AirNav Ireland
Sustainability
Management Plan

2024-2029

Contents

Foreword

The aviation sector plays a crucial role in connecting people, boosting trade, and supporting tourism, all vital aspects of our island's economy and society. Its ability to bring people together has been incredibly positive on a global scale, enhancing Ireland's ties with various international entities.

For a nation shaped by migration, aviation's role in uniting families and friends holds immense value. Society expects a strong global aviation industry that facilitates travel, social connections, and business activities. Forecasts suggest continued growth in aviation globally, with Ireland at its core.

AirNav Ireland manages Air Navigation Services for Dublin, Cork, and Shannon airports, handling more than 90% of transatlantic flights to and from Northern Europe.

Recognised worldwide, AirNav Ireland offers safe and efficient Air Traffic Control services while prioritising environmental sustainability. Our efforts have optimised Irish airspace, making it one of Europe's most efficient, resulting in improved environmental performance for our airline partners. We are dedicated to reducing aviation's environmental impact through various measures, showcasing our commitment.
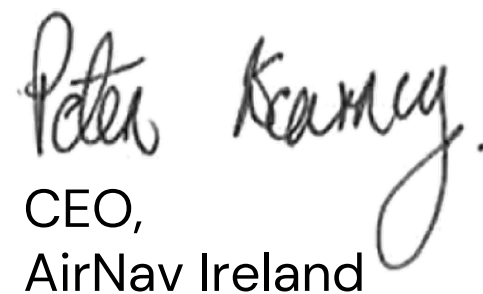
Our goal is to maintain our position as a leading Air Navigation Service Provider in Europe by continually developing strategies and collaborating with European partners and airlines to reduce emissions and promote a sustainable airline industry.

In line with governmental policies and our sustainability commitment, we are implementing energy efficiency measures to reduce consumption and move towards achieving net-zero carbon emissions. Expanding our use of PhotoVoltaic electricity generation will power our operations with cleaner energy.

We prioritise environmental protection and have initiated a biodiversity study to enhance the natural surroundings at our facilities. Our aim is to preserve and enhance biodiversity through a comprehensive Biodiversity Action Plan.

Our focus on green procurement aligns with government mandates and our environmental goals, aiming to fully integrate these practices into AirNav Ireland's business operations.

Sustainability is at the core of AirNav Ireland's focus, driving significant investment during the 2024-2029 period. Our Sustainability Management Plan aims to deliver tangible benefits, safeguarding the environment, and nurturing a sustainable aviation industry that serves the interests of our customers, stakeholders, and the Irish community.

CEO,
AirNav Ireland

Aim

AirNav has initiated its pursuit of sustainability by formulating a comprehensive Sustainability Management Plan spanning a period of five years (2024–2029).

This plan encompasses various critical sectors, including the enhancement of energy efficiency and the adoption of renewable sources for electricity procurement. AirNav's dedication remains steadfast in adhering to international sustainability objectives and maintaining its status as a trailblazer in sustainable aviation initiatives.

The objective of this document is to delineate the strategies and measures that AirNav intends to use in order to attain complete carbon neutrality by the year 2030. Additionally, it aims to establish a comprehensive strategy for biodiversity conservation and facilitate the adoption of environmentally sustainable practices in public procurement.

Certain activities have been already executed, while certain goals have to be further explored. The present Sustainability Management Plan will include the execution of the outstanding goals under three fundamental pillars, namely Energy, Biodiversity, and Governance.

Policy

There are two primary catalysts behind the global implementation of sustainability initiatives. The Paris Agreement is a diplomatic agreement that was negotiated within the framework of the United Nations Framework Convention on Climate Change.

It requires participating governments to implement measures aimed at restricting the increase in global temperatures to 1.5 degrees Celsius. Additionally, the Agenda 2030 for Sustainable Development was formulated to establish a set of 17 Sustainable Development Goals. These goals encompass a wide range of areas, including poverty eradication, environmental preservation, gender equality, education, and health. In addition to the European Union (EU), national laws and regulations, as well as regional and municipal climate policies, this document functions as a guideline for the Sustainability Management Plan.

The Climate Action and Low Carbon Development (Amendment) Act 2021[1] establishes a legal framework for a "national climate objective." This objective entails the commitment to strive for and accomplish, by the year 2050 at the latest, the transformation towards an economy that is resilient to climate change, abundant in biodiversity, ecologically sustainable, and carbon neutral.

According to the provisions of this legislation, commercial semi-State (CSS) entities, including AirNav, are mandated to adhere to certain climate action objectives by the year 2030:

1. Reduce CO2e emissions by 51% by 2030 (relative to a baseline of 2018).

2. Improve energy efficiency by 50% by 2030.

3. Fully implement green public procurement in the public sector

4. Implement and review the Public Sector Climate Action Mandate annually.

Figure 1 here depicts some key highlight of the Climate action and Low Carbon development act.

AirNav Ireland will ensure compliance with all aspects of the Climate Action Framework for Commercial Semi-State Bodies. In particular we will ensure proper governance of climate action objectives, measurement and reduction of emissions in accordance with set targets, emissions valuation in investments, compliance with green procurement requirements as part of our move toward a circular economy and will provide climate related disclosure.

Decarbonisation
Reduce CO_2 equivalent emissions **from the public sector by 51%** by 2030

Energy-Efficiency
Public bodies must deliver a 50% improvement in energy efficiency by 2030

Green Public Procurement
Other targets apply in specificsectors, e.g. **food waste to be halved by 2030** under the Wase Action Plan for a Circular Economy

Procurement/ Decarbonisation
Under the Program for Government 2020 **all procurement using public funds must include green criteria by 2023**
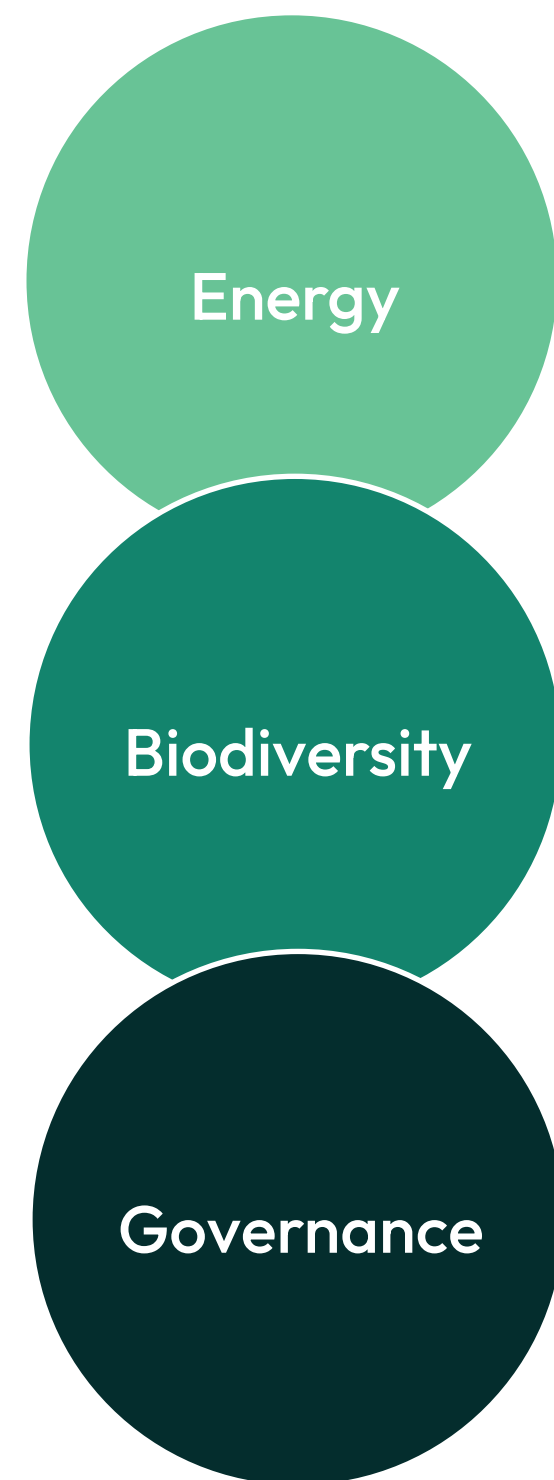
Figure 1 Summary of Climate action and Low Carbon development act

Vision Statement

In creating a vision statement for AirNav, a number of pillars have been considered, as shown in Figure 2. The three pillars of the vision statement which will be focused on are:

The vision statement establishes ambitious objectives at a strategic level within each pillar. The Vision Statement serves as the foundation for the Sustainability Management Plan, which will provide the strategic framework for integrating sustainable practices inside our organization. The Sustainability Management Plan will thereafter establish the schedule, Key Performance Indicators (KPIs), and reporting methodologies for each objective that has been specified.

AirNav's Energy Vision is centred on project demonstration, community involvement, and partnership with energy users, with the aim of exceeding the objectives set by public sector. In order to attain carbon neutrality by 2030, it is necessary to enhance the energy efficiency of AirNav buildings and use innovative technologies that have shown their value.

The Biodiversity Vision of AirNav aims to enhance our comprehension of the biodiversity present within our property. This will be achieved by implementing effective measures to promote biodiversity, both on–site and in collaboration with external partners. Additionally, AirNav intends to adopt a Nature Positive policy within our organisation within the next 5 years.

The Green Procurement Vision of AirNav is to reduce the environmental impact of its air traffic management services and embed environmental considerations into all its purchasing and procurement. AirNav also intends to improve circularity within business operations and therefore reinforces its ambition in terms of Green Public Procurement

(GPP). This will be achieved by further implementation of GPP strategies that are in line with recent policies and are tailored to AirNav's vision and capabilities.

In addition to aligning with the stated vision, AirNav will also strive to reduce its ecological impact by enhancing the sustainability of its operations.
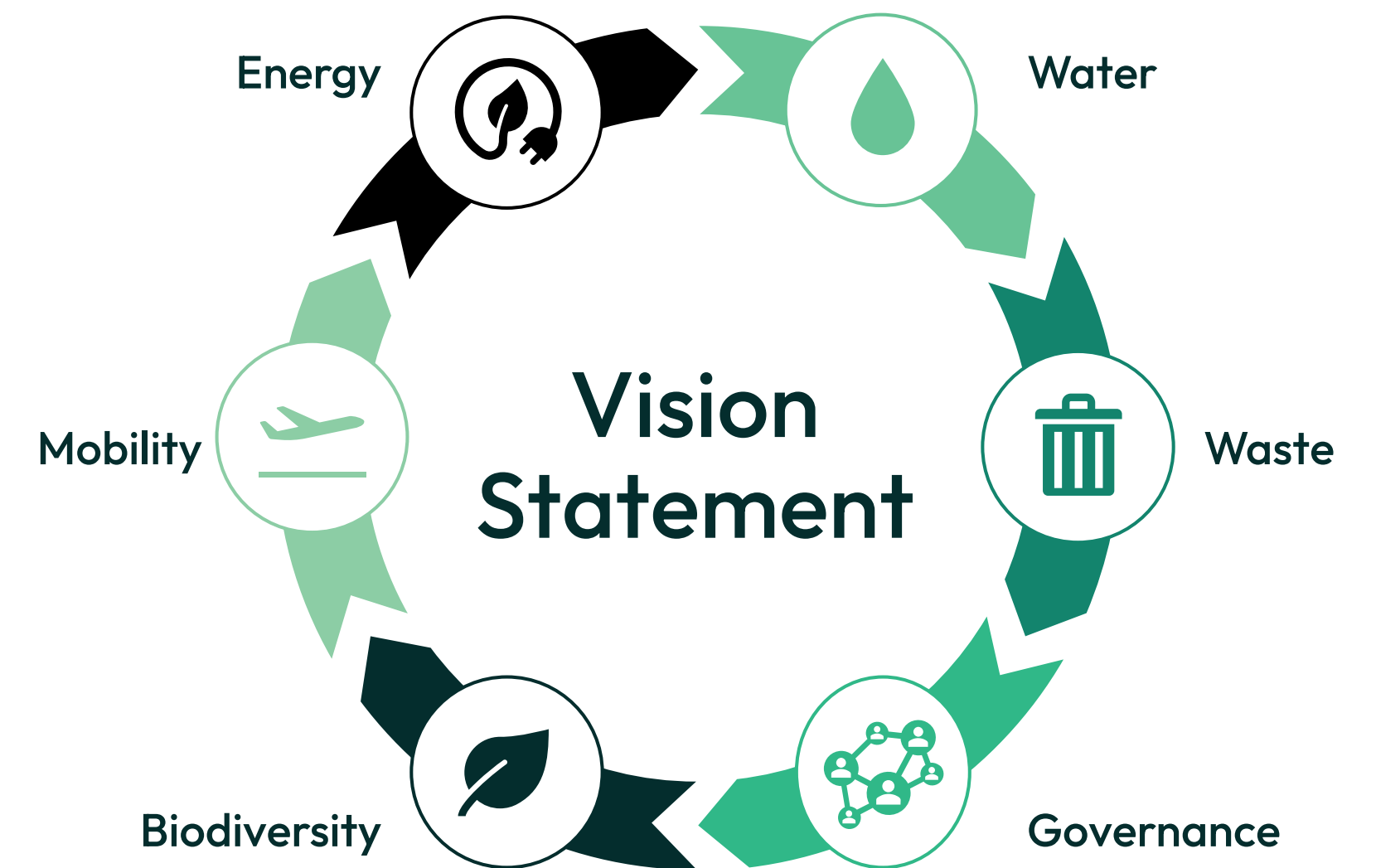

Figure 2 Vision Statement with three key pillars of Energy, Biodiversity and Governance

Sustainability Management Plan

The overarching objective of AirNav is to strive towards attaining carbon neutrality by the year 2030. In order to accomplish this objective, a five-year Sustainability Management Plan (SMP) will be implemented, focusing on the three fundamental pillars, during the time spanning from 2024 to 2029.

This strategy encompasses the following goals.

1 As a minimum, achieve a 50% energy efficiency improvement by 2030.

2 Define and implement biodiversity management in line with the 'Biodiversity for Business' management framework.

3 Fully implement effective green public procurement across all business activities.

4 Leverage our Sustainability Management Plan and achievements to promote climate action with our stakeholders, key partners, suppliers, contractors, service providers and wider society.

5 Aim to become net carbon neutral by 2030 (excluding operational contingency and resilience requirements).

SMP Implementation

AirNav intends to create a cross-functional 'Sustainability Task Force' to effectively execute the Sustainability Management Plan (SMP). This task force will be led by the company's Energy Champion. The Sustainability Task force will be accountable to the Energy Performance Officer (EPO) as well as the senior management team, and will be responsible for the yearly publication of findings and actions. Furthermore, AirNav will strive to promote the normalisation of climate and energy transition by actively involving a diverse range of internal and external stakeholders, as well as collaborating with established and emerging competent third parties.

The SMP will be integrated into an ISO 9000 certified management system. In the future, AirNav may contemplate the adoption of the ISO 14000 (Environmental Management) and/or the ISO 50001 (Energy Management) standards.

Once the Sustainability Task Force has been completely created, it will be necessary for the task force to convene on a quarterly basis.

The following actions shall be undertaken:

– A Sustainability Team will be formed, complete with appropriate terms of responsibility and a reporting structure.

– All initiatives shall be consolidated into a centralised registry of opportunities, categorised under the following headings: a) Energy, d) Biodiversity and c) Green Public Procurement.

– The development of objectives and their corresponding key activities will be undertaken for execution within the framework of the yearly Sustainability Management Plan. Every goal and major action shall undergo a comprehensive cost analysis, get necessary approvals through the CAPEX procedure.

– The responsibility of overseeing and coordinating the implementation of goals and key activities will be assigned to the Sustainability Team. It should be noted that the successful execution of these tasks will need the involvement of internal and external resources, engagement with stakeholders, and the collaboration with competent third parties.

– The Sustainability Team will be led by the Energy Performance Officer, who holds the position of Head of Corporate Affairs within the company. The team members shall possess the necessary skills and knowledge and will be provided with sufficient time and resources to efficiently achieve the goals and essential actions.

Sustainability Management Plan

– The sustainability management team of AirNav, which oversees energy and environmental matters, should be adequately equipped with resources to efficiently carry out the plan. This includes ensuring sufficient allocation of both full-time and part-time resources. The successful implementation of the programme at a national level will need the involvement of key representatives from all sectors of the organisation. These individuals will serve as champions and provide support to the team during the program's execution.

– If necessary, the staff shall be given training and access to skilled consultants to enhance their ability to fulfil their responsibilities efficiently.

– The sustainability management team shall provide yearly reports to the Executive Group via the Energy Champion.

The implementation of an effective Sustainability Task Force, under the guidance of the Energy Champion, adequately supported and financed, with a well-defined vision and strategy, will guarantee the successful execution of the programme and attainment of the goals.

SMP Actions

From 2024 to 2029, AirNav will engage in a series of activities as part of the Strategic Management Plan (SMP).

– Substitute the existing building plant and equipment with alternatives that provide higher energy efficiency.

– All significant building modifications or new constructions will adhere to the Near Zero Energy Building (NZEB) standard.

– Minimise or eliminate the use of fossil fuels where practical.

– Acquire power produced from renewable sources.

– Conduct comprehensive biodiversity evaluations and undertake initiatives at various AirNav facilities and distant locations.

– Facilitate the implementation of biodiversity conservation measures across our many locations, as well as throughout our relationships and supply chains.

– Formulate and establish rules for environmentally sustainable public procurement, with a focus on promoting eco-friendly practises.

– To accomplish the aforementioned goals, it is recommended to initiate a comprehensive sustainability communication and awareness campaign.

Monitoring, Measuring and Reporting Performance

A Sustainable Management Plan requires implementation of the monitoring procedures reporting the progress against set targets. The following components will define measuring and reporting framework:

— Measuring to undertake measurements it will be important to define robust KPIs against each of the different pillars.

  — Key Performance Indicators (KPIs) are set to measure the progress and success of the implementation plan. Each target defined has its own KPI.

— Monitoring – the importance of monitoring is to ensure a continuous record of data and the ability to review and identify trends and changes in performance by:

  — Performance Management Framework is established to track progress against the KPIs. This framework includes regular progress reports, performance reviews to understand the progress being made.

  — Data Collection and Analysis to support the performance management framework. Data should be used to measure progress against the KPIs and to identify areas where improvements can be made.

  — Stakeholder Engagement states a key part of the monitoring, measuring, and reporting arrangements. Regular engagement with stakeholders will help to ensure that their views are taken into account and that they are supportive of the implementation plan. Engagement should be planned and conducted in a systematic and transparent way.

— Reporting Performance – typically completed by a senior team in charge of sustainability data, the importance of reporting performance will be to display progress against the sustainability strategy.

  — Reporting on progress against the KPIs and to highlight any areas where improvements can be made.

  — Reviews and evaluations to be conducted to assess the effectiveness of the implementation plan. These reviews must ensure that the plan remains aligned with the overall goals of AirNav Ireland.

The targets and key performance indicators (KPIs) outlined in accordance with each pillar.

Energy Pillar

AirNav Baseline Energy and Emissions

AirNav consumed 12.5 GWh of energy between September 2020 and August 2021. Figure 3 shows the consumption by energy source. Electricity accounted for approximately 70% of AirNav's energy consumption during this period.

AirNav's energy use over this 12 month period resulted in over 3,500 tonnes of CO2e emissions. A 'Do Nothing' scenario is defined as the case where AirNav does not make any changes to their energy consumption. The resulting CO2e emissions projection from 2021 to 2050 are shown in Figure 4. The reduction in emissions seen is attributed to the decarbonisation of the electricity grid[2].
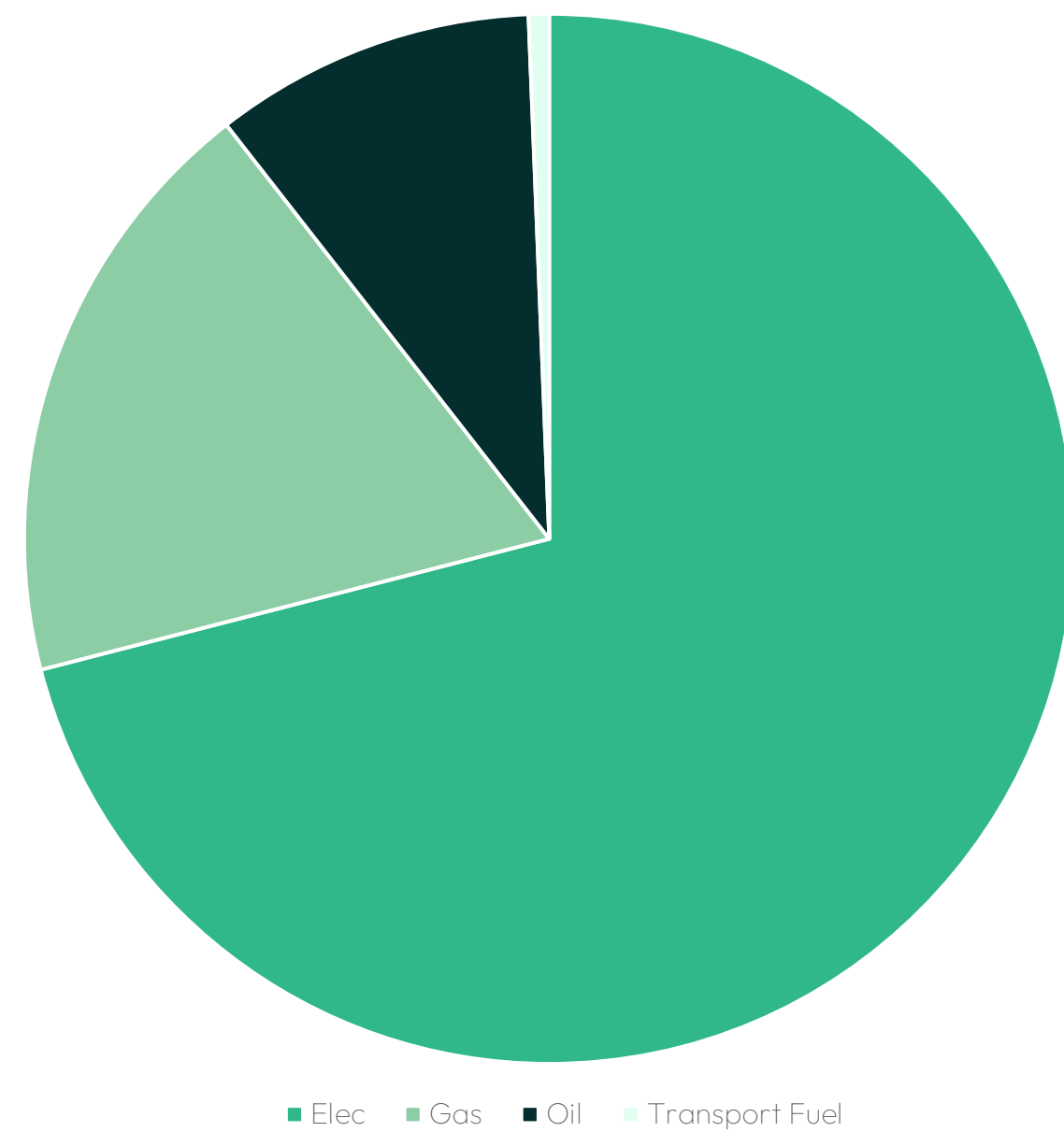
Figure 3 AirNav's total final consumption (kWh) for period September 2020 to August 2021.
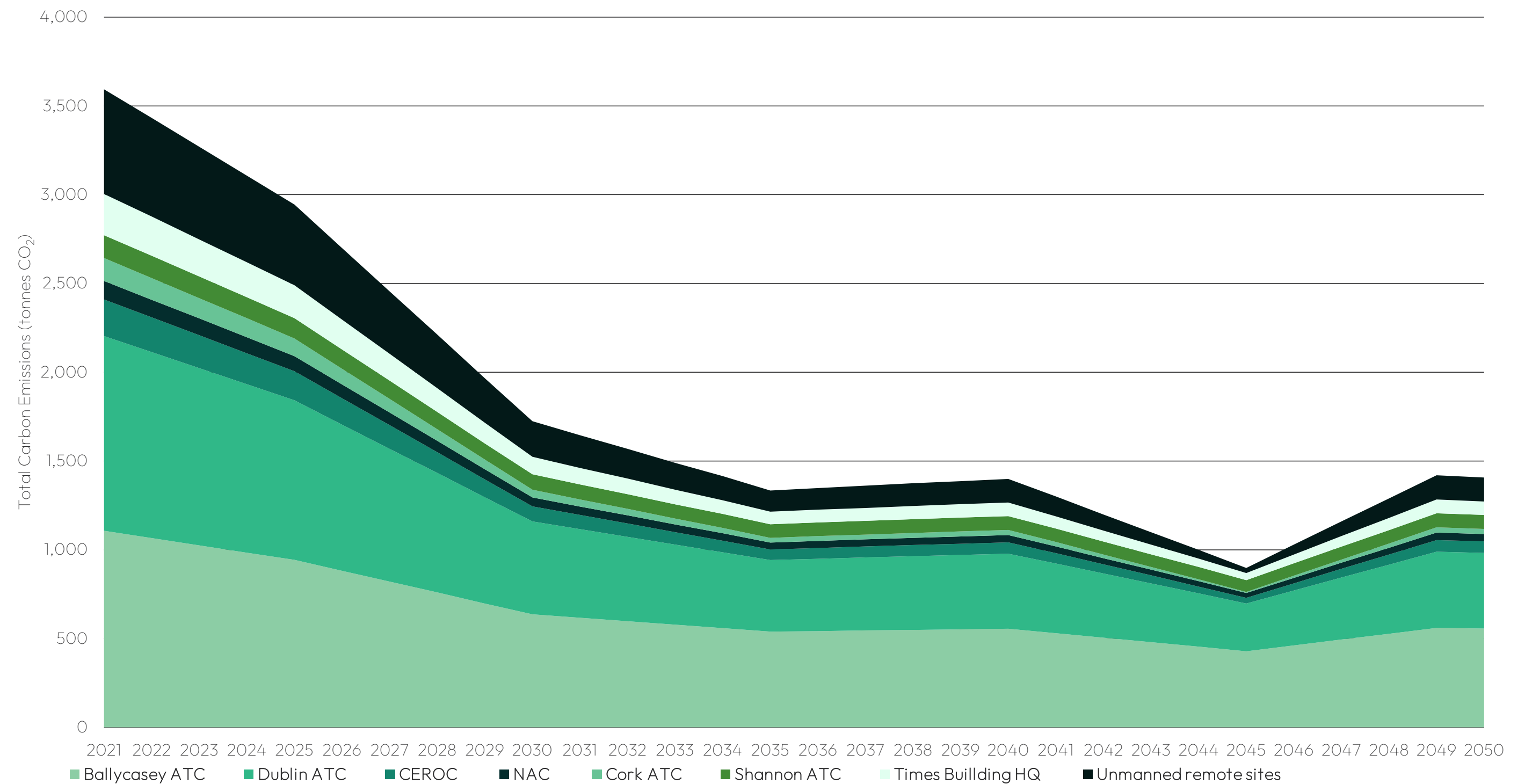
Figure 4 AirNav's total carbon emissions projection in the 'Do Nothing' Scenario.

Electricity grid carbon intensity projection taken from CRREM (https://www.crrem.eu/)

Energy Pillar

Energy Policy/Targets

As mentioned in the Policy, the main requirements of CSS companies in terms of energy are to reduce carbon emissions by 51% by 2030 and improve energy efficiency by 50% by 2030.

Key Objectives

The key objectives of Air Nav's energy pillar are as follows:

1. To target improvements which will have the biggest impact on emissions and energy reduction.
2. To reduce energy consumption and fossil fuel use.
3. To recover energy where possible.
4. To produce onsite renewable electricity (e.g. solar).
5. To offset remaining hard-to-mitigate emissions after all other objectives have been met.

| Target | Reduce | Recover | Produce | Offest |

Figure 5 Key objectives of the energy pillar

Energy Pillar

Currently, there are eight occupied AirNav facilities, namely Ballycasey Air Traffic Control (ATC), Dublin ATC, CEROC, North Atlantic Comms. Centre (NAC), Cork ATC, Shannon ATC, Times Building Headquarters, and Unmanned Remote Sites. Figure 6 illustrates the energy consumption of the locations for the period spanning from September 2020 to August 2021, providing a comprehensive analysis of the various energy sources used.

The electricity, natural gas and oil consumption from these eight facilities accounted for 99% of AirNav's annual energy consumption during this period.
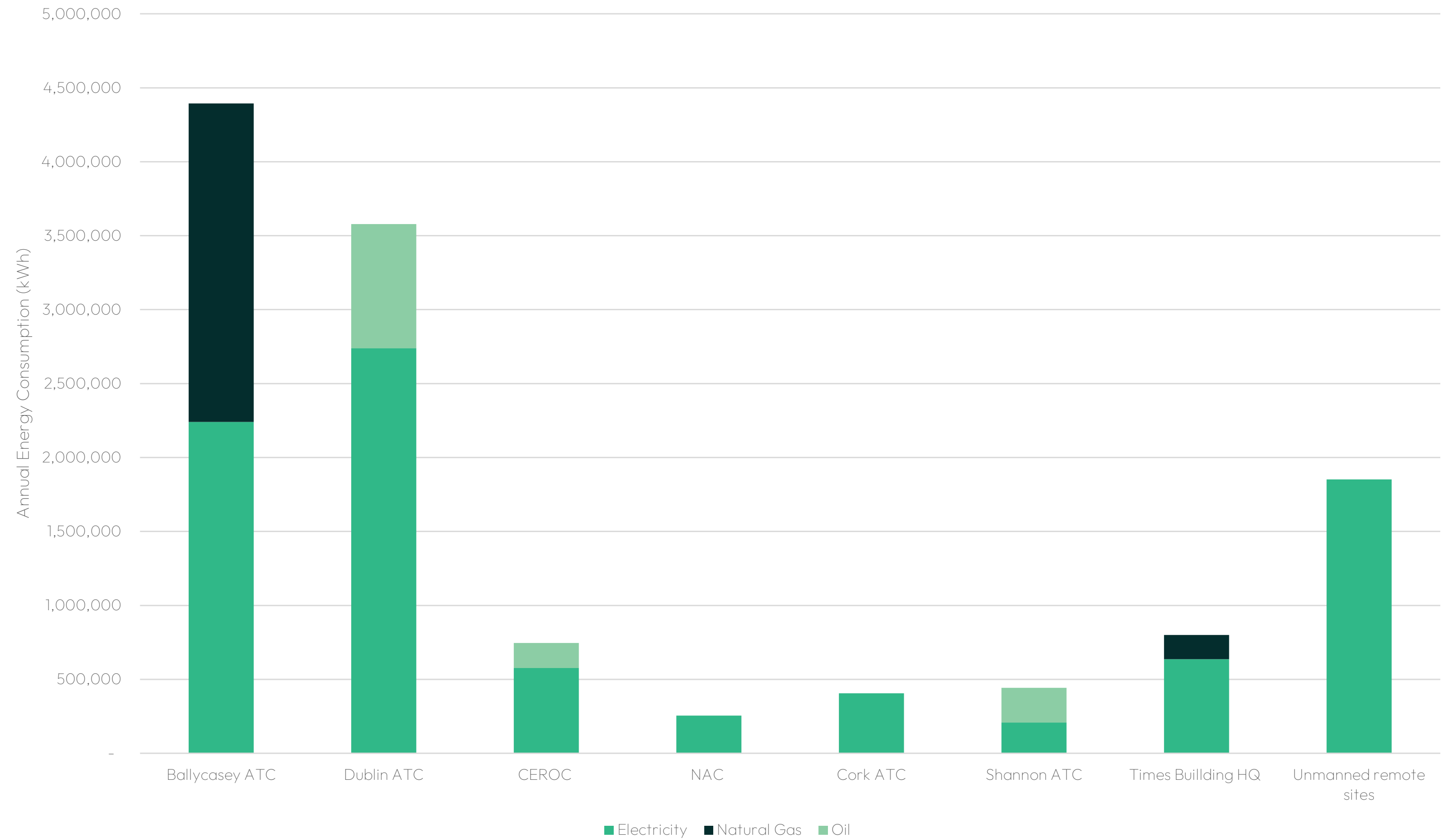

Figure 6 Energy consumption for the eight identified AirNav sites (September 2020 to August 2021).

Energy Pillar

Energy Efficiency in Facilities

The energy consumption of AirNav encompasses a substantial portion allocated to the heating and lighting of its facilities. In recent years, there has been a significant allocation of resources towards the repair of buildings and the enhancement of energy efficiency, with origins dating back to the Irish Aviation Authority (IAA). The overarching plan for achieving energy efficiency at AirNav facilities in the long term is outlined as follows:

– When constructing new facilities or upgrading existing AirNav facilities, it is recommended to adhere to the Near Zero Energy Building (B2) standard or surpass it.

– Conduct comprehensive energy audits and perform life-cycle analyses of the plants and equipment at all primary AirNav facilities, while also allocating resources towards capitalising on energy savings prospects.

– Substantiate the replacement of obsolete air handling and cooling systems with cutting-edge Variable Refrigerant Flow (VRF) air-conditioning systems, which provide concurrent heating and cooling via heat recovery. Prioritise the replacement of building plant and equipment with energy-efficient alternatives included in the triple-E registry, wherever feasible.

– Allocate resources towards investments in energy efficiency. The objective is to transition from fossil fuels to renewable energy sources for electrifying heat and transportation, whenever feasible. It should be noted that the fulfilment of contingency and operational resilience needs will necessitate the retention of some pre-existing fossil fuel heating boilers, back-up generators, and fleet vehicles powered by fossil fuels.

Air Nav Operational Equipment

The replacement of AirNav's operating equipment, which includes systems and navigational tools, will be carried out in accordance with the predetermined end-of-life cycles for each individual component. In the process of acquiring new equipment, there will be a specific focus on enhancing operational performance, resilience, safety, and security considerations. These issues will be given precedence over energy efficiency. The prioritisation of energy consumption will depend on the specific category and specialisation of the principal equipment concerned.

However, the inclusion of energy efficiency studies will be included into the comprehensive estimates of life cycle costs. It is anticipated that the combination of modernization projects and advancements in computational power efficiency would result in cost reductions via the deployment of new equipment.

AirNav Carbon Neutral Pathway

In alignment with AirNav's goal to achieve carbon neutrality by the year 2030, a strategic transition to sustainable energy sources is imperative. This transition will necessitate the adoption of renewable energy solutions, which can be procured through either direct means or via third-party arrangements, such as Power Purchase Agreements (PPAs). Specifically, to meet the renewable electricity (RES-E) requirements, AirNav would also need to consider the installation of extensive Solar Photovoltaic (PV) arrays spanning multiple hectares or alternatively, the deployment of a substantial single wind turbine. Another viable approach involves a combination of smaller-scale wind turbines and Solar PV arrays, all in accordance with contemporary technology standards.

In addition, AirNav is anticipated to investigate suitable decarbonization strategies for its current portfolio of buildings. Table 6.1 presents a summary of decarbonisation prospects that may be considered. Table 6.2 presents a summary of decarbonisation options that may be investigated for each facility, as derived from modelling and analysis conducted by external consultants commissioned by AirNav.

Energy Pillar

Table 6.1 Decarbonisation Opportunities

1. Operations & Controls	2. Central Systems
1. Measuring, verification and commissioning.	1. Central plant upgrade or connection to district network.
2. Performance-based facility management.	2. Low energy lighting, with intelligent controls (e.g. dimming, zoning).
3. Control and monitoring system/installation upgrade.	3. Electrification of heating (e.g. heat pumps).
4. Renewable power purchasing.	4. Renewable generation (e.g. photovoltaic panels).

3. Internal Spaces	4. Building Envelope
1. Low energy HVAC.	1. Insulation retrofit (roof, cavity wall).
2. Small power load optimisation (cloud-based computing).	2. Local external shading.
3. Low energy lighting, with intelligent controls (e.g. dimming, zoning).	3. Mixed-mode ventilation.
4. Tenant engagement, green leases.	4. Façade replacement for improved u-values and air tightness.

Table 6.2 Summary of decarbonisation interventions proposed for each facility.

	Ballycasey ATC	Dublin ATC	CEROC	NAC	Cork ATC	Shannon ATC	Times Building HQ	Unmanned Remote Sites
1. Operations & Controls								
Metering Upgrade	✓	✓	✓	✓	✓	✓	✓	
BMS Health Check	✓	✓	✓	✓	✓	✓	✓	
Building Tuning	✓	✓	✓	✓	✓	✓	✓	
2. Central Systems								
Electrification of heating with ASHP	✓	✓				✓		
Electrification of DHW/SHW	✓							
Replacement of radiators & pipe infrastructure				✓				
AHU Upgrades	✓	✓	✓		✓		✓	
Pump motor replacement	✓	✓	✓			✓	✓	
Fan motor replacement	✓	✓	✓	✓	✓	✓	✓	
External lighting upgrades	✓	✓	✓				✓	
Low energy lighting	✓	✓	✓			✓	✓	✓
Intelligent lighting controls		✓					✓	
Daylight linking						✓		
Photovoltaic installation	✓	✓		✓	✓	✓		✓
3. Internal Spaces								
Lift upgrades	✓				✓		✓	
4. Building Envelope								
Improve building airtightness			✓			✓		

Energy Pillar

Applying the decarbonisation measures shown in Table 2, AirNav's carbon emissions projection reduces compared to the 'Do Nothing' scenario, as shown in Figure 7.
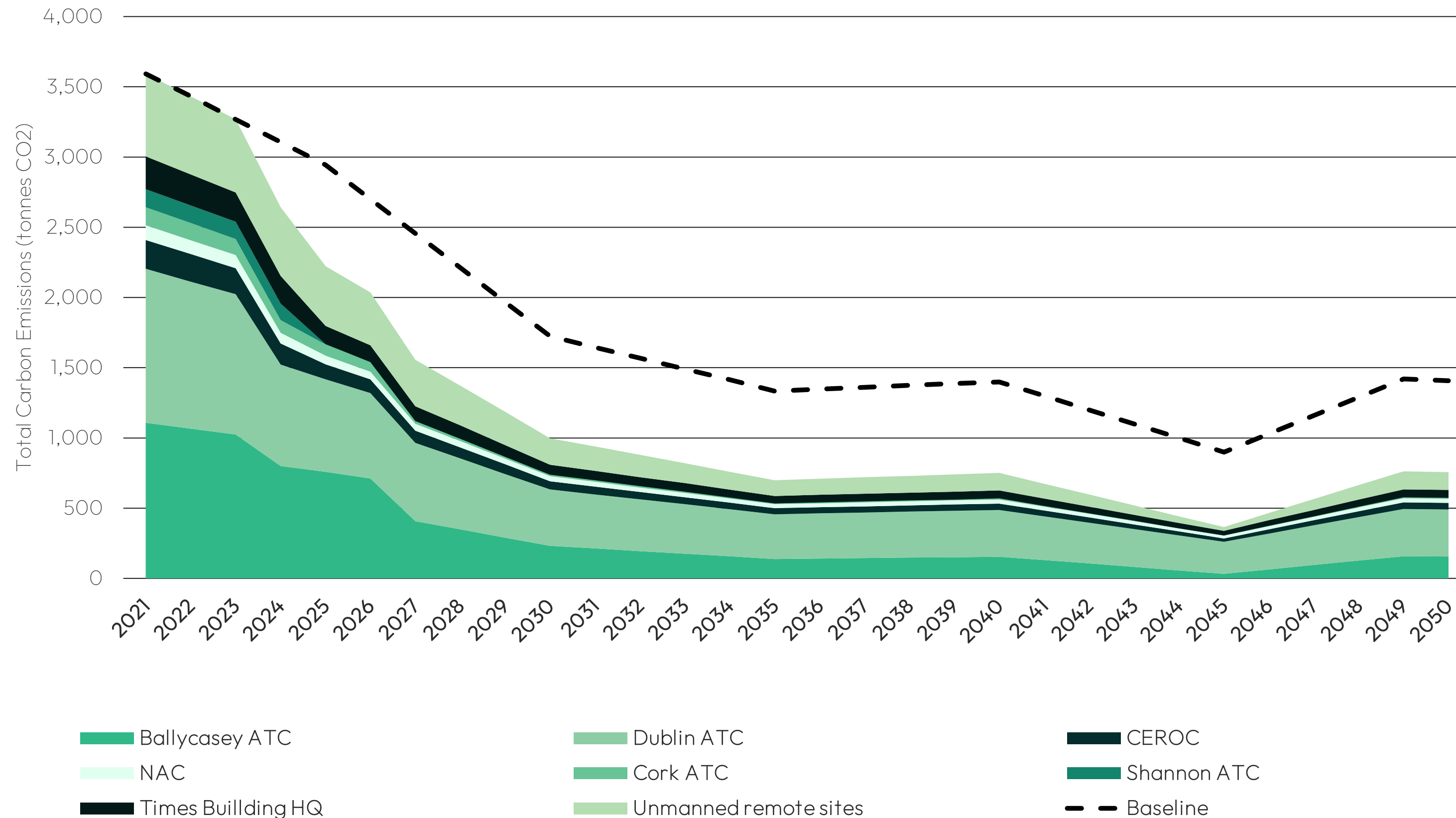
When implemented in the context of the 'Do Nothing' scenario, also known as the Business as Usual case, the findings indicate that the application of decarbonisation measures to each facility leads to a reduction in carbon emissions relative to the baseline established for the period of 2020–2021. Applying the decarbonisation interventions results in a reduction in 76%. However, in order to achieve the goal of net carbon neutrality, the use of carbon offsets will be necessary. The carbon offsets that are necessary are shown in Table 6.3.

Figure 7 AirNav carbon emission projection pathway after applying decarbonisation interventions.

Energy Pillar

Table 6.3 Required carbon offsets for each facility.

Facility	% reduction in emissions for 'Do Nothing' scenario (2021-2030)	% reduction in emissions after interventions (2021-2030)	Required carbon offsets after proposed interventions to reach net zero for 2030 (tonnes CO2e)
Ballycasey ATC	42%	79%	289
Dublin ATC	52%	76%	318
CEROC	59%	71%	70
NAC	51%	66%	40
Cork ATC	66%	75%	40
Shannon ATC	34%	113%	-23
Times Building HQ	57%	69%	83
Unmanned Remote Sites	66%	68%	236
Total	52%	76%	1,053

Renewable Electricity

Given the substantial energy requirements associated with AirNav's facilities, it is acknowledged that a considerable quantity of renewable power will be need to be produced or procured in order to attain net carbon neutrality. Renewable energy encompasses both the production of power via on-site renewable sources and the procurement of electricity from renewable sources.

A number of Renewable energy option have already been investigated for Solar Photovoltaic including 50 kW for NAC and 450 kW for Shannon ATC.

Air Navigation Service Efficiency

AirNav Ireland is at the forefront of European efforts to improve Air Traffic Management performance, including a broad range of efficiencies to enable the reductions of emissions. To date AirNav Ireland has introduced Free Route Airspace in both the upper and lower en route airspace, Point Merge operations at Dublin to both reduce orbital holding and facilitate Continuous Descent Operations. High Intensity Runway Operations at Dublin and cross border arrival management (XMAN) which aims to reduce low level holding at London Heathrow and London Gatwick Airports have also been introduced. In addition, the improvements brought by the opening of the North Runway at Dublin Airport also delivers efficiencies in taxi time and arrival sequences AirNav Ireland continues to engage with European partners to improve our performance in relation to climate adaptation on an ongoing basis . AirNav Ireland works closely with regional airports, airline operators, and adjacent Air Navigation Service Providers to enable our customers operate as efficiently as possible. In addition, our main air traffic management system is regularly upgraded with the latest functionality in order to enable increases in capacity and efficiency. AirNav Ireland commits to continue to examine initiatives which may further facilitate our customers make environmental improvements throughout the life of this plan.

Waste Management

AirNav Ireland is dedicated to waste reduction and enhancing recycling initiatives as a cornerstone of our sustainability philosophy. Collaborating closely with our waste management partners, we have implemented robust segregation and recycling practices, effectively eliminating single-use plastics from our catering and beverage facilities. As an active participant in the circular economy, we are committed to exploring opportunities for equipment upcycling wherever feasible.

Our focus extends to minimising paper waste generated by our business activities, aiming to achieve a transition to a paperless office within the timeframe of our plan. Consolidating print resources has significantly reduced our reliance on printing while promoting the standard practice of electronic document sharing in our day-to-day operations. The implementation of our Electronic Document & Audit Action Management System not only yielded substantial savings in print needs but also serves as a valuable substitute for traditional paper documentation.

Energy Pillar

Throughout the duration of our sustainability plan, we will continuously assess avenues to further advance our progression toward an office environment that operates predominantly without paper.

Timeline of Energy Targets

In order to realise the envisioned goals for the AirNav energy pillar, it is necessary to identify and implement particular measures. Table 4 provides a comprehensive overview of the objectives derived from the vision statement and execution strategy outlined in the previous sections. The KPI's for the energy targets are shown in the sections that follow:

Table 6.4 Timeline for targets of energy pillar

Short Term – 2024	% reduction in emissions for 'Do Nothing' scenario (2021-2030)	% reduction in emissions after interventions (2021-2030)	
An ongoing revision of AirNav's Energy Strategy:	Electricity Generation capacity through Renewable Energy	Reduction of space heating demand	
An ongoing update of Climate Action Roadmap	100 percent Renewable Energy electricity to offices	Green Power Certificates	
	Improve Building Energy Efficiency*	Reduction of embodied carbon	Resilience of gas and electricity networks
Energy Communication*	Energy saving equipment	Eliminate fossil fuels	Carbon Offsets

*Continuous target

Energy Pillar

Energy Pillar –KPI
Short term actions (Q1 2024 – Q4 2024)

Pillar	Target	Action(s)	Timeframe	Cost/ resource required
Energy	**AirNav's Energy Strategy:** The Energy Strategy ought to encompass the decarbonisation of pre-existing structures, with a focus on ensuring compliance with public sector regulations, objectives, and responsibilities. Additionally, it should explore the feasibility of implementing a centralised approach to energy consumption. This could involve the installation of energy metres in existing buildings and the incorporation of on-site initiatives such as electric vehicle charging points.	• Gain familiarity with the local, regional, national, and European policy framework in order to guarantee the formulation of a specific set of assumptions for the strategy and the sustainability of AirNav's plan in light of local and regulatory requirements. • Determine and assess the potential, decarbonization, and renewable energy resources that are pertinent to AirNav. • Determine obstacles to the deployment of on-site energy generation and prospects for decarbonization. • Create and revise an energy plan based on the aforementioned information.	2024 (Q2-Q4)	External Consultant/ Expert Climate and Sustainability champion
	Future energy supply: Integrate, implement, and achieve ISO 50001 certification.	• Conduct an ISO 50001 gap analysis. • Establish energy targets in accordance with ISO 50001 criteria. • Train all relevant personnel and emphasise how their employment relates to the performance of energy management systems. • Put in place an energy management system and seek accreditation. • Evaluate and constantly improve their energy-use practises.	2024 (Q2-Q4)	External Consultant/ Expert Climate and Sustainability Champion
	Continuous update of Climate Action Roadmap: The Climate Action Roadmap will outline how AirNav intends to meet its energy efficiency and GHG emission reduction objectives.	• Become acquainted with policy changes or updates concerning the adaptation and execution of the Climate Action Plan. • Assess the relevant actions needed for the execution of the Climate Action Plan as they relate to AirNav accessibility barriers.	2024 (Q2-Q4)	Sustainability Manager and Sustainability Pillar Champion
	Energy Communication Enhance energy communication and awareness by implementing regular performance assessments.	• It is recommended to consistently provide feedback about both individual and group behaviour in regard to energy use. • The objective is to provide focused communications pertaining to energy, drawing on energy audits and performance assessments. • Employ relevant and current prompts.	2024 (Q2-Q4)	Staff Communications Notices, Newsletters and Signage

Energy Pillar

Energy Pillar –KPI
Medium term actions (Q1-2025 – Q1 2027)

Pillar	Target	Action(s)	Timeframe	Cost/ resource required
Energy	**Explore Renewable Energy:** Expand the capacity for generating power from renewable sources and enhance the use of renewable energy on-site. In addition to this, it is essential to formulate a comprehensive approach for the implementation of onsite power generating methods, such as the use of rooftop solar panels and geothermal heat sources.	• Determine which renewable energy sources, taking into account resource availability, technological feasibility, and regulatory framework, are the most viable. • Determine if the infrastructure needed to implement the potential for renewable energy is available.	(2025 – 2027)	Chief Executive Officer External expert Sustainability Manager / Sustainability Pillar Champion (s)
	100 percent Renewable Energy electricity to offices.	• Conduct audits with the assistance of outside specialists to comprehend energy use in both new and existing workplaces. • Conduct a viability analysis on the use of renewable energy in office premises.	(2025 – 2027)	Sustainability Manager / Sustainability Pillar Champion (s)
	Energy efficient equipment: Increase energy efficiency by installing energy-saving devices and technologies in all newly constructed buildings and in equipment that is nearing the end of its useful life in older building stock	• Examine every equipment's operating effectiveness and billing patterns. • Determine which equipment has reached its end of life. • Create a strategy for equipment replacement that takes into account the effect on energy consumption and the end of life of the current energy rating.	(2025- 2027)	Energy Pillar Champion, Facility Manager

Energy Pillar

Energy Pillar -KPI
Long term actions (Q1 2027+)

Pillar	Target	Action(s)	Timeframe	Cost/ resource required
Energy	Minimising the need for space heating: Reduce space heating demand to 15 kWh/m2/yr, and energy consumption to 55 kWh/m2/yr	• Reducing fabric heat loss via insulation utilisation. Reducing ventilation loss through increased building airtightness and potential mechanical • Heating recovery ventilation installation • Setting up an energy-efficient heating system	(2028+)	Sustainability Manager Internal and External Experts Facilities Manager
	Reduction of embodied carbon:	When undertaking the refurbishment of old structures, it is essential to consider the following aspects: • Reuse buildings instead of constructing new ones. • Specify low-carbon concrete mixes • Limit carbon-intensive materials. • Choose lower carbon alternatives. • Use high-recycled content materials. • Maximize structural efficiency. • Use fewer finish materials	(2028+)	Chief Executive Officer Climate and Sustainability Champion Sustainability Manager External consultant/ Expert
	Resilience of gas and electricity networks:	• Conduct an assessment of the current infrastructure for gas and electric networks. • Ensure the preservation of the resilience of the gas and electricity networks, and potentially support their improvement, as long as these upgrades align with AirNav and Ireland's broader climate and energy objectives.	(2028+)	Climate and Sustainability Champion Sustainability Manager External consultant/ Expert Facilities Manager

Energy Pillar

Energy Pillar –KPI
Long term actions (Q1 2027+)

Pillar	Target	Action(s)	Timeframe	Cost/ resource required
Energy	Eliminate fossil fuels: Eliminate on-site fossil fuel use.	• Effectively administer and mitigate emissions in accordance with previously established objectives. • Increase Energy Efficiency through the replacement of equipment, particularly equipment at end of life • Expand the use of Renewables.	(2028+)	Sustainability Manager External consultant/ Expert Internal and External Experts
	Carbon Offsets: Explore Carbon Offsets.	• Choose a carbon offset methodology based on existing protocols or develop a new one. • Send the project proposal for carbon offsets to an Irish standard authority that is acknowledged. • Send the project plan to the peer review committee for Offset. • Create the project, finish the accounting for carbon offsets, and confirm project offsets. • Check offsets and register them with the relevant Irish GHG programme.	(2028+)	Chief Executive Officer Climate and Sustainability Champion Sustainability Manager External consultant/ Expert

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Sitting at the core of our Sustainability Vision, biodiversity is acknowledged as a key priority for AirNav with a view to restore and enhance where possible, thereby delivering benefits from nature. Below we present the context of biodiversity for our organization, the requirements that come from EU, national and local legislation, policy and plans, and how we use that information to design the opportunities to meet our biodiversity targets. Informed by our research, we have crafted these opportunities under the policy targets provided in Energy Policy/Targets. We have set the goal, over the lifetime of this plan, to implement these opportunities and achieve the targets provided so that AirNav contributes its maximum to biodiversity restoration in Ireland.

Biodiversity Drivers

Biodiversity is of key importance for life on this planet. It is woven into the fabric of our everyday lives, important in a functioning natural system, providing benefits from nature such as flood management and pollination, acting as natural defences against climate change and giving people places to experience and enjoy which helps with our health and wellbeing. However, we are living through the Anthropocene, a term used to describe the time during which humans have had a substantial impact on our planet, where biodiversity is in crisis as a result of human activities such as climate change.

To protect and restore biodiversity, various directives, laws, acts, statutory instruments, programmes, policies and plans have been designed and implemented at European, national

and local level. These drivers help frame the context of the biodiversity pillar within this plan, guiding our targets and which are detailed in Biodiversity Targets Section. AirNav is required to adhere to statutory instruments transposed into Irish legislation. Understanding the requirements of these legislative instruments has helped frame the opportunities and targets within this plan.

The EU Habitats and Birds Directives and the Water Framework Directive provide, primarily, the legal framework for the protection of the designated site network in Ireland and the improvement of water quality across the river catchment systems. When these EU Directives were adopted into Irish law, specific requirements including environmental assessments, derogation licences, water quality standards and best practice in industry was introduced and implemented. The National Development Plan, National Planning Framework, Regional Spatial and Economic Strategy and county development plans strengthen the framework for biodiversity with policies for biodiversity enhancement and protection from national to local level.

The EU's Biodiversity Strategy to 2030 aims to address the biodiversity crisis through measures such as halting the decline of pollinators, reducing the use and risk of pesticides and river restoration. The draft National Biodiversity Action Plan echoes the measures within the EU Biodiversity Strategy with several actions aligning with the opportunities AirNav has to protect and restore biodiversity. Principles of the EU Nature Restoration Law in addition to the All-Ireland Pollinator Plan, Climate Action Plan and County

Biodiversity Action Plans have fed into the development of our opportunities and targets.

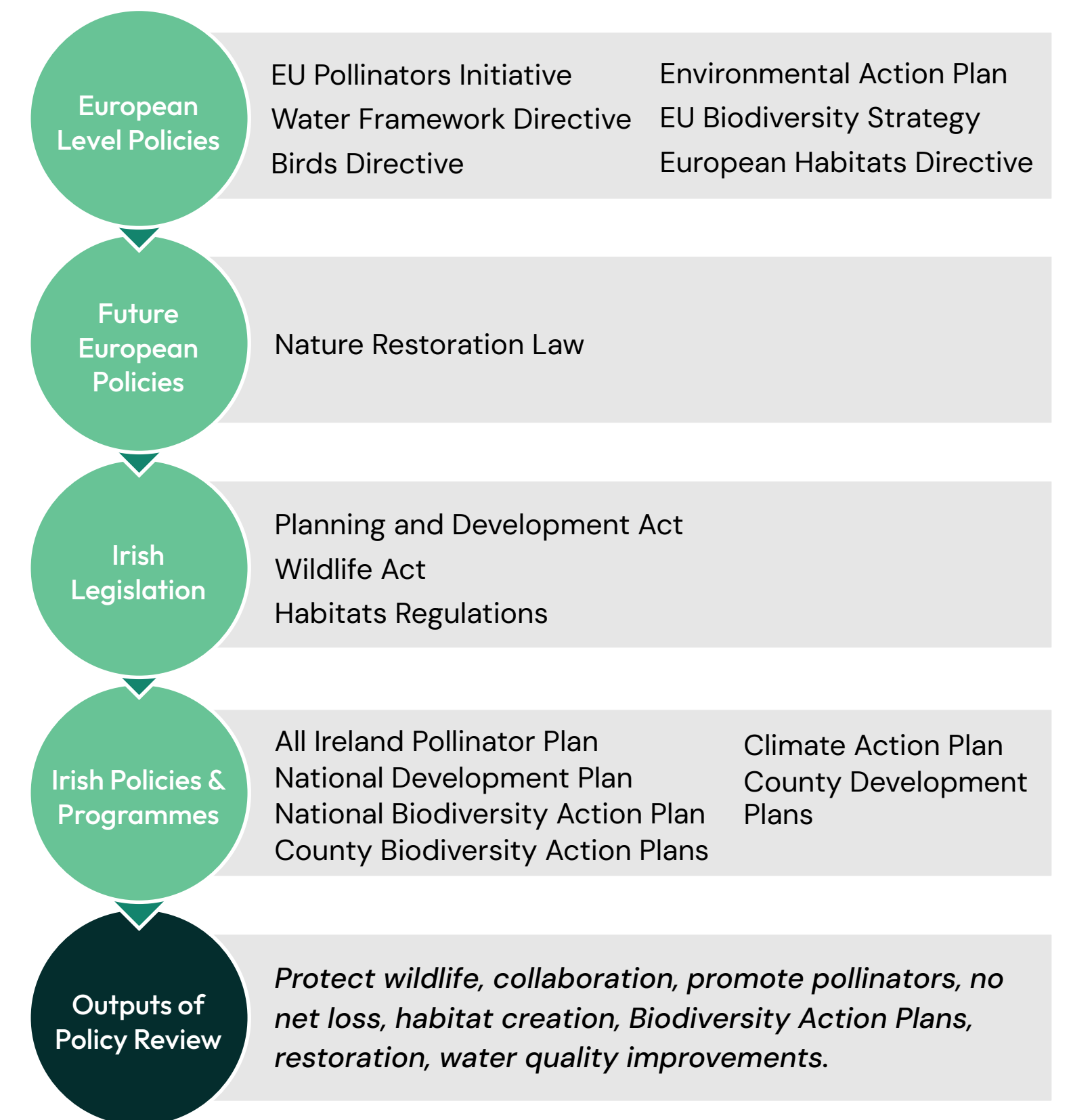|	
European Level Policies	EU Pollinators Initiative Environmental Action Plan Water Framework Directive EU Biodiversity Strategy Birds Directive European Habitats Directive
Future European Policies	Nature Restoration Law
Irish Legislation	Planning and Development Act Wildlife Act Habitats Regulations
Irish Policies & Programmes	All Ireland Pollinator Plan Climate Action Plan National Development Plan County Development National Biodiversity Action Plan Plans County Biodiversity Action Plans
Outputs of Policy Review	*Protect wildlife, collaboration, promote pollinators, no net loss, habitat creation, Biodiversity Action Plans, restoration, water quality improvements.*

Figure 8 Biodiversity policies and legislation influencing the Biodiversity Pillar

Biodiversity Pillar

Biodiversity Action Plan

Context and Vision

Ireland's biodiversity has been in decline for several years, with a number of alarming statistics over recent years. Within the last ten years, approximately 46% of protected habitats and 15% of protected species experiencing a decline[3], 63% of bird species in Ireland are in decline[4], approximately 50% of Ireland's rivers and lakes are in moderate, poor or bad ecological status[5] and more than half of Ireland's native plant species are in decline with the largest decline in grasslands.

AirNav will contribute to the recovery of Ireland's biodiversity recovery by promoting actions to enhance habitats and nature. Biodiversity is the rich variety of life on Earth, encompassing all bacteria, insects, plants, animals, humans and more. It is usually discussed on three levels: genetic diversity, species diversity and ecosystem diversity which takes in the processes, habitats, communities and variations within and geographic area. Biodiversity is a crucial and vulnerable asset that delivers a range of benefits that societies and our economy depend on. These benefits range from food, fuel, medicine, to clean air, water and soil.

3 | NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS Report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

4 | Gilbert, G., Stanbury, A., & Lewis, L. (2021). Birds of Conservation Concern in Ireland 4:2020–2026. Irish Birds, 43, 1–22

5 | CSO (2023) Central Statistics Office. Environmental Indicators Ireland 2021.

Figure 9 Biodiversity options

Nature, which includes biodiversity and other aspects of the natural world, can play an important role in the successful operation of AirNav through these benefits to humans, also known as ecosystem services, and therefore we have a responsibility not only to protect and restore biodiversity because we have caused such declines but also because securing these nature dependencies, minimising negative impacts or have positive impacts on nature will benefit us. AirNav, through appropriate management of its land, operations and supply chain can have a positive impact on biodiversity and nature.

We understand there is an overwhelming need to halt and reverse these declines in biodiversity and begin to restore the natural world. Our vision will comprise of several elements, with the first to understand the condition of biodiversity within our estate, and then to identify opportunities to protect and restore. We have set targets that will aid us to achieve the objectives within our Biodiversity Action Plan by 2030. AirNav aims to show that biodiversity is valued and protected and can be enhanced on industrial sites. This action plan will help sustain a healthy planet and deliver benefits for all people.

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Policy Targets

We understand the biodiversity crisis Ireland is currently facing and through this plan, we seek to maximise our contribution towards Ireland's path to biodiversity recovery. Understanding how we can do this has been informed by a thorough review of European, national and local legislation and policy, pulling out key drivers which are reflected in our biodiversity aspirations. Figure 10 outlines some key targets from a variety of drivers that AirNav intends to contribute positively towards.

Have restoration completed or underway on **at least 30%** of degraded terrestrial inland waters, and coastal and marine ecosystams	**90%** of Business for Biodiversity platform members have conducted and assessment of impacts and dependencies on biodiversity **by the end of 2027, with at least 60% by the end of 2025**
Eleminate, minimise, reduce and or mitigate biodiversity and ecosystems services... **by at least 50% by 2030**	At least 25,000km of free-flowing rivers are restored **by 2030**

Figure 10 Biodiversity Policy Targets across EU and Irish National Policy

Opportunities

We have aligned a list of opportunities with the five pillars of Ireland's Biodiversity Framework for Business, which itself is aligned to corporate social responsibility objectives.

The pillars can be integrated with in-house Integrated Management Systems and Environmental Management Systems, like ISO 14001[6]. The Biodiversity Framework for Business is not a standard or certification, but companies can pick and choose objectives that work best for them in the context of existing objectives. This framework has been used to identify and outline opportunities for AirNav to protect, conserve and promote biodiversity across their operations.

The opportunities identified cover a range of measures which have been further developed into targets within this plan (Biodiversity Targets Section).

Governance

There have been four key opportunities identified that AirNav intend to take forward under the category of Governance. These align with the legislative and policy drivers discussed in the Biodiversity Drivers Section, and are:

− Produce a Biodiversity Action Plan (BAP) for AirNav's land holdings in collaboration with AirNav's senior management team, the sustainability team, internal and external stakeholders and competent third parties. This includes the use of qualified experts that will provide in the development the BAP;

− Formal communication with the development team and the sustainability team to understand impacts on land holdings that may be incorporated into the renewable (e.g. photovoltaic solar farms) strategy or any

Biodiversity Pillar

new development to ensure the goals and objectives align with the BAP and to ensure any proposed works meet local, regional and national policy and legislative requirements and follow current ecological and environmental impact assessment best practice;

— Collaborate with environmental managers, the sustainability team and senior team leaders to integrate key milestones from the BAP into the ISO 19001 Quality Management System; and

— Explore opportunities for improved water quality and contribution towards improved WFD outcomes.

Environment
Opportunities that fall under the environment category are primarily direct action and initiatives that AirNav can take to improve biodiversity within their landholdings. These are:

— Create, restore or enhance grasslands in line with the All-Ireland Pollinator Plan;

— Create, restore and/or enhance habitats, such as ponds, scrub, and hedgerow habitats or supply beetle banks, insect hotels and bat/bird boxes either on AirNav land holdings or within local zone of influence; and

— Minimise use of herbicides in management activities.

Workplace
— Workplace opportunities look to where AirNav can promote biodiversity positive behaviour amongst their workforce and within their workplaces. This is a collaborative approach and provides the following opportunities:

— Produce and implement an employee environmental engagement plan that includes education and engagement initiatives; and

— Build in-house capacity for staff and local Biodiversity Champions to promote and monitor biodiversity.

Community
Opportunities within the community draw on AirNav's position as a stakeholder within a wider community, and promote the interventions they can facilitate within that area. The opportunities will require a high level of collaboration and engagement:

— Attend local events that engage with the local community to promote the goals and achievements of the BAP;

— Engage regularly with the stakeholders of the All-Ireland Pollinator Plan; and

— Engage with biodiversity stakeholders e.g. National Parks and Wildlife Service and research/university institutes to share data and resources.

Marketplace
AirNav is situated within a wider marketplace, including both upstream and downstream supply chains. In addition to the sustainable procurement opportunities that are discussed in the Governance Pillar Section, AirNav can:

— Work with the supply chain to assess whether biodiversity opportunities can be maximised outside of AirNav's land holdings; and

— Collaborate with existing landowners within AirNav operational land and new landholders for future expansion to embed biodiversity friendly practices within their land management.

In order to achieve the above five biodiversity pillars, the biodiversity elements of this plan will be implemented through AirNav's Integrated Management System (IMS). The system will be used to identify, collate, manage and implement all the objectives and key actions as part of this program. AirNav's Business Management System is currently accredited to ISO 9000 and AirNav intends to ensure accreditation to ISO 14000 and ISO 50001.

Biodiversity Pillar

Biodiversity Targets

Time based targets

Table 7.1 provides further detail on the opportunities highlighted in the Opportunities Section, and sets out short, medium, and long term targets. It is expected that short term targets will be completed within one year of the publication of the plan, and medium term targets will be implemented from year 2 to year 4. Long term targets may take the full course of the plan to come to fruition, up to the year 2029.

Table 7.1 Biodiversity Targets

Pillar	ID	Opportunity	Short term target	Medium term target	Long term target
Energy	G1	Produce a Biodiversity Action Plan (BAP) for AirNav's land holdings in collaboration with AirNav's senior management team, The Sustainability Team, internal and external stakeholders and competent third parties. Including the use of qualified experts to support the development of the BAP.	Survey habitats and carry out Preliminary Ecological Appraisals (PEA), which will establish a baseline of habitats and identify sensitive plants, insects, birds and mammals, on existing AirNav land holdings and any new land brought forward for development.	Using the PEAs, produce a BAP that identifies opportunities to create, restore and/or enhance habitats on AirNav estate (e.g. ponds, grasslands, woodland, trees, scrub, hedgerows). Collaborate with internal and external stakeholders to maximise enhancement opportunities and identify opportunities to improve habitat connectivity. The BAP should include maintenance and management procedures.	Complete the creation, restoration and/or enhancement of the first round of opportunities identified in the BAP, within the AirNav estate.
			Survey AirNav land holdings to identify and map distribution of invasive species.	Implement a programme of invasive species removal, in accordance with best practice and suitably qualified individuals.	Monitor the success of the removal programme and maintain the status of invasive species eradication on AirNav land holdings.
			Implement the BAP to achieve a minimum standard of no net loss+ (I.e., maximise enhancement opportunities) across the whole estate. Habitats to be managed annually and monitored as part of the BAP, which would be updated every 5 years.		

Pillar	ID	Opportunity	Short term target	Medium term target	Long term target
Energy	G2	Formal communication with the development team and the sustainability team to understand impacts on land holdings that may be incorporated into the renewable (e.g. photovoltaic solar farms) strategy or any new development to ensure the goals and objectives align with the BAP and ensure any proposed works meet local, regional and national policy and legislative requirements and follow current ecological and environmental impact assessment best practice.	Awareness raising with key people within sustainability and development team around the BAP and ecological and environmental considerations.	Where expansion on existing or new land is proposed, engagement with a suitable expert on the opportunities for no net loss and further enhancement takes place.	Future development and land acquisition includes biodiversity and environmental enhancement as key aims for the project and are accounted for within the development process.
	G3	Collaborate with environmental managers, The Sustainability Team and senior team leaders to integrate key milestones from the BAP into the ISO 19001 Quality Management System.	Formulate core Key Performance Indicators (KPI's) to monitor and track the progress and delivery of the BAP across existing AirNav land holdings.		
	G4	Explore opportunities for improved water quality and contribution towards improved WFD outcomes.	Undertake a review of existing drainage infrastructure across the AirNav portfolio and where water quality issues my occur.	Explore and record opportunities for improved drainage and implementation of SuDS across the AirNav portfolio.	Action a programme of improved drainage and water quality. Engage with Blue Dot programme for ways to contribute to improved water quality at a catchment scale.
Environment	E1	Create, restore or enhance grasslands in line with the All-Ireland Pollinator Plan.	Embed pollinator friendly management practices, such as delayed mowing, into land management on AirNav landholdings.	Enhance existing amenity grassland to be more species diverse and identify opportunities for new habitat creation.	Create new grassland habitats and continue to maintain and monitor enhanced grasslands.
			Use native seeds of local provenance in habitat enhancement and creation activities, with sources identified through engagement with relevant local organisations.		
	E2	Create, restore and/or enhance habitats, such as ponds, scrub, and hedgerow habitats, supply beetle banks, insect hotels and bat/bird boxes either on AirNav land holders or within local zone of influence.	Identify appropriate locations for create/restore/enhance opportunities of new habitats, in line with BAP recommendations.	Successful implementation of create/restore/enhance opportunities within appropriate AirNav portfolio land holdings.	Management and monitoring of create/restore/enhance opportunities.
Environment	E3	Minimise, or eliminate is possible, use of herbicides in management activities.	Implement new management working methods and educate employees on why the change is important.	Continue to implement revised working method and monitor results.	

Pillar	ID	Opportunity	Short term target	Medium term target	Long term target
Workplace	W1	Produce and implement an employee environmental engagement plan that includes education and engagement initiatives.	Produce an environmental engagement plan for employees and implement series of talks from external experts to raise awareness of the nature and climate crisis.	Continue to implement the plan and monitor levels of engagement, promote employees being hands on in the implementation of the BAP and taking ownership of increasing biodiversity in their own lives. Including acknowledgement and support of employees personal activities that contribute towards biodiversity recovery in the wider community.	
	W2	Build in-house capacity for staff and local Biodiversity Champions to promote and monitor biodiversity.	Create and advertise initiative of Biodiversity Champions at a local level, with an engagement officer from within the sustainability team as lead co-ordinator.	Offer upskilling and training, in collaboration with local nature organisations, to biodiversity champions to empower them and guide them into creating new initiatives for the wider work force to take part in.	Support and encourage initiatives from Biodiversity Champions, and promote sharing best practice across AirNav with co-ordinated events with the wider employee base.
Community	C1	Attend local events that engage with the local community to promote the goals and achievements of the BAP.	Identify local groups to engage with and set up introductory meetings.	Sponsorship of local initiatives or partnership with local landowners where enhancement activities cannot take place within AirNav estate.	Report on the success and reach of engagement activities and explore where future relationships can be grown.
	C2	Engage regularly with the stakeholders of the All-Ireland Pollinator Plan.	Collaborate with local stakeholders to source local native wildflower seed and green hay to be used on AirNav's estate.	3 year engagement cycle with AIPP stakeholders to identify areas of improvement.	
	C3	Engage with biodiversity stakeholders e.g. NPWS and research/university institutes to share data and resources.	Explore where opportunities may be feasible to share AirNav data e.g., weather or bird strikes, or if new monitoring could be implemented on AirNav sites.	Engage with stakeholders and research institutes to implement joint initiatives of data sharing and/or research.	
Marketplace	M1	Work with the supply chain through green procurement to identify suppliers who prioritise biodiversity.	During the initiation of the BAP set up meetings with the supply chain and service providers (e.g., grounds maintenance) to raise awareness of the BAP and offer training and share knowledge and expertise where appropriate.	Embed biodiversity expectations within AirNav green procurement policy and operational governance.	Continue to update the policies and governance to keep in line with best practice and continual improvement and training within AirNav supply chain.
	M2	Collaborate with existing landowners within AirNav operational land and new landholders for future expansion to embed biodiversity friendly practices within their land management.	Create a register of AirNav land partners and establish a list of opportunities where they could enhance biodiversity.	Support land partners to enhance biodiversity and limit damaging management practices.	Review what initiatives have been completed, and where further engagement can be implemented.

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Resource expectations

A number of resources will be required from AirNav to support the commitment to Biodiversity and fulfil the requirements of the targets set out in Table 7.1. These resources fall into four main categories:

– Time;

– Staff resourcing;

– Financial investment; and

– Knowledge and data sharing.

Biodiversity KPIs

It is anticipated that the progress for each target outlined in Table 7.2 shall be recorded within one or all of the following:

– Annual General Meeting;

– Mid-Term review of the Implementation Plan;

– Quarterly meetings; and

– Sustainability Management Meetings.

If targets are not met, then the reasons for not meeting expectations will be reviewed by the Sustainability Team and further action proposed to the AirNav Board.

Table 7.2 Short term KPIs for Biodiversity Pillar

ID	Short term target KPI	Measure	Monitoring
G1	A PEA for all AirNav landholdings been produced.	What percentage of AirNav landholdings have a completed PEA document. Measure: (No. of PEA/No. of Landholdings) * 100	Sustainability Managers track the completion of PEAs and monitoring the completion of the documents.
		What percentage of AirNav landholdings have identified and mapped the distribution of invasive species? Measure: (No. of IAS maps/No landholdings)	Sustainability Managers track the completion of Invasive Alien Species maps and monitoring their completion.
G2	A formal communication strategy for future renewable energy projects has been established.	The development and sustainability team are coordinating on the integration of potential BAP policies with future projects . Yes/No	Sustainability Managers track communications regarding BAP and future projects within meeting minutes.
G3	Are biodiversity targets from ISO 19001 Quality Management System being integrated into the BAP?	Biodiversity targets from ISO 19001 have been identified and reported to Sustainability Team. Yes/No	Sustainability Managers track the progress of research.
G4	Research into AirNav's drainage systems commenced	What percentage of AirNav landholdings have had their drainage infrastructure identified and documented with links to freshwater system identified? Measure: (No. of PEA/No. of Landholdings) * 100	Sustainability Managers track the progress of research.
E1	Initiatives for have Pollinators commenced	X number of initiatives for pollinators commenced.	Sustainability Managers track the progress pollinator initiatives.
E2	Have potential areas for habitat creation been identified?	Minimum of 1 area for habitat creation identified at each AirNav landholding. Measure: (No. of potential habitat areas/No. of Landholdings)*100	Sustainability Mangers to record no. habitat creation areas as part of annual general meeting notes.

Biodiversity Pillar

ID	Short term target KPI	Measure	Monitoring
E3	Herbicide management processes reviewed.	Report published on the use of herbicides on management protocols. Yes/No	Sustainability Managers to publish report to Board.
W1	Environmental engagement strategy	Strategy for environmental engagement measures developed? Yes/No	Environmental Engagement Strategy to be circulated to relevant staff.
W2	Survey of staff knowledge of biodiversity has been carried out.	Has online survey on biodiversity awareness amongst staff been conducted? Yes/No	Sustainability Managers to progress the survey in an online platform.
C1	Identify events within local communities in which AirNav can engage with.	Has a list of local community events and measures for engagement been created? Yes/No	Sustainability Team monitor progress of events identification through communications channel.
C2	Identify stakeholders of the All Ireland Pollinator Plan relevant to AirNav	Number of stakeholders identified for the All-Ireland Pollinator Plan (Minimum of 3 required) (No of identified stakeholders/3 * 100)	Sustainability Team publish list of stakeholders AirNav to Board.
C3	Identify biodiversity stakeholders for future collaboration	Minimum of 3 stakeholders identified for future biodiversity collaboration. (No of identified stakeholders/3 * 100)	Sustainability Team publish list of stakeholders AirNav to Board.
M1	Identify existing supply chain processes for biodiversity opportunities	Database of supply chain processes created. Minimum of 5 opportunities identified to enhance biodiversity through supply chain. No. Opportunities/5 *100	Sustainability Team monitor progress of goal.
M2	Create a database of all existing landowners within AirNav operational land and those neighbouring AirNav sites with habitats identified at a high-level.	Database of existing landowners within AirNav operational land is created, with habitats identified. Minimum of 50% of existing landowners identified.	Sustainability Team monitor progress of goal.

Biodiversity Pillar

Table 7.3 Medium term KPIs for Biodiversity Pillar

ID	Medium term target KP	Measure	Monitoring
G1	A BAP for the AirNav Estate has been produced.	Yes/No	Sustainability Managers track the completion of the BAP and the measures identified within it.
		Has a programme of invasive species removal commenced? Yes/No	Sustainability Mangers to track the rate of invasive species removal on AirNav estate.
G2	A formal communication strategy for future renewable energy projects has been established.	Strategy is in use between relevant teams. Yes/No	Sustainability Managers track the completion of the communications strategy.
G3	BAP Milestones are integrated into ISO 19001 Quality Management System.	Number of milestones integrated into ISO 19001 Quality Management System. Measure: no. milestones/no. biodiversity actions from BAP * 100	Sustainability team to report progress to Board on quarterly basis.
G4	Explore opportunities to improve water quality	Commence research into water quality improvement possibilities and existing drainage infrastructure	Appointed team to report progress to Sustainability Managers on monthly basis.
E1	Grassland areas have been restored or enhanced for pollinators	X no. sites have been planted with local provenance wildflower seed. Measure: No. wildflower planted sites/No. landholdings * 100	Sustainability team to provide update on wildflower meadow progress on quarterly basis to Board.
E2	Create, restore and/or enhance habitats either on AirNav land holders or within local zone of influence.	Minimum of 5 habitats created, enhanced or restored on AirNav estate or within local zone of influence. Measure: No. habitats / 5 * 100	Sustainability team to provide update on habitat creation progress on quarterly basis to Board.
E3	Minimise the use of herbicides in management activities.	50% of existing herbicide measures to have transformed to organic measures. Yes/No	Sustainability team to provide update on herbicide management progress to Board

Biodiversity Pillar

ID	Medium term target KP	Measure	Monitoring
W1	Produce and implement an employee environmental engagement plan that includes education and engagement initiatives.	Implement a minimum of 3 engagement and education activities per year to staff on biodiversity measures as per Environmental Engagement Strategy. No. activities/total of 3 required activities * 100	Conduct survey amongst staff following each activity to gauge success of event and for feedback.
C1	Local or community initiatives that incorporate or are biodiversity specific which are sponsored by AirNav.	Min of 3 events. Measure : No. events sponsored / 3 *100	Report on the events to Board at annual general meeting.
C2	Number of sites in which collaboration with AIPP stakeholders has lead to initiatives being completed.	Minimum of 3 sites Measure: No sites initiatives have been completed/ Minimum of 3 * 100	Biodiversity Champions to report progress on quarterly basis to Sustainability team.
C3	Identify minimum of 3 biodiversity opportunities AirNav can contribute to as collaborators with identified biodiversity stakeholders e.g. NPWS	Minimum of 3 opportunities Measure: No. opportunities identified / Minimum of 3 * 100	Sustainability team to report progress in mid–term implementation review report.
M1	Implement annual training course to staff involved in supply chain logistics on biodiversity. Incorporate measures into policies and governance.	Implement minimum of 1 course/year Yes/No	Sustainability team to report progress in mid–term implementation review report.
M2	In conjunction with landowners, design and implement measures for biodiversity within operation and adjoining lands, where feasible.	Minimum of 5 sites across AirNav Landholdings. No. Sites with measures implemented/Min of 5 * 100	Sustainability team to report progress in mid–term implementation review report.

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Table 7.4:Long term KPIs for Biodiversity Pillar

ID	Long term target KP	Measure	Monitoring
G1	The BAP has been integrated into AirNav protocol and at least 50% of BAP recommendations are actioned.	Percentage of completed actions.	Monitor the implementation rate of BAP recommendations and resources available to action them.
		Are at least 50% of Invasive Alien Species removed from AirNav landholdings? Yes/No	Monitor success rate of IAS removal from AirNav landholdings.
G2	A formal communication strategy for future renewable energy projects has been established.	Has the communication strategy been published and been used to facilitate opportunities in future developments for biodiversity. Yes/No	Monitor the use of the communication strategy and how often biodiversity is embedded into new development strategies.
G3	BAP Milestones are consistently reported within ISO 19001 Quality Management System annual reports and audits.	Have the BAP Milestones been reported within the management system repots and audits? Yes/No	Sustainability Management Team to monitor the inclusion of BAP in the ISO19001 reports they are receiving.
G4	A programme of improved drainage and water quality has been developed.	Number of improvement measures that have been carried out, and how many were in collaboration with the Blue Dot partnership?	Monitor the implementation rate of improvement measures and the relationship between AirNav and Blue Dot partnership.
E1	New grassland habitats have been created and a programme of maintenance exists.	Number of new grassland habitats created. Programme of appropriate biodiversity positive maintenance ingrained into AirNav management protocol.	Regular review of management protocol to confirm it is still appropriate and resulting in biodiverse habitats.
E2	Create/restore/enhance opportunities are being appropriately managed and monitored.	Programme of biodiversity positive maintenance and monitoring are ingrained into AirNav management protocol and have taken place at every site. Yes/No	Yearly review by the sustainability team that monitoring and appropriate management are being sustained.

Biodiversity Pillar

ID	Long term target KP	Measure	Monitoring
E3	Minimise the use of herbicides in management activities	50% of existing herbicide measures to have transformed to organic measures. Yes/No	Sustainability team to provide update on herbicide management progress to Board.
W1	Continued engagement with staff through the employee environmental management plan.	Implement a minimum of 3 engagement and education activities per year to staff on biodiversity measures as per Environmental Engagement Strategy. No. activities/total of 3 required activities * 100	Conduct survey amongst staff following each activity to gauge success of event and for feedback.
W2	Biodiversity Champions are part of a wider network, sharing best practice and are implementing biodiversity measures amongst staff and local community organisations.	Number of Biodiversity Champion initiatives that have been supported. Confirmation that Biodiversity Champion network meeting has been completed.	Sustainability team to monitor the engagement levels of the Biodiversity Champion and that appropriate resources are being given.
C1	A report on the level of engagement with local community initiatives has been published.	Has the report been published and does it include opportunities for future relationship growth? Y/N	The sustainability team to report back to the Board on the report outcomes.
C2	Report published of success of All-Ireland Pollinator Plan within AirNav landholdings and its partners.	Report published? Yes/No	Report published to Board.
C3	Strong working relationships developed with minimum of three Biodiversity Stakeholders e.g. NPWS	No. projects collaborated on / 5 year basis * 100	Report on review and implementation measures at Biodiversity Action Plan review
M1	Policies and governance structure to be fully embedded in best practice for biodiversity.	Biodiversity measures included within policy and governance structure? Yes/No	Report on review and implementation measures at Biodiversity Action Plan review
M2	Review and implement improvements to the existing measures deployed for biodiversity in operational and adjoining land where applicable.	Review all sites – Measure no. sites / 100 Implement improvements (where identified) – Measure: No. sites / 100	Report on review and implementation measures at Biodiversity Action Plan review.

Governance Pillar

Governance EU Policy

The European Union first highlighted the high potential of Green Public Procurement (GPP) in 2003 in the Commission Communication on integrated product policy. In 2004, Directives 2004/17/EC and 2004/18/EC established the European framework for procurement of public contracts and explained how the environmental dimension can be integrated into the tendering process.

The European Commission Communication (COM (2008) 400 final) "Public procurement for better environment" provides guidance on how to reduce environmental impact caused by public sector consumption and introduced Green Public Procurement (GPP) as an effective tool to stimulate eco-innovation in products and services, thus contributing to sustainable development. The Communication (COM(2008) 400 final) defines Green Public Procurement (GPP) as:

"[a] process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured".

All public procurement procedures previously defined in European public procurement Directives are covered in the Communication. The document also identified ten priority sectors for GPP.

The EU's Public Procurement Directives aim to provide the current legal framework, rules, thresholds, and guidelines for implementing GPP. These Directives include:

− Directive 2014/24/EU on public procurement;

− Directive 2014/25/EU on procurement by entities operating in the water, energy, transport, and postal services sectors; and

− Directive 2014/23/EU on the award of concession contracts.

The EU Circular Economy Action Plan (CEAP) (2020) provides an overview on the EU's transition to a circular economy. The Plan set minimum GPP criteria and targets and introduced compulsory reporting to monitor GPP uptake.

Furthermore, the European Green Deal sets out Europe's response to the climate crisis. The Green Deal is an action plan with the aim of achieving EU climate neutrality by 2050 and sets the EU GHG emissions reduction target of 55% by 2030 relative to 1990 levels, in line with the Paris Agreement. The EU Green Deal sets out a roadmap for boosting resource efficiency and driving a sustainable economy. Green Public Procurement is a key tool for delivering these objectives.

Entered into force in 2023, the Corporate Sustainability Reporting Directive (CSRD) feeds into the European Green Deal and helps investors, consumers, and other stakeholders to evaluate the sustainability performance of companies. CSRD is believed to make the GPP process more clear, verifiable, and transparent. Similarly, the EU's Corporate Sustainability Due Diligence Directive (CSDDD) sets out rules and obligations for companies regarding the potential impact of their operations on human rights and the environment. It directs companies to adopt the plan that ensures that their strategy and business model are in line with Paris Agreement. CSDDD also feeds into the European Green Deal and aims to help the EU transition towards a more resource-efficient and green economy.

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Governance National Policy

Green Public Procurement is widely known for its effective means for public bodies to establish a balance between costs and sustainable development. The public sector in Ireland accounts for about 10%–12% of GDP (Gross Domestic Product) and therefore takes a large part of economic activity and demand. Consequently, it is crucial for Ireland's businesses, such as AirNav to provide more resource-efficient, less polluting goods and services within the Irish market. To date, GPP has been a voluntary tool, and therefore EU Member States have had autonomy to make their own decisions on the extent to which GPP policies and criteria are applied. However, GPP is now recognised as a key instrument to boost a resource-efficient economy within the State, and it is gaining traction as a means of climate action.

Our Shared Future, the Irish Programme for Government, commits to a 51% reduction in Ireland's overall emissions from 2021 to 2030, and to achieving net-zero emissions by 2050. The Programme for Government also sets out that all procurement using public funds must include green criteria by 2023. Ireland's Climate Action Plan (CAP) 2023 provides an implementation plan for delivering on these commitments including the specific targets set for the Public Sector. For Commercial Semi State (CSS) bodies, such as AirNav, to align with national and public sector ambition a sector-specific mandate has been developed. This mandate is presented in The Climate Action Framework for the Commercial Semi State Sector.

The Framework outlines the five commitments that each CSS body should adopt:

1. Governance of climate action objectives;

2. Emissions measurement and reduction target;

3. Emissions valuation in investment appraisal;

4. Circular economy and green procurement;

5. Climate-related disclosures.

The New Economy and Recovery Authority (NewERA) has been tasked with monitoring the implementation of these commitments and reporting biannually on their progress to Dept of the Environment, Climate and Communications.

Furthermore, the Circular Economy and Miscellaneous Provisions Act (2022) was introduced by the Government of Ireland as a domestic law and aims to provide legal basis for the actions that authorities will take to support circular transition within the State. The law introduces the national circular economy strategy as well as circular economy fund, circular economy program, and a prohibition/levy on supply on single-use items. AirNav's commitment to environmental protection and circular economy aligns directly with this domestic law. Moreover, EPA Green Public Procurement Guidance provides support for transition to all public bodies impacted by Ireland's commitment to implement GPP in all tenders using public funds. It includes Irish GPP Criteria for ten priority sectors that is based on EU GPP Criteria, with adaptations to the Irish market and local procurement practices. To support previously mentioned laws and regulations, the recently published Waste Action Plan for Circular Economy identifies Ireland's path towards successful waste planning and management. The Plan fulfils Ireland's commitment in the Programme for Government to publish and start implementation of a National Waste Action Plan. It feeds into Climate Action and the Green Deal by aligning the ambitions and outlining contributions of the sector. The Plan underlines aims and targets, as well as measures on how these will be achieved.

All above mentioned policies and directives are directly related to AirNav's business operations and therefore must be considered in future phases of implementation, including but not limited to target-setting and planning.

Governance Context and Vision

AirNav is committed to environmental protection, biodiversity, and circular economy. The principle of circular economy is to reduce waste by maintaining the value of products and materials for as long as possible. A significant proportion of carbon emissions come from the production of goods; therefore, a circular economy is necessary for meeting emissions reduction targets.

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AirNav understands that GPP is a key tool for transition to a more sustainable, circular, and low carbon company. Therefore, AirNav aims to minimise the environmental impact of its air traffic management services and is embedding environmental considerations into all its purchasing and procurement. To improve circularity, AirNav is raising its ambition in terms of green public procurement and is committed to continuous improvement and performance of the period of this plan. AirNav commits to conducting business responsibly and being advocates for green procurement by promoting green supply chain practices.

Policy Targets

Ireland's Climate Action Plan (2023) sets specific targets and actions needing to be taken within the public sector. According to CAP 2023, the public sector is expected to lead by example, embedding climate action and delivering real progress. The targeted actions include:

– Procure only zero emission vehicles from 1st Jan 2023 onwards, unless the vehicle is exempt under the European Communities (Clean and Energy-Efficient Road Transport Vehicles);

– Implement and review the Public Sector Climate Action Mandate annually;

– Reduce GHG emissions from the sector by 51% by 2030;

– Increase climate literacy in the public sector;

– Fully implement green public procurement in the public sector.

Furthermore, NewERA's Framework for the Commercial Semi-State Sector to address climate action objectives sets out the targeted approach to circular economy and green procurement. This approach is to:

– Demonstrate leadership by example in Ireland's transition to a circular economy;

– Engage with the OGP and other CPBs to use procurement frameworks which include relevant environmental considerations;

– Set out, in the company's annual reports, corporate policy on GPP, measures taken to give effect to GPP and the data around measuring and monitoring this activity;

– Consider introducing a plan for the incremental growth of GPP;

– Incorporate circular economy principles in GPP.

Whole of Government Circular Economy Strategy (2022 – 2023) was a specific commitment in the Waste Action Plan for a Circular Economy. It further explores the opportunity for circularity across the State. It establishes the policy framework to turn a vision of circularity into actions and results. It is intended to promote public sector leadership in adopting circular policies and practices and promote increased investment in the circular economy in Ireland to deliver sustainable, regionally balanced economic growth and employment. Additionally, it also identifies and addresses the economic, regulatory, and social barriers to Ireland's transition to a more circular economy.

Under the Waste Action Plan for Circular Economy, national targets were set regarding food waste, plastic packaging, construction demolition waste, textiles, treatment, and others. The key targets are:

– Impose a tax for waste recovery and single use coffee cups to encourage recycling and reuse;

– Promote education and awareness-raising campaigns to improve waste recycling;

– Halve food waste by 2030;

– Establish sustainable food waste management options for all businesses;

– Establish deposit and return scheme for plastic bottles and aluminium cans;

– Impose Single Use Plastics (SUP) ban, including cutlery, plates, stirrers, chopsticks, straws, polystyrene containers, and oxo-degradable plastic products from July 2021.

Lastly, as stated in Irish Program for Government (Our Shared Future) (2020), the government will ensure that public procurement leads the circular transition to through an evidence-based approach (Environmental Product Declarations). They will also mandate the inclusion of green criteria in all procurements using public funds within three years.

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Opportunities

There are many opportunities to successfully implement GPP into business operations. To be consistent with and successfully achieve sustainable and circular goals, AirNav will review the opportunities that fit business needs by following six guiding principles, that are aligned with the NewERA targets for CSS, supporting incremental implementation. The guiding principles are as follows:

Table 7.4:Long term KPIs for Biodiversity Pillar

Guiding Principle	Opportunity	Key resources
Alignment with basic principles of GPP	Establish a green procurement expert working group to review existing procedure. The group of experts will work closely with the Board and appropriate departments and the staff. The experts will ensure that AirNav is in line with their commitments and GPP goals, help with implementation process and ensure company achieve long-term benefits.	National Climate Action Plan (CAP 23)
	Undertake a procurement assessment of current procurement practices and seek to align with ISO 20400 – Sustainable Procurement. It will help to achieve value for money on a whole life-cycle basis to generate benefits to the company, society, economy, and the environment.	ISO 20400 – Sustainable Procurement
	Mindset change around the procurement process and become leader in GPP. The GPP principle must be integrated into the core of AirNav's business operations.	EPA Green Public Procurement Guidance, Circular Economy and Miscellaneous Provisions Act (2022)
	Hold regular consultations and engage with relevant stakeholders to ensure full understanding of their expectations and their relevant ideas and suggestions.	National Climate Action Plan (CAP 23)
	Incorporate circular economy principles in GPP	Miscellaneous Provisions Act (2022)
	Engagement with the OGP and other CPBs to use procurement frameworks which include relevant environmental considerations	EPA Green Public Procurement Guidance, Circular Economy and Miscellaneous Provisions Act (2022)

Guiding Principle	Opportunity	Key resources
Impact and Target setting	Assess, monitor and be transparent about company's portfolio exposure to technologies and sectors with significant sustainability impacts.	EPA Green Public Procurement Guidance, The Climate Action Framework for the Commercial Semi State Sector
	Identify appropriate KPIs to incorporate into procurement processes. For example, KPI's may include maintaining the certain percentage of recycled paper available across the AirNav's offices.	National Climate Action Plan (CAP 23)
	Implement GPP in line with EPA GPP Guidance and using GPP criteria search tool where appropriate. This online search tool allows the user to rapidly find, select, and download the GPP criteria relevant to a specific procurement.	Green Tenders, EPA Green Public Procurement Guidance
Tenders and Sellers	Review 'request for tender process' policy to include specifications relating to scoring on sustainability.	EPA Green Public Procurement Guidance, The Climate Action Framework for the Commercial Semi State Sector
	90% of AirNav tenders to include sustainability criteria as an education category where appropriate.	EPA Green Public Procurement Guidance, The Climate Action Framework for the Commercial Semi State Sector
	Response or compliance rate with GPP criteria in contracts.	EPA Green Public Procurement Guidance, The Climate Action Framework for the Commercial Semi State Sector
	Work with suppliers to reduce the amount of packaging and single use plastic materials involved in consumption.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Cease use of disposable cups, plates, and cutlery.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Do not install heating systems that use fossil fuel in new buildings and major renovation retrofit projects.	Circular Economy and Miscellaneous Provisions Act (2022)
	Review any paper-based processes and evaluate the possibilities for digitalization so it becomes the default approach.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Eliminate paper-based processes as far as practicable.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Where paper must be procured, ensure that recycled paper is the default.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Procure (purchase or lease) only zero-emission vehicles.	EPA Green Public Procurement Guidance, National Climate Action Plan (CAP 23)

Guiding Principle	Opportunity	Key resources
Stakeholders	Identify and map key external stakeholders such as regulators, suppliers, governments, customers, and clients. It is crucial to pay special attention to "affected" stakeholders by setting up processes to identify potential and actual adverse impact.	National Climate Action Plan (CAP 23)
	Establish multi–disciplinary consultation and use digital and connected technologies to facilitate continuous engagement with stakeholders.	National Climate Action Plan (CAP 23)
	Consult and engage all relevant stakeholders to allow them to express their expectations regarding company's impacts, strategy, and targets.	National Climate Action Plan (CAP 23)
	Use the multi–discipline as an advantage. Partner with relevant stakeholders that can help AirNav reduce negative impacts, achieve, or scale up positive impacts and deliver more.	National Climate Action Plan (CAP 23)
Governance and Culture	Assign clear and specific roles and responsibilities at the AirNav Board level and provide adequate resource allocation.	National Climate Action Plan (CAP 23)
	Aim to develop a procurement policy that delivers tangible results in terms of sustainability across supply chain.	Green Public Procurement: Guidance for Public Sector, Circular Economy and Miscellaneous Provisions Act (2022), The Climate Action Framework for the Commercial Semi State Sector
	Developing policy that promotes procurement of sustainable products that favour biodegradable or recyclable materials over single use, non-recyclable materials.	Circular Economy and Miscellaneous Provisions Act (2022), Waste Action Plan for Circular Economy
	Integrate GPP objectives and targets into decision making processes across AirNav. Regularly review existing management systems and processes, and modify them, if necessary, to enable delivery on high GPP-goals.	Circular Economy and Miscellaneous Provisions Act (2022), Green Public Procurement: Guidance for Public Sector, Green Tenders,
	Educate and train employees on company's GPP strategy and targets in general through webinars and workshops, and on circular issues pertaining to their respective area of work to develop appropriate awareness and expertise.	National Climate Action Plan (CAP 23)
	Embed circular values into day-to-day operations of AirNav and its culture through policies, processes, and everyday practices.	Circular Economy and Miscellaneous Provisions Act (2022), Green Public Procurement: Guidance for Public Sector, Green Tenders

Guiding Principle	Opportunity	Key resources
Transparency and Accountability	Reflect KPIs in annual report, commercial management strategy and other corporate strategies and board reporting. The annual report may consist significant positive and negative impacts, its risks, the progress made as well as corporate policy on GPP, measures taken to give effect to GPP and the data around measuring and monitoring this activity.	National Climate Action Plan (CAP 23), Green Public Procurement: Guidance for Public Sector
	Incorporate an auditing program of top 20 suppliers.	National Climate Action Plan (CAP 23)
	Quantify as much information as possible to visualize the progress, for example by showing sectoral exposures, GHG emissions etc.	Green Public Procurement: Guidance for Public Sector, The Climate Action Framework for the Commercial Semi State Sector
	Disclose at aggregated level strategic risks and opportunities and how these are integrated into AirNav's governance processes and strategy.	Green Public Procurement: Guidance for Public Sector

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Implementation Plan Context

The concept of GPP and the framework for its implementation are germinal within AirNav. GPP is understood to be a process that will take effect incrementally, through the setting of timeline targets and KPIs, that AirNav will undertake over the coming months and years. To embed GPP effectively and responsibly into a company such that it becomes part of the culture and ethos, AirNav will generate a suite of realistic and achievable targets and KPIs, following the design of a framework setting out roles, responsibilities, timelines, and resources. This will be completed in conjunction with the Sustainability Task Force.

The Opportunities section outlines a preliminary set of principles that will guide and shape how AirNav will achieve this, drawing on the requirements of the policy context and what is considered best practice for CSSs.

At the commencement of this journey, AirNav commits to the following actions that are necessary for setting up an operational environment that will ensure success for GPP within the company:

– Establish a team dedicated to GPP;

– Complete a review of purchasing activities and practices;

– Plan for upskilling and training staff in GPP;

– Undertake market engagement activities with existing and new suppliers, outlining preliminary goals and policy requirements;

– At a minimum and in the short-term, ensure that all supplies and services are from energy efficient options and where appropriate identified from the Triple-E register;

– Begin to establish, communicate, and monitor alignment with green procurement policies as identified in the Opportunities section.

Full implementation is a process that AirNav commits to embarking on from 2023.

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