

# SUSTAINABLE FINANCE

PROGRAMME



SMITH SCHOOL OF ENTERPRISE  
AND THE ENVIRONMENT



## Course Handbook

### Sustainable Finance Course 2017/18

18<sup>th</sup> – 21<sup>st</sup> September 2017

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## Welcome to the Oxford Smith School

In recent years, the potential role of financial markets in driving responses to environmental challenges has become increasingly clear. However, seizing this opportunity will require a concerted effort on the part of all actors to understand the issues and develop solutions.

The Smith School of Enterprise and the Environment is a leading international academic programme focused upon teaching, research and engagement with enterprise on climate change and long-term environmental sustainability. It works with social enterprises, corporations, and governments; it seeks to encourage innovative solutions to the apparent challenges facing humanity over the coming decades; its strengths lie in environmental economics and policy, enterprise management, and financial markets and investment.

The programme ahead of you is bound to be challenging, stimulating and a unique journey. It is our belief that research, education, and practice must be integrated to best address our future global environmental challenges.

We look forward to meeting you!

A handwritten signature in cursive script, reading 'Gordon Clark'.A simple, elegant handwritten flourish consisting of a single, sweeping line.

Professor Gordon L Clark, Director  
Smith School of Enterprise and the Environment  
University of Oxford

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## Course Outline

The Sustainable Finance Course (SFC) is designed for those working in a range of sectors, for example: staff at environmental NGOs who would like to help the global financial system create better environmental outcomes; civil servants and regulators working to develop policies that can foster the development of sustainable finance; executives working in financial institutions that need an introduction to sustainability, the environment, and climate change as they relate to finance and investment; philanthropic funders looking to navigate sustainable finance topics so as to support the most impactful activities; and trustees or company directors that want to understand how sustainable finance relates to their fiduciary duties.

The course is centred around a four-day residential workshop held at Balliol College, Oxford from Monday 18th to Thursday 21st September 2017, with an extra day on Friday 22<sup>nd</sup> September 2017 for NGOs and philanthropic foundation participants funded by the John Ellerman Foundation. Over the subsequent six to nine months, participants engage in an extended learning project implementing a real-world project related to finance and sustainability. The course is developing a global network of practitioners working at the intersection of finance and the environment.

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# Monday 18<sup>th</sup> September 2017

## *Day I – Principles of Finance and Investment*

10:30 – 11:00 **Registration**

11:00 – 11:30 **Introduction to SFC - Objectives and rationale**

**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford

11:30 – 12:30 **Origins and purpose of finance**

**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford

*This session will focus on the origins, development, and purpose of finance and investment and how finance shapes the real economy and vice versa. It provides an opportunity to put finance and investment into a broader framework.*

12:30 – 13:30 **Lunch**

13:30 – 15:00 **The financial system and the investment chain**

**Mike Clark**, Director, Ario Advisory

*This session will focus on the actors in the long term finance sector, the meaning of value, fiduciary duty, investment beliefs, the role of ownership, and collective engagement and the influences in the system.*

15:00 – 15:30 **Tea/Coffee**

15:30 – 17:00 **Key concepts and instruments - from bonds to balance sheets**

**Helen Thomas**, Founder, Blonde Money

*This session will enable a non-participant in financial markets to grasp simple concepts by explaining, and then cutting through, the jargon. Attendees will be able to better interpret financial news by knowing the relative significance of different indicators, to have a financially literate conversation with investors and private market developers, and understand the latter's motivations and criteria for success.*

17:00 – 19:00 **Free time in Oxford**

19:00 **Group dinner at Balliol College**

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## Tuesday 19<sup>th</sup> September 2017

### Day II – Opportunities

- 09:30 – 10:15 **Introduction to the day (objectives and rationale) and recap**  
**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford
- 10:15 – 11:45 **Infrastructure investment**  
**Richard Nourse**, Managing Partner, Greencoat Capital  
*This session will explore how and why capital is invested into low carbon energy infrastructure. It also looks at the barriers and the role of markets and governments in finding solutions to close the investment gap.*
- 11:45 – 12:45 **Case study: Green Bonds**  
**Christopher Kaminker**, Head of Climate & Sustainable Financial Research, Large Corporates & Financial Institutions, SEB  
*This session will look at how SEB has supported the development of the green bond market.*
- 12:30 – 13:30 **Lunch**
- 13:30 – 15:00 **Biodiversity and nature**  
**Paul Jepson**, Senior Research Fellow, University of Oxford  
*This session will introduce the mechanisms developed and deployed by governments and NGOs to finance and manage the purchase, protection and management of natural areas and how these interact with the business models of major conservation NGOs. Using case examples we will discuss how declining public funds for biodiversity conservation are creating an imperative for innovation in conservation finance.*
- 15:00 – 15:30 **Tea/Coffee**
- 15:30 – 16:30 **Case study: Investing in nature in practice**  
**Peter Wheeler**, Executive Vice President, The Nature Conservancy (TNC)  
*This session will look at how TNC is investing in nature and the challenges and opportunities of getting capital to flow into nature conservation.*
- 16:30 **Free time in Oxford**

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## Wednesday 20<sup>th</sup> September 2017

### *Day III – Risk and Oxford Union Debating*

- 09:30 – 10:15 **Introduction to the day (objectives and rationale) and recap**  
**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford
- 10:15 – 11:45 **Stranded Assets**  
**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford  
*This session will provide an understanding of stranded assets-related arguments that can motivate investor decision-making and reflect on how and why stranded assets developed as an issue after 2011, where it might go next, and what lessons this might yield.*
- 11:45 – 13:00 **Case study: Climate change and financial regulation**  
**Michael Sheren**, Senior Advisor, Bank of England  
*This session will look at how and why climate change is a systemic risk that merits a response from authorities responsible for prudential regulation and financial conduct.*
- 13:00 – 14:00 **Lunch**
- 14:00 – 18:00 **Oxford Union Debates**  
*You will take part in a series of debates on topical issues within sustainable finance using the same rules and format employed by the famous Oxford Union debating society. The motions include:*
- The House believes that Green Bonds are nothing more than a marketing gimmick
  - This House believes that fossil fuel divestment is changes company behaviour
  - This House believes that the privatisation of nature is wrong
- 18:30 **Drinks and dinner at Oriel College with guest speaker**  
**Emma Howard Boyd**, Chair, Environment Agency



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## Thursday 21<sup>st</sup> September 2017

### *Day IV – Wargame and Capstone Project*

- 09:00 – 09:30 **Introduction to the day (objectives and rationale) and recap**  
**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford
- 09:30 – 11:00 **2 Degrees Pathway Wargame – Part 1**  
**Lucas Kruitwagen**, Research Assistant, Sustainable Finance Programme, Smith School, University of Oxford  
*This session will help you better understand the choices and trade-offs companies and investors face in the transition to a low carbon economy. New technologies, changing energy services, rising efficiency, competitive resource landscapes, and policy and regulatory changes all have potential to disrupt energy industry business models, strand assets, and destroy shareholder value. Here you will roleplay company and investor decision-making through the energy transition.*
- 11:00 – 11:30 **Tea/Coffee**
- 11:30 – 13:00 **2 Degrees Pathway Wargame – Part 2**  
**Lucas Kruitwagen**, Research Assistant, Sustainable Finance Programme, Smith School, University of Oxford
- 13:00 – 14:00 **Lunch**
- 13:30 – 14:30 **Capstone project design and objectives**
- 14:30 – 16:00 **Project development and peer review**
- 16:00 – 16:30 **Tea/Coffee**
- 16:30 – 17:30 **Programme synthesis and feedback**
- 17:30 **Course End**

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## Friday 22<sup>nd</sup> September 2017

### *Day V – Extra day for NGOs and Philanthropy*

- 09:30 – 10:15 **Introduction to the day (objectives and rationale) and recap**  
**Ben Caldecott**, Director, Sustainable Finance Programme, Smith School, University of Oxford
- 10:15 – 11:45 **Framing finance, networks, and challenges**  
**Sophia Tickell**, Meteos Ltd  
*This session will explore strategies and communications for effective sustainable finance activism.*
- 11:45 – 13:00 **Case study: Greenpeace**  
**Charlie Kronick**, Senior Climate Advisor, Greenpeace UK  
*This session will look at Greenpeace's work, particularly in relation to the Arctic and also work on air pollution in China, both of which had prominent finance-related components.*
- 13:00 – 14:00 **Lunch**
- 14:00 – 15:00 **How to effectively speak to and engage with investors**  
**James Hulse**, Independent Consultant  
*This session will develop confidence in direct engagement with financiers. It will include identifying strategy ahead of engagement, engagement practicalities, and understanding what is of value to you and to them.*
- 15:00 – 15:30 **Tea/Coffee**
- 15:30 – 17:00 **Fossil fuel divestment and risk creation**  
**Louise Rouse**, Director, Rouse Research & Consulting  
*This session will provide an understanding of the decision-making frame in which the 'targets' of a divestment campaign operate in order to help better inform campaign strategies. Learnings regarding audience segmentation and risk focus are applicable to all investor engagement campaigns not just divestment.*
- 17:30 **Finish**



## Speakers

**Ben Caldecott** is Director of the [Sustainable Finance Programme](#) at the University of Oxford Smith School of Enterprise and the Environment. The Sustainable Finance Programme aims to be the world's leading centre for research and teaching on sustainable finance and investment. He is concurrently an Adviser to The Prince of Wales's Accounting for Sustainability Project, an Academic Visitor at the Bank of England, and a Visiting Scholar at Stanford University. He has a number of board and advisory panel appointments, including with the City of London Green Finance Initiative, University of Oxford Socially Responsible Investment Review Committee, Green Alliance, Institute and Faculty of Actuaries, and the Natural Capital Finance Alliance.



**Mike Clark** is Founder Director of Ario Advisory, a firm offering responsible investment advisory services. An actuary, Mike has four decades of finance sector experience covering investment management, pensions, and insurance. He established Ario Advisory in 2016. Mike has worked with major pension funds in Europe and beyond, with sovereign wealth funds and other pools of institutional capital. With a previous employer, a UNPRI investment management signatory from 2009, he helped establish their global Sustainability Council and led it for seven years. Mike represents the UK actuarial profession on the Advisory Council of the Sustainable Finance Programme at the University of Oxford's Smith School. Mike has a strong interest in the role of the

financial sector, and how it supports the real economy.

**Helen Thomas** founder of Blonde Money has worked in financial markets for over 15 years, for a mixture of banks and fund managers. Most recently she has been a partner at a global macro hedge fund, joined the Board of CFA UK and runs their sub-committee on the Value of the Investment Profession. She has also worked in politics, as an adviser to former Chancellor of the Exchequer George Osborne. She is a CFA Charterholder and hold a degree in Philosophy, Politics and Economics from University of Oxford. Helen was also a lead researcher on the book "Masters of Nothing" by the MPs Matthew Hancock and Nadhim Zahawi, and has been a mentor, both formally and informally – such as helping a Chinese entrepreneur who wanted to open a teashop as part of Goldman's 10,000 Women initiative.



**Richard Nourse** is a Managing Partner at Greencoat Capital, he leads the firms overall investment strategy and is a member of the investment committee. Richard previously enjoyed a long career in the City, first at Morgan Grenfell and then at Merrill Lynch where he led the EMEA Energy and Power Team. On leaving Merrill Lynch in 2007, Richard joined the Shareholder Executive, part of the UK Government, with responsibility for British Energy, BNFL and Urenco. Richard is a non-executive director of Urenco. He sits on the boards of two of ESB NM LP's investments: Airvolution and Aveillant. Richard has a BA in Geology from Oxford University

**Christopher Kaminker** is Head of Climate & Sustainable Financial Research, Large Corporates & Financial Institutions, SEB. Previously he was an economist in the OECD's environment directorate based in Paris where he led the OECD project 'Institutional Investors and Green Infrastructure', a joint project with the directorate for financial and enterprise affairs. His published research focuses on the role of institutional investors in infrastructure investment financing, mobilising the debt capital markets for infrastructure, and clean energy and climate finance policy. Before his appointment at the OECD in 2010, Christopher worked in investment banking in New York, focusing on clean energy, infrastructure and commodities across institutional sales and trading, principal investing and advisory roles at Société Générale and Goldman Sachs. Christopher has a DPhil from the University of Oxford under the supervision of Prof. Gordon L. Clark, FBA, and graduated from the School of International and Public Affairs at Columbia University with a masters in international energy management and finance policy.



**Paul Jepson** is Course Director of the SoGE MSc in Biodiversity, Conservation and Management and previously held Senior Research Fellowships with the Environmental Change Institute and the Skoll Centre for Social Entrepreneurship at the Saïd Business School. Paul transferred into academia from a successful career in applied conservation working first as a local government officer in Manchester & Shrewsbury, then as country director of BirdLife International in Indonesia and following this as consultant for various inter-governmental and non-governmental organisations. Paul, also leads an interdisciplinary Conservation Governance Lab and his current research focuses on three inter-related interests: i) the application concepts from finance to restate the policy and

investment case for protected areas; ii) rewilding and the challenges of creating an enabling policy environment for ecosystem restoration and iii) the implications of new technologies for conservation governance.

**Peter Wheeler** joined The Nature Conservancy (TNC) as a London-based Executive Vice President in September 2013. He has a long and distinguished career as an investment banker having been the Head of Wholesale Banking for EMEA and Americas for Standard Chartered and previously a partner and Managing Director at Goldman Sachs, working initially in New York in the 1980s, then based in Hong Kong, where he established and led the firm's Investment Banking business for Asia outside of Japan from 1991 to 1998. He was the firm's first Chief Representative in Beijing. In his post-banking business life, Peter was a seed investor and Board member of Climate Change Capital until it was sold to Bunge in 2012. He sits on the Board of Rift Valley Corporation, a dynamic African agro-industrial enterprise which owns and operates a diversified portfolio of subsidiary companies across seven operating platforms in three countries in Tanzania, Mozambique and Zimbabwe. He is a founding partner of Silk Road Finance Company, a Hong Kong-based and Chinese- led investment and advisory boutique working with Chinese State-owned and private companies in their activities outside of China in pursuit of the official New Silk Road policy. He is an active seed investor in a personal capacity in innovative new companies in the renewables and low carbon economies. Peter is a co-founder and trustee of New Philanthropy Capital, a charity that works as a consultancy and think tank, dedicated to helping charities and funders achieve the greatest impact so the lives of the people they serve are improved. He is a Board member of Social Finance, a social enterprise dedicated to the transformation of the third sector's capabilities by developing access to a range of innovative financing methods. He serves on the Advisory Council of the Oxford Smith School



of Enterprise and the Environment Stranded Assets Program. He has recently served on the Board of the Young Foundation (as Chair) and Virgin Unite.



**Michael Sheren** joined the Bank of England as a Senior Advisor in July of 2013 after twenty eight years in the financial services industry where he specialized in the structuring, distribution and trading of commercial debt for major global financial institutions. Within the BoE Michael is based in the PRA where he provides guidance, advice and challenge around issues concerning financial markets, governance, supervision and policy. Prior to the BoE, Michael spent the first half of his career in New York City where he worked in leveraged finance, commercial real estate and distressed debt. In 1997 Michael moved to London where he was primarily focused on structuring and distributing debt for leveraged buy-outs. In addition, he was active in commercial

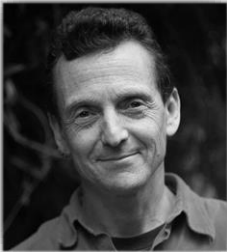
real estate finance, shipping, distressed debt, structured products and the financing of SME's in the emerging markets. Michael holds master's degrees from Harvard, The London School of Economics and New York University where he studied finance, economics, philosophy and public policy. He also holds a BA from the George Washington University in Political Science and History.

**Lucas Kruitwagen** is a Research Assistant on the Sustainable Finance Programme, Smith School of Enterprise and the Environment, and a DPhil student in the University of Oxford School of Geography and the Environment. Lucas researches how data-driven technology is changing the availability of environmental risk information, particularly in relation to company and investor risk exposure. Lucas is also a Visiting Researcher at Imperial College London where he researches organisational decision-making under conditions of risk and uncertainty. He holds an MSc (with distinction) in Sustainable Energy Futures from Imperial College London, and a BEng from McGill University, Montreal, where he was a Loran Scholar.



**Sophia Tickell** is Co-Founder and Partner at Meteos, with specific expertise in healthcare, climate change and food. Sophia brings a systems approach to strategy development and to understanding and solving complex social and environmental challenges. This involves analysis, research and the facilitation of dialogues between senior industry executives, investors, government and civil society representatives. An historian by education, Sophia started her career as a journalist in Bolivia. From 1996 to 2002, she was Chair of the Board at SustainAbility Ltd, as well as holding the role of Executive Director. Prior to that Sophia led Oxfam's work on the private sector and supported policy development internationally, including in Nepal, Zambia, and

Colombia. From 2003 - 2013 Sophia has been the Founder and Director of the PharmaFutures dialogues. Sophia holds a number of board and advisory roles, including being a trustee of Green Alliance and external advisor to the Corporate Responsibility Committee of GSK's Board. She is a member of Aviva's SRI Advisory Committee, advisor to Alliance Trust's Sustainable Future Funds, and to the Doughty Centre Advisory Council of the Cranfield School of Management. Sophia is the author of a number of publications, including Systems not Silos: Investor Perspectives on the Energy System, 2013, Pathways to Value: Pharma in a Changing World, 2013, the PharmaFutures reports ([www.pharmafutures.org](http://www.pharmafutures.org)), and The Antibiotic Innovation Study, 2005.



**Charlie Kronick** is Senior Climate Adviser at Greenpeace UK. He has worked in the fields of environment and development as an activist, campaigner, thinker and writer for more than 20 years. He has focused for most of the last decade on issues related to energy and climate change, and recently on the risks to capital markets from investment in high carbon infrastructure.

**James Hulse** has almost 20 years' experience as a trader and fund manager, including setting up the world's first climate change hedge fund. He left the financial markets in 2008 to take a Masters in Environmental Technology and moved to the NGO sector to work with investors to help them address the risks and opportunities from climate change. James is currently working as a consultant in the ESG and climate change space. His particular areas of expertise are advising investors on ESG strategy and integration, creating helpful dialogue between asset owners and asset managers, and helping investors to understand the opportunities to improve returns by using ESG information and knowledge of climate risks.



**Louise Rouse** is an Investor Engagement Consultant and advises a number of UK and international non-profits on investor engagement strategies designed to raise the profile of environmental and social issues including human rights, frontier oil exploration, and climate change among investors. Recent work includes advising Greenpeace UK on its campaign against Shell's US Arctic drilling plans. From September 2009 to end of 2014, Louise was the director of engagement and campaigns with responsible investment NGO ShareAction leading its work on issues including corporate tax practices, digital rights, and modern day slavery. Prior to moving to London Louise worked as a banking solicitor for 5 years in Dublin. She holds a First Class Honours Bachelor of Corporate

Law and a First Class Honours LLB from the National University of Ireland, Galway and an LLM from University College Dublin.



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# Travelling to Oxford

## By Coach from London

There are two Oxford Express coach services which collect from Victoria Station, Marble Arch, and Marylebone Road in London every 15-20 minutes. They will take you directly to Oxford city centre, Oxford Bus Station (Gloucester Green). Both take approximately 90 minutes and the cost of a return journey is £20. For further information see the [X90 service](#) or [Oxford Tube](#).

## By Train

The nearest train station is Oxford Station (OXF). A frequent direct service operates between London Paddington and Oxford, as well as London Marylebone and Oxford. There is also a good connection between Oxford and Birmingham New Street via Banbury and Coventry. Other services operate from the north via Birmingham New Street; from the South via Reading; and from the west via Didcot or Reading. For information see [National Rail](#). Do not exit the train at Oxford Parkway (OXF) as this is outside the city centre.

## By Driving

Oxford can be very congested and parking spaces are both limited and expensive but if you need to drive please use one of the Oxford Park and Rides and then catch a bus to the centre. Alternatively, the nearest NCP car parks are Worcester Place or Gloucester Green. For details and charges please visit [Parkopedia](#). Overall we would not recommend using this method of transport to travel to the city.

## By Aeroplane

The most convenient airport to get to Oxford from is London Heathrow which has a good bus connection that operates every 20-30 minutes, with a journey time of roughly 80-90 minutes to the city centre. London Gatwick is also well served with buses to and from Oxford, however the journey time is longer at roughly 2 and a half hours with coaches only running hourly. Both of these services are operated by the airline, for more information please see [their website](#). If using either of these options you should exit the bus at the Gloucester Green. Birmingham International Airport is connected to Oxford by train with a journey time of 60 minutes for direct routes, details on train times are available through [the trainline](#). Note that there are not good transport links between Oxford and London Stanstead or London Luton so we would strongly recommend avoiding these routes.

## By Chauffeur

JS Chauffeurs provide airport transfers as well as collection from neighbouring cities to Oxford (as far as London and Birmingham). Bookings can be made through [their website](#) or by contacting: [info@jschauffeurs.com](mailto:info@jschauffeurs.com)

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# Logistics Overview

## Accommodation

Your bedroom has been reserved at Jowett Walk (an annexe of Balliol College.) To check-in you will first need to report to the porters lodge at the main campus of Balliol on Broad St, Oxford, OX1 3BJ. The lodge is open 24 hours and can be reached on +44 (0)1865 277777. The porter will provide you with a bedroom key, as well as a code number to open the front gate at Jowett Walk and the access code for the tower your room is located in. The walk from Balliol College to Jowett Walk will then take 5-10 minutes, with directions [available here](#).

Check-in date Sunday 17<sup>th</sup> September

Check-in time 14:00 onwards

Check-out date Thursday 21<sup>st</sup> September (non NGOs/philanthropic foundations)

Check-out date Friday 22<sup>nd</sup> September (NGOs/philanthropic foundations)

Check-out time 10:00

## WiFi

A WiFi network is available throughout the Balliol College buildings. Access details will be provided at check-in.

## Catering

Breakfast will be served daily at the Grand Hall on the main campus from 8:00-9:00. Lunch and coffee breaks will also be provided throughout the duration of the course, as well as dinner on Monday at Balliol College and Wednesday at Oriel College. All other meals during the residential will be your own responsibility.

## Teaching Room

All sessions will be held in Lecture Room 23 on the main campus of Balliol College. The classroom will be signposted on the first day of the course.

## Dress Code

Dress code for the course will be smart casual. For the formal dinners on Monday and Wednesday gentlemen should wear a suit and ladies the equivalent.

## Weather

The weather in Oxford during September can be unpredictable with an average temperature of 14°C/57°F, highs of 28°C/82°F, lows of 5°C/41°F, and half of the month proving to be rainfall days. We would therefore advise that you also bring warm as well as wet weather clothing.

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## Oxford City Centre

Oxford is a charming place, packed with bundles of character and oozing history and culture at every turn. The information below is not exhaustive, and only covers a very small fraction of what you can draw from out of the city.

### Ashmolean Museum (Beaumont St)

One of Britain's finest museums, with treasures from Ancient Egypt to 20th century. Paintings, ceramics, sculpture coins and art from the Far East. Admission is free and there is a shop and café inside the building. The rooftop offers a lovely restaurant for drinks and dining.

[www.ashmolean.org/exhibitions](http://www.ashmolean.org/exhibitions)

### Pitt Rivers Museum (South Parks Rd)

One of the UK's foremost anthropological collections, bringing together extraordinary items from all over the world – really worth a visit!

[www.prm.ox.ac.uk](http://www.prm.ox.ac.uk)

### Botanic Garden (Rose Ln)

The oldest botanic garden in Great Britain and one of the oldest scientific gardens in the world. Founded in 1621 it now contains over 8,000 different plant species making it one of the most diverse yet compact collections of plants.

[www.botanic-garden.ox.ac.uk/](http://www.botanic-garden.ox.ac.uk/)

### Bodleian Library (Broad St)

The main research library of the University of Oxford, and one of the oldest libraries in Europe. With over 12 million items it is the second-largest library in Britain after the British Library. Nestled within the Bodleian is also the Duke Humfrey's Library, built in 1488 this is highly recommended stop in the city.

[www.bodleian.ox.ac.uk/whatson/visit/tours](http://www.bodleian.ox.ac.uk/whatson/visit/tours)

### Punting

A traditional Oxford past-time, punts are available to hire from Magdalen Bridge, Folly Bridge and the Cherwell Boathouse (the latter of which is just outside the city centre.)

### Cinema and Theatre

Oxford has two cinemas showing the latest releases: Odeon George St and Odeon Magdalen St. The Oxford Playhouse, New Theatre and Sheldonian are the main theatres. Fringe and more offbeat performances can be found at the Burton Taylor Theatre, North Wall Arts Centre and Old Fire Station.

### Taxis

Taxis points are available at various points in the city including the bus station at Gloucester Green, the train station and at the intersection between High Street and St Aldate's. Telephone numbers to pre-book taxis include:

Royal Cars	+44 (0)1865 777333
ABC Radio Taxis	+44 (0)1865 242424

### Shopping

There is a more commercial shopping area around Cornmarket, George and High St in the city centre and of course, the historic Covered Market is well worth a visit.



## Restaurants

Within the busier streets of Oxford you will mainly find chain restaurants that you are likely already familiar with, such as Bills (St Michael's St), Yo! Sushi (73-75 George St) and Byron (33 -35 George Street.) There is however a thriving scene of independent restaurants with recommendations below:

- Aberquina (74 Cowley Rd) – Newly opened tapas restaurant with 5\* reviews
- Branca (111 Walton St) – Vibrant Italian eatery in cosmopolitan Jericho Oxford
- Kazbar (25-27 Cowley Rd) – A Moroccan, Mediterranean, Spanish fusion
- Old Bookbinders Ale House (17-18 Victor St) – Cosy pub with a French influenced menu
- Pierre Victoire (9 Little Clarendon St) – Relaxed French bistro with fixed price menus
- Rickety Press (67 Cranham St) – Quirky corner pub with pizza and burgers
- Spice Lounge (193 Banbury Rd) – Pan-indian dishes served in a contemporary dining room
- The Perch (Binsey Ln) – Thatched 17th-century country inn only a stones throw from the city centre
- Zheng (82 Walton St) – Eastern menu of Malaysian, Chinese and Singaporean dishes

## Pubs

Some of the oldest and most famous establishments in Oxford are actually pubs. The Turf (4-6 Bath Place) and the Bear (6 Alfred St), both have 13th-century origins and unique stories within their history. The King's Arms (40 Holywell St) is a buzzing student hub with a self-proclaimed higher IQ per square metre than any other pub in the UK, whilst the Eagle and Child (49 St Giles) is renowned for its literary links to C. S. Lewis, J. R. R. Tolkien and Colin Dexter. Leaving history behind the Varsity Club (9 High St) is well worth a visit for its rooftop views across the city.

## Supermarkets

Tesco Metro, Magdalen St, OX1 3AD 7:00-00:00 (Monday-Saturday) and 11:00-17:00 (Sunday)  
Sainsbury's, Westgate Shopping Centre, OX1 1PA 07:00-20:00 (Monday-Saturday) and 11:00-17:00 (Sunday)  
Marks and Spencer, Queen St, OX1 1AB 08:00-19:00 (Monday-Saturday) and 11:00-17:00 (Sunday)  
Sainsbury's Local (smaller), Magdalen St, OX1 3AD 07:00-00:00 every day

## Running and Exercise

The city centre isn't a great area for jogging routes owing to the combination of cars, bicycles and cobbled streets. Your best bet is to head to Christ Church Meadow, University Parks or the Oxford Canal. Day passes are available at Pure Gym (16 & 17 St Ebbe's St) for £7.99.

## Further Afield

Blenheim Palace is a 25 minute bus journey (using the S3 or 7) from Oxford city centre with beautiful grounds and a monumental country house. The Cotswolds is easily accessible with Morton-in-Marsh and a number of quaint market towns only a short train journey away. London is an hour on the train, and both Stratford-upon-Avon and Bath just under an hour and a half. Slightly closer to home and within walking distance, Cowley Road, Jericho, and Port Meadow are areas of Oxford well worth exploring too.

## Tourist Information

Oxford Tourist Information (Broad Street) know everything worth knowing about the city and beyond, they can help with booking tickets for events and provide recommendations if you are looking for something more specific.

## University of Oxford

As the oldest university in the English-speaking world, Oxford is a unique and historic institution. There is no clear date of foundation, but teaching existed at Oxford in some form in 1096 and developed rapidly from 1167, when Henry II banned English students from attending the University of Paris.

In 1190, the arrival of Emo of Friesland, the first known overseas student, set in motion the University's tradition of international scholarly links. In the 13th century, rioting between town and gown (townspeople and students) hastened the establishment of primitive halls of residence. These were succeeded by the first of Oxford's colleges, which began as medieval 'halls of residence' or endowed houses under the supervision of a Master. University, Balliol and Merton Colleges, which were established between 1249 and 1264, are the oldest.

From 1878, academic halls were established for women and they were admitted to full membership of the University in 1920. Five all-male colleges first admitted women in 1974 and, since then, all colleges have changed their statutes to admit both women and men. St Hilda's College, which was originally for women only, was the last of Oxford's single sex colleges. It has admitted both men and women since 2008.

## The College System

Oxford is a collegiate university, consisting of the central University and colleges. The central University is composed of academic departments and research centres, administrative departments, libraries and museums. The 38 colleges are self-governing and financially independent institutions, which are related to the central University in a federal system. There are also six permanent private halls, which were founded by different Christian denominations and which retain their Christian character.



## Balliol College

Balliol has existed as a community of scholars on its present Broad Street site without interruption since about 1263. By this token it claims to be the oldest college in Oxford, and in the English-speaking world. In 1260 a dispute between John de Balliol and the Bishop of Durham erupted into violence and Henry III condemned Balliol's behaviour. The Bishop had Balliol whipped, and imposed a penance on him of a substantial act of charity. This he did, by renting a property and creating a house of scholars, which was soon known by his name.

After John de Balliol's death in 1269, his widow, Dervorguilla of Galloway, guaranteed the future of the 'House of the Scholars of Balliol' by establishing a permanent endowment and giving it Statutes in 1282 – so bringing into being Balliol College as we know it today. The College celebrated its 750th anniversary in 2013.

Balliol has produced a wide range of graduates in the fields of economics, history, law, physiology, medicine, management, humanities, mathematics, science, technology, media, philosophy, poetry, politics, and religion who have contributed significantly to public life. Balliol people were, for example, prominent in establishing the International Baccalaureate, the National Trust, the Workers Educational Association, the Welfare State, the Campaign for Nuclear Disarmament and Amnesty International.

Former students include: Adam Smith, Cardinal Manning, Richard von Weizsäcker as well as three past British Ministers and five Nobel Laureates amongst a host of others.



## Pre-course Preparation

The Smith School has reviewed a range of preparatory reading and courses for students who have no knowledge of financial markets and the financial sector and found the following online course to provide a good foundation of knowledge and introduction to the subject. The course is taught by the University of Michigan on the EdX platform.

To access the platform navigate to [this link](#) and select 'Enroll Now' to then create an account.

We have identified a selection of sessions that we believe students **MUST** complete (mandatory) before coming on the course in order to participate fully. A further range of sessions has been recommended for those who wish to know more. The mandatory elements will take you about 80 minutes and a further 4 hours of recommended sessions are available. The list is as follows:

Lesson 1: Corporate Finance: A General Framework	
01.01 Introduction to Corporate Finance (5:35)	Recommended
01.05 Leverage and Shareholder Risk (15:51)	Recommended
01.06 Broad Overview of Markets and Institutions (11:48)	Mandatory
01.07 Stock Markets: Introduction (10:18)	Mandatory
01.08 Bond Markets: Introduction (9:53)	Mandatory
<b>Total Mandatory time (minutes)</b>	<b>31.19</b>
<b>Total Recommended time (minutes)</b>	<b>21.26</b>
Lesson 2: Financial Instruments	
02.01 Introduction to Markets and Institutions (9:07)	Mandatory
02.02 Financial Instruments: Building Blocks (4:04)	Recommended
02.03 Financial Instruments Building Block 1: Cash Flows (13:12)	Recommended
02.04 Financial Instruments Building Blocks 2 - 5 (12:37)	Recommended
02.05 Equity Shares in Building Block Framework (8:09)	Recommended
02.06 Corporate Bonds in Building Block Framework (8:42)	Recommended
<b>Total Mandatory time (minutes)</b>	<b>9.07</b>
<b>Total Recommended time (minutes)</b>	<b>42.00</b>
Lesson 3: Markets, Institutions and Frictions	
03.01 Architecture of Financial Markets and Institutions (16:42)	Mandatory
03.02 Information Asymmetry Concerns (13:39)	Recommended
03.03 Agency Problem (8:56)	Recommended
03.04 Risk-Shifting Problem (21:11)	Recommended
03.05 Underinvestment Problem (12:23)	Recommended
<b>Total Mandatory time (minutes)</b>	<b>16.42</b>
<b>Total Recommended time (minutes)</b>	<b>55.29</b>
Lesson 4: Stock Markets	
04.01 Introduction to Stock Markets (11:43)	Mandatory
04.02 Initial Public Offerings (IPO) (18:19)	Recommended
04.03 IPO Process (12:05)	Recommended
04.05 Private Equity (10:45)	Recommended



04.06 Active versus Passive Investors (17:39)	Recommended
<b>Total Mandatory time (minutes)</b>	<b>11.43</b>
<b>Total Recommended time (minutes)</b>	<b>58.08</b>
<b>Lesson 5: Credit Markets and Banks</b>	
05.01 Credit Analysis (8:38)	Recommended
05.04 Business of Banking I (11:26)	Recommended
<b>Total Recommended time (minutes)</b>	<b>20.04</b>
<b>Lesson 6: Failures of Market</b>	
06.01 Introduction to Mortgage-Backed-Securities (12:53)	Mandatory
06.02 Pooling and Tranching (13:16)	Recommended
06.03 Pooling and Tranching: What Can Go Wrong (8:39)	Recommended
06.04 Agency and Information Frictions in MBS (16:44)	Recommended
<b>Total Mandatory time (minutes)</b>	<b>12.53</b>
<b>Total Recommended time (minutes)</b>	<b>38.39</b>

# Reading List

## General

Bank of England, 2015. *The impact of climate change on the UK insurance sector A Climate Change Adaptation Report by the Prudential Regulation Authority*

Carney, M., 2015. Breaking the Tragedy of the Horizon – climate change and financial stability. *Bank of England*. See: [www.bankofengland.co.uk/publications/Pages/speeches/default.aspx](http://www.bankofengland.co.uk/publications/Pages/speeches/default.aspx)

Batten, S., Sowerbutts, R. & Tanaka, M., 2016. Let's talk about the weather: the impact of climate change on central banks. *Bank of England Staff Working Paper*, (603).

Kay, J., 2012. *The Kay Review of UK Equity Markets and Long-Term Decision Making*

Vaughan, A. 2015. *Wellcome Trust rejects Guardian's calls to divest from fossil fuels*. The Guardian. <https://www.theguardian.com/environment/2015/mar/25/wellcome-trust-rejects-guardians-calls-to-divest-from-fossil-fuels>

## The Financial System and the Investment Chain

Caldecott, B. & Rook, D., 2015. Investment consultants and green investment: Risking stranded advice? *Smith School of Enterprise and the Environment, University of Oxford*. See: <http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/wp-investment-consultants.pdf>

Forstater, M. & Zhang, N., N. 2016. Definitions and Concepts: Background Note. *UNEP Inquiry*. See: <http://unepinquiry.org/publication/definitions-and-concepts-background-note/>

Sullivan, R., Martindale, W., Feller, E. and Bordon, A., Fiduciary Duty in the 21<sup>st</sup> Century. *UNEP Inquiry*. See [http://www.unepfi.org/fileadmin/documents/fiduciary\\_duty\\_21st\\_century.pdf](http://www.unepfi.org/fileadmin/documents/fiduciary_duty_21st_century.pdf).

The Inquiry into the Design of a Sustainable Financial System, 2015. The Financial System we Need. Aligning the Financial System with Sustainable Development. *UNEP Inquiry*. See <http://web.unep.org/inquiry>

TCFD, 2016. Phase I Report of the Task Force on Climate-Related Financial Disclosures. *Task Force on Climate-Related Financial Disclosures*. See: [https://www.fsb-tcfd.org/wp-content/uploads/2016/03/Phase\\_I\\_Report\\_v15.pdf](https://www.fsb-tcfd.org/wp-content/uploads/2016/03/Phase_I_Report_v15.pdf)

Actors & initiatives in the finance sector:

a) Global Investor Initiatives

United Nations Principles for Responsible Investment (UNPRI) - <https://www.unpri.org/>

Portfolio Decarbonisation Coalition: Reduce - <http://unepfi.org/pdc/>

IIGCC (Institutional Investor Group on Climate Change) – Europe - <http://www.iigcc.org/>

#### b) Asset Owners

The (UK) Environment Agency Pension Fund is an excellent example of a pension fund aligning itself with the goals of the (UNFCCC) COP21 Paris Agreement - <https://www.eapf.org.uk/investments/climate-risk/climate-risk-strategy>

CalPERS (US) - <https://www.calpers.ca.gov>

AP4 (Sweden) - <http://www.ap4.se/en/esg/climate-change-a-focus-area/>

ERAPF (France) - <https://www.rafp.fr/en/>

HESTA (Australia) - <https://www.hesta.com.au/why-join-hesta/responsible-investment/our-commitment.html>

#### c) ESG Data Providers

Trucost - <http://www.trucost.com/>

Sustainalytics - <http://www.sustainalytics.com/>

South Pole - <http://www.thesouthpolegroup.com/>

FTSE - <http://www.ftse.com/products/indices/F4G-ESG-Ratings>

MSCI - <https://www.msci.com/esg-integration>

#### d) Proxy Voting Services

Glass Lewis - <http://www.glasslewis.com/esg-services/>

ISS - <https://www.issgovernance.com/esg/>

#### d) NGOs and other organisations

AODP (Asset Owners Disclosure Project) - <http://aodproject.net/>

Carbon Tracker - <http://www.carbontracker.org/>

CDP (Carbon Disclosure Project) - <https://www.cdp.net/en>

E3G - <https://www.e3g.org/>

ShareAction - <https://shareaction.org/>

VBDO (Netherlands) - <http://www.vbdo.nl/en/>

A4S (Accounting for Sustainability) - <https://www.accountingforsustainability.org/>

Climate Bonds Initiative - <https://www.climatebonds.net/>

Client Earth (environmental lawyers) - <http://www.clientearth.org/>

Integrated Reporting - <http://integratedreporting.org/>

Task Force for Climate-related Financial Disclosure - <https://www.fsb-tcfd.org/>

Financial Reporting Council (FRC) – UK Stewardship Code - <https://www.frc.org.uk/>

## Key Concepts and Instruments - from Bonds to Balance Sheets

Hamilton, K. 2016. Finance Guide for Policy-Makers: Renewable Energy, Green Infrastructure. *Low Carbon Finance Group, Chatham House and Ethan Zindler, Bloomberg New Energy Finance (BNEF)*. See: <http://about.bnef.com/white-papers/finance-guide-policy-makers/>

Types of Financial Institutions and Their Roles. Chapter 3. *Investopedia*. See <http://www.investopedia.com/walkthrough/corporate-finance/1/financial-institutions.aspx>

Goldman Sachs, 2014. Interactive Guide to Capital Markets. *Goldman Sachs*. See <http://www.goldmansachs.com/s/interactive-guide-to-capital-markets/>



Test Your Money Smarts. U.S. Securities and Exchange Commission. See:

<https://www.sec.gov/investor/tools/quiz.htm>

## Energy Infrastructure and Energy Efficiency

Caldecott, B., Kruitwagen, L., et al., 2016. Stranded Assets and Thermal Coal: An analysis of environment-related risk exposure. *Smith School of Enterprise and the Environment, University of Oxford*. See:

<http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/satc.pdf>

Pfeiffer, A. et al., 2016. The '2°C capital stock' for electricity generation: Committed cumulative carbon emissions from the electricity generation sector and the transition to a green economy. *Applied Energy*.

Holmes, I., 2011. Financing the green deal. Carrots, sticks and the Green Investment Bank. E3G See:

[https://www.e3g.org/docs/E3G\\_Financing\\_the\\_Green\\_Deal\\_May\\_2011.pdf](https://www.e3g.org/docs/E3G_Financing_the_Green_Deal_May_2011.pdf)

Amon, A. & Holmes, I., 2016. Energy efficiency as infrastructure. Leaping the Investment Gap. E3G See:

[https://www.e3g.org/docs/E3G\\_Energy\\_Efficiency\\_as\\_Infrastructure.pdf](https://www.e3g.org/docs/E3G_Energy_Efficiency_as_Infrastructure.pdf)

The Energy Efficiency Financial Institutions Group, 2015. *Boosting finance in energy efficiency investments in buildings, industry and SMEs*. See: <https://ec.europa.eu/energy/en/news/new-report-boosting-finance-energy-efficiency-investments-buildings-industry-and-smes>

De T'Serclaes, P., & Jollands, N., 2007. *Mind the Gap. Quantifying Principal-Agent problems in Energy Efficiency*. See:

[https://www.iea.org/publications/freepublications/publication/mind\\_the\\_gap.pdf](https://www.iea.org/publications/freepublications/publication/mind_the_gap.pdf)

Nelson, A., 2016. EU hits energy reduction target six years early. *The Guardian*. See:

<https://www.theguardian.com/environment/2016/sep/06/eu-energy-reduction-target-six-years-early-greenhouse-gas-emissions>

Bertoldi, P., Lopez, J., Labanca, N., 2016. Energy Consumption and Energy Efficiency Trends in the EU-28 (2000-2014). *Publications Office of the European Union*. See <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/energy-consumption-and-energy-efficiency-trends-eu-28-2000-2014>

## Biodiversity and Nature

Caldecott, B. & Jepson, P., 2015. A framework for Protected Area asset management. *Smith School of Enterprise and the Environment, University of Oxford*. See: <http://www.smithschool.ox.ac.uk/research-programmes/protected-area/framework-paam.pdf>

Huwyler, F., Käppeli, J., Tobin, J., 2016. Conservation Finance From Niche to Mainstream: The Building of an Institutional Asset Class. *Credit Suisse Group AG and McKinsey Center for Business and Environment*. See

<https://www.credit-suisse.com/media/assets/corporate/docs/about-us/responsibility/banking/conservation-finance-en.pdf>

## Stranded Assets

Caldecott, B., 2015. Avoiding Stranded Assets. In G. Gardner, T. Prugh, & M. Renner, eds. *State of the World 2015: Confronting Hidden Threats to Sustainability*. Worldwatch Institute. Available at:

<http://www.worldwatch.org/state-world-2015-confronting-hidden-threats-sustainability-0>.

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Caldecott, B., 2015. Why stranded assets matter and should not be dismissed. *The Conversation*. See: <https://theconversation.com/why-stranded-assets-matter-and-should-not-be-dismissed-51939>

Carbon Tracker Initiative, 2013. *Unburnable Carbon 2013: Wasted capital and stranded assets*, London: Carbon Tracker Initiative. See: <http://carbontracker.live.kiln.digital/Unburnable-Carbon-2-Web-Version.pdf>

Christiana Figueres, 2013. Keynote address by Christiana Figueres, Executive Secretary UNFCCC at the World Coal Association International Coal & Climate Summit. See: <http://www.unep.org/newscentre/Default.aspx?DocumentID=2754&ArticleID=9703>

Gurría, A., 2013. The climate challenge: Achieving zero emissions - Lecture by OECD Secretary-General. See: <http://www.oecd.org/about/secretary-general/the-climate-challenge-achieving-zero-emissions.htm>

Krause, F., Bach, W. & Koomey, J., 1989. *Energy Policy in the Greenhouse*, El Cerrito, CA

McGlade, C. & Ekins, P., 2015. The geographical distribution of fossil fuels unused when limiting global warming to 2 [deg]C. *Nature*, 517(7533), pp.187–190. See: <http://dx.doi.org/10.1038/nature14016>.

## How to Effectively Speak to and Engage with Investors

Malcolm Gladwell and Panoply Media. 2016. *Revisionist History*, Episode 9. <http://revisionisthistory.com/episodes/09-generous-orthodoxy>

The Ethical Investment Advisory Group. 2015. *Climate Change, The Policy of the National Investing Bodies of the Church of England and the Advisory Paper of the Ethical Investment Advisory Group of the Church of England*. <https://www.churchofengland.org/media/2223994/climate.change.policy.30.04.15.pdf>

## Fossil Fuel Divestment and Risk Creation

Ansar, A., Caldecott, B. & Tibury, J., 2013. Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets? *Smith School of Enterprise and the Environment, University of Oxford*, (October). See: <http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/SAP-divestment-report-final.pdf>

# SUSTAINABLE FINANCE

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