cent customer support (Yorkshire Water, 2019b). The Forum also considers Yorkshire Water to be a leader in the support it provides for vulnerable customers, another area of growing focus for the business.

Lessons for investor action

The Yorkshire Water example has clear lessons for investors in terms of capital allocation. Its Sustainable Finance Framework provides one of the clearest models for how the social and environmental dimensions of the transition could be managed for fixed income investors, moving beyond the single dimension that is captured in 'green bonds'.

Summary of early stage findings

These examples provide an opportunity to explore how the high-level aspiration to deliver a just transition can be translated into practical action, not least by investors. None of the them has used the framing of a just transition to describe their own approach to climate change, though relevant practices and impacts are clearly identifiable. In the assessment process we had to piece together examples and evidence from a range of sources.

Three early findings can be drawn:

- First, there is an urgent need for a shared approach to evaluate business performance in the just transition, bringing together different ingredients such as the Sustainable Development Goals, human rights and impact investing frameworks.
- Second, there is a central role for anchor institutions such as local authorities, regional businesses, trade unions, universities and long-term investors, in the creation of the economic ecosystem in which the just transition will flourish.
- Third, system-wide innovations to drive market transformation for a just transition are vitally important, whether in terms of new structures for dialogue in the workplace and the wider community, appropriate environmental regulation, or in terms of creating new financial markets that better respond to the social nature of the transition (such as new forms of bond investing).

Below we look at each of these findings in more detail.

i) The need for a shared approach to evaluating the just transition

The absence of a shared approach to evaluating the just transition is a major barrier to broad-based action. For large companies such as Drax, Hermes, Siemens and Yorkshire Water, international frameworks such as the Sustainable Development Goals and the Six Capitals model provide ready frameworks for linking climate action, decent work and efforts to reduce inequality. Even under the guidance of these frameworks, however, there is still an instinctive siloing of the environmental and social dimensions of the transition, and companies have little experience of analysing how climate action could generate impacts in the workplace or wider community. A new social impact tool for use across the community energy sector could help to remedy this.

ii) The central role of anchor institutions

In the context of regional development, an 'anchor institution' can be defined as one whose scale, rootedness and community links are such that they are acknowledged to play a key role in local development (Morris et al., 2010). Many of our examples emerged as anchor institutions. These include Drax in terms of its potential role in a net-zero cluster on the Humber; Siemens and the development of an offshore wind hub in Hull; AMRC and the creation of an innovation manufacturing platform in Sheffield; Wellington Place and the regeneration of central Leeds; and potential linkages between Yorkshire Water and enterprises and communities across the region. Universities also play a key anchor role across a number of the examples, not least at AMRC and at Green Port Hull.

Alongside these largely corporate examples, trade unions can also play an anchor role (for example, through the TUC's Low-Carbon Task Force in Yorkshire), as can new multi-stakeholder partnerships such as the Leeds Climate Commission and the Leeds City Region Climate Coalition.

A key question for the just transition is how to create the incentives that encourage established institutions to think beyond their narrow institutional interests and create positive spillovers, while also encouraging disruptive innovations from new entrants. Furthermore, anchor institutions can play a particularly important role in working along supply chains and bringing SMEs on board.

iii) The importance of system-wide innovations for a just transition

Beyond the implications for individual assets and institutions, the examples also show how the just transition could require system innovations to drive market transformation. In the UK context, one recurrent theme is the need for new models for dialogue, whether in the workplace and the wider community or between organisations and across sectors. Another priority is the need to create new financial markets that better respond to the social aspect of the transition (such as new forms of bond investing). In addition, there is a clear need for a more holistic approach to the various components of the environmental agenda, not least to connect the zero-carbon and climate resilience dimensions, but also to connect this to the urgent need for the regeneration of nature.

At the heart of these system innovations will be improvements to the current policy framework. Table 3.3, on p38, summarises some of the key policy linkages from each example, illustrating the broad range of factors that will need to be brought together. Connected to all the examples is the need for policy that enables investment in green and blue infrastructure that will enable businesses and communities to minimise and mitigate the negative impacts of climate change.

Table 3.3. Key policy linkages emerging frrom the Yorkshire and Humber examples

Example	Policy linkages
Drax Power Station	• Importance of renewable energy subsidies for the development of biomass generation. • Support for the development of carbon capture technology for use in BECCS at Drax to provide important greenhouse gas removal capacity. • National industrial policy to facilitate the development of a zero-carbon industrial cluster on the Humber estuary using carbon capture and storage in the North Sea. • Local industrial policy to revitalise the historically coal-dependent Selby area, in partnership with the private sector and trade unions.
AMRC	• Long-term development finance for research and innovation of new technologies aligned with the low-carbon transition. • Apprenticeships and training in new low-carbon technologies in partnership with the private sector and trade unions.
Siemens Gamesa	• Credible clean energy incentives via Contracts for Difference to attract long-term investment. • Active industrial policy to realise wider spillover effects in the regional economy. • Strategic partnerships with universities to develop skills and innovation.
Wellington Place	• Long-term partnership with local authority to deliver environmental and community benefits. • Regulation of building standards on carbon and labour standards so that new buildings have a clear net-zero future.
Citu	• Vital role of public finance from local and national sources to support breakthrough business models. • Planning support for developments that show net-zero alignment and community integration beyond industry best practice.
Energise Barnsley	• Reliable renewable energy incentives to support community-based initiatives. • Local authority partnerships to reach under-served communities. • Market reforms to realise the potential of crowdfunding models for local authority and community projects.
Yorkshire Water	• Regulatory requirements for the water industry to manage the cost of resilience and resource management. • Potential for local partnerships to utilise water assets for renewable energy generation that provides benefits to local consumers. • Support apprenticeships and training in new low-carbon technologies in partnership with the private sector and trade unions.

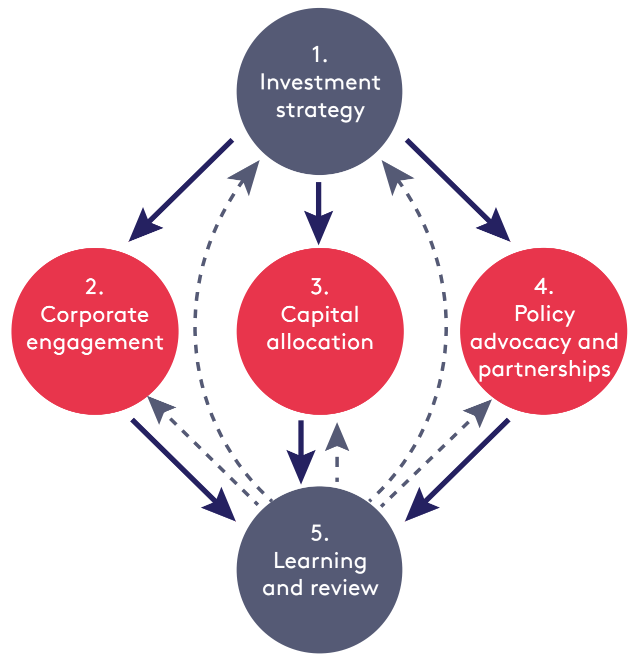
4. Conclusions and recommendations: A roadmap for investor action in the UK

Moving beyond the recognition phase

The just transition is moving from the margins into the mainstream of the climate change and sustainable development agenda, both in the UK and internationally. This shift is also reflected in the investment community, where asset managers and asset owners are increasingly recognising that social justice needs to be at the heart of efforts to avoid the systemic risks to the financial system that climate disruption now presents.

Core to effective climate action is a clear delineation of the responsibilities of different actors. As signatories to the Paris Agreement, governments bear the primary responsibility for building a resilient, net-zero economy and for doing this in a way that is fair for all. The elevation of the just transition to become a core part of overall climate and sustainable development strategy should not be seen as a burden. Rather, it is as a way of winning social acceptance for the profound changes that will be needed and of generating potentially significant co-benefits, for example in terms of additional high quality jobs and improved health outcomes. Businesses, workers, trade unions and civil society organisations also have important responsibilities for translating the just transition into practical action in workplaces and communities across the country.

Figure 4.1. Five key areas for investor action on the just transition



Source: Robins et al. (2018)

Institutional investors can play a potentially significant role in supporting the just transition as fiduciaries on behalf of millions of savers, as allocators of capital to the real economy and as stewards of assets, ensuring that the voice of beneficiaries is heard by both business and policymakers. Our research in the Yorkshire and Humber region has also highlighted that investors could become important anchor institutions in the transition, notably by providing long-term patient capital for the business and social innovations and physical infrastructure that will be needed in the coming decades. In addition, individual investors have a key role in expressing their preferences and directing savings through ISAs and other savings accounts as well as by engagement with pension funds and other investment providers. Empowering consumers so that they can feel confident that their savings are supporting the things they care about will be an important step towards a just transition.

Working with the PRI and the TUC, along with many investors, businesses and third sector organisations, we have explored how the principles of the globally applicable guide for investor action (Robins et al., 2018) can best be implemented in the UK. Based on dialogue at a national level and the insights from the place-based research in the Yorkshire and Humber region, we have tailored the global action framework shown in Figure 4.1 above to UK priorities. The result is a roadmap for investor action in five stages, designed to be implemented over the two-year period 2020–21, with the focus on piloting effective practices.

Action Area 1: Investment strategy

A growing number of investors recognise the need for a just transition; the challenge is one of operationalisation. We have identified four steps that will help to embed the just transition at a strategic level within investment institutions: commit, partner, expect and assess.

a) Commit: Investors need to incorporate the just transition into investment strategy and signal the importance of the social dimension of the climate crisis along the investment chain. This needs to be done methodically and starts with investment boards and committees making a public and strategic commitment. The process of making this commitment provides an opportunity to raise questions, address concerns and engage in dialogue with key stakeholders such as beneficiaries, clients and savers as well as key intermediaries such as investment consultants. Commitments can be made via the international investor statement (PRI, 2019), statements of investment principles, and responsible investment and climate change policies. Action on the just transition could also be included as part of investor efforts to implement their duties under the Stewardship Code, overseen by the Financial Reporting Council.

The Northern Local Government Pension Scheme (LGPS) is a leading example of how a major asset owner has made this commitment in the UK – see box.

Investor example 8

Northern Local Government Pension Scheme (LGPS) and the just transition

Northern LGPS is a partnership between the Greater Manchester Pension Fund, Merseyside Pension Fund and West Yorkshire Pension Fund, parts of the Local Government Pension Scheme (LGPS). It has assets under management of £46bn and represents about a fifth of total LGPS assets, with approximately 880,000 members and over 1,100 contributing employers.

Northern LGPS's purpose is to ensure the assets of its funds perform effectively so that members receive a pension that enables them to enjoy their retirement in dignity. To deliver this purpose, it has adopted a wide-ranging Responsible Investment (RI) policy that details its ambitions to uphold the highest standards of corporate governance at its investee companies and make investments that deliver financial, social and environmental benefits across the North of England.

Northern LGPS's long-term goal is for 100 per cent of assets to be compatible with the net-zero emissions ambition outlined in the Paris Agreement (and now the UK's new legislated target) by 2050. In addition, the scheme actively promotes 'decent work' as part of its approach to employment standards and human capital management. Bringing these two themes together, the Responsible Investment policy states that the scheme will "give consideration to supporting the objectives of a Just Transition to a low-carbon economy, and will actively engage with the social aspects of responding to climate change". The scheme considers that this commitment "fits well with our objective of seeking to ensure a regional dimension to our RI activities" (Northern LGPS, 2019).

b) Partner: Investors need to establish effective collaborations across the different parts of the investment system along with key stakeholders so that they can understand the priorities for those affected by the transition and achieve critical mass. In the UK, a growing number of investor groups have expressed interest in working through what the just transition means for their specific needs and duties. These include charities and faith investors, local authority and other pension funds, as well as groups focused on climate change, responsible investment and sustainable finance more broadly. Many of these have overlapping memberships, making collaboration a starting point for effective action. For investors to make a meaningful contribution to the transition, this ambitious collaboration also needs to extend to other major stakeholders, including business, trade unions, civil society and policymakers. This means listening to other stakeholders so that workers and communities are able to contribute their own ideas and experience to the transition process and how investment capital could be deployed.

c) Expect: One urgent priority that emerged from the regional examples was the need for investors to establish clear expectations of the companies and assets they hold, based on national and international standards for labour practices and broader social performance. A first task for collaborative action, therefore, would be to draw up a common set of investor expectations on the just transition in the UK. These expectations would need to be coordinated with international investor efforts, but tailored to UK circumstances.

Developing these expectations would largely be an exercise in consolidation rather than invention and would draw on the following three elements to ensure that there is no reinventing of wheels:

- **International frameworks**, such as the ILO's core labour standards, the UN's *Guiding Principles on Business and Human Rights*, the OECD's *Guidelines for Multinational Enterprises*, the ILO's *Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for all*, and the Recommendations of the Task Force on Climate-related Financial Disclosures.
- **Investor initiatives**, such as the Committee on Workers' Capital's *Guidelines for the Evaluation of Workers' Human Rights and Labour Standards*, the Corporate Human Rights Benchmark, the Transition Pathway Initiative and the Workforce Disclosure Initiative.
- **National priorities**, such as the TUC's just transition statement, *A Just Transition to a Greener, Fairer Economy,* as well as specific issues such as the living wage, apprenticeships, local employment and community energy.

These expectations could then form a foundation for investors to use in assessing corporate performance, shareholder engagement, capital allocation decisions and dialogue with policymakers and other stakeholders.

d) Assess: A further step at the strategic level is for investors to assess the performance of the assets they hold, using these just transition expectations. This will mean bringing together the increasingly sophisticated analysis of climate risks and opportunities with an evaluation of social performance in terms of workers, communities and consumers. These are issues that are routinely evaluated by sustainability and ESG rating agencies; what has been missing to date is the combination of the climate and the social aspects to generate a rounded perspective that can help in understanding a company's alignment with the just transition. One sustainability rating agency that has started to explore how this could be done is Vigeo Eiris.

Investor example 9

Vigeo Eiris: Measuring just transition preparation in the UK energy utility sector

Independent ESG researcher Vigeo-Eiris has explored ways of measuring corporate preparedness for a just transition. Its approach measures the alignment of companies with the energy transition and gives scores for the management of socioeconomic issues, particularly those related to the concerns of workers and communities. Combining the two gives an overall assessment. It has applied these scores to all the electric and gas utilities operating in the UK.

The top rated three companies are all based in continental Europe, while the lower four are UK-based. Higher performance is underpinned by stronger labour relations practices, which are also extended to suppliers.

Overall, Vigeo-Eiris concludes that: "Electric and gas companies operating in the UK could do more to prepare themselves to address the full scope of challenges posed by the just transition. More governance, technological and human capital investments will need to be made by all companies to build the framework that will allow more just conditions for all impacted stakeholders" (Vigeo-Eiris, forthcoming).

Alignment of European electric and gas utilities operating in the UK with a just energy transition

Company [anonymised]	Energy transition score /100	Socioeconomic score /100	Just energy transition score /100
Utility 1	74 – Advanced	69 – Advanced	71 – Advanced
Utility 2	61 – Advanced	56 – Robust	58 – Robust
Utility 3	37 – Limited	55 – Robust	49 – Limited
Utility 4	55 – Robust	44 – Limited	48 – Limited
Utility 5	31 – Limited	46 – Limited	42 – Limited
Utility 6	32 – Limited	36 – Limited	35 – Limited
Utility 7	37 – Limited	35 – Limited	36 – Limited

Action Area 2: Corporate engagement

Investors are significantly ramping up their collective engagement with the businesses and assets they own to ensure alignment with the Paris Agreement. To date, this has focused on ensuring that companies put in place targets and plans that are aligned with the Paris Agreement, backed by robust governance frameworks and made transparent through disclosure in line with the recommendations of the TCFD. Global investor initiatives such as Climate Action 100+ have delivered real results over the past year through engagement with companies such as BP, Equinor, Glencore and Shell. The just transition is now emerging as a natural extension to this engagement strategy and is already referenced within the Climate Action 100+ framework.

Of course, the companies that investors own have operations around the world and manage global supply chains. Looking specifically at the UK, there are a wide range of potential engagement targets, with power generation along with construction and real estate emerging as early priorities.

a) Power generation

The UK is committed to phasing out coal-fired generation by 2025; it looks likely that this could be achieved earlier than planned. With Canada, the UK is also the co-founder of the Powering Past Coal Alliance (PPCA), which seeks to accelerate the phase-out of coal internationally. The PPCA involves governments, companies, investors and other partners (such as universities) and is addressing the just transition in its work (PPCA, 2019). Investors could usefully engage with the utilities operating the remaining coal-fired power plants in the UK to ensure that closure is handled in a responsible manner for workers and communities. Engagement in these facilities would generate important insights for how to deliver a just transition in coal-dependent communities elsewhere and also for other parts of the fossil fuel-based energy sector, notably the upstream and downstream oil and gas industry.

In addition, investors should engage with utilities to ensure that the growth in the renewables sector realises the potential for growth in high skill and high pay jobs, notably in the offshore wind industry. Concerns have been expressed that best practice workplace and community standards have not always been consistently applied in the expansion of the renewable energy sector, thereby reducing its overall contribution to inclusive growth in the UK. Through engagement with listed utilities as well as privately-owned developers, investors can signal the importance of robust social standards in this growth sector. This would help to build confidence that the shift away from a fossil fuel-based energy system will not be accompanied by weaker social standards (in areas such as union recognition, health and safety and pensions).

One way that investors could support a just transition in the power generation sector would be to encourage companies to commit to the Business Pledge for a Just Transition and Decent Green Jobs, supported by leading European energy firms Ørsted and Enel (B Team, 2019). Beyond this initial focus on power generation, there could be further engagement opportunities with operators of transmission

Investor example 10

Friends Provident Foundation: Engaging with utilities on the just transition

Friends Provident Foundation has been engaging the energy utilities market in partnership with Royal London Asset Management and the European investor network Shareholders for Change. Engagement has focused on the '3D energy transition' to a decarbonised, decentralised and, increasingly, democratised energy system, examining business model resilience, lobbying and just transition.

This engagement has been extended to the just transition, examining company positioning in terms of strategy, governance and risk management. For example, the group has engaged EDF on the closure of Cottam coal-fired power station and future plans to close West Burton coal plant as well as several ageing nuclear plants. These engagements have covered worker and community relations, worker redeployment and retraining, site reuse, and community reinvestment. A series of positive meetings were held with EDF committing to a just transition in the closure of all plants.

Friends Provident also encouraged EDF to roll out its R&D pilot 'Project CommUNITY' nationally, a project developed with community energy group Repowering London, providing social housing residents in Brixton with electricity from a community-owned solar array with battery storage and blockchain-based peer-to-peer trading. Energy utility initiatives such as this at scale would support the community and consumer dimensions of a just transition.

and distribution networks for both power and heat. Some investors are already engaging with companies on the just transition, including the Friends Provident Foundation (see box).

b) Construction, real estate and housing

More than 10 years after the Climate Change Act was passed, the CCC has concluded that "there is still no serious plan for decarbonising UK heating systems", especially in the housing sector. Rectifying this situation means ensuring that all new housing meets zero-carbon standards and all buildings, commercial and residential, are retrofitted to net-zero standards in the coming decades. For investor engagement, this points to the need for renewed engagement with listed construction and property companies, not only to generate additional commitments to net-zero operations, but also to make sure that these benefit low-income communities facing fuel poverty.

Workers in the construction sector are also the most exposed to the upside opportunities and downside risks in the transition, with 60 per cent estimated to be affected: 30 per cent of construction workers have skills that will be in more demand during the transition, while 30 per cent have skills that could face falling demand (Robins et al., 2019).

Investor engagement could also extend to the banking sector to make sure that mortgage provision supports the UK's net-zero goal and is consistent with the just transition. The banking sector has recently launched a new project, Banking on a Just Transition, to explore the implications across the UK. Investor engagement could provide a positive market signal (Grantham Research Institute on Climate Change and the Environment, 2019).

Action Area 3: Capital allocation

Investors can shift their allocation of capital to specific assets aligned with the just transition, particularly through place-based strategies. Currently, however, investors face an inadequate supply of assets that meet the goals of the just transition. Today's policy and market frameworks still do not reward the development of sufficient equity- and debt-based assets that both drive a just transition and meet investors' risk–return requirements. Two areas stand out for further action to scale up capital flows into assets that can support a just transition: the bond market and impact investment.

a) Co-create a thriving sustainable bond market

The bond market is a particularly promising area for local issuance by communities, companies and public authorities as well as national level issuance by major corporations and the Government itself. Taking action in this area would see a focus on developing a 'sustainable bond' market in the UK that combines environmental and social outcomes to underpin a just transition, as illustrated in the Yorkshire Water example.

The UK has demonstrated many strengths in the growth of these markets. However, overall the UK ranks 12th in terms of green bond issuance at the country level, performing below expectations (Climate Bonds Initiative, 2019). To resolve this, investors, issuers, key market intermediaries and the Government could work to co-create a plan to establish a thriving sustainable bond market in the UK. This would identify the barriers facing this market and highlight practical options to scale up issuance of community, corporate and public sector bonds.

> **Green, social and sustainability bonds explained**
>
> **Green bonds** enable capital-raising and investment for new and existing projects with environmental benefits (ICMA, 2018a).
>
> **Social bonds** are 'use of proceeds' bonds that raise funds for new and existing projects with positive social outcomes (ICMA, 2018b).
>
> **Sustainability bonds** are bonds where the proceeds will be exclusively applied to finance or re-finance a combination of both green and social projects (ICMA, 2018c).

One focus for this plan could be to develop a 'local sustainable bond' market. This would encompass issuance by regional companies and local authorities (for example, through crowdfunding and other mechanisms), as well as community enterprises and geographically-focused issuance by banks.

Another focus would be for the UK government to issue a 'sustainable sovereign bond', building on recommendations for a 'green gilt'. In the Green Finance Strategy, the Government indicated that it does not currently plan to issue a sovereign green bond. The experience from other countries indicates that sovereign bonds can have an important demonstration effect across the financial system and also within government, given the need to identify qualifying areas of public spending. In addition, sovereign bonds (along with issuance from other public bodies) can help to channel private savings to priorities that tend to be under-supplied by the market (such as R&D, skills and training, and SME finance).

b) Mobilise impact investors behind the just transition

The just transition agenda presents the UK with a strategic opportunity to bring together the environmentally focused agenda of 'green finance' and the social emphasis of 'impact investing'. This convergence is starting to get underway, as signalled in the Green Finance Strategy, and is set to deepen with the establishment of the new Green Finance Institute and Impact Investing Institute.

Beyond the bond market, our work has revealed an unmet demand for place-based investments that support the net-zero economy while delivering positive social impact. This includes a proposal for a dedicated 'just transition investment fund' across the Northern Powerhouse region[6], and indeed other regions. The shape of the transition points to the need to mobilise capital for assets that are not only decarbonised and decentralised but also democratised in terms of community involvement and ownership. In terms of asset classes, this highlights the importance of developing investment products in the unlisted markets arena, through private equity, private debt and community assets, including infrastructure, enterprise and property. Realising this potential will require a similar strategy for co-creation, as proposed for the sustainable bond market.

Action Area 4: Policy advocacy and partnerships

Market and policy failures lie at the root of the climate crisis, not least inadequate pricing of carbon pollution, perverse subsidies for fossil fuels, insufficient support for R&D and deployment of sustainable technologies, and financial system flaws such as misaligned incentives, information asymmetries and pervasive short-termism. Not only do these failures need to be corrected through policy reform but also policy is required to create new markets that channel capital towards strategic public goods, as proposed by supporters of a Green New Deal, for example. Policy reform is equally important to address the social dimensions of climate change, not least because the just transition often involves changes to models of decision-making and questions of distribution that are best dealt with by public authorities. As part of its report on achieving net-zero emissions in the UK, the CCC recommended that the Treasury should "undertake a review of how the transition will be funded and where the costs will fall" and also that it should "develop a strategy to ensure this is, and is perceived to be, fair". The Committee added "a broader strategy will also be needed to ensure a **just transition** across society, with vulnerable workers and consumers protected" (CCC, 2019a; emphasis in original).

Investors have become active participants in climate policy, with 477 institutions with over US$34 trillion in assets under management calling on governments to achieve the Paris Agreement's goals (The Investor Agenda, 2020). As part of the Global Investor Statement to Governments on Climate Change, investors specifically called for policymakers to "support a just transition to a low-carbon economy" (ibid.). The case for universal investors – such as pension funds and insurance companies – to advocate for just transition policy reforms is particularly strong, given that their returns are derived from overall economic health rather than specific stock picking.

A strategic framework for the just transition in the UK

In the UK, our work has underscored the importance of policy reforms to provide investors with the long-term incentives to reward sustained action on the just transition. As a result, investors should use their voice and call for national and local governments to introduce a strategic framework for the just transition; Table 4.1 shows elements it could include. This framework could build on the ILO's just

6. The Northern Powerhouse covers all 11 Northern Local Enterprise Partnership (LEP) areas plus North Wales.

Table 4.1. Critical elements of a framework for the just transition in the UK

- **Goals:** Set a specific goal to deliver a just transition within the Government's strategy to implement the new legal target to achieve a net-zero economy by 2050. Alongside this, the Government could include the creation of 'decent work' as an explicit objective of the UK's Industrial Strategy and Clean Growth Strategy.
- **Assessment:** There is still a lack of a consistent, comprehensive and robust baseline review of climate transition impacts that can be trusted and used by a wide range of public, private and civil society actors. This analysis and process does exist for physical climate impacts, for example through the UK Climate Change Risk Assessment. A similar exercise is needed for transition impacts, not least as a basis from which to manage the social implications.[7] This transition impacts assessment could help to establish and apply a method for measuring co-benefits and identifying areas of risk in order to guide future decision-making.
- **Dialogue:** Establish an independent, multi-stakeholder Just Transition Task Force to advise the Government on how to translate these high-level goals into specific policy measures. This could draw on the experience of Scotland's Just Transition Commission, as well as international lessons from similar initiatives.
- **Public finance:** Make the just transition a priority within future Spending Reviews, including in the phase-out of the UK's high level of subsidies for fossil fuels.
- **Sovereign bonds:** Issue a sovereign sustainable bond with proceeds ring-fenced for environmental and social expenditures linked to the just transition.
- **Innovative financing:** Support new financing mechanisms that enable citizens to allocate capital to assets that deliver positive social and environmental benefits.
- **Sector deals:** Integrate the social dimension of the net-zero transition across the Industrial Strategy's sector deals, including indirect impacts on SMEs in supply chains, and include workers in their design.
- **Infrastructure financing:** Create a well funded sustainable infrastructure financing mechanism with a clear mandate for net-zero emissions, climate resilience and just transition, and a focus on aggregating small-scale, decentralised projects into a pipeline for investors. A new, independent and dedicated institution could be created, such as a National Infrastructure Bank, to provide transparency and credibility around finance for sustainable infrastructure. This will be needed to underpin market confidence given the uncertainty over future access to the European Investment Bank (see Rydge et al., 2018).
- **Standards:** Ensure high standards of workplace practices in industries exposed to the transition (including collective bargaining, consultation with workers, pay and conditions, protection of pensions, retraining and redeployment).
- **Carbon pricing:** Explicitly include principles of equity and fairness in the design of carbon pricing mechanisms. In addition, revenues from carbon pricing could be targeted to support a just transition. Compensation payments can be made visible and explicit, for example through a 'citizen dividend' (see Burke et al., 2019).
- **Skills:** Bring together the Industrial Strategy and the Clean Growth strategy to create a single forward-looking and coherent plan for strengthening the UK's skills-base and human capital for the net-zero transition (see Rydge et al., 2018). This could include the TUC's proposal to ensure that every individual has a funded entitlement to training.
- **Place:** Incorporate the just transition in Local Industrial Strategies, including the development of net-zero industrial clusters and support for community-based business models.
- **International:** Make the just transition a core component of the UK's International Climate Finance programme, including via the Department for International Development, CDC, the Green Finance Institute and UK Export Finance.

7. We are grateful to Ben Caldecott of the Oxford Sustainable Finance Programme for discussions that informed this proposal.

transition guidelines (ILO, 2015) and could cover the key policy dimensions (e.g. macro-economic, industrial, regional, labour market and wider environmental policies) as well as public finance (notably the need for a dedicated sustainable infrastructure financing mechanism). It would also recognise the importance of decentralisation and devolved decision-making along with the need to engage all stakeholders in its design.

The success with which the just transition becomes a normal part of the UK's policy architecture will depend on the willingness to have frank discussions on tough issues. Investors can play a part in this: see the example of the Church of England Pensions Board below.

Investor example 11

The Church of England Pensions Board and dialogue on the future of mining in South Africa

By Adam Matthews, Director of Ethics and Engagement, Church of England Pensions Board

Over the past three years, the Church of England Pensions Board has been part of a dialogue in South Africa convened by the Archbishop of Cape Town, His Grace Archbishop Thabo Makgoba. This unique process has sought to bring to the same table key figures who often find themselves in disagreement or conflict with one another for a dialogue on the transition that the mining sector is facing in South Africa. Under the convening authority of the Archbishop and on behalf of all major faith groups in South Africa, this process, 'Courageous Conversations', has brought mining trade union leaders, company CEOs, cabinet ministers and community organisations together.

Initially, the process stemmed from the desire to resolve significant disputes that had occurred in the sector, in some instances leading to outbreaks of protest, violence and also loss of life. However, as the conversations have progressed, a broader process of reconciliation and collective understanding to address the challenges of a sector in transition has emerged. This is the transition all stakeholders will have to manage that arises out of the twin impacts of automation and climate change. In this context, mining companies need more than ever to maintain and secure their social licence to operate. This will not be an easy path as commodity demand will significantly change as a result of the low-carbon transition. Some of this change will be positive for the industry and those who benefit from it, and some of it will not. In addition to the challenge of climate there is an emerging realisation that automation will seriously challenge the way that many mines work. The process of Courageous Conversations is still in an early stage but it is clear the mining sector in 10 to 15 years' time will be very different to today, potentially with far fewer employees.

In some regions, such as Limpopo, mining is one of the key drivers of direct and indirect employment. For a potentially hugely disruptive change in employment to occur in a societally acceptable and just way, real honesty and new thinking will need to emerge from the process. The relationships between company and society will come under new scrutiny, and the role of companies as partners in development and the ways they contribute to the common good will need to be well understood and developed if this is to be a path without conflict.

As a pension fund, we recognise that society is intimately connected to the resources extracted by the mining sector (Church of England, 2018). Modern living and the low-carbon transition demands many of the resources that are mined. We recognise that it is vital we engage in a much more fundamental way with the systemic challenges the sector faces, be that changing commodity demand or automation, and the resulting impact on workers and communities. We also recognise that this cannot be an engagement over the short term. This requires much longer-term interaction and processes akin to peace and reconciliation processes, something that the Church as an institution is familiar with, to ensure trust is built and common visions/pathways are established.

We are under no illusion as to the challenge here. Processes like Courageous Conversations play a positive role in helping to re-shape the industry, and the hope of positive outcomes helps maintain our ability to remain invested in mining. As a long-term investor we feel a deep sense of our responsibility to think creatively and with a long-term time horizon in the way we engage with companies on issues that can affect the whole of society.

Action Area 5: Learning and review

As the just transition is still a relatively new dimension of the climate change agenda, investors will need to build capacity to deliver experimentation at scale for the just transition with effective monitoring, evaluation and sharing of outcomes. This means establishing effective ways of listening to, learning from and partnering with key stakeholders affected by the transition. One platform for this could be the newly launched Place-based Climate Action Network (PCAN – see pcancities.org.uk). PCAN is focused on translating climate policy into action 'on the ground', to bring about transformative change. The network, supported by the Economic and Social Research Council, brings together the research community and decision-makers in the public, private and third sectors through five innovative platforms: three city-based climate commissions, in Leeds, Belfast and Edinburgh, and two theme-based platforms on finance and business. Place-based engagement will be particularly important in the evaluation and learning phases to ensure that investor action is not detached from places and stakeholders.

Specific actions could include:

- The development of just transition training packages for trustees, analysts, fund managers and other financial professionals.
- The design of additional regional pilots to explore the role of investors in the just transition, building on the Yorkshire and Humber example.
- The incorporation of the just transition within emerging frameworks for investor reporting on impact investing, and within action on the Sustainable Development Goals.
- The design of Just Transition Innovation Labs to identify high-leverage options to make the UK financial system as a whole 'fit for purpose' for combining a rapid transition with social justice.

Finally, investors should incorporate the just transition in their own reporting on their climate performance. This can be done by building on the framework developed by the Task Force for Climate-related Financial Disclosures (TCFD). In its Green Finance Strategy, the Government signalled that it expects all listed companies and large asset owners to be disclosing in line with the TCFD recommendations by 2022.

Looking forward

Over the past two years, the just transition has become recognised as an essential ingredient in a successful shift to a net-zero-emissions and climate-resilient economy. The Investing in a Just Transition UK project has contributed to this by showing why and how investors can make their contribution. This report has moved from high-level aspiration to explore the practical implications by examining the place-based dynamics through the lens of seven examples across the Yorkshire and Humber region. It has also captured the fruits of dialogue across the investment community and with other stakeholders in terms of the key steps that need to be taken in the next phase of action through the investor roadmap.

This report has focused on the role that investors can play to support a just transition within the UK. The companies that investors hold have a global reach and so a new dimension for collaborative work with UK investors is to apply the just transition internationally, through engagement with global corporations (including international supply chains), as well as asset allocation into just transition investments in developing countries.

The task for the coming two years is to translate this recognition into real world actions that accelerate financial flows into vital net-zero and climate-resilient investments, generate positive social outcomes and deepen confidence in the opportunities that climate action will bring. This is a critical moment for the country, with political uncertainty over Brexit coming at a time when urgent climate action is needed. Furthermore, 2020 will close with the UK hosting the UN's climate conference, COP26, in Glasgow. This provides a major opportunity to show how financing a just transition in the UK can also connect with wider efforts to achieve ambitious steps forward in climate action at the global level.

Technical appendix: Approach for assessing the jobs impact of the zero-carbon transition

Background: the challenge in defining green jobs

Defining jobs as green, not green, aligned with the transition or otherwise is challenging, as research and data are under-developed. To date, much of the discussion of the workplace implications of the transition has focused relatively narrowly on the growth in 'green jobs' as defined as jobs in specifically environmental sectors, such as low-carbon energy or recycling. The Office for National Statistics (ONS) estimates that these jobs amounted to around 208,000 full-time equivalents in 2016, about 1 per cent of the total UK workforce (ONS, 2019). However, jobs in a green economy will be varied in scope and not limited to purely environmental activities. They will include jobs in new or technologically altered 'green manufacturing' and service sectors, providing comparable goods and services to those we have today.

The skills-based approach used in this report

The research into the workfoce impact of the transition in the UK presented in this report was carried out by adapting research into labour markets in the United States by Alex Bowen, Karly Kuralbayeva and Eileen Tipoe (2018), the methodology for which we explain below.

To get a broader view of the implications of the workforce transition, Bowen et al. analyse the workforce at the skills level rather than in terms of jobs or sectors. Those currently employed in high-carbon sectors and industries, including highly technical professions, may have skills that will be much needed in the green economy. Taking a skills-based approach accords with the approach taken by labour economists in this area (for example, see Marin and Vona, 2018; Vona et al., 2017).

The approach involves defining 'green skills' and 'non-green skills' and identifying the proportion of jobs characterised by each in the economy overall. To do this, Bowen et al. used the O*NET database, a cross-sectional database that includes information on the tasks and skills involved in different jobs, as well as a list of green tasks.

In our analysis we likewise use O*NET's definition of a green job as being any occupation that will be affected by 'greening' of the economy. Within this category there are various effects, which also form the basis of our assessment of UK jobs:

- **Increased demand** – "existing jobs that are expected to be in high demand due to greening, but do not require significant changes in tasks, skills or knowledge"
- **Enhanced skills** – "existing jobs that require significant changes to tasks, skills and knowledge as a result of greening"
- **New and emerging** – "unique jobs created to meet the needs of the green economy" (Bowen et al., 2018)

The 'increased demand' and 'new and emerging' jobs are ones that use skills that will increase in demand in the green transition, and thus we classify these jobs as **'transition-aligned'**. 'Enhanced skills' are jobs that will require changes; in other words, demand for the existing skills in this occupation will fall; we classify these as **'transition exposed'**. All other jobs are considered 'non-green', and greening will not affect the skills used in them; we classify these jobs as **'other'**.

These classifications match real jobs in the US economy, and a proportion of jobs aligned or requiring reskill in the transition can easily be identified for each sector. We simply apply this proportion to sectoral employment data in the UK, as provided by government data offices (from ONS et al., 2017). This provides the overall proportion of jobs in each category at regional level, and even to much smaller census district areas, for the whole country.

Lastly, it is worth noting that this research is based on the overall 'greening' of the economy, which encapsulates a greater scope of changes than would decarbonisation alone. For example, it includes ecosystem service-related jobs, which can be focused on many environmental issues, such as biodiversity and waterway cleanliness.

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The transition to net-zero greenhouse gas emissions needs to be an inclusive process, delivering social justice for workers, communities and consumers: this is the agenda of the just transition. This report sets out the role that investors can play in delivering a just transition in the United Kingdom. It seeks to understand the growing momentum in favour of a just transition and to illustrate the implications through a set of place-based examples from Yorkshire and the Humber, before setting out recommendations for investor action.

The UK Investing in a Just Transition project is being delivered by the Grantham Research Institute at LSE and the Sustainability Research Institute at the University of Leeds, in collaboration with the Principles for Responsible Investment and the TUC. It is funded by the Friends Provident Foundation.

The **Grantham Research Institute on Climate Change and the Environment** was established in 2008 at the London School of Economics and Political Science. The Institute brings together international expertise on economics, as well as finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research, teaching and training in climate change and the environment. It is funded by the Grantham Foundation for the Protection of the Environment, which also funds the Grantham Institute – Climate Change and the Environment at Imperial College London.
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Banking the just transition in the UK

Policy insight

October 2019

In partnership with:

The Banking on a Just Transition project

Launched in July 2019, Banking on a Just Transition is a pilot project that aims to identify how banking can support a just transition towards a net-zero-carbon economy and society across the regions of the UK. The project is a process of research and collaborative dialogue between stakeholders, including banks and other financial institutions, to help achieve this goal. It has a strong focus on place, taking a regional look first at Yorkshire and the Humber.

The project is led by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science, and the Sustainability Research Institute at the University of Leeds, working in partnership with UK Finance. HSBC is funding the project. For more information see: **www.lse.ac.uk/GranthamInstitute/banking-just-transition/**

This policy insight is the first output from the Banking on a Just Transition project. It is designed to provide the basis for dialogue at a series of roundtables across the UK through 2019 and into 2020.

The Banking project is part of the broader Financing a Just Transition programme, which has also explored the role of institutional investors. For more information see: **www.lse.ac.uk/GranthamInstitute/financing-a-just-transition/**

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Summary

Making the shift to a sustainable economy in the UK will require the full mobilisation of the country's £20 trillion financial system. The banking sector forms the largest part of the UK's financial system and it will need to increase the quantity of capital flowing to investments that drive emissions down to zero and strengthen resilience to the physical shocks of climate change. The sector will also need to improve the quality of capital to ensure that the shift is fair and inclusive across the country. This is the agenda of the just transition.

The need for the just transition is increasingly recognised by policymakers, trade unions, business, financiers and civil society. The imperative of a just transition is included in the 2015 Paris Agreement on climate change and was part of the decision-making that resulted in the UK's legal commitment to reducing greenhouse gas emissions to net-zero by 2050. Scotland has established a dedicated Just Transition Commission, the Trades Union Congress (TUC) has published a set of just transition principles and the UK's new Green Finance Strategy also highlights its importance.

For the banking sector, the emergence of the just transition comes at a time of increased focus on strategic purpose. Sustainable finance and responsible banking are becoming core to the way that banks are focusing on serving society. As part of the implementation of the new Principles for Responsible Banking, banks could consider making a commitment to supporting a just transition. This would mirror actions being taken on the just transition by over 140 investors worldwide with US$8 trillion in assets.

The main way that banks can play a role in helping to deliver a just transition is by supporting their customers and clients. Banks and other finance providers will need to address questions around the demand for sustainable financial products. Successfully identifying the opportunities that arise could result in improved customer engagement.

Financing the UK's diverse SME sector through the transition will be crucial. Small and medium enterprises (SMEs) contribute to economic development, employment, innovation and social cohesion, and they are especially important in economically deprived areas. But SMEs can lack time, capital and access to expertise and often have limited market power.

Upgrading the building stock to make it more energy efficient and reduce emissions has intrinsic social implications. About a third of homes with weak energy performance are not in the 'able to pay' category. In addition, workers in the construction and real estate sector will need to upgrade their skills to support the retrofit and new build requirements. Innovations in green mortgages remain early-stage at present.

The transition will play out unevenly across the country, requiring a strong focus on bottom-up initiatives to finance a just transition. Our work reveals an unmet demand for place-based financing that supports the net-zero economy and delivers positive social impact in both rural and urban communities. Locally-rooted banks and financial institutions need to identify how they can play an anchor role in affected regions.

The policies to deliver the transition are still to be formed, whether in terms of climate and industrial strategy, financial regulation or public finance. The dynamic between the banking sector and public finance will be particularly important to get right as Brexit raises questions about successors to European funding and investment.

Wider system innovations could well be needed in terms of developing the right capital mix for the economy as well as how to manage risk in the transition. Banks are currently risk averse at a time when increased risk capital is needed to drive innovation. New models of dialogue and participation will also be needed, such as Citizens' Assemblies.

Introduction

This policy insight looks at the specific contribution that the banking sector can make to ensure that a just transition happens in the UK.

The UK government's commitment to a net-zero-carbon economy by 2050 will have implications across all sectors and industries. It implies a deep economic transformation, which brings with it the opportunity to shift capital to productive new areas of the economy, creating better jobs for workers along with stronger communities, improving health and creating more sustainable lifestyles across the UK in a way that is fair and inclusive. These gains will not be automatic, however, and there is a risk that without an explicit focus on how to make the transition fair and inclusive, it could stall. In other words, the transition must be planned.

This is the agenda of the just transition. A just transition is one that ensures that climate action and efforts to build a sustainable economy are designed and delivered so that they improve social justice, with the interests of workers, communities and consumers particularly in mind (see Figures 1 and 2 below). This positive change will not happen without strategic, collaborative efforts on the part of business, government, trade unions, civil society and finance. Social dialogue is a critical element of any just transition, including honest discussion around costs and benefits and their distribution and compensation.

This paper explores the strategic role that banks could play to support a just transition in the UK. After laying out the key features of the case for action, the paper identifies five priorities for dialogue and action:

1. Renewing purpose throughout sustainable finance, with a new focus on the just transition as a bridge between the environmental and social dimensions.
2. Supporting customers through a just transition, notably households, small and medium enterprises (SMEs), corporates and public authorities. The paper looks in particular at the challenges faced by SMEs and households with residential mortgages.
3. Responding to place-based priorities in terms of the differential impacts of the transition across the country and building 'anchor' financial institutions.
4. Shaping the policy and incentive regime in terms of the climate policy architecture (such as carbon pricing), financial regulation and the role of public finance institutions.
5. Exploring wider system innovations in terms of the capital mix, risk management, real economy linkages and citizen engagement.

The banking sector cannot make these changes alone. Achieving a just transition will require cooperation and collaboration with many partners in many areas: ensuring the provision of appropriate goods and services, suitable regulation, and market development, for example, all of which will require coordination between banks and other finance providers and stakeholders. It will need new and better information brokerage to help people understand options and improved infrastructure to support cooperation between economic partners.

This policy insight will support a process of consultation in a series of place-based dialogues convened from October 2019 through to March 2020. Based on these meetings and further research, the next output of the project will focus on specific options that banks can take to support a just transition.

Figure 1. The human dimensions of the just transition

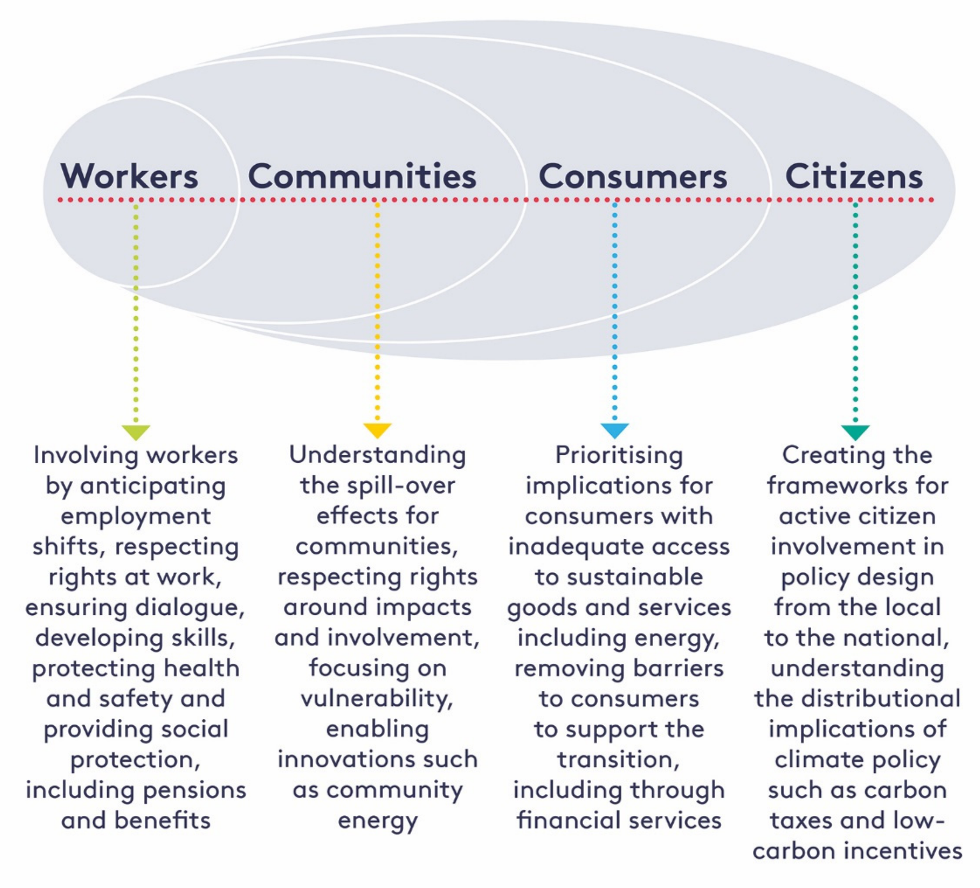
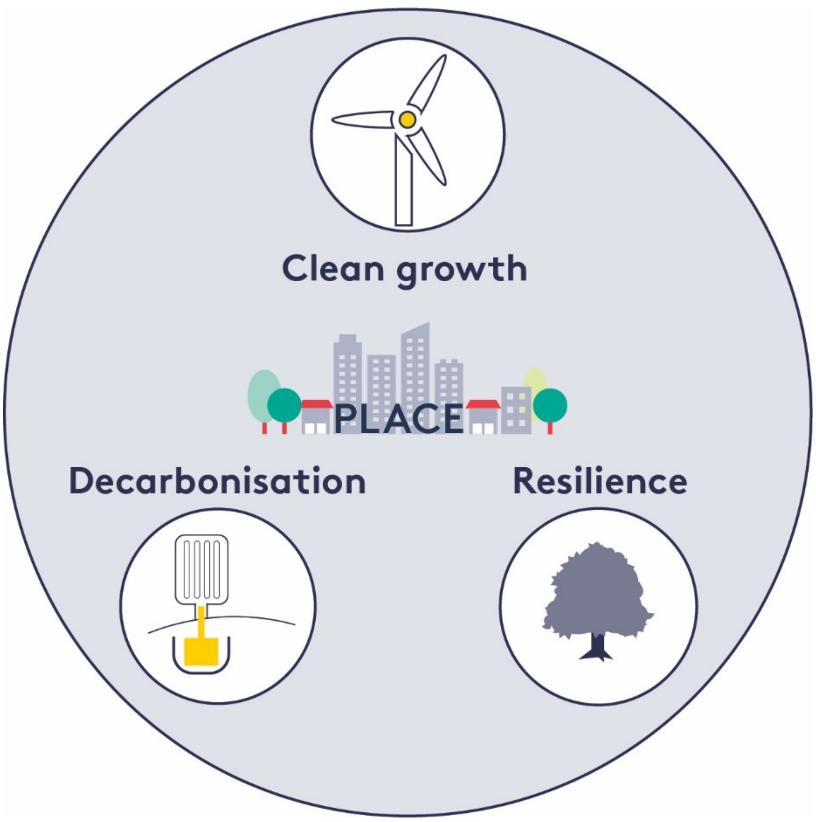


Figure 2. Key components of the just transition



The case for action

The goal: an inclusive and resilient net-zero economy

The UK is the first G7 country to make a legal commitment to achieve a net-zero economy by 2050. It is by far the largest economy to set such an ambitious target and there are signs that the UK's leadership is encouraging other large economies to follow. This target forms part of a wider commitment to adapt to the physical impacts of climate change, build a circular economy and respond to the deepening loss of biodiversity and natural capital.

This shift is increasingly viewed as a driver of economic opportunity, creating new industries and new jobs, improving health, making communities cleaner, and shifting capital to new, highly productive low-carbon industries. According to the Can-do Cities initiative, simply investing in today's cost-effective measures to cut greenhouse gas emissions would save the UK £26.6 billion per year by 2026 through reducing household energy bills on average by £256, and would create 347,500 years of extra employment (PCAN, 2019). These savings amount to 14 per cent of the national total expenditure on energy in 2016.

The UK's net-zero target is a clear response to growing societal concern, most vividly expressed by the school strikes and by the mass protests of Extinction Rebellion, which prompted the UK Parliament to declare an environment and climate emergency. According to a ComRes survey in July 2019, 71 per cent of the UK public agree that climate change will be more important than the country's departure from the EU in the long term, and six in 10 adults said the Government was not doing enough to prioritise the climate crisis (Sherwood, 2019).

Managing a process of disruptive change

Achieving net-zero will affect all individuals, households, companies and organisations – almost the whole economy will be required to decarbonise. This will require proactive management of both risks and opportunities in order to deal with the inevitable trade-offs of change. The country must manage the threat of not only 'stranded assets' and 'stranded enterprises' but also 'stranded workers' and 'stranded communities'.

In its report recommending the net-zero target, the Committee on Climate Change (CCC) concluded that, "If the impact of the move to net-zero on employment and cost of living is not addressed and managed, and if those most affected are not engaged in the debate, there is a significant risk that there will be resistance to change, which could lead the transition to stall" (CCC, 2019). The CCC has recommended that the Government introduce a just transition strategy.

An assessment conducted by the Grantham Research Institute and the University of Leeds has estimated that about one fifth of current jobs in the UK will be affected by the greening of the economy s(Robins et al., 2019). Table 1 provides an overview of sectoral decarbonisation targets as laid out by the CCC, current employment levels in each sector, and our estimates of the proportion of jobs that will be affected by greening and the proportion that will require new skills in the transition. The transport, industry, buildings and power sectors are all exposed to significant amounts of change as they green, though the reskilling challenge varies between them: it is high in the construction sector at 30 per cent but lower in industry.

The three regions that are likely to be the most affected are the East Midlands, West Midlands and Yorkshire and the Humber. The UK is already the most regionally imbalanced economy in Europe and it will be important that the transition is designed to reduce rather than increase these divisions (Institute for Public Policy Research, 2018). The transition will have consequences beyond work, too, for communities, consumers and citizens.

Table 1. Sizing the challenge: UK emissions targets, employment and skills alignment

Sector	Emissions targets	Employment levels	% of jobs affected by greening of the sector	% of jobs that will require new skills in the transition
Surface transport	98% reduction in emissions by 2050	1.6m employed in transport and storage; 4m in retail and repair of vehicles	46%[1]	26%[1]
Industry	90% reduction in emissions by 2050	3m employed in manufacturing	50%[2]	17%[2]
Buildings	All new heating systems low carbon from 2035	2.4m jobs in construction; 0.5m jobs in real estate	60%[3]	30%[3]
Power	99–100% low-carbon generation by 2050	90,000 employed in electricity production, transmission and distribution; 544,000 employed in UK energy industry	43%[4]	26%[4]
Agriculture	30–50,000ha afforested every year to 2050; 20% cut in consumption of beef, lamb and dairy	426,000 employed in agriculture; 4m jobs in agri-food sector overall	11%[5]	6%[5]

Notes: 1. Transport and storage. 2. Manufacturing sector only. 3. Construction sector only. 4. Mining, quarrying and utilities. 5. Agriculture, forestry and fishing.
Sources: Key sectors for decarbonisation and long-term emissions targets from CCC (2019b); Skills profile of sectors from Robins et al. (2019); Numbers employed in each sector from Rhodes (2018), Defra et al. (2019), ONS (2017) and Energy UK (2018).

The success of the economic transformation that is required will be measured not only in terms of meeting the country's emissions targets and how well resilience to climate impacts is built in, but also in the degree to which it delivers fairness, social justice and greater wellbeing. For this to happen, fresh thinking on the design and delivery of vital policy tools (such as carbon pricing) as well as business and financial practices will be necessary. The Scottish government has already established a multi-stakeholder Just Transition Commission to provide advice on how the country can develop a "carbon-neutral economy that is fair for all" (Scottish Government, 2018). New approaches to dialogue (such as Citizens' Assemblies[1]) will also be required. In its 2019 statement on the just transition, for example, the Trades Union Congress (TUC) concluded that "the opportunities will not be realised unless the workers most affected have a seat at the table where key decisions are made" (TUC, 2019).

[1] In June 2019, six select committees of the House of Commons announced plans to hold a Citizens' Assembly on combating climate change and achieving the pathway to net-zero carbon emissions. See UK Parliament (2019).

Mobilising the UK's financial system

Making this shift will require the UK's £20 trillion financial system to effectively manage climate risks and channel capital towards sustainable activities. According to an open letter co-written by Bank of England Governor Mark Carney, the transition will require "a massive reallocation of capital", and "if some companies and industries fail to adjust to this new world, they will fail to exist" (Carney et al., 2019).

The net-zero economy could involve extra investments of 1–2 per cent of UK GDP per year in 2050, according to the CCC (CCC, 2019c). At a national level, this is manageable, as overall investment has fluctuated at between 15 and 24 per cent of GDP over the last 30 years. The costs of key technologies have been steadily falling and are expected to fall further. Nonetheless, financial innovation will be needed to help reduce the upfront capital costs in the transition.

This imperative comes at a time of considerable uncertainty for the financial system and the country more generally. More than a decade on from the financial crisis, restructuring and regulation remain driving forces, along with historically low interest rates. Deep uncertainties exist over the macroeconomic and financial system implications of Brexit, contributing to slowing economic activity and demand for financial services. Accelerating digital disruption is providing new ways to channel finance at lower costs (including to solve climate and societal challenges), but this is also set to bring further structural changes that are yet to be fully understood for financial sector institutions, their employees and customers (Leaders' Quest, 2017).

The UK is in the international vanguard in terms of its financial sector and policy response to climate change: there are already policy expectations that climate disclosure will become mandatory and new regulatory expectations for how banks manage the financial risks of climate change, and in 2021 the first system-wide climate stress test will be introduced (HM Government, 2019a; Carney, 2018; Bank of England, 2019). In terms of how banks are responding to climate change, the Prudential Regulatory Authority estimated in 2018 that about 30 per cent of banks are being 'responsible' (e.g. driven by Corporate Social Responsibility and focusing on reputational risks), about 60 per cent are being 'responsive' (e.g. viewing climate change as a financial risk from a relatively narrow perspective) and about 10 per cent are being 'strategic' (e.g. taking a long-term view of the financial risks and supporting an orderly transition) (Bank of England, 2018).

The Government has announced a number of measures aiming at mobilising the additional capital required for a sustainable economy, as part of its new Green Finance Strategy. One of the most important tasks is to work out how to scale up flows of equity and debt finance for climate action across the UK. To take one indicator, according to the Climate Bond Initiative, the UK ranks 12th in terms of green bond issuance at the country level (Climate Bond Initiative, 2019). Two new institutions are aiming to close this and other gaps: the Green Finance Institute and the related Impact Investing Institute, which is focused on combining social purpose with financial returns (Green Finance Initiative, 2019; Impact Investing Institute, 2019).

The challenge of the just transition lies in many ways at the intersection of green finance and social impact investing. This is recognised in the Green Finance Strategy, which identifies delivering a just transition as a key next step: "...as our economy changes it is vital we make sure that this growth in inclusive, benefitting people across the UK, supporting workers as industries transform and ensuring the costs as well as the benefits are shared fairly, protecting consumers, workers and businesses" (HM Government, 2019a).

Banks now need to define the pivotal role they can play. The following sections explore five priority themes for further discussion.

Five priority themes

1. Renewing purpose through the just transition

The growing importance of purpose for banking

In 2017, a consortium of banks based in Britain working with investors and other stakeholders reaffirmed the importance of their core purpose: to serve the real economy over the long term (Leaders' Quest, 2017). This renewal of the importance of strategic purpose is now being linked to sustainable finance and responsible banking. The EU has led the way through its Sustainable Finance Action Plan, stimulating a broad spectrum of market and regulatory measures to make environmental and social priorities central within the financial system.

This question of purpose is also reflected in the new Principles for Responsible Banking (PRB), which the UNEP Finance Initiative launched in September 2019 (UNEP FI, 2019). These set out six principles for banks to implement in terms of the alignment of their business strategy, impact management, working with clients, engaging with stakeholders, governance and culture, and accountability. More than 100 institutions have signed or supported the Principles; UK Finance is one of its endorsers.

The prologue to the Principles gives a clear sense of its ambition:

> *Our success and ability to remain profitable and relevant is intrinsically dependent on the long-term prosperity of the societies we serve. We believe that only in an inclusive society founded on human dignity, equality and the sustainable use of natural resources, can our clients and customers and, in turn, our businesses thrive. We therefore want to take a leadership role and use our products, services and relationships to support and accelerate the fundamental changes in our economies and lifestyles necessary to achieve shared prosperity for both current and future generations.*

To date, the environmental and social dimensions of sustainable finance and responsible banking have been managed in siloes. Climate change is clearly an environmental issue, but the transition is a process of structural economic change with obvious social consequences. What the just transition does is help decision-makers in banks and elsewhere to see how the climate agenda fits with the social dimension. The just transition is explicitly included within the Paris Agreement on climate change and it unites many of the individual Sustainable Development Goals.

Translating the just transition into a digestible framework

Financing the actions behind the net-zero target is a task in itself; doing it in a way that contributes positively to a just transition is an additional challenge. The just transition remains embryonic and needs to be translated into a digestible framework for banks, their clients and communities. Business as usual with climate add-ons does not reflect a strategic approach to the risks and opportunities the just transition offers the sector. Instead, the core question for banks to ask as part of their just transition strategy development is: *How can banks and the banking system best respond to the social opportunities and risks that flow from the transition to a resilient, net-zero economy?*

Adopting a strategic, collaborative and consultative approach that has innovation of new products, approaches, values and client relationship models at its heart will enable banks not only to address climate change but also to reaffirm their core purpose to serve society. Thus, a just transition could help bolster and support their social licence to operate. Banks will also need to work with policymakers to ensure that effective incentives and regulatory frameworks are put in place to mobilise the banking sector more broadly to design solutions that reward inclusive outcomes.

To bring strategic focus, banks could therefore consider, as part of their support for the global Principles for Responsible Banking or within their own strategies, making a specific commitment to support a just transition. This would mirror the commitments made by more than 140 institutions in the investor community to the just transition, many of whom are major shareowners and bondholders of banks (UN PRI, 2019).

2. Supporting customers through a just transition

Understanding the granular needs of different groups

The main way that banks can play a role in helping to deliver a just transition is in supporting their customers and clients. A growing number of banks have already announced public commitments to withdraw financing from high-carbon sectors (such as coal and tar sands) as well as to scale up flows to green economy sectors. Overlaying the just transition dimension means fully understanding the needs of different groups in society, the risks and costs they might face, the opportunities for business or lifestyle improvement and the innovations that could be needed to respond at the required scale and speed. Banks and other finance providers will need to address questions around the demand for sustainable financial products. This means understanding the requirements of different customer segments (particularly under-served segments), the barriers they face, and the financial solutions that could enable them to succeed in the transition. Successfully identifying the opportunities that arise from the just transition could result in improved customer engagement, stronger linkage to the real economy and renewed confidence of local communities. Doing so will involve considerable market development, necessitating coordination between banks and other finance providers, information brokerage to help consumers understand options, improved infrastructure to support cooperation between economic partners, blended finance and appropriate regulation. This will require trusted intermediaries and blended finance, the 'patient capital' of the public sector alongside impact investors (Mazzacuto, 2016).

Banking innovations on the just transition are starting to emerge. In April 2019, for example, Spanish bank BBVA coordinated for Iberdrola the first sustainable credit facility aligned with the just transition principles, totalling €1.5 billion. The facility was explicitly aimed at delivering environmental and social objectives simultaneously, in this case the expansion of renewable energy and increased access to energy (BBVA, 2019). Sustainable improvement loans offer another mechanism for incentivising environmental and social performance (Thomä et al., 2019).

It is already possible to start identifying possible implications for customer groups along with the products and services to help high- and low-carbon business clients transition to the new economy, as well as individual customers who will need green mortgages to retrofit their houses, and savings customers who want to avoid 'stranded deposits'.

Table 2 below sets out questions for different customer groups to stimulate discussion. The rest of this section focuses on the needs of SMEs and household mortgages as important examples.

Table 2. Banking and the just transition: questions across customer groups

Individuals and households	Small and medium enterprises (SMEs)
- How can lending and mortgage products be aligned with a net-zero future and better incorporate issues of social inclusion (e.g. fuel poverty)? - What regulatory and market changes are needed to support banks to transition to the point that all lending and mortgages are green? When will this be achieved? - How can savings product models respond better to the needs of Generations X and Y? - How can banking institutions be transparent about the contribution of savings products to the just transition (including place-based programmes)?	- How can SMEs, government and finance providers best quantify SME demand for just transition financing (e.g. to avoid stranding risks and support long-term development)? - What financial products and what advisory services are likely to be needed by SMEs, and under what terms? - What institutional mix is required to respond to these needs in terms of shareholder banks, mutuals, community development finance institutions (CDFIs) and public finance? - How can capacity on climate finance be built in the SME sector? - What is the role of technology such as cloud-based accounting in supporting SMEs to transition to net-zero?
Corporate finance	Public authorities and partnerships
- How can the environmental and social dimensions of the transition be incorporated into capital raising for large corporates (e.g. bonds, credit facilities)? - How can the social dimension be included in banking finance for sustainable infrastructure? - What new public finance mechanisms are needed to support investment for net-zero and inclusive infrastructure? - How can the just transition agenda be incorporated into international trade finance?	- What innovative models exist for financing local projects that support a just transition (e.g. revolving funds, crowdfunding municipal bonds, use of digital technology?) - How can local authorities and enterprise partnerships work with banks to support net-zero industrial clusters? - What fresh thinking is required to best connect banks with public finance institutions to deliver a just transition? - How can banks support national-level action for the just transition (e.g. through sovereign bond issuance)?

Financing SMEs through a just transition

SMEs are the backbone of the UK economy, accounting for 90 per cent of UK businesses and 60 per cent of private sector jobs. There are roughly 5.6 million SMEs in the UK with a total annual turnover of £2 trillion; 96 per cent of these are self-employed or companies with fewer than 10 employees (Ward and Rhodes, 2014). SMEs contribute to economic development, employment, innovation and social cohesion, and they are especially important in economically deprived areas (see, for example, Lerner, 2010).

SMEs are hugely diverse in terms of economic contribution, environmental performance and social impact. From users of high-carbon capital stock (such as diesel haulage) to suppliers to high-carbon sectors (such as automotive, aviation, energy and industry), and on to pioneers in clean tech innovation and firms dedicated to sustainability, all SMEs in the UK will need to be net-zero by 2050, and many well before then (Owen et al., 2018). However, SMEs lack time, capital and access to expertise and often have limited market power.

It is essential that SMEs are consulted, supported and effectively financed to make the necessary changes in ways that are manageable and sustainable. This means understanding potential risks, upgrading their businesses, and adapting to new markets for net-zero products and services. There is a window of opportunity right now for banks to work with SMEs to enable them to prepare for the transition.

This will not be easy, particularly as SMEs can struggle to access finance and advice. Banks account for 80 per cent of SME loans but many are turned down on grounds of being too risky. A quarter of all SME applications are rejected (BVA BDRC, 2019). This is partly the result of risk-averse regulation following the financial crisis and partly because SMEs often have little or no collateral and no track record for the bank to assess the risks and opportunities an SME poses.

SMEs with business models based on intellectual property, and those seeking finance for new business models or technology where innovation is often key to their development, have particular problems in securing loans (see, for example, Cowling et al., 2018). About 7 per cent of SMEs are reluctant to seek external finance (British Business Bank, 2018), citing time and hassle as key reasons. These challenges extend to the transition as well. A first task is to raise awareness of what needs to be done, and then work with SMEs to understand what it will take to embrace the transition. The Government has set out some policies to support SMEs, notably the Boosting Access for SMEs to Energy Efficiency (BASEE) competition, announced in March 2019, with £6m of funding for new innovative models that reduce costs, simplify processes and encourage take-up (Thomä et al., 2019; HM Government 2019a, b).

Access to finance alone may not always be the stumbling block. For example, funds for energy efficiency upgrades lie unused by many SMEs because of time pressures and perceived risks. Ways must be found to address the apparent lack of SME demand for loans to finance economically attractive carbon reduction opportunities. Innovations in data and technology are likely to play a central role too, especially those designed to access, communicate and assess companies' needs and potential for using finance. An institution providing advice to SMEs, whose remit could include green finance and the just transition, is one option, linked to the potential establishment of a new national infrastructure bank (see Priority 4 below). Lessons can be learnt from other jurisdictions such as in Germany, where its national development bank, KfW, has been a crucial contributor to the *Energiewende* ('energy transition'), especially through energy efficiency loans to SMEs.

In Box 1 we provide examples of two SMEs working in the energy efficiency field and how they have been financed.

Box 1. SME transition pioneers: Q-Bot and Switchee

The Ashden Awards is an annual competition for sustainable energy trailblazers globally. A handful of winners each year gain funding and support to help their expansion. More widely, Ashden works to advocate for the sector and support the growth of new sustainable solutions.

Q-Bot (Ashden winner, 2018). Up to 25 per cent of heat loss can occur through floors, making this an important area for improvement in the nation's housing stock. Q-bot has developed a robot that can apply a layer of insulation beneath suspended floors, without the need to pull up carpets – thus it is a less costly and disruptive way to insulate homes and thus reduce heating need and emissions. The company received €2.13 million in grant funding from the EU's Horizon 2020 programme, as well as from other public and philanthropic bodies including Innovate UK and Climate-KIC, and equity funding from six London-based 'Angel' funders (Q-Bot, 2019).

Switchee (Ashden winner, 2017). Smart thermostats make it easier for households to optimise their heating use, saving money and reducing emissions. However, they are often not suitable for social housing, as they usually require wifi to work, which not all tenants have. Switchee has designed a smart thermostat for social housing that works without wifi or mobile phone apps. Energy use can be cut by up to 15 per cent and data is fed back to housing associations and local authorities. The company has received equity funding from Evergreen Energy and other, smaller investors (Evergreen Energy, 2016).

Financing household mortgages through the just transition

More than 10 years since the Climate Change Act was passed, the CCC has concluded that "there is still no serious plan for decarbonising UK heating systems", notably in the housing sector (CCC, 2019c). To meet the new net-zero target, all new housing must be built to meet zero-carbon standards, and all buildings, commercial and residential, will have to be retrofitted in the coming decades. This means ensuring that all new housing meets zero-carbon standards and all buildings, commercial and residential, are retrofitted to net-zero standards in the coming decades. To be on track, for example, 545,000 lofts need to be insulated each year; in 2018, only 43,000 were actually insulated (CCC, 2019b).

The Government has set targets to halve the energy use of new buildings by 2030, and to improve all housing stock to Energy Performance Certificate (EPC) band C by 2035, which will cost an estimated £35bn–£65bn (House of Commons Business, Energy and Industrial Strategy Committee, 2019). Households and businesses will be required, for example, to replace all existing oil and gas appliances (used for heating and cooking) and introduce energy efficiency measures such as insulation.

Upgrading the building stock in this way has intrinsic social implications at a time of fundamental concerns about both the amount and affordability of housing in the UK. For example, about one-third of all homes below EPC band C are not in the 'able-to-pay' category (CCC, 2019b) and about 13 per cent of UK households today live in fuel poverty, rising to over 40 per cent in some locations such as Northern Ireland (HM Government, 2017). In addition, workers in the construction sector are also the most exposed to both the opportunities and the risks from the transition, with 60 per cent estimated to be affected: 30 per cent of construction workers have skills that will be in more demand during the transition, while 30 per cent have skills that could face falling demand (Robins et al., 2019). This points to questions about how the upgrading can also generate decent work with good pay and conditions.

The banking sector will play a crucial role in connecting finance with environmental and social outcomes in the housing sector during the transition. Bank credit remains concentrated in loans to households, the largest share of which is mortgage lending. In 2018, banks provided finance for 800,000 home purchases. Total new lending for mortgages in the UK in the year to April 2019 was £147bn (including £75.6bn for purchases in London) (UK Finance, 2019).

Loans tailored to encourage energy efficiency and decentralised renewable energy development will be crucial. To date, a few 'green mortgages' have come onto the market. Barclays offers lower rates on fixed rate products for homes with EPC ratings A and B (Barclays, 2019). Ecology Building Society also offers lower rates for homes with EPC rating A or B, as well as more specialist products for energy retrofits, energy-efficient self-builds, and energy-efficient buy-to-let purchases (Ecology Building Society, 2019). It will be important to ensure that this potential to reduce energy bills can be be made available to vulnerable customers and reduce fuel poverty.

Banks are also starting to work internally to connect data on their mortgage portfolios with information on energy performance. More broadly, digital technology and data availability could play a big role in product tailoring and in facilitating the viability of new decentralised structures. For example, banks could play a role in facilitating peer-to-peer trading networks for local solar energy generators.

The Government has signalled a willingness to help: in its Green Finance Strategy, it announced a new Green Home Finance Fund of £5m to help the private sector pilot these types of products. It will be publishing a consultation later in 2019 on setting requirements for lenders to help improve the energy performance of the homes they lend to (HM Government, 2019a). A mix of incentives and requirements are likely to be needed, with social justice considerations built in.

3. Responding to place-based priorities

The transition will not be geographically neutral

Many of the factors that will determine the transition are determined at the national level or indeed internationally. Yet, these impacts will be felt very differently across the country, in rural communities as well as urban centres. This spatial dimension is particularly important for the UK given the entrenched regional imbalances that exist. Deindustrialisation continues to have negative effects in many parts of the country and there are concerns that the drive to net-zero could again negatively affect important industrial areas. Ambitious place-based strategies are needed to ensure that the transition is undertaken in ways that do not leave workers or communities in these regions behind. Equally, a just transition requires that already vulnerable communities do not pay higher energy bills as a result of policy reform.

On the upside, the transition can be shaped to drive a process of regional revitalisation. This could be linked to the commitment by more than 220 local authorities that have declared a climate emergency (Declare a Climate Emergency, 2019). The clearest example is the offshore wind sector and a number of regions are already seizing this opportunity. For example, the economy along the Humber estuary emits more carbon dioxide than any other industrial cluster in the UK, but the Local Enterprise Partnership has set an ambitious target of achieving net-zero in the area by 2040, a decade ahead of the country as a whole (Humber LEP, 2019).

Rural areas and market towns

The just transition will also need specifically to address the needs of rural areas and market towns if it is to avoid exacerbating inequalities. Food and farming will need to be central to the debates as the impact of extreme and changing climate patterns is already affecting food supply and farming communities. It will need to understand the needs of the UK's 149,000 farms, 90 per cent of which are sole traders or family businesses (Countryside, 2019). Decarbonisation of transport will also need to be sensitive to the needs of rural communities and accompanied by investment in public transport provision if it is to avoid worsening existing problems in accessing employment and social isolation. Some rural councils and market towns have already seized the initiative. For example, Cornwall Council declared a climate emergency in January 2019 and has approved an ambitious plan to become carbon-neutral by 2030.

Generating priorities from the bottom up

Place is one of the key cross-cutting components of the just transition, not least because of the decentralised nature of the net-zero economy. Our work has revealed an unmet demand for place-based financing that supports the net-zero economy and delivers positive social impact. Closing this gap will require innovation in many areas. Local authorities and enterprise partnerships must incorporate the just transition in Local Industrial Strategies and City Deals, including the development of net-zero industrial clusters and support for community-based business models. Our research has also identified the importance of anchor institutions, organisations whose scale, rootedness and community links are such that they are acknowledged to play a key role in local development (Morris et al., 2010). Development finance is also vital to help new companies, technologies and business models that are aligned with the transition to develop in locations that need economic uplift. Citu, a low-carbon housing company in Leeds, provides an example of this (see Box 2).

Box 2. Financing net-zero innovation – Citu

Citu is a privately owned, low-carbon housing development company based in Leeds. Its buildings have a carbon footprint seven to 10 times lower than the average UK house and its districts are designed to encourage behaviour shifts and community engagement to reap further environmental benefits. Citu's expansion has required patient financial backing. Such developments are high risk, facing technological risk and policy risk, as well as risk from financial and housing markets. Citu has been supported by flexible public finance from the Government's housing accelerator Homes England, Leeds City Council's Revolving Investment Fund, and Innovate UK.

Anchor institutions such as leading businesses and local authorities, along with trade unions, universities, hospitals and major charities, can often play a critical role in place-based climate action. Responding to place-based priorities will also require leadership from locally-rooted banks and financial institutions: these institutions need to identify how they can play this anchor role. In an era when the physical presence of banks is declining due to branch closures, innovative approaches will be needed to identify the long-term role that national as well as region-specific institutions can play in specific places. It will be important for banks to ensure that their regional and local knowledge is retained and shared with others when designing strategies to address the just transition. They will also need to tailor their products to different economic realities.

The Banking on a Just Transition project will be working on this with the new Place-based Climate Action Network (PCAN).[2] PCAN brings together the LSE's Grantham Research Institute, the University of Leeds, the University of Edinburgh and Queen's University Belfast. The network will support three city-based climate commissions, in Belfast, Edinburgh and Leeds, and will seek to stimulate the flow of green finance into cities across the UK. PCAN will also explore how to ensure that there is a just transition so that nobody and nowhere is left behind (Grantham Research Institute on Climate Change and the Environment, 2019). The Leeds Climate Commission is already established; one of its priorities is to mobilise finance (see Box 3).

Box 3. Leeds Climate Commission – how to finance an inclusive carbon finance

The Leeds Climate Commission is an independent, cross-sectoral, multi-stakeholder group that has brought together relevant organisations and actors to identify and stimulate investment in the opportunities associated with the low-carbon transition. In March 2019, Leeds City Council passed a motion to declare a climate emergency, based on the preparation of a science-based Carbon Roadmap produced by the Commission. This concluded that "technically and to a large extent also economically it is entirely possible for Leeds to become a carbon neutral city" and set a number of targets for the city to reduce its emissions: a 70 per cent cut by 2025, 85 per cent by 2030, 95 per cent by 2035, 97 per cent by 2040, 99 per cent by 2045 and 100 per cent by 2050 (Leeds Climate Commission, 2019).

Importantly, the Commission highlighted in its analysis of the city's next steps that "a key challenge is to ensure that the transition is a just and inclusive one – with steps being taken to ensure that people and places are not left behind and that all social groups and economic sectors participate in and benefit from the transition". The Commission is also working on innovative ways to mobilise finance for this pathway. For example, to help bridge the gap between the demand and supply of capital, the Commission is hosting peer-to-peer learning programmes.

[2] See https://pcancities.org.uk/

Questions for place-based dialogues

- What are the critical financing needs to deliver a just transition in the city/region over the coming decades in each sector?
- What is the mix of public and private finance that will be needed, including banks, investors and other financial institutions?
- What are the key barriers to flows of sufficient, affordable, place-based finance – and what steps could be taken to overcome them?
- Are there iconic projects that could help to build confidence, capacity and momentum at the local level?
- What role would the city/region like to see banks playing to support regional just transition plans?
- Who are the main actors that need to be involved?
- What new partnerships or institutions are needed to deliver these flows?
- What forms of institutionalised social dialogues are needed?
- What needs to change nationally to enable place-based financing to take-off?

4. Shaping the policy and incentive regime

Developing a just transition policy framework

Building a net-zero economy will involve "a major ramp-up" of policy effort across government at all levels, according to the Committee on Climate Change (CCC, 2019a). In its 2019 *Progress Report to Parliament*, the Committee identified that only seven out of 24 indicators of progress were on track and in terms of 25 headline policy actions set in 2018, only one had been delivered in full (CCC, 2019b). This policy framework is still to be formed, and a dimension of it will have to aid better direction of financial flows in the banking system; the banking sector and its stakeholders could help to shape it so that funding flows to the right activities with far greater urgency.

While there is growing awareness of the need for urgency in climate action, and for this to be inclusive, policy and market incentives still do not reward finance to flow in this direction. A strategic policy framework for the just transition is needed that covers the key policy dimensions (e.g. macroeconomic, industrial, regional, labour market and wider environmental policies) as well as the public finance required. Tools such as carbon pricing will need to be designed and delivered with the just transition in mind.

The just transition policy framework will need specifically to address the question of how a risk-averse banking sector can be incentivised to invest in the just transition, not least to encourage flows of sufficient, affordable finance across UK regions. Such a framework would need to recognise the importance of decentralisation and devolved decision-making, and the need to engage all stakeholders in its design. Getting the just transition into national and local Industrial Strategies, and the new Shared Prosperity Fund, are immediate priorities.

Aligning financial regulation

The UK's central bank and financial regulators have made it clear that climate change is a financial stability risk (Bank of England, 2019). They have yet to address the social and the spatial dimensions of the transition, however. Banks already face a broad 'fairness' agenda (e.g. in terms of access to cash, customers in financial difficulties, fraud) but as yet this is not linked to the imperatives surrounding climate change. A more tailored approach could be needed that differentiates between what needs to be centralised and what can be regionally determined as a way of stimulating secondary markets. Banks and other finance providers could also disclose the geographical allocation of finance to enhance understanding of inflows to the local and national economy. Furthermore, there remains a continuing concern that some existing regulation could hinder the actions that need to be taken by financial institutions to support a just transition, including by acting as a barrier to entry or constraining longer-term capital.

The crucial role of public and blended finance

Delivering a just transition is also likely to involve a new mix of financing mechanisms and institutions. This agenda comes at a time of profound change for public financing as Brexit will lead to the end of long-standing European regional and investment bank flows. This has led to the call by many for the establishment of a national infrastructure bank, with a dedicated sustainability, climate and just transition mandate (Rydge et al., 2018). Existing public finance organisations, such as the British Business Bank, could also take on a strategic role in supporting SMEs through the transition, acting through their financial services partners.

Policy is also needed to help create the ecosystem of financial institutions that can take a leadership role in the just transition. This can take the form of institutional innovation, such as setting up financial institutions with a social mission (for example, Big Society Capital). Fiscal incentives can also be deployed, such as the social investment tax credits. Take-up rates have been low in this particular example, something that subsequent initiatives must address. When operational, the new Impact Investing Institute could work to identify policies that might close the finance gap for the just transition. Further work is also needed to explore the potential for public sector bond issuance for a just transition, both by local authorities and centrally, for example, through a sovereign bond.

5. Exploring wider system innovations

The scale of the challenge linking climate action with social inclusion and economic prosperity points to the question of how transformational innovations across the banking sector and wider financial system can be developed. Our research points to several areas of potential innovation that could have a major impact.

- Rebooting the capital mix: Just as the UK needs to think about the optimal energy mix for a zero-carbon economy, we also need to explore what the right capital mix looks like to finance this transition in an efficient and inclusive way. Traditionally, banks have been built to provide 'baseload' finance and have found it hard to adapt to more decentralised and responsive forms of capital creation and allocation. Fresh thinking is required to understand how this 'baseload' role can be rethought in terms of the transition (for example to support local financing that is currently being developed by crowdfunding platforms, though volumes are still low).
- Managing financial risk in the transition: Risk is a key factor not just in the cost of capital but also in the way that financial institutions address the transition and wider sustainability issues. In one sense, the progress that banks have made in terms of managing climate risks is a sign of success. More broadly, however, banks are now regulated to be risk-averse at a time when the transition actually requires an increase in the proportion of risk capital to drive the innovations that are needed.
- Serving the real economy: The just transition is a challenge for the real economy rather than about the creation of a separate 'green economy'. The task for banking and finance is how to support the structural and systematic transformation of the whole economy through financial intermediation and expertise. Since the financial crisis, progress has been made to relink banking with the real economy. The climate emergency and the need for a just transition reemphasise the importance for banking to demonstrate the value it is creating for the UK, particularly to play a critical connective role between large-scale financial flows and practical project financing at the household, enterprise and local levels.
- Refreshing models of dialogue and participation: The scale and urgency of the climate emergency is prompting new thinking about how to involve citizens and stakeholders in

decision-making. The Scottish Government's Just Transition Commission provides a model for the UK as a whole. Citizens' Assemblies are another example of new ways of encouraging and facilitating public participation. To date, these assemblies have not been used to explore how financing could be better deployed for the transition: this is an area that the Banking on a Just Transition project will be exploring further.

Conclusion

The shift to a zero-carbon economy in the UK will require the mobilisation of significant capital from the UK's £20 trillion financial system. The success of the economic transformation needed will be measured not only by decarbonisation but also by the degree to which it delivers fairness and social justice.

The banking sector has a unique role to play in support of a just transition because of the sector's role in the economy and the goods and services it provides to households, businesses and organisations across the country. Banks need to ask themselves how they can best respond to the social opportunities and risks that flow from the transition to a resilient, net-zero-carbon economy, including making a specific commitment to support a just transition. The most important way banks can do this is by supporting their customers and clients. They need to help customers understand the benefits of carbon reduction in a way that is socially inclusive, and to consider how to move to the most appropriate mix of short-term credit and longer-term, asset-backed finance.

It is particularly important that SMEs, rural and urban, are able to participate in the zero-carbon transition and that upgrading building stock is done in a socially inclusive way. The transition will play out unequally across the country and there is an unmet demand for place-based financing that supports the net-zero economy and delivers positive social impact. Locally-rooted banks and financial institutions need to identify how they can play an anchor role in affected regions. For the banks to successfully support a just transition will also require a ramped-up policy framework and wider systems innovation.

Success with the just transition is by no means guaranteed and raises a series of tough issues. The social dimension of climate change touches on power, distribution and participation, all against the troubled backdrop of Brexit. At times, genuine dialogue could also be marked by disagreement and conflicting perspectives, hence the importance of building in and acknowledging the need for mediation and conflict management processes as part of the process. A revolution in data and digitisation is underway, with double-edged implications; the cross-over between the climate and technology transitions will ultimately need to be managed as a whole. Yet the reality that the transition is often going to be hard and that making it inclusive will be challenging should not deflect attention, especially not from the finance and banking sectors. Achieving these goals is entirely manageable. The time to start is now.

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Hackney

Skills Economy and Growth Scrutiny Commission 25th February 2020 **Skills, Economy and Growth Scrutiny Commission Work Programme for 2019/20**	Item No **6**

Outline

Attached is the work programme for the Skills, Economy and Growth Scrutiny Commission for 2019/20. This is a working document that is regularly updated.

Action

The Commission is asked for any comments, amendments or suggestions for the work programme.

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Skills, Economy and Growth Scrutiny Commission

Rolling Work Programme June 2019 – April 2020

All meetings take pace at 7.00 pm in Hackney Town Hall unless stated otherwise on the agenda. This rolling work programme report is updated and published on the agenda for each meeting of the Commission.

Dates	Proposed Item	Directorate and officer contact	Description, Comment and Action
Mon 17th June 2019 Papers deadline: Wed 5th June	Work Programme Discussion	Chief Executive Directorate Overview and Scrutiny - Tracey Anderson	To agree a review topic and discussion items for the work programme.
	Update on Inclusive Economy Strategy	Chief Executive Directorate Director - Stephen Haynes	update on the development of the Council's Inclusive Economy Strategy, proposed timescales for implementation
Mon 8 July 2019 Papers deadline: Thurs 27th June	Inclusive Economy Strategy Consultation Workshop	Chief Executive Directorate Head of Policy and Partnerships - Sonia Khan	Review of the strategy out for consultation and the development of metrics. Presentation from HM Cabinet Office on Inclusive Economy Partnership
Mon 16 Sept 2019 Papers deadline: Wed 4th Sept	Cost of living and public sector recruitment strategies	Various	*Recognising how the growing disparity between cost of living and public sector salaries are going to pose a real tension for recruitment strategies and talent management.* Looking at the cost of living and the ability to fill key public sector roles.

Dates	Proposed Item	Directorate and officer contact	Description, Comment and Action
Wed 16 Oct 2019 Papers deadline: Fri 4th Oct	Night Time Economy Seminar	Chief Executive Directorate Overview and Scrutiny Tracey Anderson	Review of new policy, jobs, sustainability of sector, implications for residents and growth.
	Hackney Young Futures Commission	Chief Executive Directorate Project Lead, Young Futures Commission Rohney Saggar-Malik	Update on Young People's Consultation Feedback of young people's views on employment, opportunities and the economy.
Mon 21 Nov 2019 Papers deadline: Mon 11th Nov	Crossrail 2 Update from Transport for London Meeting Cancelled due to Purdah	Transport For London – Crossrail 2	*Update on the progress of Crossrail 2* *In response to the government's call to make Crossrail 2 more affordable, TfL are reviewing the scheme, design and delivery in order to ensure best value for money. TfL is currently awaiting a decision from the Government about next steps for the scheme. Update to Commission about the progress of Crossrail2 will be provided at a later date.*
Mon 6 Jan 2020 Papers deadline: Wed 18st Dec	Cabinet Member Question Time sessions –	Mayor's Office – Head of Mayors Office and Support Officer Cllr Williams	The questions submitted in advance covered: • Apprenticeship Programme • Post 18 Skills and Adult Learning
	Cabinet Member Question Time sessions	Mayor's Office – Head of Mayors Office and Support Officer Cllr Nicholson	The questions submitted in advance covered: • Community Infrastructure Levy • Hackney Walk

Dates	Proposed Item	Directorate and officer contact	Description, Comment and Action
	Making the Local Economy Work for Hackney - Recommendation Discussion	Chief Executive Directorate Overview and Scrutiny Tracey Anderson	
Tues 25th Feb 2020 Papers deadline: Thurs 13th Feb	Introducing Just Transition	Various contributors	An introduction to the topic Just Transition for the Commission in advance of starting their scrutiny review. • Tim Page, Senior Policy Advisor, from the Trade Union Congress • Rebecca Newsom, Head of Politics, from Greenpeace • Nick Robins, Professor in Practice - Sustainable Finance from the London School of Economics and Political Science • Cllr Jon Burke, Cabinet Member for Energy, waste, transport and public realm from London Borough of Hackney • Sonia Khan, Head of Policy and Strategic Delivery from London Borough of Hackney • Suzanne Johnson, Head of Economic Regeneration from London Borough of Hackney • Laura Parry, Senior Transport Planner from Hackney Zero Emissions
Wed 25th Mar 2020 Papers deadline: Fri 13th Mar	Work Programme 2019/20 and Work Programme Planning for 2020/21	Chief Executive Directorate Overview and Scrutiny Tracey Anderson	

Dates	Proposed Item	Directorate and officer contact	Description, Comment and Action
	Making the Local Economy Work for Hackney - Draft Report	Chief Executive Directorate Overview and Scrutiny Tracey Anderson	Commission to agree the draft report.
	Night Time Economy Seminar – Review of Public Engagement Session	Chief Executive Directorate Overview and Scrutiny Tracey Anderson	Commission to agree key themes from the public engagement session on the night time economy.