

Wakefield College

Carbon Management Plan

2015 – 2020



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1 Foreword from Sam Wright

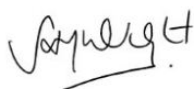
As a leading organisation within the community, Wakefield College is extremely conscious of its ethical role and how our business activities impact upon the environment. Notwithstanding the increasing economic and environmental pressures placed upon businesses, there is increasing evidence of the warming effect of raised carbon within the atmosphere.

Environmental sustainability has and continues to be a key objective in the College's Strategic Plan. This Carbon Management Plan sets out our contribution to addressing the issues of climate change, together with financial benefits and environmental sustainability. To achieve our goals we will continue to engage with suppliers, consultants, students and staff to cultivate a culture of carbon reduction and environmental awareness, as an integral aspect of the Colleges activities.

Wakefield College will monitor and review the implementation of opportunities identified in this plan, ensuring that sufficient resources are available to lower our carbon emissions further. We will promote our carbon reduction activities and publish all data through the College website.

Wakefield College is pleased to be able to present the second edition of our Carbon Management Plan, which builds on the success of our 2011 – 2015 plan. It further highlights the opportunities and challenges that we face, in order to achieve our target to reduce our carbon emission by a further 10 per cent, by the year 2020. A target that we will endeavour to surpass as part of our continual commitment to reduce our carbon emissions.

I take great satisfaction in leading the College in the pursuit to reduce our carbon emissions with the support from the College's 'Green Champions'. I will ensure that this plan makes an important contribution to the positive image and reputation of Wakefield College, as an outstanding place to study and work.



Sam Wright
Principal

2. Introduction and Background

2.1 Wakefield College and Carbon History

Wakefield College is the largest College within the district and has an impressive track record in providing education and training in Wakefield and its surrounding area since 1868.

Wakefield College operates from three campuses. The size and condition of the properties for the baseline for this Carbon Management Plan (CMP) can be seen in appendix 1.

Wakefield College recognises by introducing carbon management into the organisation, it will safeguard itself against potential negative impact of future legislation. The Carbon Management Team continue to engage with both staff and students to educate and inform that actions taken now, will enhance our ability to adapt and minimise the risk of exposure of the College to future legislation.

This Carbon Management Plan (CMP) sets out Wakefield College's approach to mitigating climate change through carbon reduction. This document is a continuation of the College's CMP 2010 – 2015 that was initiated from the Carbon Trust's Carbon Management Programme for the FE sector. This included the establishment of governance structures and raising awareness across the College. We have worked with our suppliers and service partners in measuring our carbon emissions. Critically it outlines how the College intends to embed carbon management into all areas and to adopt it as a key objective for the future.

2.2 Ownership

To continue to deliver carbon reduction, we have a team and governance structure that will ensure successful implementation. This includes the Principal and Governors of the College. The College seeks to enhance the team by recruiting influential members from the Senior Leadership Team, Students, Staff, Union representation, Suppliers and Contractors. The Director of Estates and Utilities Officer have overall accountability for the delivery of this plan and its achievements. The accountability and decision making onogram for this CMP can be seen in appendix 2. Roles and responsibilities can be seen in appendix 3.

2.3 Principal Drivers

Climate change is the greatest challenge facing the world today. It is a global issue that demands a global response. All countries must be part of the solution. The UK plays a leading role on the international stage. The government are working through the European Union, G8 and UN Framework Convention on Climate Change (UNFCCC) processes to find ways to reach global agreement on action to avert dangerous climate change.

Wakefield College is committed to reducing our carbon emissions and as a leading educational establishment we are conscious of the ethical motives to drive this programme forward. Wakefield College will lead by example and become an inspiration and source of reference that other establishments can aspire to. Morally and ethically there are numerous reasons as to why Wakefield College should take this journey but we have identified the following key drivers:

- **Energy Cost Savings:** Energy and fuel costs have fluctuated significantly in the last ten years. Prices we pay for our energy will continue to be volatile with the potential to increase at a significant rate. Therefore energy efficiency makes good business sense.
- **High Profile Issue:** Climate change has become a high profile issue and our organisation wants to enhance its reputation by showing leadership in this area.
- **Student Concern:** Demonstrating strong environmental credentials will help us attract students.
- **Employee Concern:** Our employees are concerned about the environment and we believe that taking action on carbon will increase employee satisfaction.
- **Expected Future Targets:** There might be an expectation of future external targets set for the College, e.g. regulatory or in partnership with other organisations.
- **Reputation:** The College is committed to demonstrating good environmental performance internally and to the wider community and wants to be recognised as one of the best performing Colleges on green issues. By setting a good example and providing learning environments which are efficient and environmentally friendly. We aim to produce knowledgeable and responsible citizens, who will respect and protect the natural environment both now and in the future.

2.4 Carbon Management Plan 2010 – 2015

The College's first Carbon Management Plan (CMP) achieved over 37% percent reduction of carbon between 2010 and 2015 against the original footprint of the CMP. This was achieved by:

- **Utilisation:** The review of operational hours and the introduction of challenging booking viability for both internal and external customers. Improving the centralised time table database to allow appropriate use of spaces and challenge inefficiencies.
- **Environment:** The creation and implementation of an environmental policy that identified the College operational boundaries for heating and ventilation. This is supported by room information and how to operate controls locally. The introduction of responding to wasteful or inefficient practices has significantly impacted on reducing previously wasted energy.
- **Harrison Building Refurbishment:** 2011/12. The College invested £4.2m nett construction cost to refurbish and extend this tired building. We chose not to include fossil fuelled heating and ventilation in lieu of air source heat pumps supported by photo voltaic panels. This building achieved a **Very Good** rating under the BREEAM 2008: Education: Higher Education.
- **Salix Fund:** 2012/13 – LED Lighting. £348,000 funding awarded to replace inefficient lighting with LED.
- **Photovoltaic Installation:** 2012 – Castleford. The Coalfields Regeneration Trust (CRT) supplied and installed free of charge PV panels to the Castleford Campus. The College benefits from the energy generated and the CRT benefit from the Feed in Tariff (FiT).
- **Photovoltaic Installation:** 2013 – Castleford. The CRT installed an additional 50kw of PV.

- **Wakefield City Campus A & D Block Roofs:** 2010/11. The College invested £166k to replace and super insulate the roof of Radcliffe Building (block A) and repair the roof of Gissing building (block D).
- **Radcliffe Fenestration and Cladding:** 2013/14. The College has invested £2.1M nett construction cost as part of the property strategy to refresh the external face of the building. The cladding and windows replaced the poor quality materials fitted to the building that was constructed in 1965. The cladding included super insulation of the main structure and the installation of triple glazed windows that reflect thermal gain and retain internal heat. Since completion the gas consumption in this building has been reduced by 49%.
- **Procurement of College Fleet:** 2013-2016. The College has leased highly energy efficient pool cars and is in the process of replacing the people carrier and the older van stock. With a further look towards replacing the 2 minibuses.
- **Radcliffe Local Water Heaters:** 2015. Localised water heaters have been installed in this building at a cost of £15,400. This amount included the insulation for the Radcliffe Boiler House. The boiler at 100.42kW would have used 100,420 kW a year about 18.5777 tonnes CO₂/annum; the water heaters (worked for the same times, 4hrs, 5 days, 50 weeks) use 10.36 tonnes CO₂/annum, a saving of 8.2177 tonnes CO₂/annum 44.23%.

The achievements of this plan can be seen in appendix 4.

2.5 Our low Carbon Vision and Target

Wakefield College vision and targets relating to carbon reduction are initiated from the desire to:-

- Contribute to the efficiency savings of the College by reducing our use of energy and fuel.
- Increase the proportion of our energy needs from renewable and clean fossil fuel technology (for example photovoltaic sources and potentially good quality combined heat and power).
- Promote continuous improvement of our environmental performance.
- Demonstrate leadership and good practice.
- Reduce Wakefield College's financial liability to purchase emissions allowances under the Carbon Reduction Commitment (CRC).
- The EU Building Energy Performance Directive that requires all campus buildings with a floor area over 250m² to display a Display Energy Certificate (DEC) giving visibility of carbon and energy performance to all building users.
- Compliance with building regulations Part L2 and F.
- Discharge the Colleges global social responsibility, in part by contributing to national targets to reduce carbon dioxide emissions.
- Maintain reputational and other competitive advantages to be gained from a pro-active approach to energy management.

The College plans major refurbishment / replacement works to buildings at the Wakefield Campus. All works are expected to reach a "BREEAM **Very Good**" which is the minimum standard the College will accept.

2.6 Targets of 2015 – 2020

This CMP will build on the success of the 2010 – 2015 plan and will achieve a further 10% reduction of Carbon emissions by 31 December 2020. To achieve a further year on year reduction in emissions, we will focus on the management of energy controls, thermal insulation, utilisation, travel, transport, waste management, procurement, staff and student information. The collection of data is identified within appendix 5.

We will measure carbon emissions associated with business travel by recording fuel used and mileage of pool cars and travel claims. We will measure property related carbon emissions through consumption in kWh used within each property.

2.7 Carbon Trust Standard Accreditation

The College achieved the Carbon Trust Standard Award in 2013 and the Carbon Trust revalidated the award in February 2016. The Carbon Trust provides independent verification and certification that recognise real achievements in sustainability, identify improvement opportunities that enhance the College reputation and builds trust with customers, investors and stakeholders.

The certification delivers more than just a certificate of achievement. The core methodology, based on a process of working through four key stages: Measure, Manage, Reduce and Certify, has helped the College identify and capture opportunities to reduce resource use thereby reducing cost. The recommendation report from the February 2016 revalidation can be seen in appendix 6.

2.8 Key Partners and Sector Support

The College has the support of a number of key partners in the delivery of this CMP. They are;

Yorkshire Purchasing Organisation (YPO): Framework for the purchase of gas and electricity. The framework is used by over 200 local authorities and public sector organisations. Additional benefits to this framework are advice on legislation and market initiatives, billing and tariff rates, proactive support and advice regarding energy and sustainability in the Public Sector.

Environmental Association for Universities and Colleges (EAUC): This specialist HE and FE group provide sector specific best practice advice and training regarding sustainability. The regional meeting programme allows valuable networking opportunities for sharing best practice.

Carbon Trust: The Carbon Trust, are agents of Government who undertake carbon reduction across all industries. They set key performance indicators (KPI) for industry and public sector. Wakefield College has achieved re-accreditation to the Carbon Trust

Standard. Within this verification they provide a report with recommendations. Please see appendix 6 to view the February 2016 Carbon Trust Standard recommendations for the College.

Wakefield Metropolitan District Council (WMDC): Wakefield College is a key member of WMDC Sustainable Steering Group. Other members of this group include NHS, WDH, Retailers and other significant private and public sector partners within the district. The College is a working with WMDC and others in projects including District Heating scheme feasibility and travel options for the district.

WYCA / LEP: The College is a member of WYCA Travel Planning Network. The objective of this network is to reduce the use of private vehicles and create sustainable travel options for West Yorkshire. It is through this group that Wakefield College can provide favourable options for staff and student Metro travel cards and business travel around West Yorkshire.

3. Scope And Objectives Of The Plan

3.1 Scope of the Plan

Wakefield College recognises that for this Carbon Management Plan to be effective it is essential that everyone understands its strategic objectives. They are:

- To reduce the consumption of utilities, primarily electricity, gas and water
- To reduce the environmental impact of emissions associated with the operation of the College
- To reduce the costs associated with the procurement of utilities and disposal of waste
- To develop a prioritised list of investment opportunities to deliver the savings
- To demonstrate to staff, students and the wider community that Wakefield College has in place a progressive and comprehensive programme to manage its impact upon the environment
- To integrate the objectives of carbon management into the procurement and development of new buildings and refurbishment projects
- To embed the principles of carbon management into the culture of Wakefield College

3.2 Baseline 2014 - 2015

The carbon baseline is a record of our approximate carbon emissions in a chosen year. Targets and performance in reducing emissions are measured against this figure as a % of the baseline value. This emissions baseline will be used to monitor and measure changes in emissions resulting from the carbon-saving initiatives identified in this plan. The carbon baseline is a quantitative reference(s) providing a basis for comparison of carbon/energy performance.

Wakefield College's carbon baseline reflects emissions for the specified period of 2014 – 2015. These emissions totalled circa 2006 tonnes as detailed within Appendix 7. These

figures have been determined from our utility bills and we have set an aspirational carbon reduction target of 200.6 tonnes CO₂ which is 10% of our total Scope.

To accommodate any changes of the footprint that will impact on the target reduction. The evaluation will include the verified property footprint baseline year of 2014 -2015 in appendix 1

3.3 Culture of Carbon Management

The culture of approach to carbon management within any organisation is a key factor of success. The Carbon Trust Maturity of Culture of Carbon Management is explained in appendix 8. Wakefield College culture for carbon management has grown significantly within the past five years. Initially identified as being at stage 1 (grass roots), we have progressed to a status of a strong stage 2 (functional) / week stage 3 (strategic).

During the period of this CMP the objective is to become a strong stage 3 (strategic) / stage 4 (ecosystem).

3.4 (Short Term) projects requiring funding 2015-2017

- **Improve the BMS Control:** The College will improve the control of the heating and ventilation systems through our central Building Management System (BMS). We will install enhanced controls to replace traditional timeclocks and manual controls. Estimated value £25k.
- **Install highly efficient boilers to Gissing Building:** This project will reduce energy consumption and heat wastage through the failing campus network pipeline. The independent operation of Gissing will allow a significant reduction in wasted energy as the current operation requires heat to be provided simultaneously to both Gissing and Radcliffe. Radcliffe heat requirement is lower than Gissing and this leads to the overheating of Radcliffe. Estimated value £30k.
- **Install additional PV to Radcliffe and ASIC roofs:** This will reduce energy demand from the grid. Estimated value TBA.
- **Introduce IT based conference and meeting facilities:** This will reduce the need to travel for meetings. Estimated value £15k.
- **Procurement Strategies:** The creation of a procurement strategy that includes sustainability in the supply of goods and services. The qualitative assessment within procurement must include whole life costs, end of life disposal and recyclability of purchases.

3.5 (Medium/Long Term) projects requiring funding 2017-2020

- Replacement of aged fossil fuel boilers within Radcliffe. The boilers within Radcliffe are approaching the end of their operational life. They are now oversized for the heat demand of the building following the super insulation of the property. Estimated value £45,000.
- Investigate district heating scheme with WMDC.
- Replace the existing vehicle fleet with zero carbon alternatives.

- Replace Castleford heating plant with air source heat pumps.
- Disposal of Thornes Park properties.

3.6 Green Travel Plan

The College is a member of the West Yorkshire Travel Passenger Network (WYTPN) and encourages staff and students to use public transport. The Green Travel Plan identifies that the actions to achieve this goal are;

- Provide a personal travel plan for all staff.
- Provide Corporate Business Travel cards for business travel around West Yorkshire.
- Provide highly efficient pool cars that are supported by City Car Club membership for Senior Leadership Team and other regular users.
- Maintain 40p per mile (below the HMRC recommendation) to discourage staff from using their own cars.
- Promote the discounted staff travel card scheme through Metro and Northern Rail.
- Promote Lift Share and through the Car Parking policy create advantages for staff who actively take part in the scheme.
- Promote and support walking.
- Promote and support cycling that includes improved welfare facilities at all campuses and encourage staff to take advantage of the Cycle to Work scheme.

3.7 Energy

Wakefield College conducts and documents an energy planning process. Energy planning shall be consistent with the revised energy policy and shall lead to activities that continually improve energy performance. This Carbon Management Plan sets out our strategy to improve our energy management system to reduce carbon emissions by 10% by 2020 from a baseline of 2014 - 2015. The baseline can be seen in appendix 7.

3.8 Waste Management

The College has employed contractors with the aim to recycle and re-use waste where appropriate. The current contractor has an obligation under contract to provide minimum amounts of waste to landfill. The College will maintain this contractual obligation and increase re-use and recycling by including end of life disposal of equipment and goods as part of the qualitative assessment of procurement.

3.9 Utilisation

The College monitors the use of property to ensure the efficient use of space. The Property Strategy identifies that we need to increase utilisation to ensure efficiency and reduce the operational footprint of the College. Our target is 40% by 2016. This will raise to 48% by 2020. This will be achieved by refurbishing properties with suitable sized and flexible accommodation. We will maximise the use of accommodation during out of main hour's operation to reduce costs and our carbon emissions.

3.10 Display Energy Certificates

From 9 July 2015 public properties with useable floor space larger than 250m² must comply with the regulations for Display Energy Certificates (DECs). A DEC shows the energy performance of a building based on actual energy consumption as recorded annually over periods up to the last three years (the Operational Rating). The DEC also shows an Asset Rating for this building if this is available.

The Operational Rating (OR) is a numerical indicator of the actual annual carbon dioxide emissions from the building. The various types of energy consumption from occupying a building must be brought together on a common basis so that the performance of one building can be compared with that of another. The UK has decided that the common unit should be CO₂ emissions, since this is a key driver for energy policy. This rating is shown on a scale from A to G, where A is the lowest CO₂ emissions (best) and G is the highest CO₂ emissions (worst).

Appendix 9 demonstrates the current performance of buildings and their historical rate.

3.11 Communication and Training

Wakefield College will accurately relay this CMP and all other aspects of the College carbon reduction strategy to students, staff, suppliers, partners and stakeholders.

The College will ensure that:

- Carbon Management will be integrated with new and existing awareness campaigns for energy efficiency and transport
- Carbon benefits of existing Programmes will be highlighted to staff
- Carbon management hints and tips will be included in staff induction packs and other staff and student publications
- Carbon management will be integrated into environmental awareness training for all staff and procurement training
- Publicity on the achievements of the Carbon Management Programme will be included on the website, College literature, annual Environment Statement and press released to local media
- Give a clear signal to staff and students from the Senior Leadership Team that Wakefield College is committed to this issue for the long term
- Establish a clear shared understanding of the Carbon Management Plan's vision and goals
- Keep the programme in touch with changing academic, property, student, staff and other requirements.
- Enable early recognition of risks and issues so that the programme plan can be adapted where appropriate
- Ensure that decisions are based on accurate information
- Ensure that staff and students understand their personal responsibility.

4. Funding and Procurement

4.1 Funding

At present Wakefield College is in the midst of a number of stages of refurbishment of the main City Centre Campus identified within the Property Strategy. Each project will require a robust business case. It has also been identified that future refurbishment / redevelopment projects will include a high degree of sustainability within specifications.

4.2 Procurement

The College understands the importance of procurement and how it can significantly impact upon the Colleges carbon footprint. The College procurement policy will be realigned to meet demands of this CMP and allow for the following:

- Whole life cycle analysis of materials purchased by the College
- Sustainability to be an integral element in our tender process
- Opportunities to share equipment and facilities with partners both internal and external to the College

5. Monitoring and Reporting

This section describes how we will improve the quality of carbon emissions data and progress reports. Robust data will provide us the basis to monitor and report on the results of our actions and it will help to drive behavioural change.

5.1 Monitoring

The Utilities Officer will meet with the Director of Estates and discuss all works in progress. These will be measured against predicted forecasts and targets, determined within a specific projects business case.

The College will continue to review and monitor KPI's for all elements of energy data capture (gas, electricity, water and waste). These will be reported as part of the Estates Business Review process.

Travel data will continue to be captured through liaison between the Utilities Officer and HR. The Utilities Officer, will also capture usage of the Travel Cards, Pool Cars and the uptake of alternative travel options by staff and students.

5.2 Reporting Progress

The College has a commitment from the original CMP and Carbon Trust to;

- Ensure that carbon management is being implemented effectively
- Enable management to be improved and optimised where appropriate

- Provide data that can be used to update the emissions targets and programme scheduling

The Director of Estates and the Utilities Officer will create an annual report for Senior Leadership Team and the Board of Governors. This document and all other pertinent information will be made publically available via the internet in the Go Green portal. The report will include:

- CO₂ savings against target
- Lessons learnt
- Key actions to be taken to improve our performance

5.3 Accreditation

The College as part of the original CMP achieved the Carbon Trust Standard Award. This requires the College to provide all consumption data for energy and travel along with our activities and actions that support reduction in carbon emissions. This is then independently verified by the Carbon Trust. Once assessed they will either revalidate the awards or fail our application. The revalidation in 2015 was highly complementary and made a number of recommendations that can be seen in appendix 6.

6 Appendices

1. Property Footprint and Condition
2. CMP Decision Process
3. Roles and Responsibility
4. 2009 - 2015 CMP Impact
5. Data Sources and Quality
6. Carbon Trust Standard Recommendations
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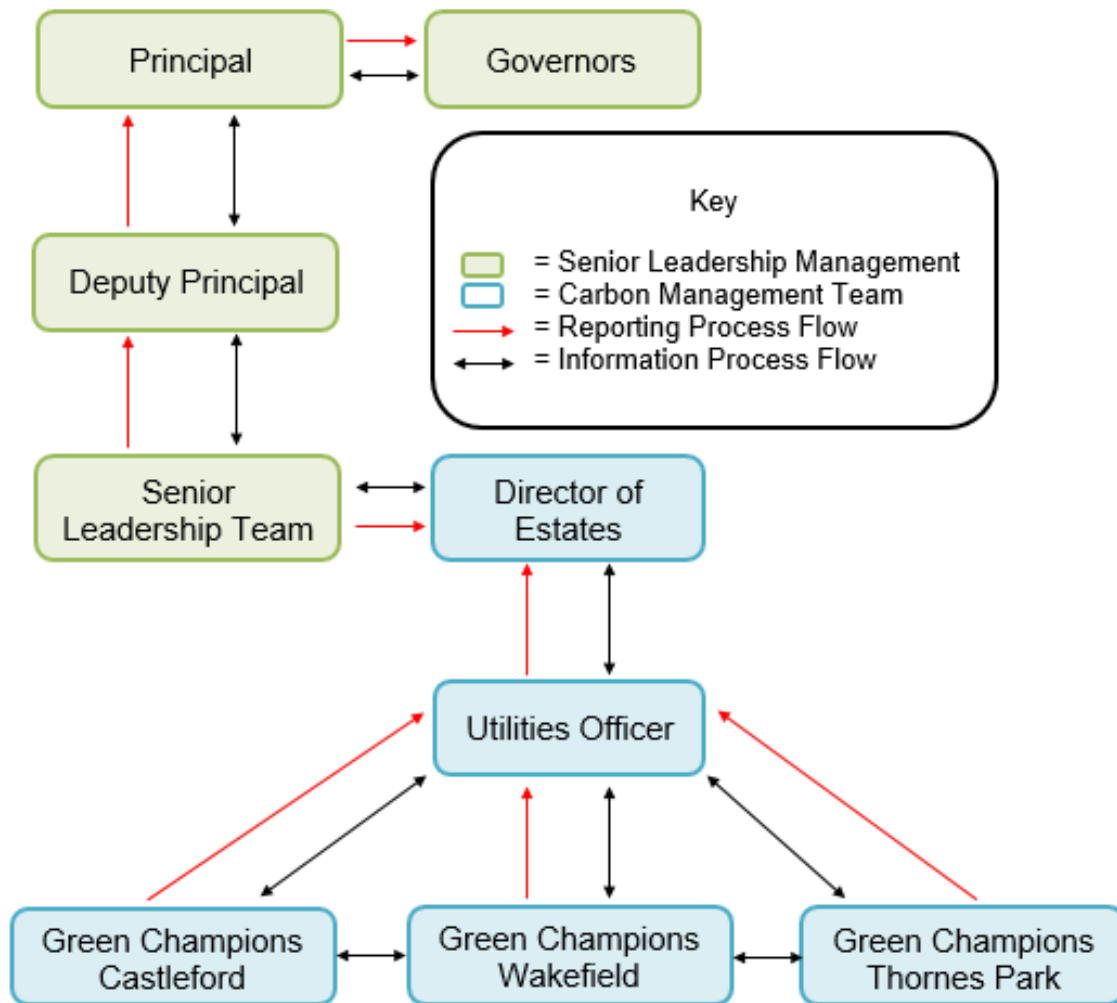
Property Condition September 2015

	Size m2	A	B	C	D
Thornes Park Campus					
Main Teaching Block					
Ground Floor	2469.9			2469.9	
First Floor	2249.4			2249.4	
Second Floor	1384.8				1384.8
Third Floor	564.4				564.4
Theatre	1070.9				1070.9
Basement	132.2				132.2
Upper floor	99.3				99.3
Music Block	1252.3		1252.3		
Sports Hall	948.8				948.8
First Floor	148				148
Basement	61.8				61.8
Swimming Pool	338.6				338.6
Total Area	10720.4	0			
City Campus					
Radcliffe Building					
Basement	549	549			
Ground Floor	1064			1064	
First Floor	1419			1419	
Second Floor	1419			1419	
Third Floor	1419	1419			
Fourth Floor	1419	1419			
Total Area	7289				
Harrison Building					
Ground Floor	932	932			
First Floor	932	932			
Second Floor	932	932			
Third Floor	932	932			
Total Area	3728				
Gissing Building					
Basement					
Ground Floor	948		948		
First Floor	948		948		
Total Area	1896				
C Block	1032			1032	

Appendix 1 Property Footprint and Condition

F Block					
Basement	72.91				72.91
Ground Floor	671.6			671.6	
First Floor	812.8			812.8	
Second Floor	810.8			810.8	
Extension Ground	336			336	
Extension Basement	336			336	
Total Area	3040.11				
Waterton Building					
Basement	325	325			
Ground Floor	322	322			
Mezzanine	40	40			
First Floor	323	323			
Balcony	22		22		
Total Area	1032				
Lightwaves					
Construction	1000		1000		
Sports*	1000	150	850		
Total	2000				
Newstead				146	
Crofton	456	456			
Castleford Campus					
Ground Floor	3725	3725			
First Floor	3399	3399			
Second Floor	3103	3103			
Third Floor	926	926			
Total Area	11153				
TOTAL	42492.51	19884	5020.3	12766.5	4821.71
%		47%	12%	30%	11%
Total GIA					42492.51

Appendix 2 CMP Decision Process



The programme is overseen by the College's Principalship chaired by the Principal.

The Director of Estates reports through the College's Senior Management Team and to the governing body.

The Director of Estates in essence will;

1. Champion and provide leadership on carbon management
2. Set and review strategic direction and targets
3. Set the scope of the carbon management programme
4. Approve carbon reduction projects
5. Recommend budgetary spend required to achieve future savings projected in the plan
6. Report progress to Senior Management Team and Governors.

The Utilities Officer in essence will;-

1. Define the terms of reference for the Green Champions and ensure appropriate representation
2. Monitor progress by the Green Champions in implementing the Plan
3. Resolve any issues escalated to them by the Green Champions
4. Publicise the College's performance against the targets
5. Raise awareness of initiatives through Team brief, College Intranet, Global e-mails, Marketing e-newsletter, Staff/student meetings, Staff/student Functions, Green Team Notice boards.
6. Issue noncompliance notices to offenders.

Green Champions in essence will ultimately be responsible for raising the profile of all the projects and embedding sustainability across the College. They will also assist in-

1. Identify potential projects and assisting the project lead in constructing the business cases for all potential projects. These actions will be supervised by the Energy Officer who will be guided by the project sponsor in their regular programme meetings previously included within this document.
2. To further embed responsibility within the College ethos the 'Green Champions' is planning to introduce Carbon saving KPIs for Departments against which Managers will be measured.
3. HR department so that Carbon saving will be included in relevant job descriptions
4. The Green Champions to act as champions in their Departments
5. Information on the environment policy and carbon management issues will be included in all induction packs

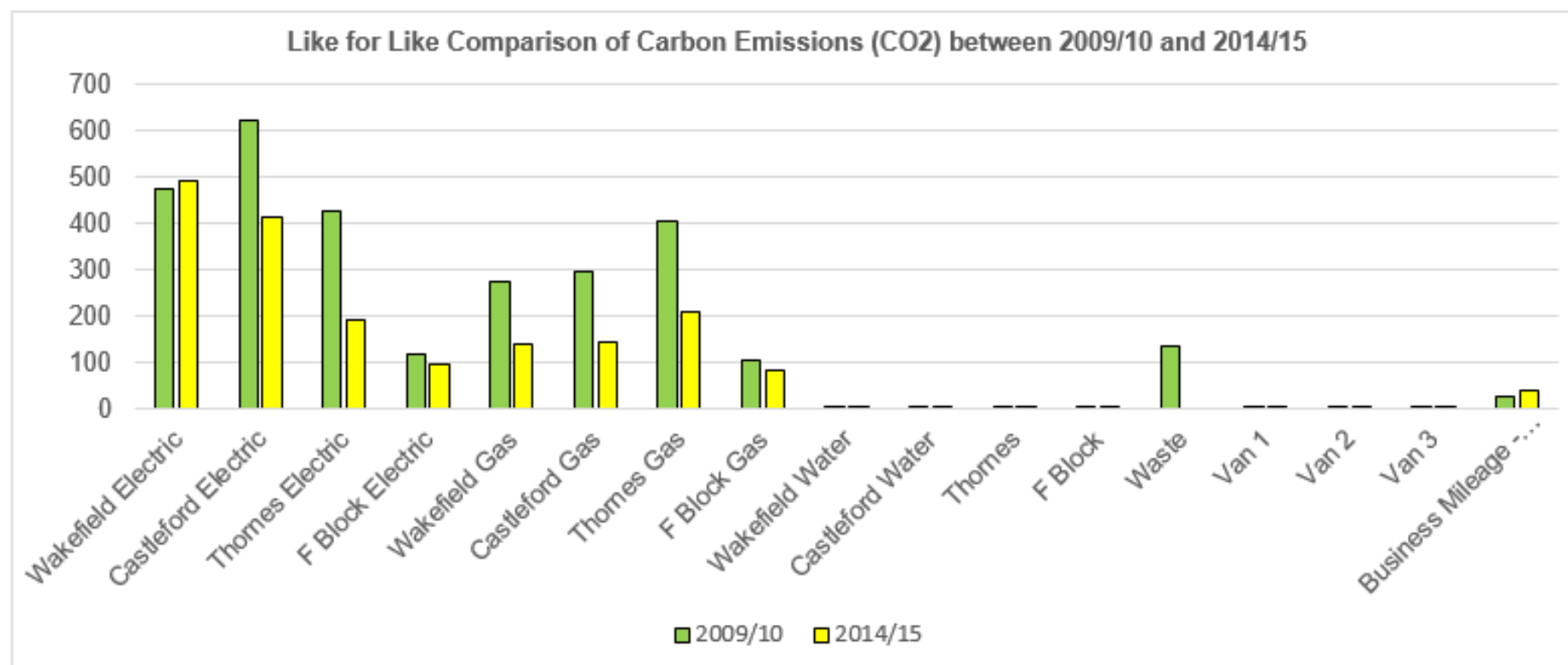
The Utilities Officer aided by the Director of Estates will continuously present regular reports back to senior management through the 'Senior Leadership Team.

In addition to the above, the Green Champions will assist.

Appendix 4 2009 – 2015 CMP Impact

	2009/10		2014/15	
Description	CO ² (tonnes)	%	CO ² (tonnes)	%
Gas & Electric	2721	94	1766	97
Transport	29	1	42	2
Water & Waste	138	5	9	1
Total	2888	100	1817	100

Fig: like for like comparison 2009/10 to 2014/15 (does not include Waterton, PV, and C1s, MPV or minibuses)



Emissions sources included in baseline scope	Data sources and quality
Level 1 Emissions - includes all direct emissions from sources directly controlled by the College - fuels consumed on site and from owned/leased vehicles - purchased electricity – PV Production	
Fuel use in buildings and estates	Wakefield College has included all gas emissions within the baseline. Data quality is average and details are obtained predominantly from utility bills. This is measured against the year on year and also the 'E-Mandate'. Smart metering has been identified as a potential project to enhance the monitoring and reporting.
Fleet transport emissions	Emissions relating to fleet transport/mileage are included in the baseline for us to effectively evaluate and monitor the emission levels in respect to overall CO ₂ levels.
Electricity consumption	Wakefield College has included all electricity emissions. Data quality is efficient and includes the capture of consumption through half hourly metering.
PV Generation	Measurement of the generated electricity is recorded but not the amount returned to grid as it is a partnership agreement with a third party.
Level 2 Emissions – Business Travel	
Business travel (public transport and staff vehicle use)	Emissions relating to staff business mileage are included in the baseline. We monitor miles claimed as expenses, travel claimed on rail and public transport and data from the use of business metro cards to effectively evaluate and monitor the emission levels in respect to overall CO ₂ levels.
Business Travel (regular Taxi use)	Data is taken from the invoice records the Health and Safety Department hold for First Aid Taxi use.
Business Travel (other Staff and Student travel)	From June 2016 the Finance Department record all air and train tickets booked for staff and students. This will be used in future for a more accurate record of CO ₂ emissions from these forms of business travel.
Level 3 – all other emissions	
Water consumption	Data is obtained from utility bills and is based on the volume of water consumed/disposed of. Although currently not a part of the Carbon Trust Standard Award the College takes into account CO ₂ for this commodity for the purpose of the CMP baseline.
Commuting for staff	Staff commuting emissions are excluded from the baseline.
Commuting for students	Emissions relating to student commuting from their place of residence to the College are not included in the baseline.

Appendix 5 Data Sources and Quality

Emissions sources included in baseline scope	Data sources and quality
Waste	This data is not required to be recorded as part of the Carbon Trust Standard Award. However data for waste transferred to landfill is recorded from invoices from our service provider and has been included within this scope.
Procurement	Wakefield College uses Government purchasing consortiums for a significant amount of goods and services procurement. This data collection and supportive policies are key objectives for the 2015 – 2020 CMP.

Carbon Trust – Recommendations Summary	
This section summarises the high priority recommendations made and opportunities identified by the assessor, which could be considered to help achieve continuous improvement. Particular attention should be paid to these as there may be significant reputational and financial benefits from addressing them. These recommendations will be revisited during the Midpoint Review and support for them discussed where further support can be offered.	
Priority One	Date Completed
Wakefield College should work towards a broader internal and external communication of its carbon performance, which would show the good results the organisation has had in the past years. The materials used in the communications should present the total footprint of the organisation along with a breakdown of the emissions and the performance against previous years and set targets, similar to the CMP Review report. Details of the boundary and scopes considered should also be included. Please see the "Reporting and Communication" section's recommendations for more details.	
Priority Two	Date Completed
The model used to calculate the College's footprint should be updated in order to allow for an update of the emissions factors. This could be done by either unprotecting the spreadsheet or by updating the model to the latest version. If Wakefield College wishes to pursue any of these options, please contact your client manager.	
Priority Three	Date Completed
Following the good work the organisation has done in managing carbon emissions within its operations, Wakefield College should now look into initiatives that will lead to carbon emissions reductions that lie upstream (with its suppliers). On a first approach, Wakefield should work with the closest suppliers, such as the caterers, to share best practice learning from the work the college has done recently, and develop programmes to reduce energy use within the suppliers' operations	

Carbon Trust – Recommendations - Summary from the Carbon Trust Report (February 2016)				
Midpoint Review = July 2016 = Light touch analysis on data quality and readiness for recertification = dialogue about any outstanding questions/queries = assistance with staying on track to recertify = update on important dates and recertification requirements = Discussion of changes made to carbon management practices and any actions taken on the back of these recommendations.				
Section		Recommendation	Action to be taken	Date to be completed
Governance	Policy	Review CMP and Environmental Policies more frequently		
	Responsibility	Include students in the Energy Team as they are the main users of the College buildings		
	Reporting & Communication	Work towards a broader internal & external communication of the carbon performance	present total footprint, it's breakdown and performance against previous years and set targets - to include scope and boundaries	
		Share CMP Review on intranet & website.	Create specific materials to share internally & externally that are informative and appealing.	
			Add information to the 'Quick Facts' section of the 'About Us' page of the public website. To include breakdown of emissions since 2011 or CMP Review. Create an Annual Carbon Report.	
			Create engaging communication materials showing achievements, initiatives and encourage students and staff to contribute	

Appendix 6 Carbon Trust Standard Recommendations

Section		Recommendation	Action to be taken	Date to be completed
Measurement	Accounting Process	PV exported data is reported	Contact CRT to see if there is any way of monitoring what goes back into the grid. May need a monitoring device.	
		Owned vehicles' reported by fuel consumption instead of spend or mileage	Speak to Vehicle Technician to see if can record litres put into the vehicles or if he can give me the cost per litre and I can calculate it	
		Finance develops a system to split travel data by mode and record all travel data by mileage not just spend by recording start and destination of each trip.	Speak to Finance to see if there is any way this can be recorded when ordering train/flight tickets. Or any other tickets for travel.	
		Update the model to calculate the annual carbon footprint to allow for updated emission factors.	Speak to CT client manager to see if can have the spreadsheet unprotected so can enter the updated DECC emission Factors. Or update the model to the latest version.	
		Create a process manual including a description of the methodology used to collect data and calculate the organisations footprint to ease any future transitions of staff.		
	Monitoring	Create a monthly report of: 1. PV electricity generation and export 2. Fuel consumption by owned vehicles 3. Business travel broken down into different modes: car, taxi, train, aeroplane.		
	Targets	CMP to include a minimum carbon reduction target	The college will aim for a reduction of 10%	
		New CMP to include new targets to allow for more focused goals. E.g. Specific emissions sources like business travel or to a specific building reflecting the improvement plans of each site. By creating targets with a more focused scope the College would have a more informed discussion around the overall reduction target		

Appendix 6 Carbon Trust Standard Recommendations

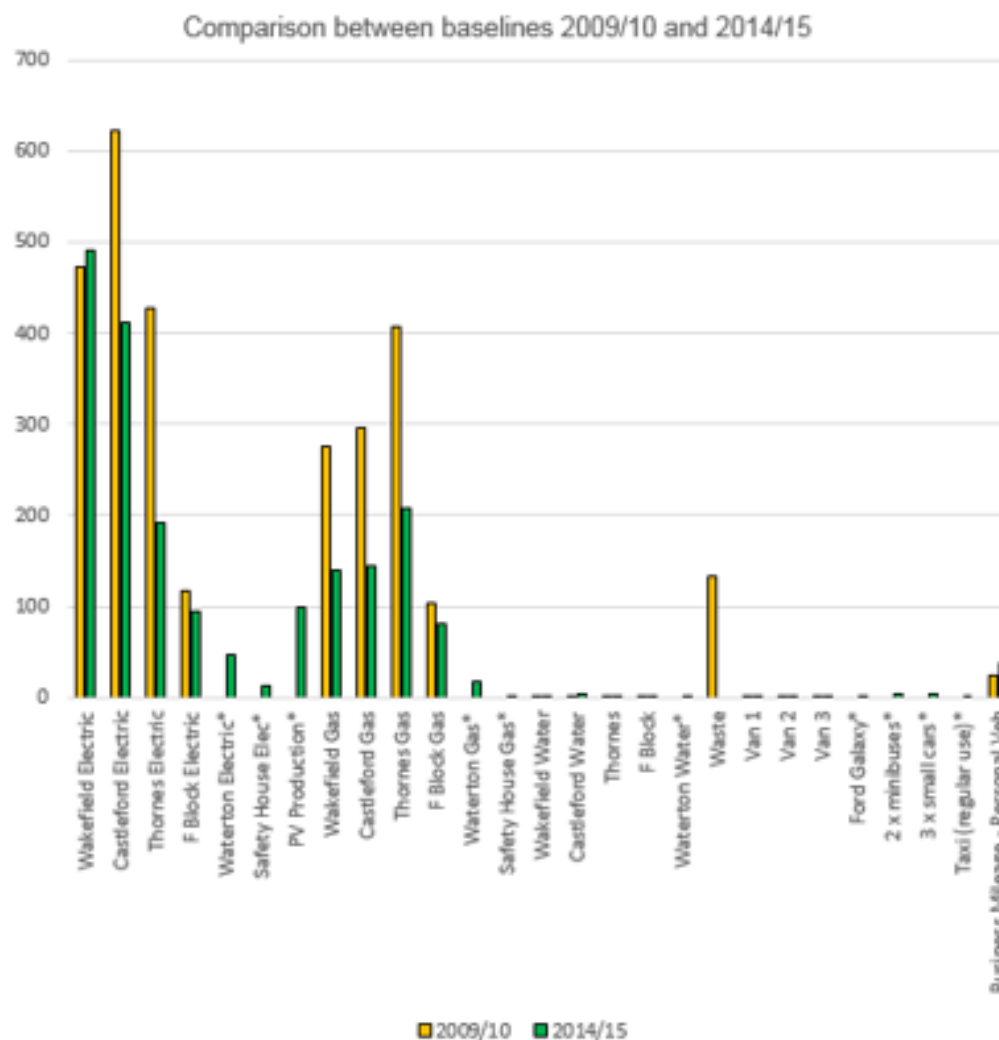
Section		Recommendation	Action to be taken	Date to be completed
Implementation	Operating Procedures	Develop a stronger awareness programme to both staff and students – increasing knowledge on energy and carbon related issues the motivation to engage with College programmes would also increase		
	Investments	Review the methodology so that they fully understand the assumption and estimation being made in carbon savings. This would inform the organisation of the possible impacts of the different programmes that allows prioritisation of the programmes with the largest potential.		
	Staff Engagement	Update and start using the 'Go Green with Wakefield College' presentation again showing the importance of tackling climate change and how everyone can contribute		
		Provide staff training to personnel in charge of managing the CMP and calculating the footprint of the organisation therefore increase technical expertise of the estates team		
		New Intranet – ensure there is a section dedicated to energy/ carbon management with the main policy documents and descriptions of initiatives.		

Appendix 6 Carbon Trust Standard Recommendations

Section		Recommendation	Action to be taken	Date to be completed
Upstream Impacts	Supply Chain Engagement	<p>Look into initiatives that will lead to carbon emissions reductions that lie upstream (with the College suppliers).</p> <p>First work with the closest suppliers e.g. Caterers and share best practice from the work the College has done recently and develop programmes to reduce energy use within the suppliers operations.</p> <p>Longer Term – 'Hotspot Analysis' can be carried out. This is based on mapping the procurement spend by category (or Sector) and applying a sector specific emission factor (Economic input-output emissions factors – database made available by Defra or other reputable source). With the results from this the College would understand who the largest contributors to its upstream carbon footprint are and be able to prioritise any future supplier engagement programmes.</p>		
	Procurement	Create a procurement policy document. Set criteria and procedures that apply to all procurement decisions made within College. Energy efficiency or a low-carbon lifecycle of procured goods/services should be included in the criteria to be considered.		
Downstream Impacts	Customer Engagement	Create programmes that have students as the main focus. Learn from past successful and unsuccessful initiatives.		
		Reintroduce a member of the student union in the Energy Team as mentioned in the 'Responsibility' section above.		
	Products and Services	Management of the carbon emissions beyond the boundary of the organisation. See 'Supply Chain Engagement' and 'Customer Engagement' sections.		

Appendix 7 Baseline 2015

Comparisons in tonnes CO2		
Energy	2009/10	2014/15
Wakefield Electric	473.1	491.1
Castleford Electric	622.3	412.1
Thornes Electric	426.4	192.9
F Block Electric	118.1	95.7
Waterton Electric*		48.1
Safety House Elec*		13.6
PV Production*		98.0
Wakefield Gas	275	141.0
Castleford Gas	295.4	143.8
Thornes Gas	407	208.7
F Block Gas	103.5	81.2
Waterton Gas*		16.8
Safety House Gas*		1.5
Wakefield Water	1.11	2.6
Castleford Water	1.551	3.7
Thornes	1.753	1.3
F Block	0.337	0.9
Waterton Water*		0.1
Waste	132.9	0.0
Van 1	1.276	1.5
Van 2	0.654	0.5
Van 3	2.442	1.9
Ford Galaxy*		2.8
2 x minibuses*		3.3
3 x small cars*		3.5
Taxi (regular use)*		0.5
Business Mileage - Personal Veh	25	38.6
Totals	2888	2006
*not included in 2009/10 baseline		





- 1 **Grassroots** - Sustainability initiatives start with a few employees taking the initiative to implement the recycling, replacement of paper cups, and enable double-sided printing. Whilst individually these steps are small, they are still significant because of the process to engage employees. Employee engagement is one of the most critical factors in becoming more sustainable. Green teams are formed and responsibilities are assigned, which typically falls outside of their "day job".
- 2 **Functional** - Accountability is already established within the College. Future initiatives are identified and Senior Team involvement is essential. A result being that more resources to expand sustainability efforts are made available (Go Green). Engagement on these initiatives is still limited to a minority of employees, and these efforts are still a minor blip on the sustainability radar.
- 3 **Strategic** - As more functional units within the organisation are engaged, it is evident that projects and initiatives need to be aligned strategically for greater impact and efficiency. It is now recognised that sustainability is a key element of the organisation that is led by the Board who will be involved in overseeing, and creating executive accountability for the initiatives. A cultural shift will start to be felt throughout the organisation as employees realise that sustainability is not about a few "greenies" trying to save the planet, but it is an organisational priority, and everyone will have a role to play.
- 4 **Ecosystem** - This is the engagement stage with external stakeholders. Suppliers are typically the first external group the organisation (Biffa, Catering Academy etc) should address and invite into our sustainability ecosystem (Green Champions), which often occurs during the strategic stage, we should now become much more selective and even demanding from those we do business with.
- 5 **DNA** - At this stage sustainability is completely embedded in the organisations strategy and business that it can be considered part of our DNA. We should not only inject it into our eco-system but also go beyond it to encompass individuals, communities and other businesses with which we would normally not have any relationship. Helping the environment becomes part and parcel of their values and business model. All employees should believe in it, act on it.

Appendix 9 DEC Information

DEC Rating	City Campus															Thornes Park						Castleford		
	Radcliffe			Harrison			Gissing			F Block			Waterton			Main Block			Music Block					
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
A 0-25			19			7			20			18	11											
B 26-50					61									44										
C 51-75		60						61			66				60	73			75				68	57
D 76-100	77			78			78			90							81	94			96	84		
E 101-125																								
F 126-150																				142				
G over 150																								
	No Data/ or building did not exist																							
	100 would be typical																							