



Creating a safer
Cambridgeshire



Police and Crime Commissioner
CAMBRIDGESHIRE AND PETERBOROUGH

CAMBRIDGESHIRE CONSTABULARY

ESTATE TRANSITION PLAN

JULY 2022



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1. Background and Strategic Context

Environmental sustainability for the Constabulary has been given a renewed focus following the 2021 United Nations Climate Change Conference (COP26) held in Glasgow. In 2011 the Carbon Trust conducted a carbon assessment for the Constabulary and an accompanying carbon reduction plan. The Constabulary has over time taken steps to reduce carbon output by installing: LED lighting operated by sensors and timers where possible; solar photovoltaic panels and air source heating to numerous stations; voltage optimisation to Force HQ; replacement boilers and heating controls; building rationalisation; Building Management Systems; removal of unnecessary electrical appliances; and provision of agile working areas across the force to reduce travel. However, the renewed global and governmental commitments to carbon net zero have been revisited and refreshed by the Constabulary in this strategy.

The Government has a Net Zero Strategy for how the UK will deliver its commitment to reach net zero emissions by 2050. The Constabulary and PCC have set their net zero emissions target at 2035. Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere. The term net zero is important because, for CO2 at least, this is the state at which global warming stops. The Government's Net Zero Strategy is a national economy wide plan for businesses, consumers and the public sector to transition to cleaner, greener energy and technology.

The Constabulary's approach to sustainability will be to undertake a refreshed carbon emissions baselining assessment. This will provide the underlying position against which carbon reduction will be measured. Reassessments will be undertaken as appropriate and at no more than 5 year intervals.

Strategic Alignment

The Constabulary has identified 5 key themes to underpin the Sustainability Strategy as set out in the following diagram:

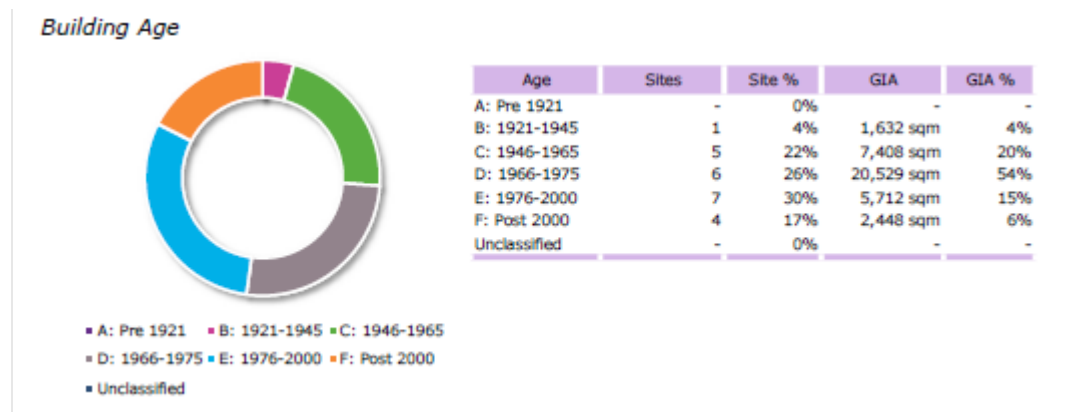
Diagram 1 – The Key Themes of the Sustainability Strategy



This transition plan focuses on the Estate and Property but clearly links into the other key themes.

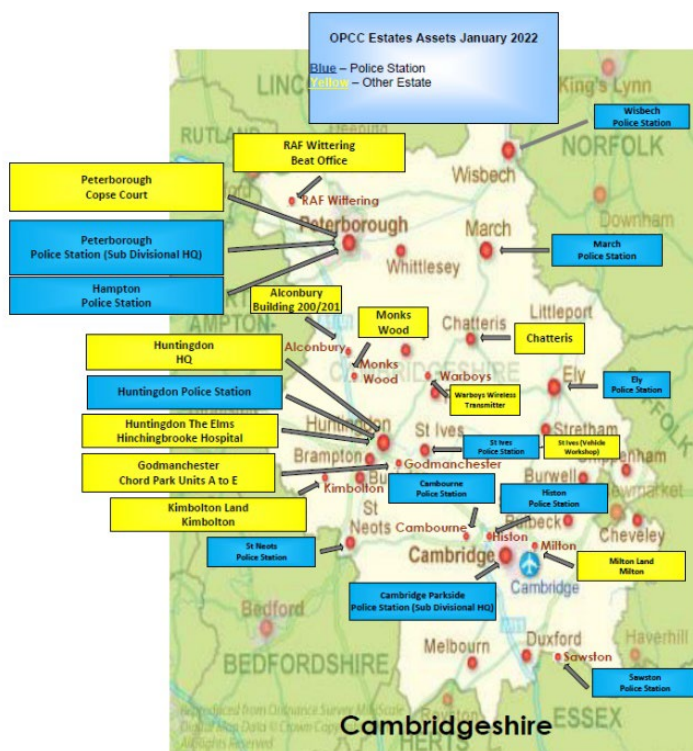
2. The Estate Baseline

The Constabulary occupies an ageing estate with only 6% of the total estate floor area constructed post 2000.



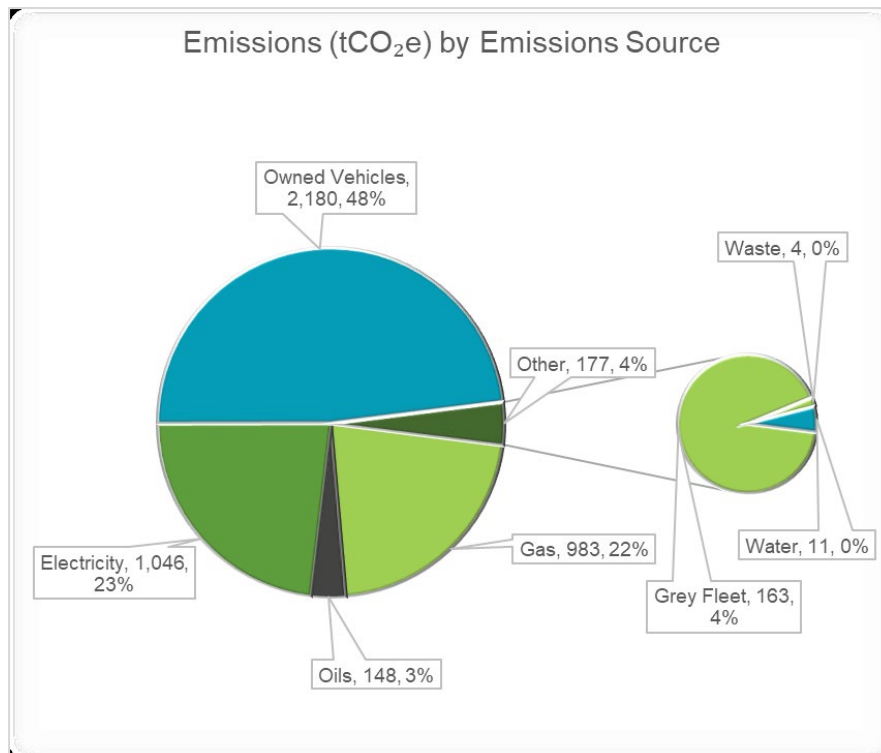
Due to the ageing estate energy efficiency is one of the main challenges in reducing carbon emissions. Much of the estate is required operationally and therefore approaches and investment to reduce the carbon emissions will be sought, including how technology can support more effective building management approaches. Surplus estate will be considered for disposal where it is not required operationally to help achieve carbon reduction.

The estate is made up of 24 sites as shown on the below map:



Laser Energy have been instructed via the Ealing Framework for Consultancy Services to undertake a baselining exercise on the estate and fleet to establish our carbon footprint and to explore options to reduce this footprint. Data analysis will be completed in July 2022 with a workshop in September and the final report in October. To supplement this work a bid has been made to the Public Sector Low Carbon Skills Fund for £68,000 to undertake decarbonisation surveys across the force. A decision on this application is expected by August.

The below carbon footprint for 2021/22 shows 4,534 tCO₂e



3. Estate Transition Themes and Actions

The estate transition plan requires completion of the baseline work and decarbonisation surveys, as detailed above, and the following provides an indicative programme for this work and agreeing a transition plan to achieve Carbon Net Zero by 2035:

Task	Date
Estate baseline data collection	May – July 2022
Submit bid for decarbonisation surveys under the Public Sector Low Carbon Skills Fund	June 2022
Receive award decision on bid	August 2022
Baselining workshop to discuss the options detailed in the reports and to confirm which one(s), we would like to take forward	September 2022
Undertake decarbonisation surveys	Sept - Dec

Prepare an initial schedule of projects from the baselining exercise, to ensure carbon reduction activities are delivered.	October 2022
Develop projects following decarbonisation surveys.	January 2023
Finalise transition plan and report to Resource.	February 2023
Agree funding plan to achieve carbon net zero by 2035 at FEB and BCB.	March/April 2023
Engage with partners across public and private sector to explore joint opportunities, learning & development. Estates are working with Cambs partners on the Climate Working Group.	Ongoing

The following themes will form a foundation for the transition plan:

1.	Phasing out the burning of fossil fuels to heat police buildings and replace with low carbon heating solutions
2.	Increase production of renewable energy to reduce reliance on heating with fossil fuels
3.	Significantly increase energy efficiency of all buildings and improve EPC ratings through retrofitting
4.	Electrify transport and shift travel from the private car to greater levels of homeworking/agile working
5.	Invest in digital infrastructure to facilitate more home working, and remote access to police services, to reduce the need to travel
6.	Carbon offsetting through tree planting
7.	Improving quality of existing green space to actively support nature

Existing Carbon Reduction Works

- All refurbishment and new builds will explore low carbon heating solutions. Gas boilers to be capable of a 20% hydrogen mix to align with government proposal. No new Gas boilers will be purchasable from 2030. The traditional on/off gas boilers have been upgraded in Wisbech as part of the recent refurbishment and Copse Court boilers are being upgraded this summer.
- Work is underway to design a sustainable heating solution for Monks Wood with a view of applying for Salix Funding in the October bidding round.
- Estates are in the process of migrating to LED lighting across the force. As at May 2022 the programme was circa 30% complete with most of the conversion being at HQ. Copse Court is schedule for an upgrade in Summer 2022.
- Building Management Systems are being upgraded on a 3-year investment programme. Thorpe Wood has been selected as the proof-of-concept site as it is the most dated requiring increased control to manage efficiency. The upgrade started in June 2022 with the units purchased in the 2021/22

financial year to avoid the semi-conductor shortages. ICT project support has been requested.

- We are working with our waste contractor, Zest, to obtain better waste segregation, use more local companies to reduce the carbon footprint from transport and to make better use of the waste in terms of energy produced from it. Early monthly reports indicate that we are going in the right direction
- A decarbonisation study has been commissioned at Monks Wood to support a potential Salix bid in Autumn 2022.
- Ongoing rationalisation of air conditioning plant from older refrigerants to R32 to increase efficiency. Replacement unit to be of variable refrigerant flow where possible increase efficiency.
- On-going increase in pipework insulation where damaged, removed or not installed.
- Reducing building and boiler temperatures across the force to more typical levels. This has been in small increments to assist user comfort but still 1.3 degrees to go in some places.
- Continue to promote Secure by Design (and link to the carbon cost of crime) on major new developments across Cambridgeshire and capture the carbon savings.

Potential Future Carbon Reduction Works

- Carbon offsetting through tree planting. Consider coppicing the roadside woodland area at Monks Wood and a tree replanting. A similar exercise could be undertaken in the woodland area at St Neots.
- Improving quality of existing green space to actively support nature. Improve the grassland management at Monks Wood (to include the field at the rear of the site) and also the rear grassed area at Ely and perhaps planting a hedge in the inside of the new fence line at HQ. Coppice and plant new trees in HQ spinney. Looking into the possibilities of DEFRA funding and early indications would suggest the tree area on the roadside at Monks Wood could fall into this category.
- Consider EV charging as part of major refurbishments and new builds.
- Following baseline and decarbonisation surveys to advise on ability and cost of providing infrastructure to support EV charging.
- Upgrade of urinals and wc pipework. Heavy water losses are being seen at some sites due to constant leaking systems.
- Work with local water providers to introduce systems of water saving and replacement of faulty meters.
- Capture and reuse of rainwater perhaps for washing vehicles.
- Introduction of valve jackets to plant rooms.
- Replacement of heating system at Monks Wood to new air source energy centre and district heating. Anticipated energy saving of <40%.
- Reduction of dead heating system pipework and long dead legs to improve heat distribution

- Introduce ventilation ductwork cleaning programme to keep air systems clean and increasing motor efficiency.
- Linking large air handling units to CO2 levels and presence detection rather than just temperature. This will reduce motor speeds depending on occupancy levels.
- Review the savings opportunity from good housekeeping. This was addressed as part of 2011 Local Authority Carbon Management (LACM) Plan
- Review technological/capital solutions such as PV, air source, ground source.

4. Funding and Finance

The Constabulary has a duty to achieve and demonstrate value for money and Estates staff work with Procurement colleagues to ensure this is achieved.

Section 3 above provides a framework for achieving Carbon Net Zero by 2035 together with current and future initiatives. This will be revisited once the baselining exercise and the decarbonisation plans are completed and a programme and cost plan produced for consideration at Resource Group, FEB and BCB.

It is recognised that achieving Net Zero will require significant work and expenditure across the five strands of Estates & Property, Fleet & Transport People & Behaviour, Procurement & Supply Chain and Offsetting. This will require a formal project structure to manage and monitor what is expected to be a significant programme of works.

The funding landscape will be a challenge with ever increasing running costs and expectations placed on the Constabulary to deliver on national agendas and to maintain the Uplift in police officers. The Estate Transition Plan will have to accommodate within the overall resources of the Constabulary meaning affordability will continue to be a key focus.

There will be associated costs to the infrastructure required to enable electric vehicles onto the fleet, which will be an essential requirement before any electric vehicles are purchased.

The Constabulary will look to secure funding wherever possible through public and private sources as well as taking advantage of national arrangements through central government as they expand the public infrastructure network. In adopting this approach it is anticipated that partnership working will help to develop the required infrastructure in a collective manner driving economies of scale and maximising benefits to all partners.

The existing Estates budget will be optimised where possible to keep cost increases to a minimum.

5. Measuring Success

Measuring the success of the Estate Transition Plan will be fundamental to understanding the impact of carbon reduction initiatives and their contribution to the net zero target and it is likely that baselining exercised will need to be undertaken regularly at say 5 year interval. The below transition plan will be a dynamic and evolving document linked to the data capture and specialist surveys undertaken. The current carbon gap to achieve net zero is still to be determined as is the finance required to achieve the target date of 2035.

Appendix 1 – Transition Plan Short, Medium and Long-Term Actions

SHORT TERM ACTIONS – WITHIN 1 YEAR

REF	THEME	DESCRIPTION	DEPENDANCIES	TARGET DATE
1.	Data	Estate baseline data collection.	Work across Estates, Finance, Fleet & Laser.	July 2022
2.	Funding	Submit bid for decarbonisation surveys under the Public Sector Low Carbon Skills Fund.	Work between Estates and consultant.	June 2022
3.	Funding	Receive award decision on bid.	Evaluation by fund manager, Salix.	August 2022
4.	Data	Baselining workshop to discuss the options detailed in the reports and to confirm which one(s), we would like to take forward.	Scheduling by 7F Procurement with all 7 forces.	September 2022
5.	Data	Undertake decarbonisation surveys.	Dependant on funding bid.	Sept - Dec
6.	Planning	Prepare an initial schedule of projects from the baselining exercise, to ensure carbon reduction activities are delivered.	Dependant on workshop and consultants report by Laser.	October 2022
7.	Planning	Develop projects following decarbonisation surveys.	Internal resource.	January 2023
8.	Governance	Finalise transition plan and report to Resource.	1-7	February 2023
9.	Funding	Agree funding plan to achieve carbon net zero by 2035 at FEB and BCB.	Ability of organisation to fund.	March/April 2023
10.	Partnership	Engage with partners across public and private sector to explore joint opportunities, learning & development. Estates are working with Cambs partners on the Climate Working Group.	Common goals of partners.	Ongoing
11.	Carbon Reduction	Replace gas boiler at Wisbech with low carbon model capability of a 20%	Internal resource.	Spring 2022

		hydrogen mix to align with government proposal.		
12.	Carbon Reduction	Replace gas boiler at Copse Court with low carbon model capability of a 20% hydrogen mix to align with government proposal.	Internal resource.	Summer 2022
13.	Carbon Reduction	Replacing lighting with energy efficient LED lighting.	Internal resource.	Summer 2022
14.	Carbon Reduction	Design low/zero carbon solutions for St Neots Fire Station.	Partnership working and funding.	October 2022
15.	Carbon Reduction	Design low/zero carbon solutions for Monks Wood Operational Training Centre. Air source heat pumps.	Funding across BCH.	January 2023
16.	Carbon Reduction	Upgrade Building Management System at Thorpe Wood.	Internal Resource	
17.	Carbon Reduction (Waste)	Improved waste segregation and use more local companies to reduce the carbon footprint from transport	Partnership with contractor Zest	Spring 2023
18.	Carbon Reduction	Reduce building and boiler temperatures across the force to more typical levels. This has been in small increments to assist user comfort but still 1.3 degrees to go in some places.	Internal Resource	Spring 2023
19.	Carbon Reduction - Energy	Review the savings opportunity from good housekeeping. This was addressed as part of 2011 Local Authority Carbon Management (LACM) Plan	Internal Resource	Spring 2023
20.	Carbon Reduction - Energy	Review technological/capital solutions such as PV, air source, ground source.	Internal resource & funding.	Summer 2022

MEDIUM TERM ACTIONS – 2 - 4 YEARS

REF	THEME	DESCRIPTION	DEPENDANCIES	TARGET DATE
21.	Carbon Reduction	Design low/zero carbon solutions for Cambridge Southern Police Station including EV charging.	Internal funding.	Summer 2023
22.	Carbon Reduction	Design low/zero carbon solutions for Monks Wood Operational Learning Centre including EV charging.	Salix bid.	Summer 2023
23.	Carbon Reduction	EV charging across the force.	Fleet Transition Plan	2023/27
24.	Carbon Reduction	Estate migrating to LED lighting across the force. FHQ & Copse would have already been completed.	Internal funding.	2023/25
25.	Carbon Reduction	Upgrade Building Management Systems.	ICT support.	2023/25
26.	Carbon Reduction	Ongoing rationalisation of air conditioning plant from older refrigerants to R32 to increase efficiency. Replacement unit to be of variable refrigerant flow where possible increase efficiency.	Internal Funding.	2023/25
27.	Carbon Reduction	On-going increase in pipework insulation where damaged, removed or not installed.	Internal resource & funding.	2023/25
28.	Carbon Cost of Crime	Continue to promote Secure by Design (and link to the carbon cost of crime) on major new developments across Cambridgeshire and capture the carbon savings.	Internal resource	2023/25

29.	Carbon Reduction - Water	Upgrade of urinals and wc pipework. Heavy water losses are being seen at some sites due to constant leaking systems.	Internal resource & funding.	2023/25
30.	Carbon Reduction - Water	Work with local water providers to introduce systems of water saving and replacement of faulty meters	Internal resource & funding.	2023/25
31.	Carbon Reduction – Heating	Introduction of valve jackets to plant rooms.	Internal resource & funding.	2023/25

LONG TERM ACTIONS – IN 5 YEARS OR MORE

REF	THEME	DESCRIPTION	DEPENDANCIES	TARGET DATE
32.	Carbon Offsetting	Coppicing the roadside woodland area at Monks Wood and tree replanting. Improve the grassland management at Monks Wood (to include the field at the rear of the site)	Funding (explore DEFRA grant) & statutory consent.	2027
33.	Carbon Offsetting	Coppicing the woodland at St Neots and tree replanting.	Funding & statutory consent.	2027
34.	Carbon Offsetting	Coppice and plant new trees in HQ spinney. Hedging to the inside of the new fence line at HQ.	Funding & statutory consent.	2027
35.	Carbon Offsetting	Improving quality of existing green spaces to actively support nature.	Funding	2028
36.	Carbon Reduction - Water	Capture and reuse of rainwater perhaps for washing vehicles.	Funding	2028
37.	Carbon Reduction – Heating	Reduction of dead heating system pipework and long dead legs to improve heat distribution	Internal resource & funding.	2029
38.	Carbon Reduction - HVAC	Introduce ventilation ductwork cleaning programme to keep air	Internal resource & funding.	2029

		systems clean and increasing motor efficiency.		
39.	Carbon Reduction - HVAC	Linking large air handling units to CO2 levels and presence detection rather than just temperature. This will reduce motor speeds depending on occupancy levels.	Internal resource & funding.	2029
40.	Carbon Reduction	Ensure Net Zero Emissions	Internal resource & funding.	2035