A National Plan for the UK

From Austerity to the Age of the Green New Deal

The fifth anniversary report of the Green New Deal Group

This report is the fourth publication of the Green New Deal Group.

Meeting since early 2007, the Green New Deal Group's membership is drawn to reflect a wide range of expertise relating to the ongoing financial, energy and environmental crises. The views and recommendations of the report are those of the group writing in their individual capacities.

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The purpose of this report is to advance a much-needed debate about how to move the UK out of the counterproductive politics of austerity and into the age of the Green New Deal. This is a matter of utmost urgency. If it isn't introduced rapidly, we are likely to enter another economic slump. A Green New Deal could be implemented now if the political will existed. It calls initially for a £50 billion a year investment programme to boost economic activity, in a way which provides jobs on a living wage in every community in the UK, while reducing our ecological impact.

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Executive summary

Five years ago we wrote and published the Green New Deal. In our report,[1] begun in the summer of 2007 before the full extent of the financial crisis had become apparent, we called for a joined-up package of measures. They were designed to power a renewable energy revolution, create thousands of green-collar jobs and rein in the distorting power of the finance sector, while making more low-cost, patient capital available for pressing social and economic priorities.

The Green New Deal Group argued that, given the scale of the threat to the finance system at the time, it was vital for government to borrow to intervene in the economy and to 'generate employment, income and saving and associated tax revenues to repay the exchequer.' Unlike many policy makers and commentators at that time, we believed that economic failure would cause public debt to rise. This turned out to be true. To reduce the annual deficit and total debt it was vital, we argued, that government should step in and invest in measures that would not only generate economic activity to counter the negative impacts of the immediate economic slump, but bring about the transformation of the economy for a low-carbon future, while also creating the jobs that would insulate against the worst impacts of the downturn.

As the world stood on the edge of an economic abyss in 2008, Gordon Brown and other world leaders quickly abandoned the mantra 'markets know better than governments', blew the dust off their Keynesian textbooks and pumped money and hence demand into the global economy. Governments made available previously unimaginable sums to bail-out out a banking system whose uncontrolled greed and recklessness had bought the global economy to its knees.

During the Keynesian 'year in the sun' that followed, institutions and politicians joined the call for a Green New Deal. The United Nations Environment Programme (UNEP) called for a Global Green New Deal because of its 'enormous economic, social and environmental benefits… ranging from new green jobs in clean tech and clean energy businesses up to ones in sustainable agriculture and conservation-based enterprises'.[2] In 2009, then UK Prime Minster, Gordon Brown called for an international "green new deal" to boost the environmental sector and help lift the global economy out of recession.[3] Green Members of the European Parliament called for a European Green New Deal to tackle the continent's economic problems in a sustainable manner.[4]

As soon the global economy appeared to be improving, the mini-revival of Keynesianism was replaced by its nemesis – the age of austerity. In response, our second report *The Cuts Won't Work,* published in December 2009, warned: 'Now is the time for spending, not cutting'.[5]

By 2012 and after the Coalition Government's drastic programme of public spending cuts, total net public debt, as we had warned, had increased substantially – to more than £1 trillion before the impact of quantitative easing is considered, or 70 per cent of GDP – and has continued to rise in 2013.[6] The reason was entirely predictable: public investment had been slashed, causing a collapse in private confidence, a rise in underemployment and joblessness, a fall in wages, investment and spending. As a result, government revenues and the tax-take fell and expenditure on unemployment benefits etc rose.

The downside of the age of austerity is becoming increasingly apparent in rising government debts, underemployment and inequality as well as cuts to essential public services, benefit cuts, social misery, social division and unrest. This is particularly the case in the UK and many parts of Europe where austerity is still being implemented relentlessly. Improvements in the UK deficit have in the public finance watchdog's words 'stalled',[7] in spite of various political sleights of hand such as including anticipated auction receipts of £3.5 billion from the 4G mobile spectrum auction in the December 2012 Autumn Budget Statement.

Five years on from the first Green New Deal report, the global finance system remains in a precarious state, while the threat to our climate has grown and government support for renewable energy in the UK has melted away.

This report repeats and updates the demands we made in 2008. It calls for the urgent implementation of a real Green New Deal: an interlinked package of measures including a systematic programme of investment in green infrastructure of at least £50 billion a year, which will benefit every community in Britain, providing skilled-jobs, making homes warmer and keeping energy costs down.

This Green New Deal would be funded through the following measures:

- Tackling tax evasion and avoidance;
- A programme of Green Quantitative Easing (QE), where the Bank of England 'creates' tens of billions of pounds to be used in a targeted fashion to fund a Green New Deal, generating jobs and economic activity that also transform the economy for the future. This is very different from any previous round of QE;
- Controls to ensure that banks that were bailed out by the taxpayer also invest in such a programme at low, sustainable rates of interest;
- Encouragement for pension funds and other institutional investors to invest in the Green New Deal;
- Buying out the private finance initiative (PFI) debt using Green QE and redirecting some of the otherwise huge repayments into funding green infrastructure.

This real Green New Deal would create employment. This would generate wages, salaries, profits and tax revenues – from both the public and private sectors. Tax revenues could then be used eventually to finance the economic deficit and pay down the national debt.

More than that, insulating every home and building in the UK, transforming our transport system for a low carbon future and ensuring maximum efficiency in the use and reuse of raw materials would create jobs across the country. Investment in renewable energy could be targeted so that it would help to rebalance the economy away from London, while also providing reliable sources of clean energy and enabling the UK to show global leadership on climate change.

Foreword: From Austerity to the Green New Deal

The purpose of this report is to advance a much-needed debate in the run up to the general election in 2015 about how to move the UK out of the counterproductive politics of austerity into the age of the Green New Deal. This is a matter of utmost urgency. If it isn't introduced rapidly we are likely to find ourselves in another economic slump. A Green New Deal programme calls initially for a £50 billion a year programme to boost economic activity in a way which provides jobs on a living wage in every community in the UK, while reducing our ecological impact. To begin with, this involves putting in place a nationwide project to make every building in the country energy efficient and building hundreds of thousands of new, affordable, sustainably sited, energy-efficient homes.

Also key will be ensuring that the constant repair and maintenance and improvement of the nation's public transport system is geared to enhancing regional and local links. The information equivalent to transport – the broadband superhighway – will need to be dramatically improved across the country. Finally it is crucial that the recycling, reuse and minimisation of waste becomes a priority in every part of the UK.

This huge programme will be funded by ensuring that a substantial part of the £95 billion a year lost to tax dodging is recouped by government. This will require effective regulation and ensuring that enough tax inspectors are employed to maximise collection.

The rest of the money can be electronically printed by the Bank of England and invested directly into the Green New Deal. So far the £375 billion of QE has been used to buy government debt, i.e. gilts from financial institutions, in the blind hope that they will invest these funds to get the economy moving again. Unsurprisingly, the result has been the use of such funds, not to support the real economy, but to pile into the stock market, the bond markets and the housing market, in the process contributing to a further threat of asset price bubbles. Should these bubbles burst, they risk prompting a bigger financial crisis than that of 2007/8.

Recent warnings that the QE programme in the US might begin to slow down caused panic in the global market, as it dawned on the banks and investors that this easy money could come to an end. Despite soothing words from the Federal Reserve, the global markets remain very volatile and the real economy continues to suffer. Green QE by comparison would be used to fund carefully-costed, and therefore non-inflationary, green infrastructure projects that would result in jobs and business opportunities right across the country while also transforming the nation's outdated infrastructure to meet the needs of the future.

Of course neither a crack-down on tax dodging nor Green QE can be put into place overnight, although it should be possible to start a Green QE initiative relatively quickly. The very short term upfront money to begin this transformation to a programme of green infrastructure for every community will have to come from increased upfront Government borrowing, making use of today's very low interest rates.

At present one of the justifications for the Coalition's cuts is the pretence that they are needed to pay for more infrastructure projects. The Chief Secretary to the Treasury, Danny Alexander has said that £3 billion of the cuts would be diverted to infrastructure projects. In his 2012 Autumn Statement Chancellor George Osborne announced that £5 billion in savings from departmental spending would be recycled into higher capital spending. This lose-lose approach that fails to transform the UK economy for the future, or create jobs where they are needed actually means that the cuts will continue to increase underemployment and joblessness. An illustration of this is the Coalition's emphasis on major new roads and the High Speed 2 (HS2) rail link. These have long project lead times, are likely to be cost-escalating and would actually take money away from the kind of improvements to local infrastructure proposed in this report. The Green New Deal approach would increase economic activity nationwide in the short-term and enhance the well-being of a great many more people, as well as creating new jobs much sooner than major projects could.

Once the economy has begun to improve, funded by short term increases in public expenditure followed by Green QE and an effective crackdown on tax dodging, then pension funds can move into longer term investments in areas like energy efficiency and building new low-carbon homes. These will earn a constant income stream and provide secure returns for pensioners. Most importantly, this public and pension funded Green New Deal will generate a huge range of skilled work, particularly for young people and in the places where people actually live, providing much needed intergenerational solidarity.

The banking system must also be transformed such that it fosters and facilitates sustainable economic activity in all communities and provides an adequate local branch network. To achieve this, large banks must be broken up and strictly regulated to ensure they serve community needs and so they can never again wreck our economy.

Bringing in such a nationwide Green New Deal would ensure a wide range of jobs and business and investment opportunities in every city, town, village and hamlet in the UK. This is why it makes political sense for such a programme to become central to the manifestos of all parties in the run up to the next election. It is hard to imagine any voter not wanting to support such a programme, since the tax it would generate would reduce the national debt, the jobs created would reduce the need for welfare benefits and a programme would be in place to help revitalise and transform local economies.

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The Green New Deal Opportunities: 2008

- **A massive environmental transformation of the economy: to tackle the triple crunch of the financial crisis, climate change and insecure energy supplies.**

- **Jobs, more jobs and secure jobs: and** the skills and training to create and sustain them. In a time of recession, with unemployment unacceptably high, shifting to green energy will produce countless new jobs, and create many more pound-for-pound of investment, than propping up the current system.

- **Investment now to tackle the current recession, and an investment for the future:** there are lots of ways we can invest in the future – as a country. Public spending on a Green New Deal will reap economic, environmental and social benefits. We can spend 'better' by reforming taxes, so that we tax more on what we want less of (like pollution and reckless speculation) and less what we want more of (like green goods and services). Investment can come from public and private sources, as well as our savings. Shutting tax havens and ensuring that corporate tax reporting accurately reflects profits made in a country, would raise billions more for public investment in both rich and poor countries.

- **New checks, balances and directions for a banking system that has become unfit for purpose:** everyone agrees that new rules are needed to prevent a repeat of the banks' catastrophic errors, but there's also a new opportunity for change. With the taxpayer now owning several banks we can make sure that they invest and lend at low, affordable interest rates to support the economy's environmental transformation.

- **Greater security for our pensions and savings:** many people's pensions have taken a battering, but now there's a chance to create new, low risk steady return vehicles for saving. New bonds and pensions targeted at the green renewal of the nation's infrastructure could help bring mutual long-term benefits to both savers and the nation as a whole.

- **Warm homes in winter, protecting us from high and volatile energy prices and ending fuel poverty:** too many people can't afford to keep warm in winter. Whatever the international price of fuel, homeowners seem to have to pay ever higher prices. A Green New Deal will begin by improving insulation and energy efficiency in UK households and start to break our dependence on volatile, expensive and ultimately declining fossil fuels.

- **The UK showing real world leadership, setting an example and helping to build global security:** unless rich nations like the UK show that they can implement change at home, poorer countries are unlikely to make the shift. The Green New Deal is about setting the economy, nationally and globally, on a path to living within its environmental means. It is also about fair play in a warming world and calls for the new financial mechanisms to help the majority world adapt to climate change as well as breaking the carbon chains of fossil fuel dependence.

Part 1: Why The Green New Deal Was Right in 2008

"We find that forecasters significantly underestimated the increase in unemployment and the decline in private consumption and investment associated with fiscal consolidation."

IMF: *Growth Forecast Errors and Fiscal Multipliers*
by Olivier Blanchard and Daniel Leigh, IMF Working Paper, 3 January 2013[8]

"Gather round and take a good look, children. This is the thing we call failure."

John Lanchester, *London Review of Books.* 3 January 2013[9]

The first report of the Green New Deal Group was published in 2008.[10] It outlined policies to fund investments and transform the finance system in ways that would tackle the 'triple crunch' of the economic crisis, climate change and the need for a low carbon energy system.

We called for the active demerger of large banking and finance groups (along the lines of the Glass-Steagall legislation of inter-war America) with retail banking split from corporate finance and from securities dealing.

Five years on from the crisis that almost brought the global economy to its knees, there has been no progress in re-structuring the banking sector. On the contrary, bankers now experience business-as-better-than-usual, given that their speculative activity, in defiance of free market theory, is guaranteed and underwritten by taxpayers.

We also called for increased regulation of derivative products and other exotic instruments, and argued that governments had powers to restrain such reckless speculation. In particular we called for 'negative enforcement': a refusal by government and the legal system to enforce contracts negotiated outside the regulatory framework. This would mean that bankers, for example, could not enforce loan agreements made with borrowers in Britain, or sue defaulters and fraudsters.

Instead, successive UK governments have remained supine and subordinate to finance capital. In bowing to the interests of financial markets, politicians and policymakers have sacrificed the living standards and incomes of the working population; and the life-chances of millions of the unemployed, including a generation of young people. According to the TUC, the UK's overall pay packet has declined by £52 billion since the eve of the recession in 2007, with total pay across some regional economies shrinking by 10 per cent.[11] Nearly one million young people in Britain are out of work: 20.2 per cent of people under 25 – down marginally from 21.4 per cent in April 2012.

In 2008, and before the collapse of Lehman's bank, the Green New Deal Group argued that, given the scale of the financial crisis, it was vital for government to borrow to intervene in the economy; to 'generate employment, income and saving, and associated tax revenues to repay the exchequer.'

Unlike many policy-makers and commentators, we understood that economic failure would cause public debt to rise. To reduce the annual deficit and total debt it was vital, we argued, that government stepped in and invested in measures to enhance the economic, energy and climate security of British citizens.

By the time of our second report, *The Cuts Won't Work,*[12] published in December, 2009, policy-makers and their friends in the media and the City were assuring the public that signs of recovery were in place. Eighteen months after the 'debtonation' of 9 August, 2007 (when inter-bank lending froze) the stock market had risen by 50 per cent, house prices were up, and City bonuses were back.

We warned then of 'complacency'. We also warned that: 'cutting spending now will make the recession worse by increasing unemployment, reducing the tax received, and limiting government funding available to kick-start a Green New Deal while there is still time.'

'Now', we argued 'is the time for spending, not cutting'. We explained that: 'the public debt is an *outcome* of policy, not a constraint on policy'. In 2009 (long before the IMF report quoted above on the issue) we reminded readers of the theory of 'the multiplier': that any new government spending would have repercussions throughout the economy. 'This meant' we spelt out carefully 'that the aggregate impact (of spending) would be far larger than the original expenditure.' In other words, that public spending in a downturn would pay for itself.

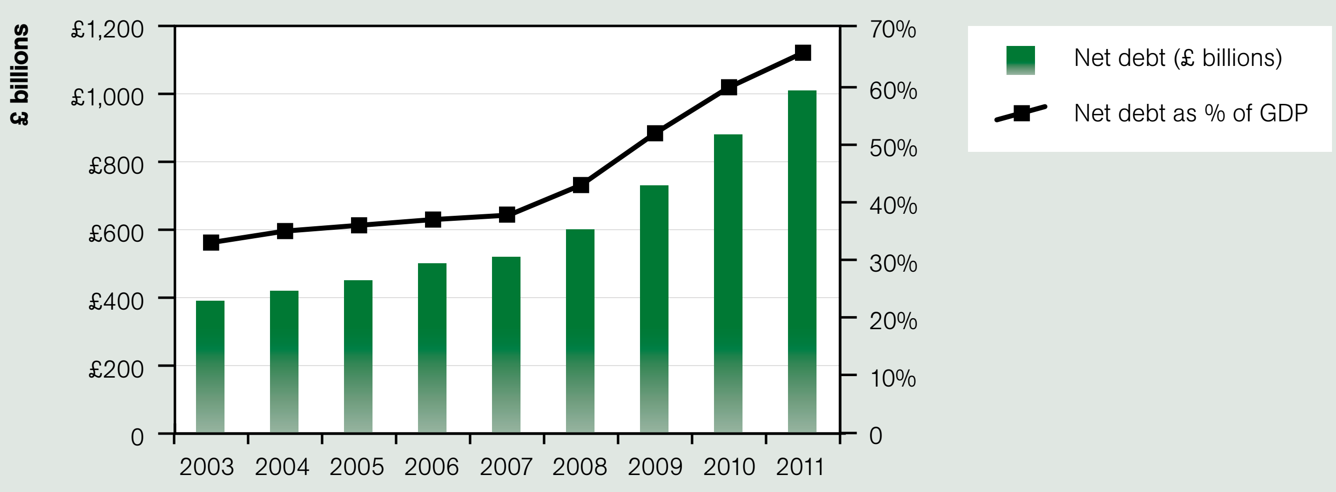
Our warnings and our advice – based on tried and trusted economic theory and historical experience, re-imagined to meet contemporary challenges – went unheeded.

More Cuts, More Debt And The Threat Of Deflation

The outcome of the policy of expenditure-cutting was inevitable. Soon after publication of *The Cuts Won't Work*, in 2010, the UK's total public net debt was £811.3 billion or 55 per cent of GDP. Public debt had risen to this level in large part because of the cost of rescuing the economy from banking failures.

By 2012 and after the Coalition Government's drastic programme of public spending cuts, total net public debt, as we had warned, had increased substantially – to more than £1 trillion – or 70 per cent of GDP.[13] Progress towards the specific goal of reducing the deficit has 'stalled'.[14] While in June 2010 the government saw the deficit as a share of GDP improving from 7.5 per cent in 2011–12 to 5.5 per cent in 2012–13, its own latest figures show a worst starting point of 7.8 per cent in 2011–12 and improvement to only 7.4 per cent in 2012–13.

Figure 1: The Impact of the Bank Bail-out: Net Public Debt in the UK



Source: Public Sector Finances, Office for National Statistics

The reason was entirely predictable: public investment had been slashed, causing a collapse in private confidence, a rise in unemployment and a fall in wages, investment and spending. As a result, government revenues fell, and current expenditure (on e.g. unemployment benefits) rose.

The total public debt in 2012 would have been higher if it were not for some extraordinary contributions to the Exchequer in that year. These included: a £3.5 billion windfall from auctioning off the 4G telecom spectrum; the sudden boost of the Royal Mail's £28 billion transferred assets, (even though balanced by pension liabilities); state ownership of the Bradford and Bingley Building Society; and profits of £35 billion from the Bank of England's QE programme.

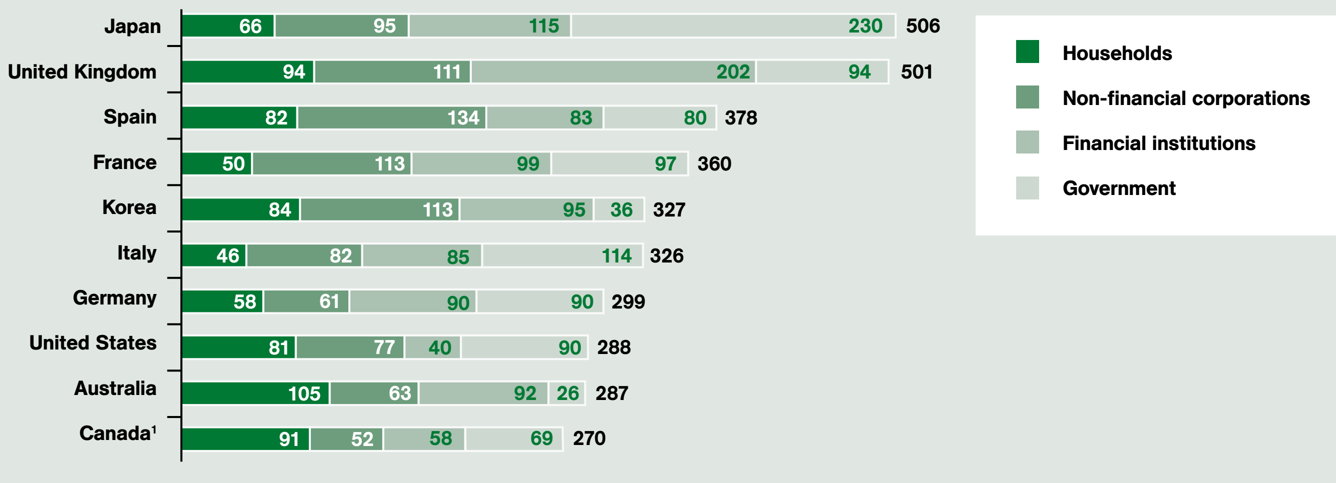
Why did total government debt rise? The answer is not complicated. First, the British economy is burdened, on the one hand, by enormous private debts – debts that private entities are obliged to 'de-leverage', write off or pay down, in a recession. Britain is not alone in this: the world economy is in a debt-deflationary spiral. Second, the financial crisis led to a collapse, initially in UK private investment and then in reduced demand and tax revenue due to the cuts in public investment – both major causes of the prolonged recession.

The UK's overhang of private debt

UK private debt is very high (more than 400 per cent of GDP). According to McKinsey and Co.[15] the UK is the second most indebted of the world's largest mature economies in terms of public and private debt, beaten only (marginally) by Japan. The main difference is that this country's debt is overwhelmingly made up of *private* debt – debts owed by banks, by corporations and firms, by households and individuals. The scale of the rise in UK private sector debt is most stark when compared to that of the US. Between 2000 and 2008 US private sector debt rose by 81 per cent of GDP. In the UK between 2000 and 2008, private sector debt rose by 161 per cent of GDP.[16]

As a result of this oppressive overhang of private debt, brought on by over-zealous lending by a de-regulated finance sector, the solvency of many British firms, households and banks remains in question. A large number of companies are kept

Figure 2: The composition of debt varies widely across countries, indicating different deleveraging challenges. Total debt of the ten largest mature economies, Q2 2012 or latest



1 According to Canada's national accounts, 'household' sector includes nonfinancial, non-corporate business.
NOTE: Numbers may not sum due to rounding.

Source: Haver Analytics; national central banks; McKinsey Global Institute afloat as ‘zombie’ firms – by a process of ‘extend and pretend’ (extend new loans, and pretend they will be repaid.) And as we argued in 2009, policymakers – politicians and central bankers – are like ‘rabbits frozen in the glare of the headlights.’

The British banking sector, whose purpose is to lend into the economy, has been turned on its head. Instead of lending to the real economy, banks are borrowing from the real economy, as firms and households deposit more in banks than banks lend out. This is a bizarre and historically unprecedented development. (See the Bank of England’s regular ‘Trends in Lending’ reports.[17])

When the private sector (including the banks) is saving and there is no significant change in the level of net exports and imports then it is inevitable that the government of any country will run a deficit, and that is what is happening in the UK at present. It is simply not possible in economic accounting terms for everyone to be in surplus at the same time.

The current government did know this when it made reducing the deficit its central policy. When doing so in 2010 it assumed, according to OBR forecasts, that consumers would massively increase their borrowings and not save. This was the now almost forgotten policy of ‘expansionary fiscal contraction’ which turned out to work on a professor of economics’ blackboard and not in practice. It was also assumed that the UK would significantly increase its exports as the result of a fall in the value of the pound. The government were right about the pound falling, but not about the boost to exports that was supposed to follow.

The inevitable result has been continued large deficits, and nothing else was possible. The only way to reduce the government deficit is to reduce the private sector surplus, and the only way to do this is through a revival of confidence in the private sector. The government has been attempting to do this by ongoing cash injections and support to the banking system- some aimed directly at house prices – and through increased liberalisation and a fire sale of public sector income flows and assets. But the only sensible and sustainable way of fostering private sector confidence is through public investment in vital infrastructure projects. But instead of keeping up the rhetoric of deficit reduction, which the government has done, government should have embraced the deficit at a time of private sector saving, and used it to finance productive employment-creating activity in sustainable infrastructure. Instead the Government chose to finance economic *inactivity* – via for example, unemployment benefits.

The collapse in UK private investment

In aggregate, real GDP has declined by £60 billion since the peak level of activity in 2007.[18] The driving force behind this collapse is the fall in both private *and* public investment, in real (constant volume) terms.

Between 2007 and 2012, total UK investment fell by about £40.5 billion – just under 3 per cent of GDP. This was due first, to a collapse in business investment from a peak of £134.6 billion in 2007 to £114 billion in 2010: i.e. a fall of £20 billion in just two years. Second, there was a collapse in investment in private sector dwellings from nearly £89 billion in 2007 to £52 billion in 2009.

To compensate for this collapse of £57 billion in private investment in two years, the Labour government increased public investment by £12 billion – from £27 billion in 2007 to £39 billion in 2010. In 2011 under the Coalition Government, £10 billion of the Labour government’s public investment stimulus was slashed to force public investment down to just under £29 billion.

By 2012, dimly aware of its error, the Coalition Government marginally increased investment by £0.75 billion to £29.4billion. Too late. The combined collapse of private and public investment has prolonged the crisis unnecessarily. In 2012, as the *Economist* has reported, the UK ranked 159th in the world in terms of its investment to GDP ratio – behind Mali.[19]

Re-balancing?

In his Mais Lecture on 24 February, 2010, George Osborne announced that

> *"….given that we cannot go back to the last decade's debt-fuelled model of growth, the question I am asked most often at the moment, is 'where is the growth going to come from?' …The economics profession is in broad agreement that the recovery will only be sustainable if it is accompanied by an internal and external rebalancing of our economy: in other words a higher savings rate, more business investment, and rising net exports."*

According to the OECD, UK household net saving was negative in the run-up to the 'debtonation' of 2007. Household net saving was -1.7 per cent of disposable income in 2004 and a startling -4.3 per cent by 2007. After 'debtonation' UK households began to cut back on borrowing and to save. By 2010 net household saving had risen 2.0 per cent of disposable income, but by 2011 people had started to spend again, and net saving fell to 1.3 per cent of disposable income.* So, not much 'rebalancing' at household level.

As to the Chancellor's ambition for "rising net exports"; despite a significant fall in the value of the pound, Britain's exports have failed to take advantage, and the current account deficit has worsened.

Between 2008 and 2009 the pound fell by approximately 30 per cent against the US dollar. Against a basket of currencies (represented by the Sterling Trade-Weighted Index) it fell by over 25 per cent – a significant devaluation, which has not changed since. Yet even in nominal sterling terms, exports have barely grown. Britain's share of world export markets actually fell, from 3.5 per cent in 2008 to 3.2 per cent in 2012, continuing a long-term trend. And the current account deficit has widened from -0.2 per cent of GDP to -3.6 per cent of GDP over that period.

* Debt figures are taken from: Girouard, N, Kennedy, M and André C, (2007) Has the rise in debt made households more vulnerable? Economics Department working paper number 535. ECO/WKP (2006) 63. OECD

The threat of deflation

Far from reflating the economy after the collapse of 2007–8, the Coalition Government has watched passively as deflationary forces have taken hold. These are frightening for one important reason: in a deflationary environment, prices, profits and incomes can fall in real terms, but the value of debt, relative to incomes and profits, rises. While prices for goods and services can fall below cost, the rate of interest cannot fall below zero – the Zero Lower Bound (ZLB). As a result, while interest rates may appear to be low, in an environment where wages, incomes and prices are falling in real terms – i.e. in a deflationary environment – the real cost of debt rises. This is in contrast to an inflationary environment, when the real cost of debt is eroded. For an economy as indebted as the UK's, the threat of deflation is a grave risk to private commercial and household debtors and therefore to the private banking system. And yet our policy-makers seem unaware of this threat, and incapable of taking action to reverse the squeeze on living standards, and increase wages and incomes. This can be achieved by increasing public investment; but also by legislating for example, for a living wages, and for rises in the minimum wage. Above all government should use public investment in green infrastructure as a springboard for upgrading the UK's skills base, creating meaningful employment.

Secondly, measures for increasing the base money supply, including the Bank of England's QE programme, have done little to direct finance towards sound investment in the real economy: in jobs, in alternative energy sources and in measures to combat climate change. Instead the increase in money supply has largely been directed at the financial sector such as pension funds and insurance companies. Created without conditions attached to its use, the liquidity has been used for speculative purposes – both in the UK, but also internationally. The result:

the inflation of assets like government bonds, stocks and shares, property, works of art and so on. These asset price bubbles will, inevitably, burst.

Recently there has been increased anxiety that a rise in interest rates will occur when the Federal Reserve and/or the Bank of England slow or stop QE. This will 'puncture' asset price bubbles, and in particular the bond bubble, and worsen the predicament of the already heavily-indebted private sectors in both the US and UK.

When the next crisis occurs, policymakers will have fewer tools at their disposal than during 2007–9. Interest rates cannot be forced down from today's low rates to below zero. Public funds for bailing out the banking sector a second time will be severely constrained. Public investment in 'shovel-ready' infrastructure will be both inadequate and spent on prestige projects such as the HS2 rail link (rather than on programmes to get green jobs into every community, and begin the process of rebalancing the economy as detailed in this report). As a result any government is likely to therefore fail to counteract the renewed collapse in economic activity caused by bursting asset bubbles and wider economic failure, with potentially disastrous results.

Five years on from our first report on the Green New Deal, governments have failed dismally to tackle the triple crunch of excessive private debt and economic failure, climate change and energy insecurity. Instead they have used the opportunity of the crisis to mount an ideologically-driven assault on the state – in the UK, the Eurozone and to a lesser extent in the US. Given the private finance sector's parasitic dependence on the public realm, this assault not only undermines the state and its services, impoverishing the majority, but will remove a vital crutch for the finance sector itself.

Five years on, lessons have not been learned. Government policies for austerity have combined with the reckless behaviour of an unreformed, liberalised and weakened (but state underpinned) financial sector to increase the likelihood (and likely severity) of renewed economic failure. A real Green New Deal is needed now and more urgently than before.

Banks Beyond Control

It is apparent to most people that finance is deliberately and fiendishly complicated yet the financial root of the economy's mess is, on another level, simple. Giving a speech in New York in October 2010, the then Governor of the Bank of England, Mervyn King, put it bluntly, "Of all the many ways of organising banking, the worst is the one we have today."[20] Five years on from the full blown banking crisis, with the exception of the stakes in the big high street operators begrudgingly taken by the State, banking in Britain is still organised in essentially the same way as it was when King made his astonishing remark.

If anything, the situation has got worse. Today the banking system is more concentrated than before the crisis. In spite of the extraordinary level of public financial support they have received, the banks still reliably miss their targets for lending to small businesses – yet these obligations were a quid pro quo of receiving the backing. Irrationally huge bonuses are still given to senior bankers, unsupported by either the theory or practice of management and not justified by any contribution of the banks to the wider economy.

In speech to the Mansion House in the City of London in 2009, Adair Turner drew a direct link between banking failure and a future in which, "*British citizens will be burdened for many years with either higher taxes or cuts in public services*." The irony was not lost on him that in the trading rooms responsible for the crisis "many people earned annual bonuses equal to a lifetime's earnings of some of those now suffering the consequences."[21] Even the Chancellor of the Exchequer, George Osborne, senior figure in a Conservative Party which derives over half of its funding from the financial sector, conceded in June 2010 that, "*In putting in order the nation's finances, we must remember that this was a crisis that started in the banking sector. The failures of the banks imposed a huge cost on the rest of society.*"[22]

The banks have been told to hold more capital and – flush with the proceeds of quantitative easing – they are doing so to the detriment of the real economy. A range of other minor changes to banking practice are set to be phased in over the coming four years. Yet, without revolutionary reform there is a limit to what technocratic institutional fixes can achieve.

We now need to focus on how the hidden architecture of a better banking system can expand to meet modern challenges and reduce the scale and threat of the old, flawed system. With the big banks now even bigger, the best that could be done by the Commission on banking under Sir John Vickers, set up to propose reforms, was to recommend ways to soften the impact when the next crisis hits. Candidly, if subtly, the Commission accepted that, given the basic structure of banking future trouble was highly probable. There is, it found, "*inherent uncertainty about the nature of the next financial crisis*", taking for granted, in effect, that there would be one.

What are banks for?

What should be the purpose of the banking system? One good, working definition developed by **nef** (the new economics foundation) is that it should:

> *'facilitate the exchange of goods and services, allocate capital to financially sound activities that generate the highest long-term well-being for society, with the least environmental impact, finance a low carbon transition, and redistribute and share risk.'*[23]

That suggests some very practical proposals. Retail or 'high street' banking, for example, should be separated from speculation to protect retail services from volatile international capital markets. Banks that are 'too big to fail,' should be broken up and reduced to a size at which their failure would not threaten the wider economy. Exotic financial products should be licensed. Incentives that encourage counterproductive risk taking should be removed and in their place controls on excessive speculative activity put in. The UK should also introduce a US style 'community reinvestment act' which obliges banks, to lend wherever they take deposits. Very often banks do the opposite, taking money in from communities but failing to lend to them.[24]

In the lead up to the crash, speculation proved so profitable compared to running an everyday, useful bank branch network that the tail of investment banking began to wag the dog of retail banking. In 2009 Michael Geoghegan, then Chief Executive of HSBC said "*The economics of running a major retail network in the UK no longer stack up*".[25] In other words humble high street customers simply didn't make enough money compared to the casino world of complex derivatives. And so, the branches that served us closed. Their number fell by nearly half (43 per cent) in 20 years. At the last count the UK had substantially fewer than half the number of bank branches per head of population compared to Germany. As a result there are an estimated 1,500 rural and suburban communities with only one or two bank branches left which may, in any case, have very restricted opening hours of one or two days a week.[26]

Banking to support local economies

We have the opportunity to grow a more vibrant, diverse local banking infrastructure similar, for example, to that which successfully supports local economies and small businesses in Germany. This is a form of local, relationship-based banking – when a human judgment rather than automated credit scoring by computer determines whether you get a loan or not – and could well be the future of a more resilient, business-friendly banking system. Compared to the UK, the shape of banking is very different in Germany. In the UK 8 out of 10 mortgages, and 9 out of 10 smaller company accounts are held by just the five biggest banks, but in Germany the small or community banking sector has 70 per cent of the market.

Germany and Switzerland have regional and local banks that are substantially mutually owned. In Germany there is the combination of the regional Landesbanks, and the local Sparkassen, or 'savings banks.' There are 430 Sparkassen with over 15,000 branches (the UK has only just over 9,000 bank branches in total). These savings banks explain why Germany has so many more branches per head of population. In Switzerland there are regional, or 'Cantonal', banks.[27] Generally theses banks have avoided the risky investments that were the downfall of the big, commercial banks. They function equally to support business as well as to 'turn a profit.' Decisions get made at the local level where branches develop substantial local knowledge rather than deferring to protocols set by a remote national or global HQ. These aren't left overs from a more innocent age, these local banks are the foundations of Europe's dominant economy, Germany. They have underpinned an economy both more resilient to global recession, and more successful in recovering from it. Germany's economic performance outstrips the UK in terms of manufacturing, employment and especially jobs for young people.

France, Germany and Italy all operate banks born out of their postal services. By providing universal access they keep poorer people out of the hands of predatory and costly payday lenders and they can also help to enhance the economic viability of the postal services themselves. Germany's Postbank, born out of Deutsche Post, is the country's largest retail bank with over 14 million customers. Banking functions account for €4 out of every €10 worth of business at their post office counters.[28]

The UK Post Office network has 12,000 post offices in the UK, nearly double the branch office network of the four biggest banks combined. One analysis of branches in Manchester showed that each post office, through its convenience and range of services, saved local small businesses in the region of £270,000 each year.[29] A UK Post Bank could build on this, with a remit to support local communities and enterprise, whilst shoring up the Post Office itself in a virtuous cycle. A far better long-term economic approach than present plans for privatisation.

Another initiative could help redeem the troubled Royal Bank of Scotland (RBS). Once so proud of its involvement in financing the exploitation of fossil fuels RBS called itself 'the oil and gas bank.' It still invests substantially in fossil fuels, is still underwritten with public finances and pays millions in bonuses to its senior executives. Two proposals for RBS' future go beyond the unimaginative assumption that, sooner or later, it will simply be sold back to the private sector. The first is that it could be an industrial (or development) bank supporting investment in Britain's low carbon economic transformation, which some suggested could lead to another name change to the Royal Bank of Sustainability or the Responsible Bank of Scotland.[30] A second proposal is that RBS could be broken up to form a network of regional banks similar to the German Landesbanks. And, it would, of course, be possible to do the latter in tandem with giving the new bank a remit to favour businesses and projects that are helping to deliver the low carbon transition.

Part 2: Another Looming Credit Crunch – And How To Avert It

Green-shoot seekers and 'turning the corner' optimists in the UK have pounced on improvements projected for manufacturing, services and construction. They also point to statistics indicating that there are signs of life in the housing market and that unemployment is edging down (although full time employment is inadequate and real wages are falling.) Others, both in government *and* in the City, question whether the recovery is genuine. Real incomes remain under pressure and the global economy has turned down since the start of the year. And, with carbon emissions rising, any shoot would not, regardless, be green.

Until recently, financial markets have been in bullish mood – prices of shares, bonds and property have all been rising even though Europe is in a prolonged double-dip recession, the recovery in the United States has been poor by historic standards and China is losing momentum. After relentlessly turning a blind eye to depressing data, markets have begun to respond badly to rising Japanese bond yields, a weak business survey from China and mixed messages from Washington about the future of QE.

The reason markets have been rising has, of course, nothing to do with real economic conditions and everything to do with the willingness of central banks to print money. In effect, investors have been able to play in the casino with chips liberally provided by the Federal Reserve, the Bank of England and – more recently – the Bank of Japan. After such a strong rise, some correction has always been inevitable. The real question, however, is whether this is a pause for breath or the start of something more serious.

Central banks may well be inflating the biggest financial bubble the world has ever seen, the popping of which would trigger a second global slump, but they are convinced they know what they are doing. Extra liquidity, they believe, will feed through into higher business and consumer confidence through a wealth effect, and this will put the global economy on a stronger growth path. Given the choice, they prefer to have the problem of asset prices going through the roof than the problem of deflation. If they are wrong and the bubble bursts before the recovery arrives, it will be the mother of all credit busts.

The central banks are now in a very tricky position. Financial markets are so hooked on the electronic money created through QE that they cannot cope without it. In the short term, a commitment to keep the money taps full on will do the trick. Market corrections will be followed by soothing words and policy easing by central banks, and this will prompt further buying of assets. In the end, of course, this increases the chances of an almighty bust.[31] That indeed looks likely, but hopefully we still have time to act. In the interim there is a fundamental shift that can help remove such a destabilising threat.

Avoiding the Next Crash by Funding a Massive Green New Deal

Austerity is imploding effective demand while low interest rates and QE are herding investors into soaring – if occasionally jittery – bond and stock markets. This can't go on. The credit binge before the 2008 collapse was predominantly a response to falls in real wage levels, compensated for by cheap credit which encouraged those who couldn't really afford it to carry on buying and so keep the whole economic show on the road. This time round, it is austerity plus the continued fall in real wage levels that are causing the decline in effective demand.

Common to both is the continued irresponsibility of, and lack of adequate government control over, the finance sector that is today benefitting outrageously from measures to counterbalance austerity such as Quantitative Easing. The sector is also enjoying a return to huge salaries and bonuses such as those which continued almost unabated during the run up to, and in the aftermath of, the credit crunch.

It is crucial for the economy, society and the environment that government replaces austerity with a massive investment in a Green New Deal programme. Central to this must be the paying of a living wage to those involved, helping to overcome the present lack of sustainable and adequate effective demand in the economy.

This initiative, by providing a new direction for the economy, will also create the conditions for the emergence of a huge range of businesses initiatives which will provide new and more secure investment opportunities than those offered by today's increasingly unstable stock markets. During the transition much of the funding could be provided by what we term 'Green QE'. Since this investment would be supplying safer vehicles for investment than those in the today's volatile stock market, then flagging up such a government-backed transition should help calm markets, at present terrified of any reduction in the current level of QE.

The details of what projects might make up a Green New Deal programme and how to provide the massive funding required are addressed in the next sections below.

A Green New Deal Infrastructure Programme

There is a growing consensus among politicians, business, finance, unions and non-governmental organisations (NGOs) that a key way to help tackle declining effective demand is the urgent use of private and public finance to generate jobs, business and investment opportunities through a rapid expansion in domestic infrastructure. Such an approach, however, must also tackle the twenty-first century necessity of transforming the economy to meet the challenges of climate change and energy and resource security while addressing pressing social needs, such as that for affordable housing, so that it involves and benefits every community in the country. This is what a Green New Deal programme is designed to do.

By contrast the Government although committed to providing some £100 billion of guarantees for investment in UK infrastructure has a much less geographically diverse approach.[32] It concentrates on large scale schemes such as the backing of £42–50 billion for HS2 high speed rail line, £10 billion for EDF's two proposed nuclear stations[33] and £28 billion for a number of road schemes.

In terms of putting in actual Government money the Chancellor's announcement of £50.4 billion of extra capital spending on infrastructure for 2015–16 actually amounts to a cut in real terms compared with 2014–15. Most of the schemes will take several years to contribute to the economy, and any public capital investment will have to be funded from other cuts elsewhere or tax increases, according to the Institute for Fiscal Studies in its review of Chancellor George Osborne's 2015/16 spending round.[34]

There are other sustainable infrastructure investment programmes that deliver more significant short and long-term economic and social, as well as environmental and climate change, benefits – and we urge the Government to join forces with the private and social sectors to enable such a positive Green New Deal for the UK to materialise.

Green Infrastructure already a big player in the economy

To some extent the Green New Deal approach is calling for an acceleration of a trend towards green infrastructure that is already taking place. A report by environmental think tank, Green Alliance, suggested that of the top 20 infrastructure projects in the pipeline, £23bn worth can be described as low carbon, compared to just £3.1bn that are high carbon. According to Treasury's own data, 63 per cent of the top infrastructure projects in this country last year were low carbon and leveraged £14.5bn of private sector money in 2012, while high carbon projects managed to attract only £1.2bn.[35]

The green economy is worth more than £120bn, and the sector has supplied a third of recent economic growth. The sector employs nearly a million people ranging from biofuels and electric car manufacturing to wind turbine installation, with more than 25,000 jobs created in 2012. Despite the fact that the green sector employs more than car manufacturing, aerospace or telecoms, it still gets far less of the political attention than these traditional sectors.

However big business is waking up to the potential of the green economy and the need for government support to see it flourish. In July 2012 the CBI director-general John Cridland launched a report reinforcing the scale and growth of the green economy, worth £122bn a year, making up eight per cent of GDP, and growing at 4.7 per cent in 2011. The CBI report calculated that the green economy encompasses 50,000 firms across many different sectors, employing 940,000 people, two-thirds outside London and the south-east. It also noted the UK green goods and services run a trade surplus of £5bn a year and are forging strong links with growing economies, with its number one export market being China.[36]

Green Infrastructure Sectors

This section outlines some of the investment needed and the potential jobs that could be created by a massive increase in green infrastructure. Of course these can only be estimates, but they give a sense of what a nationwide Green New Deal would involve. These include making every existing building in the country energy efficient and building hundreds of thousands of new, affordable, sustainably sited, energy-efficient homes. Also key will be ensuring that the constant repair and maintenance and improvement of the nation's public transport system is geared to enhancing regional and local links. Finally it is crucial that the recycling, reuse and minimisation of waste becomes a priority in every part of the UK. The major economic social and political advantage of such a programme is that it will ensure a wide range of jobs and business and investment opportunities in every city, town, village and hamlet in the UK.

Making every building energy efficient

A starting point for the Green New Deal programme would be a multibillion pound investment to train a 'carbon army' to make all the country's buildings energy efficient, eventually paid for out of the savings in energy bills. Birmingham recently started just such a large scale initiative – the £100 million Energy Savers programme to carry out improvements and where feasible fit solar panels in 15,000 homes by 2016. It is also working with another 22 authorities in the region to retrofit at least 200,000 houses by 2026, requiring funding of over £1 billion.[37] It is possible that the entire scheme could eventually be funded by bonds that should prove attractive to pension fund investors.

Another proposal is the provision of solar PV in every community. Green New Deal Group research has shown that if the Bank of England were to use Green QE to buy £20 billion worth of solar PV to be fitted free to the three million best suited roofs, this could eventually generate 140,000 jobs.[38]

New energy efficient homes

Also crucial is the building of more than a quarter of a million new energy efficient homes for both rent and sale, using predominantly brown field sites, while also ensuring adequate protection for wildlife and vital green spaces. For many years, the country has not built, or renovated, enough homes to keep up with demand. We need at least 240,000 new homes each year. Last year, just 111,250 new homes were built – less than half the number needed. The Government has recognised that housing drives economic activity with a speed and effectiveness that few industries can match and therefore has a crucial role to play in the economic recovery.

The macroeconomic benefits of investing in affordable housing are enormous. The National Housing Federation has called for £2 billion a year to deliver 55,000 to 65,000 new affordable homes. This could result in around 140,000 new jobs since every affordable home built in England creates 2.3 jobs and generates an additional £108,000 in the wider economy.[39]

Such public investment offers greater benefit to those on lower incomes than those who are well-off. It can mean that people have more disposable income after housing costs, which in turn boosts spending in the local and national economy. Increasing such housing supply can also improve labour market dynamics by allowing people to move home to take jobs, improve skills and widen employment opportunities. This is especially true of affordable housing, which allows employers to recruit and retain lower paid workers in higher value areas – many of these jobs are in public services essential to keep the economy running. Low fuel bills from Green New Deal energy efficient new homes will be a further advantage.[40]

Investing in affordable housing could dampen the housing bubble beginning to appear in response to Government demand-side measures, such as Help to Buy which facilitates prospective home buyers to find a deposit.[41] Indeed, according to Office for National Statistics figures released in July 2013, annual house prices rose in all regions for the first time since 2008.[42]

Renewable Energy
Energy generation, storage and use is on the threshold of revolution. The Government's preferred approach of supporting centralised power provision, with the emphasis on supply side solutions, a heavy reliance on fossil fuels and nuclear, and market control by a weakly regulated oligopoly of utilities, is a generation model based on the past.

The rapid rise of renewables, the development of the SMART grid and management innovations using automated systems, and the roll out of co-generation and distributed community-scaled energy networks, alongside massive improvements in energy efficiency across buildings, machinery and appliances, offer much greater benefits in terms of energy security, price, network resilience, greenhouse gas emission reduction, employment and innovation than the conventional model.

There are many authoritative sustainable energy scenarios for the UK that have been developed by a range of actors, including the Committee on Climate Change, research groups, business groups, and NGOs. The potential for the UK to go carbon free has most recently been extensively detailed by the Centre for Alternative Technology (CAT) in the report: 'Zero Carbon Britain: Rethinking the Future' from which much of the following is drawn.[43]

Overall, the 2013 CAT estimate of the job creation potential of the zero carbon economy is some 1.5 million new jobs, spread throughout the country, covering a range of skills, in a range of sectors (manufacturing, growing, managing, retailing, service and so on), and many quickly realised in the market place (See Appendix 1).

Transport
Jobs and economic benefits could also be generated from investment in the transport infrastructure. Now is the time to roll-out a renewed programme of cost-effective capital and revenue spend to match best practice cycling provision in Europe and above all to invest in improvements to the rail network.

In announcing the preferred route for the high speed rail link HS2, the Transport Secretary Patrick McLoughlin stated: "Rebalancing and rebuilding our economy; and generating the growth and jobs that will allow us to compete and win in the 21st century global marketplace."[45] But the first HS2 trains aren't expected to run for

GERMAN ENERGY TRANSFORMATION

"Germany already has twice as many people employed in the renewables sector than in all other energy sectors combined. An estimated 387,000 jobs had been created in the renewables sector in Germany by 2011, far more than the total 182,000 people working in all other energy sectors. By 2020, more than 600,000 people are expected to work in the renewables sector – roughly as many as are currently employed in the automotive industry.

Wind, solar, biogas, and geothermal power provide employment opportunities for many traditional industries. Heavy industry also benefits in a number of other ways.

For instance, wind turbine manufacturers are now the second largest purchaser of steel behind the automotive sector. A number of struggling ports in Germany are also positioning themselves for the offshore wind sector. While some of these are manufacturing jobs, many others are in installing and maintenance. Jobs for technicians, installers, and architects have been created locally and can't be outsourced. They already have helped Germany to come through the economic and financial crisis much better than other countries."

Extract from *German Energy Transition – Arguments for a renewable energy future*[44]

20 years. The railway network needs rebuilding and extending now in order to help reboot the economy and provide an integrated cross-country network for the nation.

Network Rail's Strategic Business Plan 2014–19, sets out proposals costing some £37.5 billion to upgrade many parts of the network as well as pushing ahead with major projects including main line electrification, Crossrail and Thameslink.[46] The Government has claimed this represents the biggest investment in the railways since the Victorian era, but over 50 per cent of the headline 'new' £9 billion is already committed and has been previously announced.[47]

In 2013, the Campaign for Better Transport (CBT) came together with the British Chambers of Commerce, The Centre for Cities and the Passenger Transport Executive Group to call on the Chancellor[48] to invest in:

- Electrifying more lines, to make rail even greener;
- Fully funding the Northern Hub scheme, which will provide faster, more frequent journeys throughout the North of England;
- Upgrading other parts of the network, improving stations and adding capacity at pinch points.
- The CBT also have argued for the following infrastructure improvements to tackle climate change, create jobs and boost the economy generally:
- Provide a specific fund for reopening railway lines and stations;
- Ensure rail companies have incentives to grow rail use;
- Make improving services and providing better facilities part of every new franchise agreement;
- Modernise rail network and improve station facilities;
- Provide adequate staffing for stations and trains;
- Make fares more affordable;
- Reopening lines and stations.

With some of the fastest passenger growth on regional branch lines, and overcrowding a serious problem, expanding the cross-country and urban networks is an affordable and feasible solution. Closed lines have reopened over time and passenger demand on many of these has exceeded original projections. For instance, trains on the Edinburgh to Bathgate line, which was reopened in 1986, now carry four times as many passengers as predicted; and the Ebbw Vale to Cardiff line, reopened in 2008, now carries 1million passengers, 600,000 more than projected. Similar investment across the country is urgently needed.[49]

Cycling

Research by the charity Sustrans has shown that about 40 million more cycling trips were made in 2011 than 2010 – an 18 per cent increase – taking the total to 256 million.[50] If all journeys made on the network in 2011 had been made by car, an additional 760,363 tonnes of carbon dioxide would have been emitted at a cost of £40 million to the economy.[51]

The benefits of cycling are extensive, with increased participation bringing broad socio-economic benefits to the UK:

- £2.9 billion total contribution to UK economy
- 28 per cent increase in volume of cycle sales in 2010, generating £1.62 billion
- £853m further contribution to the UK economy through the purchase of cycling accessories and bicycle maintenance, resulting in total retail sector sales of £2.47 billion
- Over £500 million generated in wages and £100 million in taxes from 23,000 employed directly in bicycle sales, distribution and the maintenance of cycling infrastructure
- Health benefits save the economy £128m per year in absenteeism.[52]

The Mayor of London, Boris Johnson, is planning to create a "Crossrail for the Bike" as part of his plans for a nearly £1 billion investment in London cycling.[53] The route will run for more than 15 miles, very substantially segregated, from the western suburbs through the heart of London to Canary Wharf and Barking. Other elements in the "Mayor's Vision for Cycling" include:

- More Dutch-style fully-segregated lanes
- More "semi-segregation" on other streets, with bikes better separated from other vehicles
- A new network of "Quietways" – direct, continuous, fully-signposted routes on peaceful side streets, running far into the suburbs, and aimed at people put off by cycling in traffic
- Substantial improvements to both existing and proposed Superhighways, including some reroutings
- A new "Central London Grid" of bike routes in the City and West End, using segregation, quiet streets, and two-way cycling on one-way traffic streets, to join all the other routes together
- This type of approach needs to be replicated in urban areas across the UK.

Broadband

> *"….the £17 billion committed by the government to a high-speed rail line from London to Birmingham could cover most of the costs of a future-proof all-fibre network. If we had those links we wouldn't need to travel as often to Birmingham and we wouldn't be polluting the environment as much."*
>
> **Boris Ivanovic, Director of Hyperoptic**[54]

Ministers rank broadband as one of Britain's top four infrastructure priorities, alongside roads, rail and energy and the Chancellor George Osborne has committed £200 billion to these sectors over the next five years. Yet only a fraction of that will go to broadband – just £1.3 billion from local and central government has been earmarked. If the UK had committed as much as China has per head of population, some £7 billion of taxpayer funds would have needed to have been invested. Australia is connecting broadband to 93 per cent of homes by 2018. In the UK, this would cost up to £29 billion, or around £6 billion a year.[55]

The benefits would be potentially enormous economically, socially and environmentally. There would more home working and local start-ups, with correspondingly less travel and relocation to cities. Other enhancements could include business innovation, better consumer entertainment and personal interaction, which are particularly important in maintaining the viability of rural communities.

Materials recovery and re-use in the UK

Significant job and economic benefits could result from a resource economy based on the dismantling of equipment, materials recovery and re-use in the UK.

According to research by the recycling and resource management company, SITA UK:

> *"The UK has a unique opportunity to revitalise its economy by changing the way it manages its waste and uses the products recovered."*

SITA highlight the potential for the emergence of a new 're-making' sector using recycling:

> *"to manufacture new goods for sale also has significant potential to help reinvigorate the UK's manufacturing industry"*[56]

Research by Friends of the Earth suggests that over 70,000 new jobs could be created in the UK by recycling more. According to the FoE research, a number of studies in both the UK and the US have shown that recycling provides around ten times more jobs than landfill and incineration per tonne of material processed. In the 2010 report, 'More jobs, less waste', FoE showed that:

- 51,400 new jobs could be created across the UK if an ambitious but achievable 70 per cent recycling target was set for waste collected by local councils by 2025, compared to a 2006 baseline,

- 18,800 more jobs could be created across the UK if the same targets were set and achieved for commercial and industrial waste over the same time period.

The Scottish Executive and Welsh Assembly Government have 'zero waste' plans for waste reduction and re-use which include 70 per cent recycling targets for council-collected waste by 2025. According to FoE's projections this could create 4,700 new jobs and 2,800 new jobs respectively. In Northern Ireland and England – currently the source of the majority of waste in the UK - targets are just 50 per cent.[57]

The overall benefits of sustainable resource management, based on closed loop or circular economy principles and practices, can be summarised as:

- Providing greater materials and energy security
- Meeting clean energy and greenhouse gas emissions-reduction goals by promoting energy-from-waste innovations
- Recycle and repurpose valuable materials from waste to resource technologies that can be used in UK manufacturing
- Promoting more employment and a stronger UK manufacturing base
- Helping redress the current balance of trade through the export of more products and substitution of currently imported raw materials
- Helping create new jobs at a faster rate than the economy is growing and in areas where advanced skills are required.

The Cost, How to Involve UK Communities and Ensuring a Sustainable Future

The cost of the countrywide green infrastructure that is needed has been estimated at £250 billion by 2017[58] with only £26 billion of that already underway.[59] This report therefore repeats our previous call for £50 billion to be spent annually for the next five years on a Green New Deal Programme. This will not only transform the country to meet the needs of the future, but also provides an unprecedented peacetime boost to employment, business and investment opportunities. Perhaps most importantly if it covers the sectors mentioned above it will contribute to revitalising virtually every community in the country. It is this unique feature that must turn such a programme into a national economic priority.

For this to happen on the scale, and in the timeframe needed to really turn round Britain's economy to meet climate and socioeconomic challenges, will need the involvement of a wide range of organisations. Not only national and local government, business and trades unions, but also a whole range of community groups and activists will need to be involved. The coming together of such a diverse grouping with detailed local knowledge will provide the mix of skills, knowledge and expertise needed to design the actual implementation of such a national programme at a local level. Examples of such involvement exist in small projects in parts of the UK and the rest of the world,[60] but the successful implementation of this huge infrastructure programme, will require co-ordination and commitment on a scale not seen since the post war introduction of the welfare state.

Perhaps the strongest medium and long term political argument is that such a rebuilding process will have at its heart the promotion of resource and carbon efficient lifestyles. It will tackle climate change through the rapid decarbonisation of our energy and production processes, and the greening of homes, commercial buildings and our transport networks. It will also ensure a more sustainable future with less vulnerability to future resource shortages and through a combination of regulation of the finance system and localisation of production will insulate us against the soaring costs of commodities such as energy, food, water and materials that we are already experiencing today. The throughput of energy and other raw materials will be minimised in all sectors of industry, services and agriculture.

As a result, the Green New Deal programme will protect the environment, dramatically reduce our use of ever-scarcer raw materials and provide secure employment with adequate wages and conditions for the vast range of workers that will be required. Finally the huge number of more secure, properly paid workers in all parts of the country will help overcome the present lack of effective demand in the economy, increasingly the biggest short term political crisis facing all decision-makers.

Part 3: Plenty Of Money For A Green New Deal

"I'm afraid there's no money."

Liam Byrne MP, in a note for his successor when leaving the Treasury, 6 April 2010[61]

"It's as if they think there's some magic money tree. Well let me tell you a plain truth: there isn't."

Prime Minister, David Cameron, 7 March 2013[62]

"Central banks could go beyond the range of unconventional instruments deployed… in advanced economies since the 2008–09 financial crisis. For example, it is theoretically possible for monetary authorities to finance fiscal deficits through the creation of money… In theory, this could allow governments to increase spending or reduce taxation without raising corresponding financing from the private sector."

George Osborne from a document tabled on Budget Day March 2013, entitled: *Review of the Monetary Policy Framework*[63]

A UK Green New Deal will eventually need hundreds of billions of pounds over decades. To kick-start this process we are repeating our call for a £50 billion programme of green infrastructural spending a year over the next five years. The Green New Deal will create jobs and hence boost taxable economic activity in every corner of the UK.

Funding this will need the use of carefully targeted Green QE and a large and effective crackdown on tax dodging. It will also require a new approach to savings and investment in order to finance the huge changes needed to make the UK economy sustainable. This will include helping national and local governments to borrow for public investment and banks to provide loan finance at reasonable interest rates as well as encouraging private investment from pension funds and individuals in this greening and reviving of the economy.

Is it often said that there is not enough money to increase expenditure on green infrastructure on such a scale. That is economic ignorance on four levels. Firstly, in terms of public expenditure, our report *The Cuts Won't Work*[64] warned – and has been proved correct – that what the economy needs is more public expenditure. Cuts to public spending have made the recession worse by increasing underemployment and joblessness, reducing the tax received, and limiting government funding available to kick-start a Green New Deal.

Secondly, the tax dodgers can and must be tracked down and their unpaid taxes added to the public coffers. Our work has shown, for example, that there is £70 billion in tax evasion (illegal non-payment or under-payment of taxes), and £25 billion in tax avoidance (seeking to minimise a tax bill without deliberate deception, which would be tax evasion or fraud) and billions of tax due but paid late at any point in time.[65] Not all is, of course, recoverable, but the government's steadfast refusal to recognise the scale of this issue (maintaining that just £32 billion is lost and setting pitifully limited targets for recovery) is the first issue to be tackled when addressing this problem.

Thirdly the Bank of England's QE programme has conjured out of thin air £375 billion (around £6,000 for every man women and child in the UK) since 2009.[66] The Bank has electronically created this new money. It has not come from tax revenues, nor has it been diverted from other uses. It has simply been created by the Bank of England to enable it to purchase gilts (government bonds) from private investors such as pension funds and insurance companies. However, since these investors typically do not want to hold on to this money, because it yields a low return, they tend to use it to purchase other assets, such as corporate bonds and shares. That lowers longer-term borrowing costs and, at least in theory, encourages the issuance of new equities and bonds.[67]

However, as is often the case in neoliberal economics, theory and practice have not coincided and unsurprisingly the actual result has been massive asset bubbles in the stock market and bond markets as what are, in effect, second hand bits of paper – in the form of shares and bonds already in issue and now being sold at inflated prices – have been purchased. Whereas what is really required is direct investment into UK businesses and the real economy that transforms our economy to meet future needs. It's now time for the Bank of England to help create jobs, stabilize the economy and support the environment through a carefully planned and targeted package of Green QE.

Although not QE, Central bank support for national infrastructure investment has worked before. The Industrial Development Bank of Canada, which supported Canadian SMEs from 1946–1972, was capitalised entirely by the Central Bank with not a single penny of taxpayers' money required. In New Zealand in 1936, the central bank extended credit for the building of new homes, helping the country out of the Great Depression.[68]

The first section of this report covered arguments for increased public expenditure, this section will concentrate on tackling tax dodgers, a switch to Green QE and the role of the banks, particularly those owned by the taxpayer.

Tackling the tax dodgers

Ensuring that tax that is owed is paid requires three key measures. The first one is ensuring that the right questions are asked about an individual's or company's tax situation. It is not enough for them to claim that they pay the right amount of tax in the right place at the right time. They also have to prove it.

The second requirement is that the law be changed so that taxpayers know that their risk of being discovered when evading or avoiding tax is as high as possible. So, for example, automatic information exchange agreements are needed with tax havens so that those jurisdictions automatically advise this country which UK residents have accounts in tax havens, and how much income they earn on them. In addition, a simple change in UK law to require that our domestic banks advise H M Revenue & Customs whenever they open a bank account for a company would provide HMRC with all the information they would need to know which companies really need to be chased to provide accounts and tax returns – about which essential information HMRC have, at present, no real clue.[69] If that was done and the directors of those companies with bank accounts who failed to provide tax returns to HMRC were made personally liable for the tax due by the company then the 'nudge' effect these measures would have on tax payments would be dramatic because these laws would close two of the favourite boltholes of tax fraudsters at a stroke.

The third measure is to have adequate numbers of tax inspectors. Any government that is serious about tackling tax dodgers must invest in more staff at Her Majesty's Revenue and Customs (HMRC). In 2005 there were nearly 100,000 people working for HMRC, by 2015 there will be fewer than 55,000 if HMRC achieves its objectives as set out in its business plan for 2012–15.[70]

As is now widely appreciated, but which was not when we began discussing this issue, multinational companies are amongst the largest culprits in tax dodging. The following approaches are crucial if we are to ensure that they pay their fair share of taxes.

Improving company transparency

Companies should commit to paying the right amount of tax in the right place at the right time and explain the governance procedures and policies they have put in place to make sure that this happens. Companies should be explicit about where they trade and what they are called in each country in which they trade. They should explain their use of tax havens, why they are there, what their trade involves and how much each such subsidiary makes in terms of both sales to third parties and other group companies and the resulting profit and tax paid. Multinational corporations could, without any change in the law, put the accounts of all their subsidiaries, wherever they might be in the world, on public record on their group web site. That way, if anyone wants to see what the impact of a multinational corporation on a particular community is they would have the opportunity to do so.

Full country-by-country reporting

Companies should publish information on the total sales, costs, employment costs and employee numbers, financing costs, profits, current and deferred tax charges and tax paid for each country in which they operate by year. These figures should be reconciled to the group annual accounts, with an explanation of the reconciliation being made available if necessary to show the impact of intra-group trading

Unitary taxation

Profit shifting by multinational corporations is now recognised to be a massive international problem. The Organisation for Economic Cooperation and Development, which sets the rules for international taxation, has acknowledged that the integrity of the present international tax system is now under threat as a result of the tax avoidance activities of multinational corporations. Unitary taxation seeks to charge the profits of a group of companies to tax as if they are one single entity – which is, of course, how such companies now report their results. Unitary taxation works by using a formula, or a range of formulas to divide up the total profit of a multinational corporation and its group proportionately between all the countries in which it operates. The logic behind the formula is that companies cannot make profit without having customers, people to service them and places where they can work.[71]

In addition, it is important to note that the above measures to tackle tax havens and the shadow economy all too often come up against UK companies acting as fronts. Because regulation of those companies is now almost non-existent to the extent that less than one in three now pay tax, it is vital to tackle this problem.

Green Quantitative Easing and the Role of the Banks[72]

> *"The idea is simple: to commit £100 billion from the existing quantitative easing programme to building new council and housing association homes over the next five to seven years. Based on accepted industry ratios, this would create an extra million homes in the UK and generate 500,000 ongoing jobs…The Bank of England's existing quantitative easing programme… could progressively create £100 billion to fund a property bond, instead of buying gilts."*

Sir Michael Darrington, 12 March 2013[73]

> *"We believe you can help stimulate lending to businesses by making the Funding for Lending Scheme more effective and by widening the existing Quantitative Easing programme to include the purchase of private-sector assets including securitised SME debt (rather than just gilts)."*

John Longworth, chief executive of British Chambers of Commerce from an open letter to Mark Carney, Governor of the Bank of England, 1 July 2013[74]

In this report we are repeating our call for a £50 billion programme of green infrastructural spending a year over the next five years. In addition to funding provided by tackling tax dodging the remainder could come from a targeted programme of Green QE. Under this process the Bank of England creates tens of billions pounds and the Government allows the Green Investment Bank or a National Development Bank, whichever is the more rapid and effective, to issue bonds, which are then purchased by the Bank of England. The Green/National Development Banks could then make loans at low-to-zero rates to finance the country wide Green New Deal. This would in turn create new jobs and businesses and generate further tax money and save on benefits.

Green New Deal Group research has looked at what could happen if the Bank of England were to use Green QE to provide up to £20 billion worth of solar PV to be fitted free for some three million south facing roofs, best suited to capture the maximum amount of energy. Based on 2011 figures when around 20,000 installation jobs were created putting PV on 150,000 dwellings, a million home a year programme would eventually create 140,000 jobs. If that were then to be extended to all the potential nine million homes that could benefit from PV then the employment growth would be much larger still, and there would, of course, be the added benefit of all the energy generated.

We also proposed that a further £16 billion of Green QE could be spent really kick-starting the government's Green Deal energy efficiency programme for homes. The government expects this to support at least 65,000 jobs in insulation and construction by 2015. Local authorities, many of whom are already involved in planning to make tens of thousands more local homes energy efficient, could also access a QE Green Deal fund to initially finance such work.[75]

Other major Green QE initiatives that could provide employment and improve communities across the country would be to build more energy efficient homes for both rent and sale using predominantly brown field sites, whilst also ensuring adequate protection for wildlife and vital green spaces. In terms of transport there is a constant need to repair, maintain and improve the nation's public transport system and its information equivalent –the broadband superhighway.

Once the economy has been kick started by Green QE, then pension fund investment can move in and obtain a secure return from such a huge programme of domestic funding. The requirement for this investment could also be front-loaded. The current annual tax subsidy to the pension industry is some £35 billion a year.[76] Pension contributions amount to about £75 billion a year. If it was required that only 20 per cent of the funds invested in pensions funds were invested in bonds linked to the Green New Deal for the next five years, much of the pump priming cash to establish the whole process would be made available almost immediately – and a secure source of income would be provided for these funds. Most importantly this plan will generate work, particularly for young people and in the places where people actually live, and in doing so, create intergenerational solidarity.

The private banking system in the UK is dysfunctional. According to the then Governor of the Bank of England, Mervyn King 'heightened uncertainty about the solvency of banks'[77] lies behind their failure to lend and finance private investment. The Royal Bank of Scotland (RBS) and Lloyds Bank are both largely owned by British taxpayers. The terms and conditions of such finance from these bailed out banks must emphasise investing in sustainable productive economic activity, such as the Green New Deal. This should be the quid pro quo for the taxpayer guarantees and low interest rates that have allowed such banks to survive, with effective controls in place to ensure that these banks act in a financially and socially responsible way.

Opponents of such financing argue that it will stoke inflation. That is unlikely. The reason is this: financing investment in an economy which has been 'cratered' by a financial crisis and will just begin the process of recovery, and increases in employment. Pouring funds into the 'crater' of economic inactivity will not be inflationary until that 'crater' is filled up. That is, until we reach full employment. It will be particularly non-inflationary if it uses Britain's domestic resources – in particular its people – and is invested in activity that does not require imports or the diversion of resources abroad. These can easily be identified, and we do so in this report and in our first Green New Deal report and in subsequent publications.

Low-cost lending by both the taxpayer-owned commercial banks, RBS and Lloyds, could provide funding for the Green New Deal programme in addition to Green QE from the Bank of England.

Buying Out the Poisonous PFI Debt Legacy

Analysis of data from HM Treasury shows that the 717 Private Finance Initiative (PFI) contracts currently under way across the UK are funding new schools, hospitals and other public facilities with a total capital value of £54.7 billion, but the overall ultimate cost will reach £301 billion by the time they have been paid off over the coming decades.[78] The ratio of cost to benefit is sufficient evidence in itself of the appallingly poor value for money inherent in these projects, many of which are now owned by banks.

If cash has to be injected into the economy to provide liquidity then there can be no doubt that one of the best way to do so for the future benefit of the UK would be to buy out all PFI schemes now. In the process this would reduce ongoing costs to the UK taxpayer over the next 30 years or more. The around £300 billion 'saved' could then at least in part be allocated instead to continue to finance some Green New Deal initiatives over the decades to come as well as helping funding the equally important social infrastructure in education, health, care etc at present under threat from the austerity policies and the onerous repayments of PFI.[79]

Conclusion. The Green New Deal: An Overriding Priority

This report proposes a £50 billion per year Green New Deal national programme of infrastructural renewal that is environmentally sustainable and will generate work, business and investment opportunities. We have shown that such a programme is easily affordable through a range of measures including Green QE, tackling the tax dodgers, increasing the tax take by stimulating employment and providing a safe haven for pension fund investments.

The purpose of this report is to make clear what form a massive Green New Deal job and business programme would take and how and why it is affordable. As the austerity approach by the Coalition continues to make social and economic conditions worse, it is crucial that the alternative should be seen by all political parties as the Green New Deal. The Green New Deal can and should be implemented now. Since this is unlikely in the current political context, we want to use this report to kick start the debate that could make the Green New Deal the priority for the next election, and in case changes to the finance and/or climate system mean that it is needed sooner.

Our proposals would provide a wide range of jobs in every corner of the UK, contribute to solving the housing crisis, improve the UK infrastructure and promote energy and resource-use efficiency. It is hard to imagine any voter in the forthcoming election not wanting to support such a programme, since it would reduce the need for welfare benefits whilst revitalising and transforming local economies.

Appendix One

The job potential of the green energy revolution is significant, in sectors such as marine and offshore wind, solar and decentralised, distributed systems, as well as existing technology and manufacturing sectors such as construction and transport. There are new employment opportunities in land based industries, such as growing energy and fuel crops, and carbon capture processes.

Jobs and Renewables

Although some jobs will inevitably be lost in conventional energy systems, new jobs in renewable energy, construction, transport, buildings retrofit, forestry and agriculture should more than compensate, though these jobs will be different and may not emerge in the same places, with other opportunities to rejuvenate declining rural and ex-industrial local economies.

1. The Supply Chain – Powering Up: 1.33 million jobs

The Renewable Energy Association estimates that the UK renewable energy sector employed 99,000 people in 2010–11 and 110,000 people in 2012.[80] The Department of Energy and Climate Change's Renewable Energy Roadmap 2012 Update suggests that, in addition to the REA's estimated 110,000 jobs directly in the renewable energy sector in 2012, there were another 160,000 jobs along the supply chain.[81]

By projecting these figures using historical growth rates in the sector, and including the impact of the UK reaching its binding European Union target of 15 per cent of energy generated renewably by 2020, the REA estimates that around 400,000 jobs would be created – or in other words, for every 1 per cent of our energy produced renewably, about 26,700 jobs are created.

Extending to all renewables, and extrapolating from this estimate, the Centre for Alternative Technology (CAT) tentatively conclude that providing 100 per cent of UK current primary energy from renewables by 2030 would generate some 2.67 million jobs. However, energy production (due to decreased demand) in the scenario is estimated at around half of the current level. The net number of jobs in the energy sector (and supporting services) in according to the CAT scenario is therefore approximately 1.33 million jobs.[82]

For wind and marine renewable energy deployment in the UK to 2020, RenewableUK estimated a range of scenarios, concluding: "The High Scenario represents a very ambitious but achievable outcome… An overall 10-fold increase in the deployment of wind and marine technologies (51.8 GW) could support over 115,000 full time equivalent jobs, 73,000 of these would be working directly in the sector and the rest in the supply of wind and marine energy related goods and support services."[83]

The Centre for Alternative Technology scenario envisages almost four times the capacity of wind and marine technologies, meaning roughly 460,000 jobs may be created in this sector. The remaining 870,000 jobs (out of 1.33 million) would be in areas like solar power, geothermal, synthetic gas and liquid fuel production.[84]

2) Demand Management – Powering Down: 150,000 jobs

The Centre for Alternative Technology has estimated that some 170 jobs should be created per TWh in energy saved.[85] This means that with about 900 TWh of energy demand reduction measures in CAT 2013 scenario, roughly 150,000 jobs might be created.[86]

3) Forestry – Biomass and Wood: 40,000 jobs

Some 40,000 people are currently employed in forestry and the primary processing of wood products. CAT estimates around 40,000 additional jobs in forestry and the primary processing of wood products from a doubling in forested area in their scenario. Other employment opportunities may exist in the verification and validation of carbon capture schemes, in biochar production and in the restoration of conservation areas such as peatlands.

Endnotes

1 The Green New Deal Group – Elliott L, Hines C, Juniper T, Leggett J, Lucas C, Murphy R, Pettifor A, Secrett C and Simms A (2008*) A Green New Deal: Joined-up policies to solve the triple crunch of the credit crisis, climate change and high oil prices.* (London: nef).

2 The Green New Deal Group (2009) The cuts won't work: Why spending on a Green New Deal will reduce the public debt, cut carbon emissions, increase energy security and reduce fuel poverty. (London: nef).

3 'Brown calls for 'green new deal'', *BBC News*, 6th March 2009. Available online at: http://news.bbc.co.uk/1/hi/uk_politics/7927381.stm

4 *A Green New Deal for Europe*: (Brussels: Green European Foundation; The Greens European Foundation; EUROPEANGREENS.EU). Available online at:http://www.greennewdeal.eu

5 The Green New Deal Group (2009) The Cut's Won't Work (London: nef)

6 'Budget 2013: Britain's debt and deficit', *The Telegraph,* 15th August 2013. Available online at: http://www.telegraph.co.uk/finance/budget/9932748/Budget-2013-Britains-debt-and-deficit.html

7 'Economic and fiscal outlook – March 2013' P5 Para 1.3, *Office for Budget Responsibility,* March 201 Available online at: http://cdn.budgetresponsibility.independent.gov.uk/March-2013-EFO-44734674673453.pdf

8 IMF: *Growth Forecast Errors and Fiscal Multipliers* by Olivier Blanchard and Daniel Leigh, IMF Working Paper, 3rd January 2013. p. 5. Available online at: http://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf

9 John Lanchester, *London Review of Books.* 3rd January 2013. http://www.lrb.co.uk/v35/n01/john-lanchester/lets-call-it-failure

10 The Green New Deal Group (2008) *A Green New Deal*, *op. cit.*

11 '£52bn lost from local economies through job losses and shrinking pay packets' *TUC*, 10th June, 2013. Available online at: http://www.tuc.org.uk/economy/tuc-22267-f0.cfm

12 The Green New Deal Group, *The Cuts Won't Work*, (2009), *op. cit*

13 *The Telegraph*,15 August 2013, *op. cit*, Available online at: http://www.telegraph.co.uk/finance/budget/9932748/Budget-2013-Britains-debt-and-deficit.html

14 Office for Budget Responsibility, (March 2013) op.cit

15 Roxburgh, C, Lund, S, Daruvala, T, Manyika, J, Dobbs, R, Forn, R and Croxson, K., (January 2012), *Debt and deleveraging: Uneven progress on the path to growth* (McKinsey and Co). Available online at: http://www.mckinsey.com/insights/global_capital_markets/uneven_progress_on_the_path_to_growth

16 *Ibid.*

17 'Trends in Lending', *Bank of England,* April 2013. Available online at: http://www.bankofengland.co.uk/publications/Documents/other/monetary/trendsapril13.pdf

18 'Determination of the December 2007 Peak in Economic Activity Business Cycle' *Dating Committee, National Bureau of Economic Research,* August 15th 2013. http://www.nber.org/cycles/dec2008.html

19 'Let's try to catch up with Mali', *The Economist,* July 6th 2013. Available online at: http://www.economist.com/news/leaders/21580466-why-being-159th-best-investment-no-way-country-sustain-recovery-lets-try

20 'Speech by Mervyn King Governor of The Bank Of England: *Banking: From Bagehot to Basel, and Back Again*, The Second Bagehot Lecture Buttonwood Gathering, New York City', *Bank of England,* Monday 25th October 2010. http://www.bankofengland.co.uk/publications/speeches/2010/speech455.pdf

21 'Adair Turner, Head of the Financial Services Authority, Mansion House Speech', *FSA*, 22nd September 2009. Available online at: *http://www.fsa.gov.uk/library/communication/speeches/2009/0922_at.shtml*

22 Maley K, (2010) 'Towards a global bank tax', *Business Spectator,* 23rd June 2010 http://www.businessspectator.com.au/article/2010/6/23/global-financial-crisis/towards-global-bank-tax

23 Greenham T, Simms A, (2010) *Where did our money go?* (London: nef). Available online at: http://neweconomics.org/sites/neweconomics.org/files/Where_did_our_money_go.pdf

24 More detail can be found in the wealth of submissions to the Independent Commission on Banking readily available on the internet (except that the majority of submissions from the major banks whose contributions are held to be largely confidential), or visit the finance section of the **nef** website at: http://www.neweconomics.org/issues/entry/banking-finance1

25 Mason R, (2009) 'HSBC warns branch network 'uneconomic' *The Telegraph,* 22nd May 2009. Available online at: http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/5370300/HSBC-warns-branch-network-uneconomic.html

26 French D (2009) *Branch Network Reduction Report 2010* (London: Campaign for Community Banking). Available online at: http://www.publications.parliament.uk/pa/cm201011/cmselect/cmtreasy/612/612vw.pdf

27 Boyle D, Greenham T, (2011*) A Local Banking System: The urgent need to reinvigorate UK high street banking,* (London: nef).

28 Post Bank Coalition (2011) *The Case for a Post Bank*, (London: FSB). Available online at: http://www.fsb.org.uk/policy/assets/postbank.pdf

29 Rubin, G., Raymond, P., and Taylor, J. (2006) *The Last Post: The social and economic impact of changes to the postal service in Manchester*, (London: nef)

30 Silver, N., (2009) *Towards a Royal Bank of Sustainability: protecting taxpayers' interests; cutting carbon risk.* Platform et al, London. See also: *The Oil & Gas Bank: RBS & the financing of climate change* (2009) Platform *et al.*

31 Elliott, L., (2013) Stock market crash or pause for breath? *The Guardian*, 23rd May 2013. Available online at: http://www.guardian.co.uk/business/2013/may/23/stock-market-crash-central-banks

32 Watt, N and Topham, G, Government plans £100bn in infrastructure projects, *The Guardian*, 26th June 2013.

33 Wintour, P, Danny Alexander announces £10bn of guarantees for nuclear power stations, *The Guardian*, 27th June 2013.

34 Details from the IFS briefing can be found here: http://www.ifs.org.uk/projects/418 A briefing note, to accompany the event was released by the IfG, see: Harris, J and MacCrae, J, (2013) *The 2015-16 Spending Round: A briefing note to accompany the IFS/IfG press briefing on 7 June 2013*, (London: IfG) Available online at: http://www.instituteforgovernment.org.uk/sites/default/files/publications/Spending%20Round%20briefing%20note%20final.pdf

35 Harper, A., (2012) *Green economy: a UK success story, The Green Alliance, London.* Available online at: http://www.green-alliance.org.uk/grea_p.aspx?id=6629

36 CBI (July 2012) *The Colour of Growth: Maximising the Potential of Green Business.* Available online at: http://www.cbi.org.uk/media/1555286/cbi_-_the_colour_of_growth_-_maximising_the_potential_of_green_business.pdf

37 See, (2011) *Local Authorities and the Green New Deal: Information Note*, (London: DECC) available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43022/3499-local-authorities-green-deal-info.pdf

38 Werner, R., Time for Green Quantitative Easing: How to Generate Green, Sustainable Growth at No Cost, in *Centre for Banking, Finance and Sustainable Development, Policy News*, Volume 3, Issue 1, February 2012 (University of Southampton Management School: Southampton) Available online at: http://www.greennewdealgroup.org/wp-content/uploads/2012/03/Green-QE-report-CBFSD-Policy-News-2012-No-1.pdf

39 *Spending Review Briefing*, (2013) National Housing Federation. Available online at: http://www.housing.org.uk/publications/browse/spending-review-briefing

40 *Ibid.*

41 Orr, D, *Housing Britain's Future: our greatest challenge*, 19th July 2013, National Housing Federation, Available online at: http://www.housing.org.uk/media/david-orrs-blog/housing-britains-future-our-biggest-challenge

42 See: Osborne, H, Houses rise across the UK for the first time since 2008, *The Guardian*, 16 July 2013

43 Allen, P, Blake, L, Harper, P, Hooker-Stroud, A, James, P and Kellner, T (2013) *Zero Carbon Britain: Rethinking the Future*, (Machynlleth: Centre for Alternative Technology): Available online at: http://www.zerocarbonbritain.com/images/pdfs/ZCBrtflo-res.pdf

44 Morris, C, and Pehnt, M (2012) German Energy Transition – Arguments for a renewable energy future, (Berlin: Heinrich Bohl Foundation)

45 Cited in, Joseph, S, HS2 holds great potential, but the government must ensure all our railways are fit for the future, 1st February 2013, *Left Foot Forward*

46 *A Better Railway for a Better Britain*, 8th January 2013. (London: Network Rail) Available online at: http://www.networkrail.co.uk/publications/strategic-business-plan-for-cp5/

47 9bn railway investment announced by coalition, BBC News, 16 July 2012.

48 British Chambers of Commerce, The Centre for Cities and the Passenger Transport Executive Group, Joint Letter to The Chancellor, George Osborne, 12th June 2013. Available online at: http://www.bettertransport.org.uk/files/HLOS-joint-letter.pdf

49 *Re-opening Railways – the case for growing the rail network and how it can be achieved*, Campaign for Better Transport, June 2012

50 The Real Cycling Revolution – how the face of cycling is changing, May 2012, Sustrans. Available online at: http://www.sustrans.org.uk/sites/default/files/file_content_type/real-cycling-revolution.pdf

51 *Ibid.*

52 *Ibid.*

53 "Crossrail for the bike" in Mayor's £913 million cycling scheme, 7th March 2013, Mayor of London Press Release. Available online at: http://www.london.gov.uk/media/mayor-press-releases/2013/03/crossrail-for-the-bike-in-mayor-s-913m-cycling-plan#sthash.5YAP9VyV.dpuf

54 Garside, J, Why Britain's broadband is heading for the slow lane, 7 May 2012, *The Guardian*. Available online at: http://www.theguardian.com/technology/2012/may/07/broadband-britain-heading-slow-lane

55 *Ibid.*

56 *Driving Green Growth: The Role of the Waste Management Industry in the Circular Economy*, 2013, SITA UK. Available online at: http://www.sita.co.uk/downloads/DrivingGreenGrowth-SITAUK-120423.pdf

57 *More jobs less waste: Potential for job creation through higher rates of recycling in the UK and the EU,* September 2010, Friends of the Earth: London.

58 Lord Heseltine (2013) *No stone unturned: in pursuit of growth-Lord Heseltine Review,* Independent report for the UK government, (London: Department for Business, Innovation and Skills)

59 Figures taken from Green Alliance (August 2012) *Green economy: a UK success story,* which uses figures originally from HM Treasury (2011), *Infrastructure investment pipeline data.*

60 Lewis, M., and Conaty P, (2012) *The Resilience Imperative: Cooperative Transitions to a Steady State Economy*, (British Colombia: New Society Publishers)

61 http://news.bbc.co.uk/1/hi/uk_politics/8688470.stm

62 David Cameron and Nick Clegg slap down Vince Cable for suggesting government could jumpstart flat-lining economy by increasing borrowing, *The Independent*, 7th March 2013. Available online at: http://www.independent.co.uk/news/uk/politics/theres-no-magic-money-tree-david-cameron-and-nick-clegg-slap-down-vince-cable-for-suggesting-government-could-jumpstart-flatlining-economy-by-increasing-borrowing-8524543.html

63 *Review of the monetary policy framework*, March 2013, para 3.34. (London: UK Treasury) Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/185553/ukecon_mon_policy_framework.pdf.pdf

64 The Green New Deal Group, *The Cuts Won't Work* (2009) *op. cit.*

65 Murphy, R (2011) *Why are they increasing the tax gap?* (London: PCS) Available online at: http://www.pcs.org.uk/en/campaigns/national-campaigns/tax-justice/why-are-they-increasing-the-tax-gap.cfm

66 Bank of England, http://www.bankofengland.co.uk/markets/Pages/apf/default.aspx

67 Bank of England, http://www.bankofengland.co.uk/monetarypolicy/pages/qe/default.aspx

68 Ryan-Collins, J, Greenham, T, Bernardo, G and Werner, R (2013) *Strategic Quantitative Easing*, (London: nef) Available online at: http://www.neweconomics.org/publications/entry/strategic-quantitative-easing

69 For more on this, see: Murphy, R (2011) *500,000 missing people: £16 billion of lost tax. How the UK mismanages its companies*, (Norwich: Tax Research LLP) Available online at: http://www.taxresearch.org.uk/Documents/500000Final.pdf

70 For more detail, see paragraph 6.4, in: Murphy, R (2011) *Why are they increasing the tax gap?* op.cit. Available online at: http://www.pcs.org.uk/en/campaigns/national-campaigns/tax-justice/why-are-they-increasing-the-tax-gap.cfm

71 For more detail on what needs to be done to achieve these goals see the Fair Tax website at: http://www.fairtaxmark.net/

72 The term Green Quantitative Easing was first explicitly used in 2010 in http://www.financeforthefuture.com/GreenQuEasing.pdf although the principle of directing quantitative easing to the green transformation of the UK's infrastructure was included in the Green New Deal Group's 2008 report.

73 Darrington, M, With 100bn of quantitative easing cash we would rebuild Britain brick, by brick, The Telegraph, 12th March 2013. Available online at: http://www.telegraph.co.uk/finance/financialcrisis/9923427/With-100bn-of-quantitative-easing-cash-we-could-rebuild-Britain-brick-by-brick.html

74 Sunderland, R and Duncan, H, Its time to support UK firms: British Chamber of Commerce calls on Mark Carney to make business a priority, 30th June 2013, Daily Mail. Available online at: http://www.thisismoney.co.uk/money/markets/article-2352025/Its-time-support-UK-firms-British-Chamber-Commerce-calls-Mark-Carney-make-business-priority.html

75 Werner, R, (2012) Time for Green Quantitative Easing: How to Generate Green, Sustainable Growth at No Cost, *op. cit.*

76 Echalier, M, Adams, J, Redwood, D and Curry C, Tax relief for pension savings in the UK, 15th July 2013, Pension Policy Institute. Available online at: https://www.pensionspolicyinstitute.org.uk/uploadeddocuments/20130715_Tax_Relief_for_Pension_Saving_in_the_UK.pdf

77 Opening Remarks by the Governor of the Bank of England, Inflation Report Press Conference, Wednesday 13th February 2013,

78 Campbell, D, Ball, J and Rogers, S, PFI will ultimately cost £300bn, *The Guardian*, 5th July 2012. Available online at: http://www.guardian.co.uk/politics/2012/jul/05/pfi-cost-300bn

79 Murphy, R and Hines, C (2010) Green QuEasing: Paying for the Economy we need, Finance for the Future. Available online at: http://www.financeforthefuture.com/GreenQuEasing.pdf

80 *Renewable Energy – Made in Britain: jobs, turnover and policy framework by technology* (2012 assessment), 23rd April 2012, Renewable Energy Association and Innovas. Available online at: http://www.r-e-a.net/resources/rea-publications

81 *UK Renewable Energy Roadmap: Update 2012*, 27th December 2012, (London: Department of Energy and Climate Change) Available online at: https://www.gov.uk/government/publications/uk-renewable-energy-roadmap-update

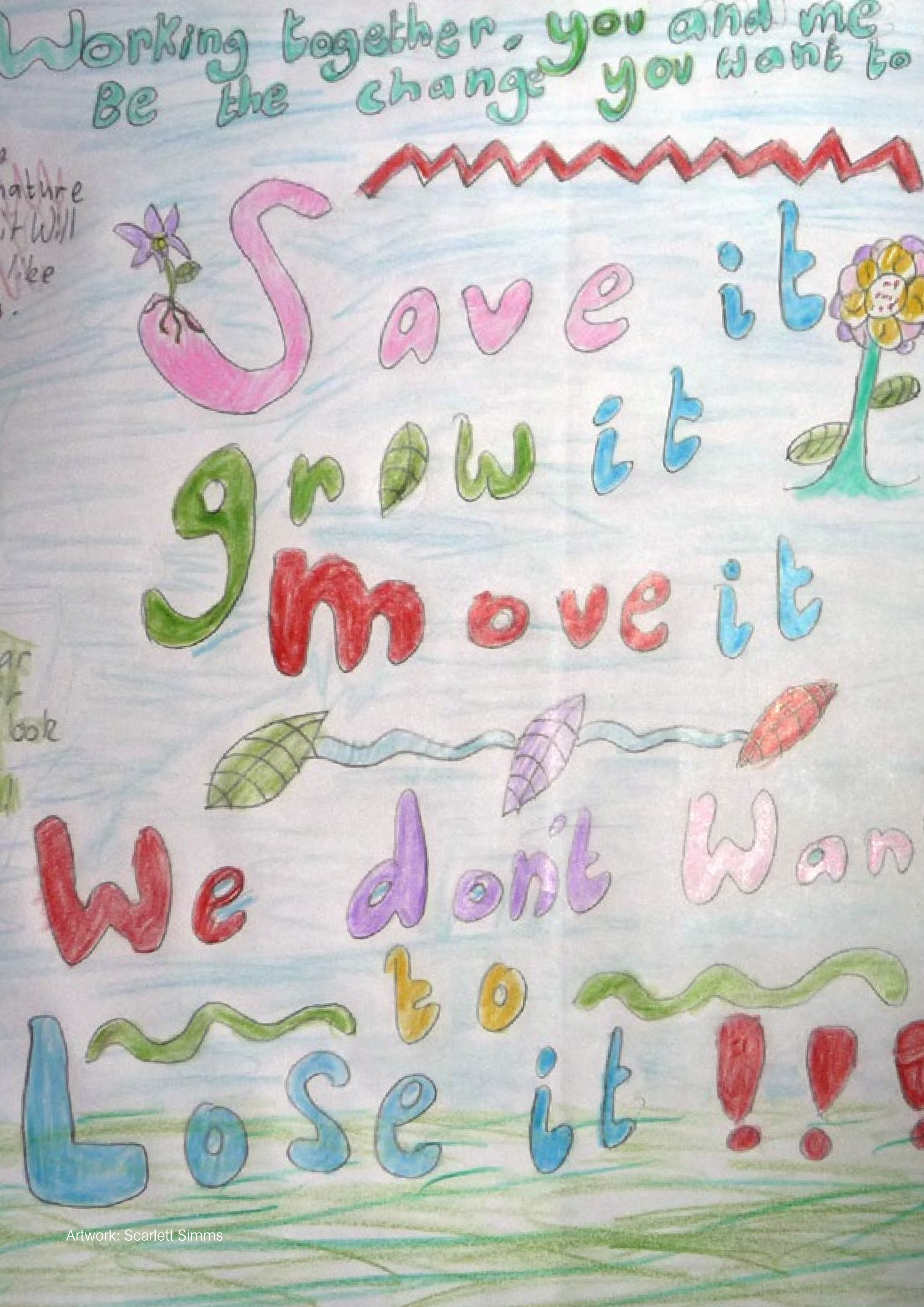
82 Allen, P *et al*, (2013) *Zero Carbon Britain: Rethinking the Future*, op.cit. Available online at: http://www.zerocarbonbritain.org/index.php?start=20

83 (2011) *Working for a Green Britain – Volume I and Volume II*, (London: RenewableUK) Available online at: http://www.renewableuk.com/en/publications/reports.cfm/Working-for-a-Green-Britain-Volume-1 *and*: http://www.renewableuk.com/en/publications/reports.cfm/Working-for-a-Green-Britain-Volume-2

84 Allen, P *et al*, (2013) *Zero Carbon Britain: Rethinking the Future*, op.cit.

85 Kemp, M and Wexler, J, (2010), *'Zero Carbon Britain 2030: A New Energy Strategy'*, (Machynlleth: Centre for Alternative Technology)

86 Allen, P. *et al*, (2013) *Zero Carbon Britain: Rethinking the Future*, op.cit.



Artwork: Scarlett Simms

The Green New Deal Group: This report is the fourth publication of the Green New Deal Group. Meeting since early 2007, its membership is drawn to reflect a wide range of expertise relating to the current financial, energy and environmental crises. The views and recommendations of the report are those of the group writing in their individual capacities. The report is published on behalf of the Green New Deal Group by The New Weather Institute.

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Acknowledgements: The Green New Deal Group would like to thank the Polden-Puckham Charitable Trust and the Calouste Gulbenkian Foundation for their support of this work.

Design by: the Argument by Design – www.tabd.co.uk

Published by: New Weather Institute
Website: www.newweather.org

ISBN: tbc