CWGC ENVIRONMENTAL SUSTAINABILITY REPORT 2024



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COMMONWEALTH WAR GRAVES

FOREWORD

Welcome to our third annual Environmental Sustainability Report which covers our global activity over the last 12 months – a year in which 'climate' has barely left our daily news. Across our Estate, we are seeing an increase in the frequency and severity of extreme weather events and the emergence of new climate risks that impact our organisation and truly test our resilience.

As we have in previous years, this report serves two main purposes. Firstly to report on how and where we have reduced our own greenhouse gas emissions (GHG) as we move ourselves closer to our Net Zero target in 2050. Secondly, we provide a summary of our wider sustainability objectives as we look to further enhance biodiversity, promote a circular economy and reduce waste at all levels.

As Director General, I am most struck by the enthusiasm I see from our people working across the globe to make practical changes which, when taken together, really do serve to make the tangible difference we are now making. We continue to empower our people, whether they are staff or volunteers, harnessing their creativity, enthusiasm and expertise in order that they can embed sustainable practices.

The headlines are clear – we are planting more, making greater use of local nurseries, using significantly less water and applying minimal use of chemicals. We are all proud that our newest cemetery, Loos British Cemetery Extension in France, opened in September 2024, was designed, built and will be maintained with sustainability very much front and centre.

Challenges remain of course – as a global organisation, to be truly effective we need to travel and as a consequence are still often dependent upon air travel to do so. In a similar vein, whist we have an increasing electrical vehicle fleet, our budget together with other practical concerns, means we cannot always transition as swiftly as we would ideally wish to.

As previously, I very much hope the reader would note our progress to date and support our shared commitment to continue on our Net Zero journey.

Claire Horton CBE
Director General
Commonwealth War Graves Commission

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GLOSSARY

CO_2e	Carbon dioxide equivalent – a measurement unit used to express the global warming potential of various greenhouse gases, stated in terms of the global warming potential of one unit of carbon dioxide
CWGC	Commonwealth War Graves Commission
EV	Electric vehicle
FY	Financial year
GHG	Greenhouse gases
HQ	Headquarters
kWh	Kilowatt hour (a unit of energy)
LEDs	Light-emitting diodes
Plan	Environmental Sustainability Plan

1. ABOUT THIS REPORT

This report constitutes the third in our series of annual Environmental Sustainability Reports, providing regular progress updates on our sustainability transition.

In October 2022, the Commonwealth War Graves Commission (CWGC) published its first annual Environmental Sustainability Report. Within this, we stated our commitment to transition to more sustainable ways of working and we introduced the three key drivers shaping our sustainability agenda, which are combatting climate change, protecting biodiversity and promoting a circular economy. We also set out what our objectives for 2025 were within each of these key areas.

In our second annual Environmental Sustainability Report, issued in 2023, we provided an overview of the greenhouse gas emissions (GHG) associated with our activities, together with a breakdown showing the relative contributions that different activities made to these emissions (e.g. fleet vehicles, electricity consumption, business travel). This first inventory of GHG emissions established a necessary baseline against which our future progress in meeting our long-term and near-term reduction targets would be assessed. This baseline data also underpinned the development of an emission reduction strategy designed to help us meet these targets.

In this third annual Environmental Sustainability Report, our aim is two-fold. Firstly, we provide comparative activity data for the last two financial years for the various activities that contribute to our greenhouse gas emissions (Section 2). Undertaking this comparison enables us to identify which trends are supporting a decrease in emissions and which other activities are driving up emissions. Within Section 3, we report on how we are progressing against our near-term GHG reduction targets.

The second aim of this report is to provide an update against our wider sustainability objectives, both in terms of our progress to date and our next steps (Section 3). The success of our sustainability transition, as driven by our Environmental Sustainability Plan, will be measured (in part) by our ability to meet the short, medium and long-term targets we have set ourselves.

Our employees around the world are embracing and delivering against our sustainability agenda. We are making tangible strides towards reducing the environmental impact of our activities and we have made real progress in delivering on the positive potential of our estate, both in terms of promoting greater biodiversity and sequestering more carbon dioxide. This annual report also serves to recognise and celebrate our collective achievements and to encourage us all to maintain the pace of change. We recognise that we have much to do to ensure that our sustainability transition reaches all parts of the organisation, wherever we work and whatever our role is.

Sustainability drivers	Sustainability principles
Combating climate change	Reduce greenhouse gas emissions Promote carbon sequestration Adapt to climate change
Protecting biodiversity	Actively enhance biodiversity Reduce impacts on biodiversity
Promoting a circular economy approach	Reduce resource consumption Reduce waste

Sustainability drivers & principles

For an organisational overview of CWGC and a discussion on what has shaped our sustainability agenda, please refer to our 2022 Environmental Sustainability Report.

2. ENVIRONMENTAL PERFORMANCE AT A GLANCE

ACTIVITY DATA

CWGC's environmental performance at a glance - Activity data

	FY 22/23	FY 23/24	Trend
Energy consumption			
Electricity consumption (kWh)	2278559	1920137	▼
Natural gas consumption (kWh)	338374	367364	▲
Fuel oil consumption (litres)	9302	10681	▲
Diesel consumption by fleet vehicles (litres)	585548	542838	▼
Petrol consumption by fleet vehicles (litres)	33825	33850	●
Diesel consumption by machinery/on-site vehicles (litres)	55062	62458	▲
Petrol consumption by machinery/on-site vehicles (litres)	139931	144765	▲
Fleet vehicles			
Distance driven (km)	5998133	5624360	▼
Number of electric vehicles	3	3	●
% distance travelled by electric vehicles	0.267	0.537	▲
Average CO_2 emission figures for all cars in fleet (g/km)	154	153	▼
Average CO_2 emission figures for all light commercial vehicles in fleet (g/km)	219	220	▲
Average CO_2 emission figures for all heavy goods vehicles in fleet (g/km)	636	592	▼
Energy efficiency			
Energy-efficiency audits undertaken (per year)	13	53	▲
Renewables & low carbon energy			
Renewable energy installations providing non-electrical energy (e.g. solar thermal) (total)	3	5	▲
Renewable energy installations providing electrical energy (e.g. PV) (total)	2	15	▲
Low carbon heating/cooling installations (e.g. air source heat pump) (total)	1	2	▲
Renewable energy feasibility studies undertaken (per year)	8	36	▲
% of electricity consumption that was sourced from renewable energy generation (via mains supply)	-	25	▲
Carbon sequestration			
Sites reviewed to identify tree planting potential (per year)	66	76	▲
Additional trees planted (per year)	1860	298	●
Biodiversity			
Number of individual biodiversity enhancements made (per year)	-	632	▲
Water consumption			
Volume of water consumed (m^3)	786073	686998	▼
Water-efficiency audits undertaken (per year)	5	18	▲
Number of rainwater storage features (total)	14	14	●
Total capacity of rainwater storage features in place (m^3)	308	241	▼
Business travel distances			
Flights (km)	2838099	3176722	▲
Rail (km)	225020	277313	▲
Bus (km)	3925	16573	▲
Taxi (km)	57779	70144	▲
Ferry (km)	7141	9642	▲
Personal cars used on company business (km)	200484	182617	▼
Waste			
Total quantity of waste generated (tonnes)	8613	10808	▲
Number of sites that compost green waste on-site or at another CWGC site	796	795	●
Number of sites that send green waste for composting by a third party	908	873	▼
Number of sites that send green waste to landfill	152	125	▼

Key

▼ ▲ Favourable trend
▼ ▲ Acceptable/neutral trend
▼ ▲ Unfavourable trend

GREENHOUSE GAS EMISSIONS

CWGC's environmental performance at a glance - Greenhouse gas emissions

		FY 22/23	FY 23/24	Trend
	Greenhouse gas (GHG) emissions by scope			
	Scope 1 GHG emissions (tCO_2e)	2770	2639	▼
	Scope 2 GHG emissions (tCO_2e)	441	297	▼
	Scope 3 GHG emissions (partial) (tCO_2e)	3140	3154	▲
	Breakdown of GHG emissions - Scopes 1 & 2			
1	Fuel/energy consumed by all fleet vehicles (tCO_2e)	1571	1435	▼
1	Electricity consumption (tCO_2e) (emissions associated with non-renewable electricity)	441	297	▼
2	Composting on CWGC sites (tCO_2e)	587	613	▲
	Fuel/energy consumed by machinery & on-site vehicles (tCO_2e)	450	474	▲
	Energy consumed to heat/cool buildings or power processes (excl. electricity) (tCO_2e)	92	108	▲
	Refrigerant leakage from air-conditioning units (tCO_2e)	71	10	▼
	Breakdown of GHG emissions - Scope 3			
	Commuting (tCO_2e)	1153	1153	●
3	Fuel- & energy-related activities (not incl. in Scopes 1 & 2) (tCO_2e)	775	712	▼
3	Business travel - flights, rail, bus, taxi, ferry, personal cars, short-term hire vehicles (tCO_2e)	771	893	▲
3	Off-site waste management & wastewater treatment (tCO_2e)	359	326	▼
3	Water supply (tCO_2e)	81	69	▼
	Breakdown of GHG emissions - Scopes 1, 2 & 3			
1	Fuel/energy consumed by all fleet vehicles (tCO_2e)	1571	1435	▼
1	Commuting (tCO_2e)	1153	1153	●
1	Fuel- & energy-related activities (not incl. in Scopes 1 & 2) (tCO_2e)	775	712	▼
2	Business travel - flights, rail, bus, taxi, ferry, personal cars, short-term hire vehicles (tCO_2e)	771	893	▲
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3	Off-site waste management & wastewater treatment (tCO_2e)	359	326	▼
3	Energy consumed to heat/cool buildings or power processes (excl. electricity) (tCO_2e)	92	108	▲
3	Water supply (tCO_2e)	81	69	▼
3	Refrigerant leakage from air-conditioning units (tCO_2e)	71	10	▼
	Breakdown of GHG emissions from business travel			
	Flights (tCO_2e)	626	774	▲
	Short-term hire vehicles (tCO_2e)	96	67	▼
	Personal cars used on company business (tCO_2e)	29	27	▼
	Taxi (tCO_2e)	12	15	▲
	Rail (tCO_2e)	6.5	7.5	▲
	Ferry (tCO_2e)	0.81	1.1	▲
	Bus (tCO_2e)	0.38	1.6	▲

Key

▼ ▲ Favourable trend
▼ ▲ Acceptable/neutral trend
▼ ▲ Unfavourable trend

3. TRANSITIONING TO MORE SUSTAINABLE WAYS OF WORKING

In our first annual Environmental Sustainability Report in 2022, we stated our commitment to transition to more sustainable ways of working and we set out what our sustainability objectives were for 2025. In this section, we provide an update on the progress achieved towards these objectives and our next steps, taking the opportunity to celebrate key achievements and the great diversity of sustainability initiatives that are taking place. The update is presented under the headings of combatting climate change, protecting biodiversity and promoting a circular economy.

COMBATTING CLIMATE CHANGE

Combatting climate change - key achievements by end of FY 23/24

Renewable electricity	Renewable energy self-generation	Emissions reductions Scope 1 & 2	Energy-efficiency audits	Eco-driving training	Carbon sequestration
+ 25%	+20	- 8.6%	+ 66	95%	x 2158
Progressively switching to renewable electricity, which now comprises 25% of supply	15 PV systems installed	Scope 1 & 2 emissions on track against near-term reduction target	Energy-efficiency audit programme established for offices & base sites	95% of fleet vehicle drivers have completed an on-line eco-driving training module	142 sites reviewed for tree planting opportunities
Timetable in place for transitioning to 100% renewable electricity by FY 30/31	5 solar thermal systems installed		66 energy-efficiency audits undertaken over last 2 years		2158 additional trees planted over 2 years

REDUCING GHG EMISSIONS

Establishing emission inventories & setting reduction targets

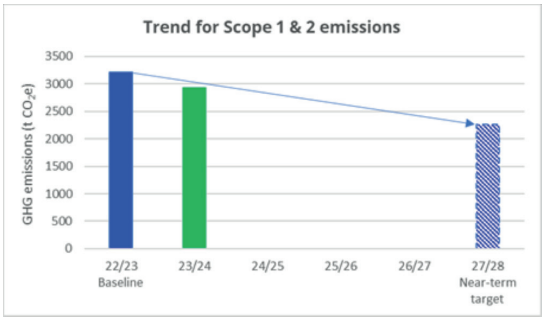
Objective: By 2025, we aim to have established systems in place for calculating annual GHG emissions associated with our direct activities and those of our wider value chain. A near-term emission reduction target (for scope 1 and 2 emissions and for selected categories of scope 3 emissions) will have been set and a decarbonisation pathway will have been developed to help us achieve this target.

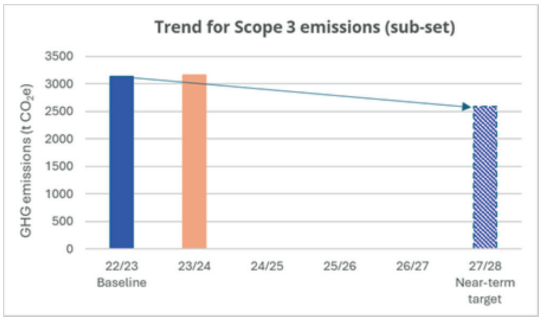
Progress to date:

1. We have committed to a net-zero GHG emission target by 2050 and are committed to reducing our GHG emissions in line with climate science, as part of the global effort to prevent the most dangerous consequences of climate change by limiting global warming to 1.5°C.
2. We have set two near-term science-based reduction targets[1] - the first is for our combined scope 1 and 2 emissions, and the other is for the sub-set of scope 3 emissions that have been quantified to date.[2] [3]
3. We have formulated a decarbonisation plan to deliver emission reductions at the pace required to meet our near-term reduction targets.
4. For our scope 1 and 2 emissions, we achieved a combined decrease of 8.6% in FY 2023/24 (against our FY 2022/23 baseline), which is in line with meeting our near-term reduction target (of 29.4%) in FY 2027/28. The main single contributing factor has been the switch to renewable electricity tariffs, but many other initiatives also contributed to this reduction.
5. For the sub-set of scope 3 emissions that have been quantified to date, emissions increased by 0.4% rather than decreased and this trend is not in line with meeting our near-term reduction target (of 17.5%) in FY 2027/28. This is due to the increased emissions associated with business travel, which have increased by 16% rather than decreased.
6. We have determined which of the previously unquantified scope 3 emission categories are considered to be relatively minor or not applicable to the Commission's operations[4].

What's next? In FY 2024/25, we will:

1. Quantify the remaining pertinent scope 3 emission categories (that is those that have not been designated as not applicable or relatively minor).





Monitoring emission trends *against our near-term reduction targets*

[1] In line with guidance issued by the Science Based Targets Initiative
[2] Sub-set of scope 3 emissions quantified to date from activity data: category 3 (Fuel- and energy-related activities (not included in scope 1 or scope 2)); category 5 (Waste generated in operations); category 6 (Business travel); category 7 (Employee commuting)
[3] For an explanation of scope 1, 2 & 3 GHG emissions, please refer to Section 2 of the 2023 Environmental Sustainability Report.
[4] Scope 3 emission categories considered to be relatively minor or not applicable to the Commission's operations: category 9 (Downstream transportation and distribution); category 10 (Processing of sold products); category 11 (Use of sold products); category 12 (End-of-life treatment of sold products); category 14 (Franchises).

Decarbonising our operations

Objective: By 2025, we aim to source at least 25% of purchased electricity from renewable electricity supplies and will have generated a timetable for transitioning to 100% renewable electricity by 2031 (where available in country). Through using electric vehicle (EV) pool cars and trialling small electric vans, we will have built-up experience and knowledge to help inform the 2024/25 feasibility study relating to our future wider transition to EVs and other ultra-low emission vehicles. By 2025, our transition towards the use of electrically powered machinery will be progressing steadily and the findings from the energy-efficiency audits undertaken at base sites and offices will be feeding into the programme of energy-saving measures being undertaken.

Progress to date:

1. We now source 25% of purchased electricity from renewable electricity supplies and have developed a timetable for transitioning to 100% renewable electricity by 2031 (where available in country).
2. We have installed 20 renewable energy systems (15 photovoltaic systems providing renewable electricity and 5 solar thermal systems providing hot water).
3. We have introduced an EV pool car at each of our main offices in France and Belgium and at our UK HQ, together with the installation of on-site charging points. We have conducted two short trials of small electric vans in France and Belgium and have introduced an EV salary sacrifice scheme within the UK to promote EV uptake amongst employees.
4. We have produced a feasibility study relating to our future wider transition to EVs and other ultra-low emission vehicles.
5. We have introduced an asset management system that enables us to generate annual statistics on the percentage of operational machinery in use that is electrically powered.
6. We have undertaken 66 energy-efficiency audits across our offices and base sites, which are highlighting potential energy-saving measures. We are continuing to progress with converting lighting to LEDs (e.g. the conversion is now complete at our HQ).
7. 95% of our fleet drivers have completed an on-line eco-driving training module.

What's next? In FY 2024/25, we will:

1. Continue to consider options for transitioning to renewable electricity supplies when energy contracts come up for renewal.
2. Expand the number of electric cars in our fleet and welcome the first electric van into our UK operations.
3. Continue to audit our base sites and offices to identify potential energy-efficiency opportunities.

Diversifying our decarbonisation efforts: *a sustainable mode of travel for trips in & around Ieper (Belgium) (left) & an electric robotic mower at Thiepval Memorial (France)*

Expanding our renewable energy generation: photovoltaic installations at:

Coriano Ridge War Cemetery (Italy)

Anzac Base Site (Türkiye) (installation needs repair after damage by wildfire)

Groesbeek Canadian War Cemetery (the Netherlands)

Faenza War Cemetery (Italy)

Sfax War Cemetery (Tunisia)

Anzac Base Site (Türkiye) (installation needs repair after damage by wildfire)

PROMOTING CARBON SEQUESTRATION

Objective: By 2025, we will know how many specimen trees there are on our estate following the completion of the 3-year cycle of our new tree risk management process. We will also have started to collate data on tree groups and woodland areas. In addition to taking all reasonable measures to protect and nurture our existing trees, we will have reviewed 150 sites to identify where missing trees can be replaced or additional trees can be planted.

Progress to date:

1. We are progressing well with recording trees on our new tree risk management software, which will enable us to establish the total number of specimen trees and areas of woodland that we have once the current 3-year cycle of tree inspections has been completed at the end of 2025. This baseline can then be used to track changes in the carbon sequestration potential of our estate over the years ahead as we continue to plant additional trees. By the end of FY 2023/24, we had recorded approximately 25% of our tree stock.
2. We have delivered tree design workshops for our global horticultural teams to support (a) the management of our existing trees, (b) the evaluation of sites to identify further tree planting opportunities, and (c) the selection of appropriate trees and their establishment.
3. We have reviewed 142 sites to identify where missing trees can be replaced or additional trees can be planted. We are set to meet our 2025 objective on these reviews.
4. We have an emergent tree planting programme and have planted 2158 trees over the last 2 years, as guided by the site reviews undertaken. As well as promoting carbon sequestration, these additional trees will enhance biodiversity and provide extra shade.
5. We commissioned an independent study into the feasibility of neutralising our projected residual GHG emissions in 2050 with an increase in our estate's carbon sequestration potential, as could potentially be delivered through future significant tree planting projects.

What's next? In FY 2024/25, we will:

1. Review further sites to establish tree planting opportunities and expand our tree planting programme.








Newly planted trees at *(left to right, top to bottom) Bruay Communal Cemetery Extension (France), Takoradi European Public Cemetery (Ghana), Lafenwa Military Cemetery (Nigeria), Neuve-Chapelle Farm Cemetery (France), Hazebrouck Communal Cemetery (France), Rheinberg War Cemetery (Germany), Messines Ridge British Cemetery (Belgium) & Track X Cemetery (Belgium)*

ADAPTING TO CLIMATE CHANGE

Objective: By 2025, we will better understand the current and future potential impacts of climate change on our sites. The requirement for project design to consider risks presented by changing climatic conditions will be embedded within the organisation. By 2025, we will have collated 5 years of data on extreme weather events impacting on our sites and we will have systems in place for logging observed changes in weather patterns. We will have identified which sites are vulnerable to flooding and we will be working to address this risk.

Progress to date:

1. We have selected a climate diagnostics model that will enable us to predict the impact of climate change on all our sites, under different climate change scenarios and timeframes. For example, the model can be used to highlight which sites are likely to experience greater risks of drought, wildfire, heat stress, high rainfall, flooding and coastal erosion.
2. Through the work of our Sustainability Research Volunteers, we have gained a better understanding of the ways in which climate change is predicted to impact our sites in Europe, parts of Asia and Africa. Specific projects have investigated future flood risks for sites in Belgium and the Netherlands.
3. We now require the design of new horticultural and structural projects to take into consideration the risks presented by changing climatic conditions (e.g. whether proposed tree species are suitable given the projected changes in climate for the area).
4. We continue to record extreme weather events and changing climatic conditions impacting on our sites (e.g. repeat flooding events, high winds, unusual drought conditions).

What's next? In FY 2024/25, we will:

1. Roll-out and embed the use of our new climate diagnostics model, so that the risks from climate change can be taken fully into consideration in the prioritisation and design of new projects and in reviewing how we might make our sites and operations more resilient to the predicted changes.

Storm damage: *soil collapse at Anzac Commemorative Site (Türkiye) (left) & Ari Burnu Cemetery (Türkiye) (centre) due to sea erosion; tree fall adjacent to Chittagong War Cemetery (Bangladesh)*

Flooding *at Nairobi (Kariokor) Cemetery (Kenya) (left), Thika War Cemetery (Kenya) (centre) and Imphal War Cemetery (India)*

PROTECTING BIODIVERSITY

Protecting biodiversity - key achievements by end of FY 23/24

Variable grass management zones	Bird nesting & bat boxes	Bee/insect hotels	Wildflower zones & bulb/nectar rich lawns	Deadwood piles/hedges/ pyramids	Reducing usage of pesticides, herbicides & biocides
+ 73826 m^2	x 382	x 98	+ 81251 m^2	x 83	- 94%
Grass allowed to grow longer in carefully selected zones at 59 sites	Installation of 314 bird nesting boxes & 68 bat boxes	Installation of 98 bee/insect hotels, aiming to provide a suitable egg-laying environment	Introduction of wildflower zones & bulb/nectar rich lawns at 109 sites	Introduction of 83 deadwood features in the form of piles, hedges & log pyramids	Continuing to progressively reduce usage of herbicides, pesticides & biocides
Amounting to 73826 m^2 under variable grass management	At certain sites, aiming to atract specific bird species to assist with the control of less desirable species	Trialling the efficacy of various types, many designed & crafted in-house	Amounting to 81251 m^2 of biodiversity enhancements	Providing a place for nesting & hibernation, & providing a food supply for a variety of wildlife	Achieved a 94% reduction (by volume) in the use of these chemicals in FY 23/24 against a 2019 baseline

ACTIVELY ENHANCING BIODIVERSITY

Objective: By 2025, we will have gained valuable experience on how best to enhance biodiversity on our sites; both through a well-embedded concept of biodiversity net gain for projects (whereby we take the opportunity whilst undertaking projects on sites to improve their biodiversity potential) and through the implementation of further biodiversity-enhancing measures at over 100 sites. By 2025, working to improve biodiversity will be an accepted part of our responsibilities.

Progress to date:

1. We have developed and introduced the concept of biodiversity net gain for structural and horticultural projects. In order to meet the biodiversity net gain criteria, a certain number of biodiversity enhancements need to be introduced by qualifying projects.
2. We have generated guidance and criteria for the active enhancement of biodiversity on our estate.
3. The drive to enhance the biodiversity potential of our estate has been embraced by many of our staff and our progress has exceeded expectations, with 632 individual biodiversity enhancements being recorded by the end of FY 2023/24 (as illustrated in the key achievements diagram and photos in this section). Clear record keeping of these enhancements is enabling us to track progress with confidence.
4. Working to improve biodiversity is now an accepted part of our responsibilities.
5. We have encouraged volunteers and employees to record their biodiversity observations, using a selected app. Recorded observations can help us to select the most appropriate biodiversity enhancements and to monitor the spread of invasive plants and pests.



Creating insect hotels – *Our team in Belgium packed these elegant frames with branches, bamboo canes, reeds & also drilled wooden blocks, that aim to provide a nesting habitat for solitary bees. The frames themselves are produced by a local company that prioritises inclusive employment for individuals with disabilities & those facing challenges in securing regular jobs.*

What's next? In FY 2024/25, we will:

1. Continue to embed the concept of biodiversity net gain for projects.
2. Continue to introduce further biodiversity-enhancing measures across our sites.

Making space for wildlife *across our sites*

Enhancing habitats *(left to right) with a bee hotel at Bedford House Cemetery (Belgium); bird nesting boxes at St. Symphorien Military Cemetery (Belgium) & Fajara War Cemetery (Gambia); a bat box at Kanchanaburi War Cemetery (Thailand) & retaining a dead tree stump at Bordon Military Cemetery (UK)*




Variable grass management at *(left to right, top to bottom) The South Africa (Delville Wood) National Memorial (France), Oxford Road Cemetery (Belgium), Hill 62 (Sanctuary Wood) Canadian Memorial (Belgium) & Pernes British Cemetery (France)*










Blooming marvellous: *(left to right, top to bottom)* ***crocuses*** *in the lawns at Berks Cemetery Extension (Belgium), some of the 95,000 planted in autumn 2023;* ***alliums*** *at Tyne Cot Cemetery (Belgium), planted as part of the wider '50,000 Flowers for Flanders Fields' initiative;* ***heather*** *at Netley Military Cemetery (UK);* ***wildflowers*** *at the British Normandy Memorial (France), Southend-on-Sea (Sutton Road) Cemetery (UK), Harrogate (Stonefall) Cemetery (UK), Morbecque British Cemetery (France), Venray War Cemetery (the Netherlands) & Loos British Cemetery Extension (France) x 2*

REDUCING IMPACTS ON BIODIVERSITY

Objective: : By 2025, our usage of pesticides, herbicides and biocides will have been effectively reduced to minimal levels, as driven by a move to more Integrated Pest and Weed Management approaches and legislative changes across Europe.

Progress to date:

1. We continue to progressively reduce our usage of herbicides, pesticides and biocides. In FY 2023/24, we achieved a 94% reduction (by volume) in the use of these chemicals against a 2019 baseline (amounting to a further improvement on the 87% reduction achieved in FY 2022/23).
2. As a replacement to biocides, we have introduced an enzyme-based, headstone cleaning product. This product is now in use at all locations where we previously used biocides (predominantly northern Europe). It is also in use in northern Italy, Malta and Singapore. We no longer order biocides for stone cleaning and are depleting any remaining stocks of such chemicals.
3. Belgium and the Netherlands first began using the enzyme-based cleaning product in 2019. We have therefore gained sufficient experience to be confident in the efficacy of this product (but to be effective it does require the temperature to be above a set point).
4. In early 2024, we conducted trials on a yeast-based stone-cleaning product in France, alongside some laboratory testing. Although this product did not prove successful for use at scale, it may prove suitable for more limited applications.
5. We have provided further training on our headstone cleanliness policy to support the phase-out of biocides and to emphasise our "clean on the basis of need" approach. As part of this, we have issued new guidance on cleanliness standards for the various structural features in our cemeteries (e.g. walls, shelter buildings and entrance buildings).
6. We are steadily gaining experience in harnessing non-chemical approaches to control pests and weeds and consider that we have been able to maintain our reputation for high standards of care whilst being environmentally more responsible.

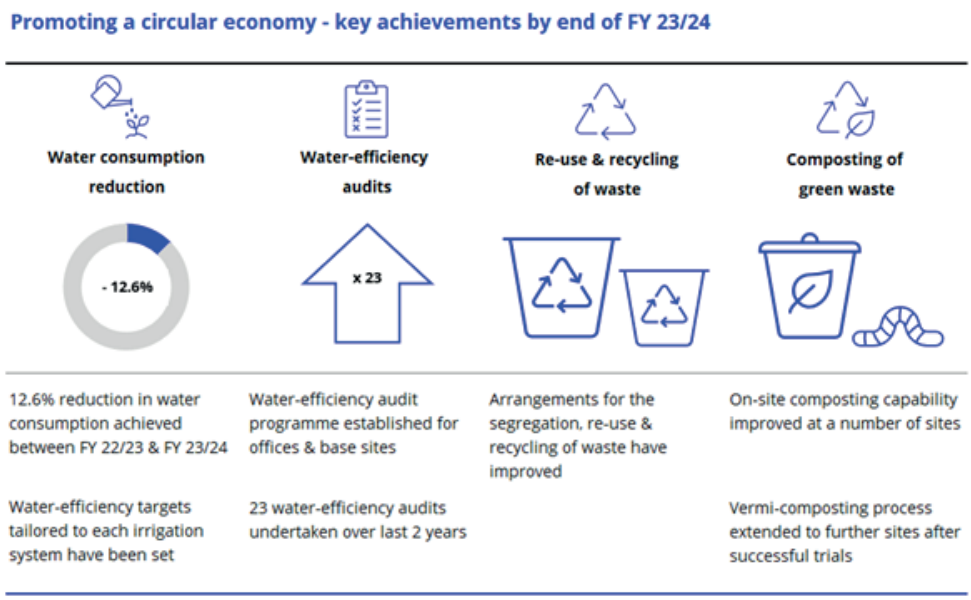
No longer needed: *This container (left) was installed at our Ieper base site approximately 30 years ago. It provided a safe place to store the chemical products in use at that time (e.g. biocides, herbicides & pesticides). Since we no longer use these types of chemical products in Belgium, the storage container was no longer needed. It was therefore sold to a waste management company that will recycle the metal for other purposes.*

Making use of drone technology: *The switch to enzyme-based cleaning products has enabled the Vis-en-Artois Memorial (France) (centre) to be cleaned using a more resource-efficient process. Previously, this task would have required the erection of scaffolding and then either the application of biocide or steam cleaning. This time, the cleaning was undertaken via the use of a drone (right) that methodically applied the enzyme-based cleaning product to the memorial.*

What's next? In FY 2024/25, we will:

1. Continue to set annual targets for progressively reducing our usage of herbicides, pesticides and biocides.
2. Further embed our "clean on the basis of need" approach.
3. Continue to conduct trials on further alternative stone cleaning products that have reduced environmental impact.

PROMOTING A CIRCULAR ECONOMY



REDUCING RESOURCE CONSUMPTION

Objective: By 2025, we will be working to adhere to water-efficiency targets tailored to each irrigation system. In addition to annually monitoring water consumption, we will be 2 years into our 5-year programme of water-efficiency audits for base sites that will have informed measures to save on water consumption. In addition to water, we will be reporting on the consumption of other key resources and will be engaging with our supply chain to promote improvements aligned with the principles of a circular economy. We will have derived and introduced procurement criteria for products and services that are aligned with our sustainability principles.

Progress to date:

1. We have developed and are working towards water-efficiency targets tailored to each irrigation system.
2. We continue to roll out a smart, software system that enables us to better optimise and track the water consumed by our irrigation systems. By the end of FY 2023/24, this system had been installed at 26 sites (up from 11 sites in FY 2022/23).
3. We have undertaken a successful technological pilot programme in Italy to monitor soil moisture, salinity and temperature in order to help optimise our irrigation systems.
4. We have commenced a programme of water-efficiency audits across offices and base sites.
5. We have installed new rainwater harvesting systems at Brookwood Military Cemetery (UK) and Yokohama War Cemetery (Japan).
6. We collated information on how much water our global estate used and where it was sourced from in FY 2022/23. Against this baseline, we achieved a significant 12.6% reduction in water consumption in FY 2023/24. The contributing factors to this reduction included the allocation of water-efficiency targets tailored to each irrigation system and improved metering and data collection.
7. We have categorised all irrigated sites in terms of the potential that exists for reducing or removing irrigation requirements through landscape changes. Two sites have been selected as potential pioneer sites, where we will explore the extent to which water consumption can be reduced whilst still meeting internal and external stakeholder expectations for standards of care.
8. We have developed an in-house training course for those that manage or operate irrigation systems, to improve levels of understanding and competence.
9. We have derived a provisional first tranche of procurement criteria for products and services that are aligned with our sustainability principles. These provisional criteria have yet to be finally agreed.

What's next? In FY 2024/25, we will:

1. Expand the water-efficiency audit programme across further offices and base sites.
2. Install further smart, software systems to enable us to better optimise the water consumed by our irrigation systems, together with further soil condition monitors.
3. Identify sites where irrigation could cease during FY 2025/26.



Harvesting rainwater *& using this to clean tools at Yokohama War Cemetery (Japan) (left & centre); at Brookwood Military Cemetery (UK) (right), the installed rainwater harvesting system will provide water to support both the plants in our small nursery & the establishment of plants & trees around the site.*



Trialling mulching products *made from coconut fibre (left) & oil palm kernels (centre & right) at Chungkai War Cemetery. The coconut fibre mulch has proved effective, so we plan to roll this out to our other site in Thailand.*

REDUCING WASTE GENERATION

Objective: By 2025, effective engagement with key suppliers and partners will have yielded reductions in waste generation at our sites via initiatives that design out wastage and promote repair, re-use and recycling. We will have set and be working towards progressively tighter targets for reducing waste quantities going to landfill. Internal collaboration between regions will enable best practice examples of a circular economy approach to be more widely adopted.

Progress to date:

1. We collated waste data from across our estate for FY 2022/23, deriving information on how much waste our global estate generated and how this waste was managed. Against this baseline, there was an overall increase of 25% in reported waste quantities in FY 2023/24. 84% of this increase was due to the generation of greater quantities of green waste, attributed mainly to enhanced growing conditions. The remaining 16% increase in non-green waste is attributed mainly to improvements in data collation. It is expected that this upward trend will continue next year as data collation continues to improve and extends further to countries that were not fully reported in the FY 2022/23 baseline.
2. We have improved arrangements for the segregation, re-use and recycling of waste at offices and base sites. There has also been a heightened awareness of the need to consider how waste from structural and horticultural projects can be reduced, re-used and recycled.

3. The proportion of waste that was composted, re-used or recycled rose in FY 2023/24.
4. 4 out of our 5 operational areas report that there is no landfilling of green waste. The remaining operational area, covering Africa and the Indian sub-continent, is continuing with efforts to divert green waste from landfill.
5. We improved our on-site composting capability at a number of sites, including sites in India where the vermi-composting process was introduced. In the UK, we started trialling a mobile composting unit for use at certain locations where our plots are located within larger cemeteries and churchyards, owned by other organisations.

What's next? In FY 2024/25, we will:

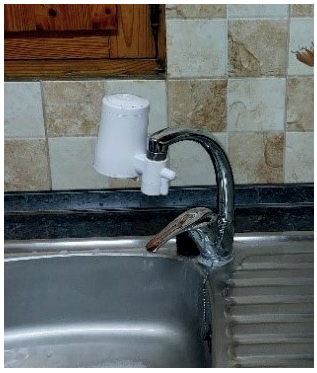
1. Continue to improve our on-site composting capability at further sites.
2. Introduce food waste collections at our HQ.
3. Promote examples of internal projects where the re-use and recycling of waste has represented best practice.




Composting green waste: *extending our vermi-composting initiative in India to Ranchi War Cemetery (top left), Calcutta (Bhowanipore) Cemetery (top centre) & Kirkee War Cemetery (bottom left); installation of a new green waste silo at Morogoro Cemetery (Tanzania) (top right)*



Innovative mobile composting units - *We are currently trialling an innovative mobile composting unit developed by a member of our UK team. Rather than having to transport green waste off-site, these units will enable us to compost our green waste in situ at certain locations where our plots are located within larger cemeteries and churchyards, owned by other organisations. The composting process has been given a helping hand through the introduction of worms. After 8 months, the decomposition process is yielding good interim results and we hope that, after a few more months, the product from the decomposition process will be added back onto the site as a soil conditioner. The sites participating in the trial are Seaford Cemetery (top left), Hastings Cemetery and Mill Hill Cemetery. Learning from the trials, minor modifications to the design, in the way of extra drainage and additional ventilation to the lower section, will be made when these units are emptied in early 2025.*



Reducing plastic waste *by installing water filters in Malta, enabling staff to reduce the use of bottled water (top left); promoting the use of our biodegradable willow wreath, as part of a commemoration ceremony at sea (Belgium) (top centre & right); encouraging visitors & event organisers to use biodegradable wreaths (left)*

Re-purposing - *As part of on-going efforts to reduce waste, we continue to identify ways to put stone offcuts to good use:*

- *One of our stone masons giving an engraving demonstration at a public engagement event (UK) (top left). Once members of the public had tried their hand at engraving the waste stone, the stone was cut up & re-used again as indents for headstones requiring repair*
- *Members of staff from a local art school selecting waste stone pieces to support their student's work (Belgium) (top centre)*
- *We were approached to produce memorials for two aircraft crash sites in Belgium. The hand-engraved memorials were designed in-house & made from stone recycled from within CWGC (left & top right)*

4. MANAGING OUR SUSTAINABILITY TRANSITION

GOVERNANCE

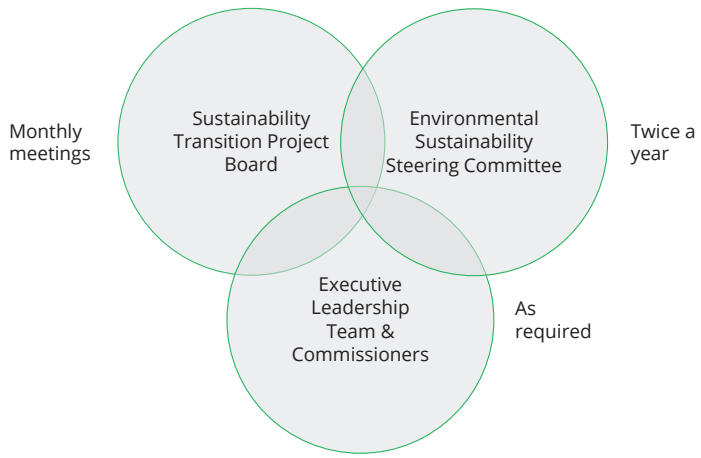
The success of our sustainability transition depends on the on-going efforts of many across our organisation, who are delivering the improvements needed and reporting the information required so that we can track our collective progress. To help ensure the focus on sustainability is secured across the various geographical areas and work functions, key elements of the Environmental Sustainability Plan are now incorporated as objectives within our new organisation-wide strategy, issued in 2023.

There are 3 central components to the governance of our sustainability transition:

1. **Sustainability Transition Project Board** – This Project Board (comprised of the Head of Environmental Sustainability, the Chief Operating Officer, the Director of Estates, the Director of Horticulture, the Director of Finance and Corporate Services, Marketing and Communications Director and Internal Communications Manager) typically meets every month. It provides oversight of the implementation of the Environmental Sustainability Plan and associated sustainability initiatives, such as the Sustainable Innovation Fund in FY 2023/24. The Project Board's main function is to identify and act to resolve any difficulties or constraints identified, thereby helping to drive the pace at which progress is achieved. Given the members of the Project Board, it also serves as an effective way of (a) feeding in sustainability-related questions, viewpoints and requests from across the organisation, and (b) generating ideas for internal and external communications that will support and explain our sustainability transition.

2. **Environmental Sustainability Steering Committee** – The Environmental Sustainability Plan applies to all geographical areas and work functions and this Committee serves to reflect that through its diverse membership. The Committee met twice in FY 2023/24 and is comprised of 17 members drawn from each of the 5 geographical areas and a range of key HQ teams. The Committee was kept up to date with the implementation of the Plan and provided another form of oversight for our sustainability transition. The Committee facilitates the on-going feedback from across CWGC on how things are progressing and whether there are any issues that need resolving. The Committee also provides a forum for highlighting examples of change and innovation taking place across the geographical areas and work functions. Now that our sustainability transition is permeating effectively through the organisation and has progressed to a business-as-usual status, the need for the Environmental Sustainability Steering Committee has diminished. Progress updates to management across all geographical areas regularly take place via other quarterly meetings and updates on sustainability initiatives are also distributed more widely via a quarterly newsletter.

3. **Executive Leadership Team and Commissioners** – Given the strategic significance of the sustainability agenda for CWGC, significant updates relating to the implementation of the Environmental Sustainability Plan are presented to the Executive Leadership Team and our Commissioners, as required.



Overview of the governance arrangements relating to our sustainability transition in FY 2023/24

EMPLOYEE ENGAGEMENT

In FY 2023/24, the Green Teams in each of our 5 geographical areas and HQ continued to put forward and implement projects that supported the implementation of our Environmental Sustainability Plan. By harnessing local knowledge, the Green Teams have generated initiatives that are tailored to the context of different sites and regions, and which reflect what is a priority for these localities.

The Sustainable Innovation Fund, which was set up in FY 2022/23, continued in FY 2023/24, ring-fencing money to assist with the development and implementation of sustainability initiatives across all areas. In FY 2023/24, this Fund supported a variety of initiatives such as:

- the installation of photovoltaic systems in Tunisia, Italy, Türkiye and India
- a biodiversity survey of the desert land around El Alamein War Cemetery in Egypt
- the installation of a rainwater harvesting system at Brookwood Military Cemetery in the UK
- the installation of advanced irrigation control systems at multiple sites in Egypt and Tunisia to promote reductions in water use, and
- the installation of innovative soil moisture sensors at Kanchanaburi War Cemetery in Thailand to enable the amount of water used in the manual irrigation system to be better optimised.

We publish a quarterly, internal Green Fingers newsletter which captures examples of how our employees around the world are embracing and delivering against our sustainability agenda. The aim of these newsletters is to celebrate our achievements and to inform and inspire us all to act as agents of change.

SUSTAINABILITY RESEARCH PROGRAMME & VOLUNTEERS

As part of enabling our sustainability transition, we set up a Sustainability Research Program in 2022 to assist with deriving information that would support decision-making and optimise progress in specified areas. This programme continued in FY 2023/24, with our Sustainability Research Volunteers undertaking useful research projects relating to the evaluation of climate change risks for our sites in Africa and the availability of Energy Attribute Certificates in the countries where we operate.

We are grateful to those that have participated in our Sustainability Research Program. Their valuable research has contributed to our knowledge base, and has supported our efforts to combat climate change, protect biodiversity and promote a circular economy.

MORE INFORMATION

ENVIRONMENTAL SUSTAINABILITY REPORT
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