

DKIT CLIMATE ACTION ROADMAP



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CONTENTS

Definitions	1
Introduction	2
1. Our Targets	2
1.1 GHG Reduction	2
1.2 Increased Energy Efficiency	2
1.3 Updated Climate Action Roadmap	4
2. Our People	4
2.1 Leadership & Governance for Climate Action	4
3. Our Way Of Working	6
3.1 Annual reporting	6
3.2 Public Service M&R	6
3.3 Formalising Environmental Certification	6
3.4 Green Procurement	6
3.5 Construction	7
3.6 Food Waste	7
3.7 Paper	7
3.8 Water	9
3.9 Single Use	9
3.10 Other Materials	9
4. Our Buildings and Vehicles	9
4.1 Transport	9
4.2 Commuting	10
4.3 Display Energy Certificates	10
4.4 Heating systems	10
4.5 Existing Buildings	11
4.6 Vehicles	11
5. Current Situation	12
Appendices	15
Appendix 1 - Governance Structure – Roles & Responsibilities Table	15
Appendix 2 – Draft Terms of Reference DkIT Sustainability Council	18
Appendix 3 – Register of opportunities	20

ABBREVIATIONS

DkIT	Dundalk Institute of Technology
EPO	Energy Performance Officer
GHG	Green House Gases
CAP21	Climate Action Plan 2021
GTT	Gap to Target
OPW	Office of Public Works
SEAI	Sustainable Energy Authority of Ireland
tCO ₂	Tonnes of Carbon Dioxide
kWh	Kilowatt hour
LCC	Performing Life Cycle Costing
LCA	Life Cycle Analysis
GPP	Green Public Procurement
TFI	Transport for Ireland
EEDPP	Energy Efficiency and Decarbonisation Pathfinder Programme
BEC	Better Energy Community Scheme
DEC	Display Energy Cert
EV	Electric Vehicle
M&R	Public Service Monitor and Reporting
kg CO ₂	Kilograms of Carbon Dioxide
SDG	Sustainable Development Goals
EDI	Equality, Diversity, and Inclusion
UDL	Universal Design for Learning

DEFINITIONS

ISO 50001	EN ISO 50001:2018 is the international standard for energy management.
Green Public Procurement (GPP)	Green Public Procurement (GPP) (or Sustainable Procurement) is a process where public authorities seek to source goods, services or works with a reduced environmental impact.
Sustainable Energy Authority of Ireland (SEAI)	The SEAI is Ireland's national sustainable energy authority and works with householders, businesses, communities, and government to create a cleaner energy future.
Climate Action Plan 2021 (CAP21)	CAP21 provides a detailed plan for taking action to achieve a 51% reduction in overall. Greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Act 2021.
Decarbonisation	Decarbonisation is the removal or reduction of carbon dioxide inputs from human activity into the atmosphere which is important for limiting global warming. The main levers for decarbonisation are the development of renewable energies, switching fuels and the improvement of energy efficiency.
Gap to Target model (GTT model)	The gap-to-target model (GTT model) is a spreadsheet model for use by public bodies to evaluate their energy efficiency (EE) performance and energy-related greenhouse gas (GHG) emissions over time, using data and methodologies from SEAI's Public Sector Monitoring & Reporting (M&R) system
Energy Efficiency	Energy efficiency is a reduction in the energy used to do the same task. Retrofitting options can be used to reduce energy usage. These may include switching to LED lighting and energy efficient appliances or upgrading insulation. Energy efficiency has a variety of benefits including reducing GHG emissions, reducing demand for energy imports, and lowering energy costs.
Display Energy Certificate (DEC)	A Display Energy Certificate (DEC) shows the energy performance of a building based on actual energy consumption recorded over the last 12 months. It compares the actual energy use against the energy use for a benchmark building of the same type. Similar to a domestic Building Energy Rating (BER), DEC's are displayed on a scale from A to G, with an A rating being the most efficient and a G rating being the least efficient.

INTRODUCTION

Dundalk Institute of Technology (DkIT) is an Institute of Technology in north east region of Ireland. The Institute of Technology was formed in 1970. The DkIT 2024 Climate Action Roadmap, based on the 2024 Climate Action Mandate, sets out the IT's plans to reduce emissions and meet decarbonisation and energy efficiency targets as directed by Government. It has been prepared in accordance with guidance from the Sustainable Energy Authority of Ireland (SEAI) and Chapter 9 of the Climate Action Plan 2021 (CAP21).

DkIT is committed to Energy Efficiency and Sustainability. DkIT recognise the scale of the challenge to achieve the step changes required to meet the national emissions reduction targets, alongside tackling the biodiversity crisis. DkIT will look to actively contribute to reducing GHG emissions and stay focused on guiding DkIT towards a more sustainable and greener Institute.

1. OUR TARGETS

The Climate Action Plan stipulates that the public sector will lead by example in delivering on Ireland's decarbonisation commitments. This Roadmap demonstrates how DkIT will achieve emissions reductions to 2030. As a public sector organisation DkIT has two targets under CAP21 focused on energy:

- Target 1 Decarbonisation: To reduce greenhouse gas (GHG) emissions from energy by 51% by 2030
- Target 2 Energy Efficiency: To improve energy efficiency to 50% by 2030.

1.1 GHG REDUCTION

DkIT's baseline (2016-2018 [average]) GHG emissions from the energy used in Dundalk is **2,688tCO₂**, this comprises of 1,165tCO₂ for thermal emissions and 1,523tCO₂ for electricity. The maximum emissions that DkIT must operate to in 2030 is **915tCO₂**.

This reduction needs to be achieved even if there is an increase of activity or campus size.

Emissions due to Institute business transport are a fraction of 1% of overall energy emissions.

1.2 INCREASED ENERGY EFFICIENCY

Baseline figures for measuring DkIT energy efficiency improvements constitute the 2010 baseline figure of **11,067,882kWh**. This is made up of 4,360,969 kWh of electrical and 6,706,913kWh of thermal.

The maximum energy use for DkIT in 2030 must be over **5,533,941kWh**. The actual total annual consumption recorded in 2023 was 10,291,673kWh.

At present the Institute has one main energy related reduction activity. This is a major capital project to insulate and upgrade the fabric to two of its original 1970's building, the North and South Buildings. These buildings cover an area of approximately 15,300m². Wrapping the building in insulation and replacing the glazing with enable energy related reductions due to

the requirement for less thermal load to both heat the building space and maintain a working temperature.

These targets focus on the emissions and energy performance within DKIT's control; from electricity purchased by the organisation, and emissions produced from fossil fuels used for heating and hot water.

The targets will be met due to electricity grid decarbonisation over the coming years, combine with decarbonisation and energy efficiency projects planned by DkIT, subject to additional funding and resources, as well as availability of technological solutions to achieve the targets. Using the Internationally recognised GHG Protocol, emissions are categorised into three scope definitions:

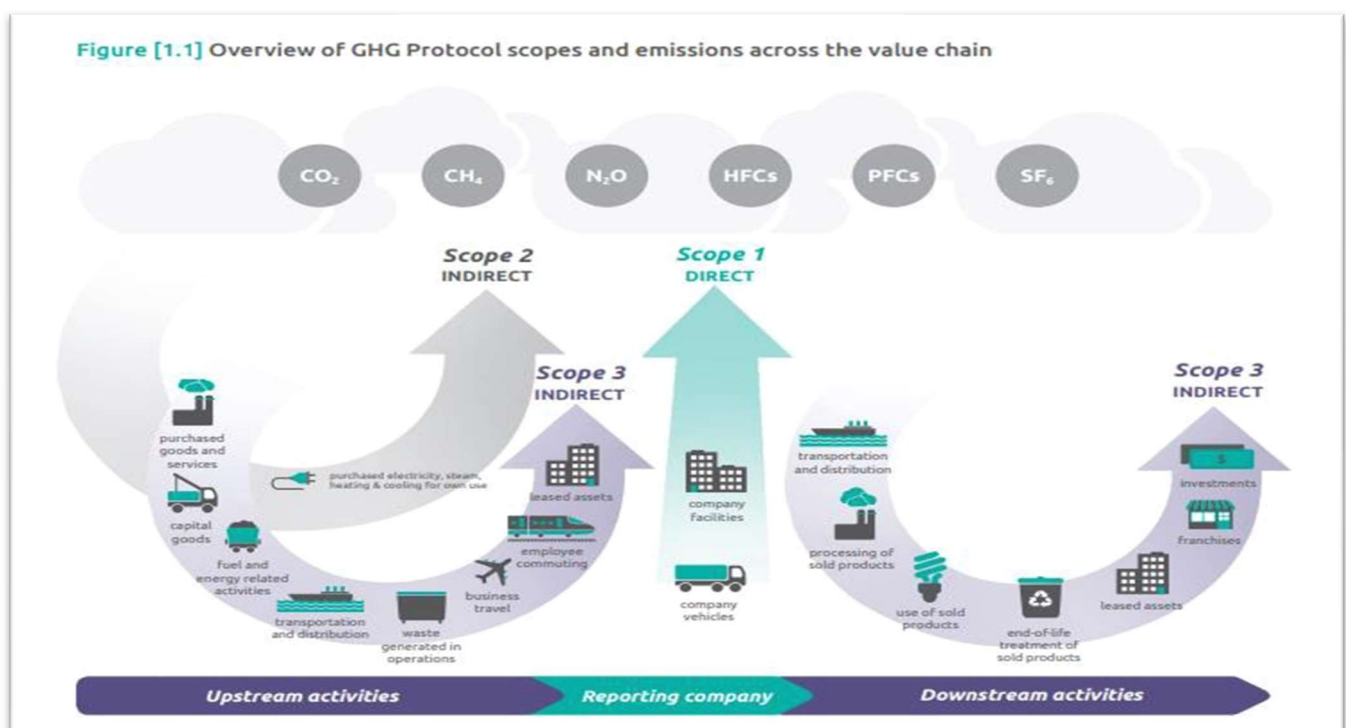
Scope 1 (direct emissions from sources that are owned or controlled by an organisation)

Scope 2 (indirect emissions from electricity)

Scope 3 (indirect emissions).

Please see table below:

Table 1: GHG protocol Scope 1, 2 and 3 emissions



Source: <https://ghgprotocol.org/corporate-value-chain-scope-3-standard>

1.3 UPDATED CLIMATE ACTION ROADMAP

The DkIT Roadmap is a document, which will be updated annually or as required, to reflect DkIT's progress and to respond to requirements under the Climate Action Mandate.

2. OUR PEOPLE

As part of the DkIT Strategic plan, DkIT will ensure sustainable development is embedded in DkIT's leadership, governance and operations, and the DkIT community of staff and students. The community should be sustainably aware and incorporate sustainable practice into their daily Institute life.

As part of the Climate Action Mandate, DkIT are required to nominate and identify the roles of the following:

- Climate & Sustainability Champion
- Energy Performance Officer (EPO)
- DkIT Sustainability Council

The oversight and monitoring of the DkIT Climate Action Roadmap are a priority for the President and Executive Board (EB). A Climate and Sustainability champion has been appointed, who has responsibility for implementation and reporting on the Climate Action Roadmap.

As required by the Public Sector Energy Strategy the role of Energy Performance Officer has been held by the Vice President of Strategy, Communications and Development, who is a member of the EB of the Institute.

A Sustainability Manager has been appointed, who will carry out the day-to-day tasks involved within the climate action roadmap, and whose role will be the defacto Sustainability Champion and Energy Performance Officer. This demonstrates the Institutes level of seriousness and commitment to the responsibilities within the Climate Action Roadmap.

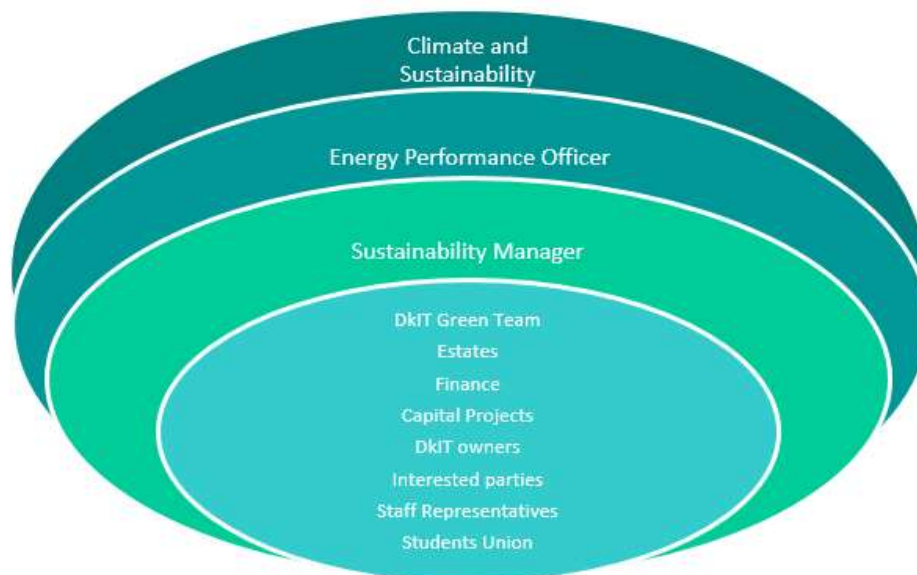
DkIT will utilise established Institute Team Structures to form a "DkIT Sustainability Council". The Green team will include representatives from IT, Finance/Procurement, Students Union, Staff representatives, Estates and other interested parties. Refer to Appendix 2 for the Green Team's terms of reference.

2.1 LEADERSHIP & GOVERNANCE FOR CLIMATE ACTION

The Leadership and Government structure outlines the structure of key DkIT members that are focused on delivering the DkIT Climate Action Strategy. The following chart shows the

Governance structure:

Chart 1: DkIT Climate Action Leadership and Governance framework



Please refer to Appendix 1 for the proposed governance structure which includes the titles and roles of the DkIT personnel responsible for progressing DkIT's climate action targets.

DkIT climate action Leadership and Governance structure will ensure that annually, 'green days' are held to engage on climate issues, including a focus on decreasing the Institutes carbon footprint. All members of Sustainability Council and those who can significantly affect the Institutes carbon footprint will undergo appropriate training.

All members of the executive board will attend a climate action leadership training course in 2024 in accordance with the Public Sector Climate Action Mandate 2024.

DkIT will also use the training resources provided through Sustainable Energy Authority of Ireland (SEAI) Training Academy and relevant NTUTOR lectures.

DkIT has approved a sustainability Policy, which guide all activities of sustainability on campus and of which the Climate action roadmap is a major part.

The policy will be endorsed and approved by the Institute governance structures.

3. OUR WAY OF WORKING

3.1 ANNUAL REPORTING

DkIT has and will continue to publish an annual report on its environmental impact. This report, usually issued in May for the previous year, will form part of an information platform on which all sustainability matters will be communicated.

3.2 PUBLIC SERVICE M&R

DkIT will continue to fulfil its obligation to report its performance as set out in the Public Service M&R Guidelines. All relevant information such as scorecards will be publicly available on the digital DkIT Sustainability platform.

3.3 FORMALISING ENVIRONMENTAL CERTIFICATION

At present DkIT operates the SEAI Energy Map process to evaluate its performance. DkIT will endeavor to reach the ISO 50001 or ISO 14001 standard and work towards establishing the necessary structures within the organisation.

3.4 GREEN PROCUREMENT

DkIT plans to develop a green procurement plan and processes where goods, services and works will be sourced ensuring that their environmental impact is considered, understood and reduced where feasible. This procurement plan will consider criteria that support the inclusion of sustainable and green practices into the Institutes' procurement procedures. The following but non-exhaustive criteria will be evaluated:

- Road Transport Vehicles & Services
- ICT Products & Services
- Food & Catering Services
- Indoor Cleaning Services
- Office Building & Design
- Construction & Management
- Indoor & Outdoor Lighting
- Heating Equipment
- Energy Related Products
- Paper Products & Printing Services
- Textile Production

Performing Life Cycle Costing (LCC) and Life Cycle Analysis (LCA) will also be a key feature when reviewing any procurement proposal at the award stage of a tender.

The plan will consider scenarios where selection and award criterion can be supplied when procuring all goods and services with reference to public sector Green Public Procurement (GPP) guidance and criteria sets.

The procurement plan will consider, in collaboration with our Finance Departments, how to record data on GPP. This will include the development of specific guidance and reporting mechanisms.

3.5 CONSTRUCTION

DkIT will through its internal mechanisms determine if there is a need to construct or alter buildings. This process does include a preliminary assessment on environmental impact such as provision of services, energy use, impact on carbon output and a lifecycle assessment. The definitive project brief will describe all these decisions. Construction projects will be evaluated for their “green” credentials as part of the tender process, incorporating Life Cycle Assessment criteria and Whole Life Carbon design into all new buildings and renovations

Construction itself will follow building regulations and all other guidelines set out about the construction and alterations of public buildings. DkIT will also ensure that the appointed contractors fulfil their obligations toward Resource and waste management.

3.6 FOOD WASTE

DkIT is already actively involved in waste management and will continue to improve the collection, segregation and disposal of any food waste in accordance with current regulations and epa protocol.

DkIT will include a specific food waste section into all its contract arrangements with third party food services providers to ensure that they deliver the highest industry standards in terms of waste prevention, segregation and disposal.

3.7 PAPER

As part of the Climate Action Mandate, DkIT are committed to reducing unnecessary paper usage by reviewing existing paper-based processes and transitioning these processes into digitalised methods.

As this Institute is made up of many separately operated departments and offices, it is challenging to adopt a single strategy to suit each of the department’s specific requirements. It is proposed by DkIT to communicate to all staff the need to go paperless and allow them (whether individual or department) to identify, strategize and implement changes to their specific paper usage processes.

DkIT will propose the following steps be implemented by each individual / department:

1. *IDENTIFY*

- Identify processes where new paper printing and filing can be digitalised.
- Identify existing files that can be scanned & digitalised. Select leaner processes for essential printing e.g., print on both sides.
- Identify practicality of digitalisation of certain processes. Some paper process will need to be maintained.

2. *AGREE A STRATEGY*

- Confirm and agree on new workflows, paper processes and procedures.
- Communicate the new processes to all relevant personnel. Provide Training as needed. Create written guidelines and operations.
- Agree a timeline for change-over within each department.
- Choose a software to assist in digitalisation of documents.
- Devise a new paperless filing system. i.e., documents will need to be indexed with logical naming procedures that allow for files to be more easily found when searched on a digital platform.
- Assign an optional department supervisor to oversee transition.

3. *IMPLEMENTATION*

- Implement new paperless process workflows and digitalisation methods.
- Implement and monitor digitalisation change over.
- Appoint a person responsible for digitalisation of all essential historical document.
- Communicate and encourage behaviour changes.
- Measure reduced paper usage.

4. *REVIEW AND REVISE*

- Identify weakness in strategy.
- Identify barriers including staff behaviour and resistance.
- Revise strategy if required.

The following workflow strategy is proposed:



The time taken to undertake these changes could vary depending on each department differing processes and operations, however DKIT would envisage the length of a full academic year to be a sufficient time to identify and implement any new digitalisation processes.

3.8 WATER

DkIT possesses an extensive Water network which supplies individual buildings with fresh water. The water supply is monitored and an annual report is issued as part of the management report. DkIT has clearly marked drinking water points accessible to Staff Students and visitors. The utilisation of these points will be a project that DkIT will endeavor to address as part of ongoing improvements in data capture.

3.9 SINGLE USE

As part of our drive to minimize waste, DkIT will encourage the cessation of use of any single use products wherever possible. To this end we will run publicity campaigns to encourage the use of multi-use cups and cutlery. We will also engage with our catering suppliers to do the same wherever possible.

The use of other single use items such as stationary and promotional gifts is envisaged to be phased out after assessment of the extent of their present use.

3.10 OTHER MATERIALS

DkIT through its waste management strategy is addressing the disposal of all materials use as part of the activities through its “Reduce, Reuse, Recycle” mantra.

It also avails of various opportunities to recycle or repurpose waste items, through third party activities, as the opportunities arise.

4. OUR BUILDINGS AND VEHICLES

4.1 TRANSPORT

DkIT has committed to creating bicycle friendly campuses for all its employees and staff. Dedicated bicycle parking is currently available on both campuses including many off-street bike shelters. Many of the bike shelters are located centrally beside campus buildings that promotes accessibility and security.

To promote cycling, DkIT will develop a dedicated “Cycling” webpage that displays each campus bike parking map locations, means of access, rental schemes, and bike safety information. New cycle parking will be developed in line with the Public Sector Climate Action Mandate.

Through programmes such as the “Smarter Travel Scheme”, “Ready, Set, Cycle” and “Bike Week”, DkIT will promote behavioural change towards cycling. By encouraging staff to participate in the “Cycle to Work Scheme”, staff can avail of tax incentives to purchase a new bicycle.

4.2 COMMUTING

The above will encourage the student and staff population to switch to alternative modes of commuting to work. In addition DkIT will work with the local transport providers to develop an efficient strategy for public transport so that more people can use it to access DkIT.

Private car use should become the exception in the future but can only be achieved if the alternatives are in place.

DkIT acknowledges that some patrons will not be able to utilise the above means and will, over time, increase the provision of electric charging points as required. It will also ensure that sufficient accessible parking is available for those with physical mobility issues.

4.3 DISPLAY ENERGY CERTIFICATES

DkIT will continue with the DEC certification to all its public building stock and are currently displaying Display Energy Certs at the entrances to all its buildings.

4.4 HEATING SYSTEMS

DkIT is reliant on natural gas as the primary source of space heating. The challenge to decarbonize thermal energy is immense in terms of both scale of work and costs. All 9 buildings are thermally heated by natural gas-powered boilers. They range in age from 55 years to 10 years old. Apart from a small extension, all buildings have been designed and built before NZEB standards, therefore, insulation and airtightness levels will be poor in comparison to standards of a newly built facility.

All new and future DkIT buildings will not install heating systems that use fossil fuels unless there is no other technical viable non-fossil alternative. Exceptions would include:

- Fossil fuel use only through the electrical grid.
- The installation of renewable space heating that would increase CO₂ emissions.
- As a backup or for emergency maintenance purposes.

DkIT is committed to updating the procurement and design procedures to ensure that the scope for any future builds do not contain fossil fuelled heating systems.

DkIT understand the need to reduce the reliance on burning fossil fuels to provide heat to the current buildings and will pursue all avenues to decarbonise legacy heating systems in all the existing buildings. This will include a proposed program to replace the existing fossil fuelled heating systems with more sustainable options such as electric powered heat pumps and renewables. DkIT are continuing to engage with SEAI in support of retrofitting the existing heating systems with more environmental and sustainable options.

Currently two capital projects are on their way with both being designed to meet current standards in as far as possible within the possibilities of building retrofits.

4.5 EXISTING BUILDINGS

It is proposed that action is taken in the form of a project to develop an Institute GHG and Energy Reduction Masterplan. This will involve a detailed design team led assessment of the campus building. The assessment will lead to the further development of the register of opportunities and a project pipeline to 2030. The assessment will include an outline Building Stock Retrofit Plan and will identify saving in energy and the associated costs. The plan should also identify possible sources of funding for the register of opportunities. This comprehensive plan will require the development of a detailed client brief and project execution plan.

At present the Institute has one main energy related carbon reduction activity. This is a major capital project to insulate and upgrade the fabric to two of its original 1970's building, the North and South Buildings. These buildings cover an area of approximately 15,300m². Wrapping the building in insulation and replacing the glazing with enable energy related carbon emissions reductions due to the requirement for less thermal load to both heat the building space and maintain a working temperature.

4.6 VEHICLES

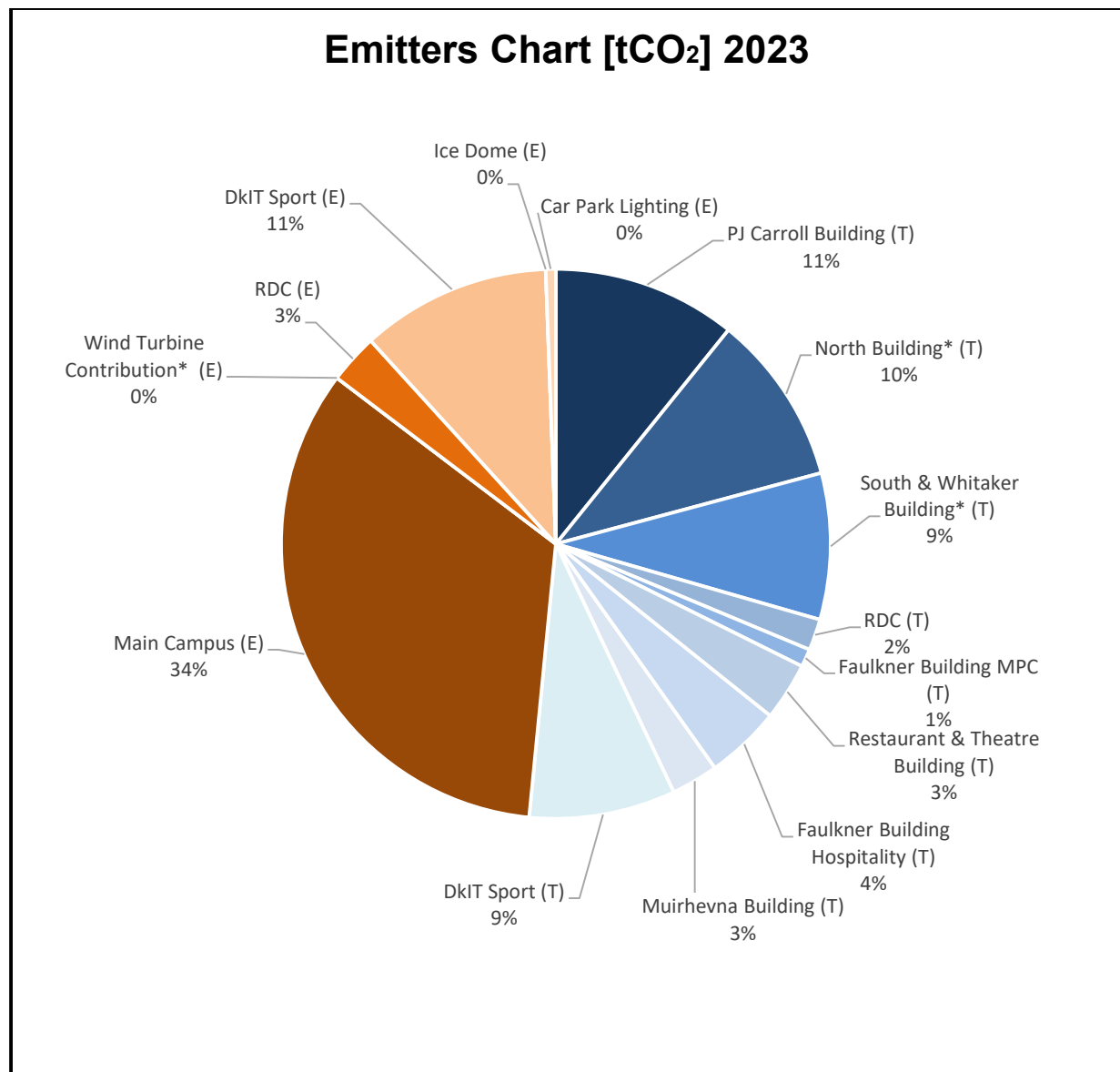
DkIT recognise the need for electrification of all its vehicles. Currently, DkIT use a small number of diesel-powered transport vans and smaller vehicles such as forklifts.

When vehicles are due to be replaced, DkIT will look to purchase zero emitting vehicles where operationally feasible to ensure CAP21 targets are met and in compliance with the SI381/2021 Clean Energy Directive.

5. CURRENT SITUATION

The significant emitters of carbon are the Institute buildings, which use fossil fuel to heat thermally and electrical energy to light and power the facilities.

The largest user thermally is the North and South Buildings which although less in area than the PJ Carroll Building has almost double the emissions. The actual breakdown in emissions for 2023 is set out on the chart below.



Building	kWh	tCO ₂
PJ Carroll Building (T)	1,272,440	234
North Building* (T)	1,181,443	217
South & Whitaker Building* (T)	1,014,834	187
RDC (T)	216,891	40
Faulkner Building MPC (T)	123,681	23
Restaurant & Theatre Building (T)	403,443	74
Faulkner Building Hospitality (T)	520,382	96
Muirhevna Building (T)	323,969	60
DkIT Sport (T)	1,015,585	187
Main Campus (E)	2,202,802	731
Wind Turbine Contribution* (E)	1,057,527	0
RDC (E)	190,500	63
DkIT Sport (E)	729,331	242
Ice Dome (E)	0	0
Car Park Lighting (E)	38,845	13
TOTAL	10,291,673	2,167

Emissions	%	tCO ₂
Thermal	52%	1,117
Electrical	48%	1,050

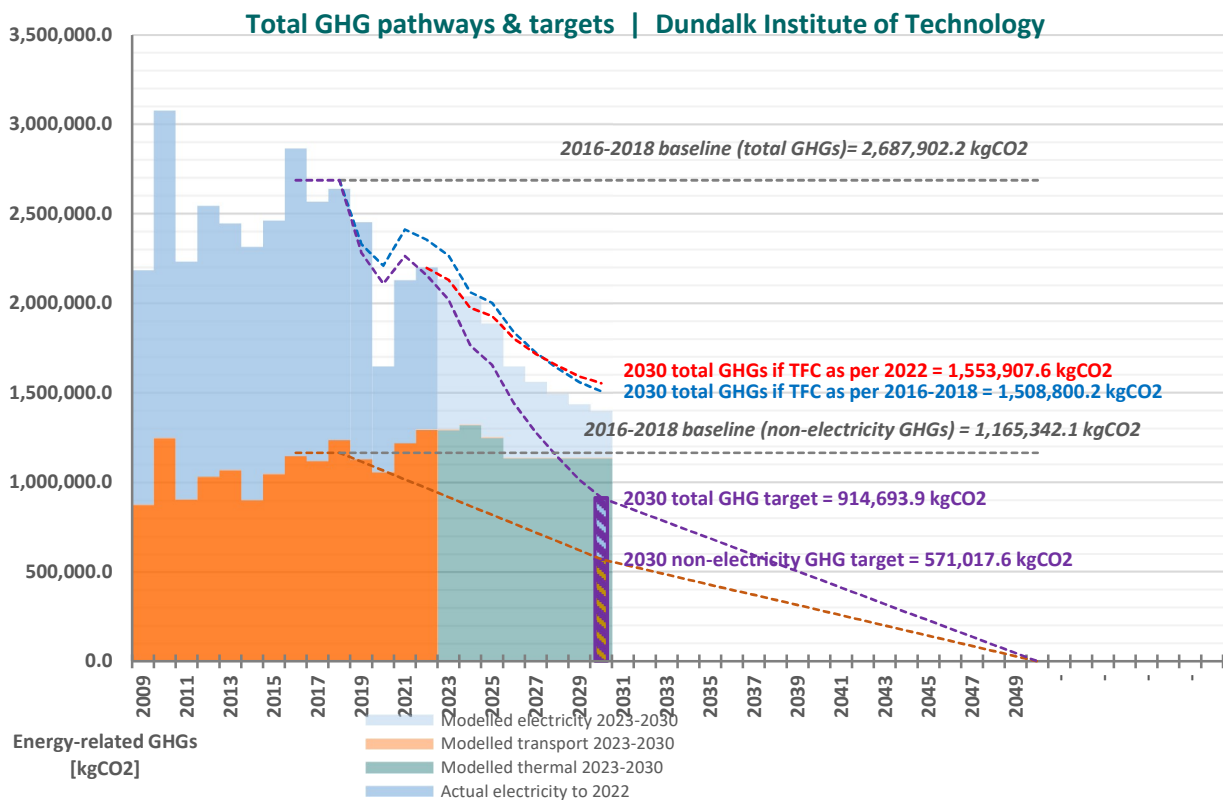
The above show 2023 figures of Energy Consumption as well as CO₂ output per building and broken down into electrical and thermal.

The public sector requirement is for a 51% reduction in GHG emissions over the 2016-18 baseline.

Using the SEAI gap to target tool the gap between the 2030 total GHG target of 914,693 kgCO₂ and the 2030 non-electricity GHG target of 571,017 kgCO₂ is 343,676kgCO₂. This figure represents the reduction required from DkIT's own actions between 2018 and 2030 and is known as the gap to target.

The GHG targets and pathways are set out below in figure 2

Figure 2



Decarbonising Electrical Energy

The proposed actions to achieve energy related carbon reduction rely heavily on decarbonizing the electrical grid and decarbonizing the Institutes thermal load.

GHG emissions savings are highly sensitive to changes in the national electricity grid carbon emissions factors. These carbon emissions factors change from year to year as the efficiency of the electricity grid changes. Ireland's electricity grid has significantly decarbonised in recent years, and it is expected that this trend will continue, as fossil fuels are phased out of power generation. However, some years have seen a backwards shift. For example, in 2021, emissions associated with electricity production increased by 18% from 2020, due to:

- Increased electricity demand
- Less wind power availability
- The use of older plants including a coal fired plant.

The increase in GHG emissions seen in 2021 is not expected to become a trend for Ireland's electricity production. However, it demonstrates the sensitivity of the grid to these compounded factors and impacts on energy efficiency modelling.

APPENDICES

APPENDIX 1 - GOVERNANCE STRUCTURE – ROLES & RESPONSIBILITIES TABLE

Role	Responsibilities
Climate & Sustainability Champion Irene McCausland	<ul style="list-style-type: none"> Ensuring that the gap to target model & climate action roadmap are complete. Approving the Institutes climate action strategy. Communicating the importance of climate action. Ensuring public sector targets are achieved. Reporting to the President and/or governing Body on performance against targets.
Energy Performance Officer Irene McCausland	<ul style="list-style-type: none"> Ensuring sufficient resources are in place to achieve climate action targets. Approval of annual project plans. Allocation of project funding. Reporting to the Climate & Sustainability Champion on performance against targets. Ensuring that the gap to target model & climate action roadmap are complete. To maintain and publish the Register of Opportunities (ROO) of energy initiatives which are suggested by the DkIT community. To establish baselines, update and report on EPI tracker, and deviations of energy performance at the University. Update legal register at planned intervals.
Sustainability Manager Christian Maas	<ul style="list-style-type: none"> To promote sustainability and energy awareness To progress the Institute Carbon Emissions Reduction and Energy Efficiency Master Plan To become the defacto Sustainability Champion and Energy Performance Office for the Institute To communicate and implement the DkIT energy and Sustainability policy. Establish and review action plans. To ensure operational control of Estates Office maintenance activities is consistent with DkIT Energy and Sustainability policy, objectives, targets and action plans. Ensure appropriate communication of operational controls to personnel working for, or on behalf of DkIT. Tracking and recording of non-conformances. To ensure energy performance improvement opportunities and operational control is considered in the modification of renovated

	<p>facilities, equipment, systems, and processes that can have a significant impact on DkIT energy performance. The result of energy performance evaluation should be documented.</p> <ul style="list-style-type: none"> • To plan and promote awareness campaigns; green days etc. • To ensure energy efficiency forms an integral part in the client brief for all new DkIT buildings and refurbishment projects. • Ensuring that the gap to target model & climate action roadmap are complete. • To maintain and publish the Register of Opportunities (ROO) of energy initiatives which are suggested by the DkIT community. • To establish baselines, update and report on EPI tracker, and deviations of energy performance at the University. • Update legal register at planned intervals.
<p>Students Union President</p>	<ul style="list-style-type: none"> • To keep student body briefed about energy and sustainability initiatives and encourage student participation. • To plan and promote awareness campaigns; green days etc. • Lead by example and challenge behaviors. • To create, drive and promote energy and sustainability awareness.
<p>Estates & Capital Projects Representative</p> <p>Christian Maas</p>	<ul style="list-style-type: none"> • To provide technical support to the sustainability manager and green teams. • To develop and ensure that all new developments are planned and carried out in conformance with relevant standards, in consort with the sustainability manager.
<p>Staff Representatives and interested parties</p>	<ul style="list-style-type: none"> • To act as a link between staff and energy and sustainability initiatives. • To promote energy awareness among staff and students in DkIT. • To update Green Teams on new research and advancements in Energy and sustainability topic. • To provide assistance for staff to take action on operational energy efficiency throughout DkIT. • To plan and promote awareness campaigns; green days etc.
<p>SEU's (Significant Energy Users) Manager</p>	<ul style="list-style-type: none"> • To review data on energy usage and consumption at DkIT. • To provide feedback on possible improved energy efficiency measures available for example IT networks, equipment and associated systems. • To operate and maintain facilities, processes, systems and equipment in accordance with operational criteria.

	<ul style="list-style-type: none"> • To ensure operational control of maintenance activities is consistent with DkIT Energy and Sustainability policy, objectives, targets and action plans. • To ensure appropriate communication of operational controls to personnel working for, or on behalf of DkIT. • To ensure energy performance improvement opportunities and operational control is considered in the design of new, modified and renovated facilities, equipment, systems and processes that can have a significant impact on DkIT's energy performance. The result of energy performance evaluation shall be documented.
Finance Representative	<ul style="list-style-type: none"> • To ensure evaluation of green criteria included in tenders where appropriate. • To ensure DKIT purchase only zero-emission vehicles where available and operationally feasible from end of 2022, enabling Ireland to go beyond the requirements of the Clean Vehicle Directive and act as an international leader in this area. • To ensure procurement and design procedures in place to comply with the requirement for no fossil fuel heating after 2023.
Departmental Energy and Sustainability Champions	<ul style="list-style-type: none"> • To provide expertise in relation to energy and sustainability initiatives. • Lead by example and challenge behaviours. • To create, drive and promote energy and sustainability awareness. • Keep up to date with Policies and procedures which effect energy and sustainability at DkIT.

APPENDIX 2 – DRAFT TERMS OF REFERENCE DKIT SUSTAINABILITY COUNCIL

1. TITLE OF COMMITTEE:

DKIT Sustainability Council

2. STATUS OF COMMITTEE

Sub-committee of the EB (Executive Board)

3. GUIDING PRINCIPLE OF DKIT SUSTAINABILITY COUNCIL

To promote activities, procedures and policies that will ensure sustainable development and management of the Institutes resources, to serve as a change agent and to serve as a source of information for others with similar aspirations.

4. RESPONSIBILITIES DELEGATED TO DKIT SUSTAINABILITY COUNCIL FROM EB

- The Dkit Sustainability Council will be chaired by a member of the EB as nominated by the President. The Sustainability Council can appoint a deputy Chair if chair is not available for meeting.
- The Sustainability Council will review, revise and be guided by the Institutes Energy and Sustainability Policy, and any other relevant legislation, as appropriate.
- To ensure continual improvement in line with Dkit Strategic Objectives.
- To identify and encourage areas of collaboration across all Dkit communities and ensure effective communication on sustainability issues affecting Institute activities.
- The prioritisation and timely delivery of Sustainable development aims and objectives by responsible persons.
- To be responsible for ensuring that the Institute complies with, and where possible exceeds, all applicable legislation, guidelines and any other relevant requirements.
- The setting of targets, use of indicators and the annual review of activities.
- To enable Dkit to provide leadership for other public sector organisations.
- To engage and collaborate with other 3rd level institutions to develop a coherent approach across the sector

5. ARRANGEMENTS FOR THE DKIT SUSTAINABILITY COUNCIL TO REPORT TO EB

- The Committee shall report significant (those with financial implications) decisions to the EB, and any further committees where relevant following each occasion on which it takes action.
- The Dkit Sustainability Council will submit a report on key activity on an annual basis to EB.

6. ARRANGEMENTS FOR THE PERFORMANCE OF THE FUNCTIONS, DUTIES AND RESPONSIBILITIES DELEGATED:

- The business of Dkit's Sustainability Council is conducted through meetings but can be done by conference call, TEAMS and e-mail etc. subject to the Chair's requirements.
- To pass a motion will require two thirds. Casting vote held by Chair.

7. MEMBERSHIP OF DKIT SUSTAINABILITY COUNCIL

The proposed membership of DkIT Sustainability Council are as follows:

- Climate & Sustainability Champion
- Energy Performance Officer
- Sustainability Manager
- Estates Office
- Finance Office
- Students Representative
- Staff representatives and interested parties
- Sustainability Council can invite additional members/experts as required

8. FREQUENCY OF MEETINGS

- Meetings will be scheduled on a six-weekly basis during semester time.
- Meetings will require a quorum of 50% plus one.
- Meetings will not be held during the months of July and August.

APPENDIX 3 – REGISTER OF OPPORTUNITIES



Register of Opportunities

Colour Code: Dark Green is part of Major Capital Works, Blue is Complete.

Use the filters to prioritise the opportunities, e.g. cols D, E, M, N. Use the [Optional Opportunity Prioritisation tool](#) in cols N-V for more detailed opportunity prioritisation

Ref	Opportunity	Project association	Ref No M&R	Estimated Annual Savings				Category	Electrical / Thermal / Fleet	Responsible	Additional Information / Comments	Date Entered
				Fuel Type	[kWh]	[€]	[kgCO2]					
001	Refurbish/replace boiler installation in North Building	North & South Building Façade Upgrade Project	10466	Natural Gas	89,720	€4,128	21,981.4	Technical	Thermal	Christian Maas	based on 66 hrs per week 30 weeks /year operation, 10% saving	25-Jan-18
002	North Building Roof Refurbishment	North & South Building Façade Upgrade Project	5740	Natural Gas	100,000	€4,601	24,500.0	Technical	Thermal	Conor Lait	25% of heatloss reduced by half	26-Jan-18
003	North Building Refurbish Façade	North & South Building Façade Upgrade Project	5740	Natural Gas	180,000	€8,282	44,100.0	Technical	Thermal	Conor Lait	40% of heatloss reduced by half	26-Jan-18
004	South Building Roof Refurbishment	North & South Building Façade Upgrade Project	5741	Natural Gas	75,000	€3,451	18,375.0	Technical	Thermal	Conor Lait	25% of heatloss reduced by half	26-Jan-18
005	South Building Refurbish Façade	North & South Building Façade Upgrade Project	5741	Natural Gas	200,000	€9,202	49,000.0	Technical	Thermal	Conor Lait	40% of heatloss reduced by half	26-Jan-18
006	Refurbish Bright Room Area in PJ Carroll Building	Stand Alone	5742	Natural Gas	165,000	€7,592	40,425.0	Technical	Thermal	Conor Lait	15% reduction of Heat load	26-Jan-18
007	Install Revolving Door in North Building Main Entrance	North & South Building Façade Upgrade Project	7824	Natural Gas	4,700	€216	1,151.5	Technical	Thermal	Christian Maas	2% of 15% convective heatloss	26-Jan-18
008	Install Revolving Door in DkIT Sport	Stand Alone	12343	Electricity	1,000	€90	519.0	Technical	Thermal	Estates	1% of 15% convective heatloss	26-Jan-18
009	Replace Roof Windows in S102	Stand Alone	13799	Natural Gas	500	€23	122.5	Technical	Thermal	Estates	estimated saving	26-Jan-18
010	Replace AHU 4 on South Building Roof	North & South Building Façade Upgrade Project	13800	Natural Gas	2,000	€92	490.0	Technical	Thermal	Christian Maas	estimated saving	26-Jan-18
011	Replace Radiator Installation S202 to S206	Stand Alone	13801	Natural Gas	2,000	€92	490.0	Technical	Thermal	Christian Maas	estimated saving	26-Jan-18
012	Replace Close Control Unit in D152	Stand Alone		Electricity	1,000	€90	519.0	Technical	Thermal	Christian Maas	estimated saving	26-Jan-18
013	Heating and Ventilation Improvement works S136	North & South Building Façade Upgrade Project	13802	Natural Gas	1,000	€46	245.0	Technical	Thermal	Christian Maas	estimated saving	26-Jan-18
015	Install Revolving Door To Restaurant Main Entrance	Stand Alone	13803	Natural Gas	1,000	€46	245.0	Technical	Thermal	Conor Lait	2% of 15% convective heatloss	26-Jan-18
016	Remedial Works to Hot & Cold Water System North Building	Stand Alone	13804	Electricity	2,000	€181	1,038.0	Technical	Electrical	Christian Maas	estimated saving	26-Jan-18
017	Remedial Works to Hot & Cold Water System South Building	Maintenance	5738	Natural Gas	1,000	€46	245.0	Technical	Electrical	Christian Maas	estimated saving	26-Jan-18
018	Replace Existing AC Units in South Building Computer Labs	North & South Building Façade Upgrade Project	13805	Electricity	4,000	€361	2,076.0	Technical	Electrical	Christian Maas	Savings against operating system. Systems not working at present	26-Jan-18
019	Remove Hot Water Tank in S267	Stand Alone	5738	Natural Gas	3,000	€138	735.0	Technical	Thermal	Christian Maas	remove tank and connect system to existing tank	26-Jan-18
020	Connect MPC heating end Extract Fan to BMS	Stand Alone	13806	Natural Gas	5,000	€230	1,225.0	Technical	Thermal	Christian Maas	prevent overheating of Hall	26-Jan-18
021	Segregate changing rooms from pool area in DkIT Sport	Stand Alone		Electricity	5,000	€452	2,595.0	Technical	Thermal	Conor Lait		26-Jan-18
022	Remove / replace AC Units in PJ Carrolls	Stand Alone	Not in M&R	Electricity	2,000	€181	1,038.0	Technical	Thermal	Christian Maas	Savings against operating system. Systems not working at present	26-Jan-18
023	Alter Controls to Student Common Room AHU	Stand Alone		Natural Gas	1,000	€46	245.0	Technical	Combination	Christian Maas	Re-evaluated control strategy and time schedule	26-Jan-18
024	Repair Controls on AHU 1&2 South Building	Stand Alone		Natural Gas	3,000	€138	735.0	Technical	Combination	Christian Maas	Repair. Re-evaluated control strategy and time schedule	26-Jan-18
025	Reconfigure Reception of Sports Dome, DkIT Sport	Stand Alone	13808	Electricity	10,000	€903	5,190.0	Technical	Electrical	Conor Lait	Separate functional areas to enable comfortable conditions for staff	26-Jan-18
026	Reconfigure Reception of Gym Area, DkIT Sport	Stand Alone	13807	Electricity	10,000	€903	5,190.0	Technical	Electrical	Conor Lait	Separate functional areas to enable comfortable conditions for staff	26-Jan-18
027	Lighting Repairs and Replacements as part of ongoing Maintenance 2018	Maintenance		Electricity	78,000	€7,045	40,482.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	14-Nov-18
028	Lighting Repairs and Replacements as part of ongoing Maintenance 2019	Maintenance	12344	Electricity	25,000	€2,258	12,975.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	14-Nov-18
029	Upgrade of Roadside Lighting	Maintenance	12342	Electricity	14,000	€1,264	7,266.0	Technical	Electrical	Colm McCourt	Once off replacement project	8-Apr-19
030	Replace lighting in MPC	Stand Alone		Electricity	30,000	€2,710	15,570.0	Technical	Electrical	Colm McCourt	Once off replacement project	21-May-19
031	Lighting Repairs and Replacements as part of ongoing Maintenance 2020	Maintenance	13026	Electricity	20,000	€1,806	10,380.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	18-Dec-19
032	Lighting Repairs and Replacements as part of ongoing Maintenance 2021	Maintenance	13798	Electricity	20,000	€1,806	10,380.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	20-Jan-21
033	Replace Boilers in Muirhevna Building	Muirhevna Building Boiler Upgrade Works	13809	Natural Gas	60,000	€2,761	14,700.0	Technical	Thermal	Christian Maas	Replacement due to boiler Failure and reliability issues	20-Jan-21
034	Lighting Upgrade on Ground Floor Muirhevna Building	Stand Alone	13810	Electricity	10,000	€903	5,190.0	Technical	Electrical	Colm McCourt	Replacement of existing with LED	20-Jan-21
035	Repair of Heating recirculation on AHU 5 Muirhevna Building	Stand Alone	11592	Natural Gas	45,000	€2,070	11,025.0	Technical	Thermal	Christian Maas	Repair LPHW circulation heat recovery circuit on AHU	3-Mar-21
036	Isolate Stanby Boiler in Muirhevna Building	Muirhevna Building Boiler Upgrade Works	11590	Natural Gas	17,000	€782	4,165.0	Technical	Thermal	Christian Maas	As indicated in Audit	3-Mar-21
037	Ventilation Control AHU4 Muirhevna Building	Stand Alone	11589	Natural Gas	76,000	€3,497	18,620.0	Technical	Thermal	Christian Maas	As indicated in Audit	4-Mar-21
038	S116 Server room AC	Stand Alone	13811	Electricity	2,000	€181	1,038.0	Technical	Electrical	Christian Maas	AC replacement and use of ventilation	4-Mar-21
039	Lighting Repairs and Replacements as part of ongoing Maintenance 2022	Maintenance	14435	Electricity	10,000	€903	5,190.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	3-Mar-22
040	Replace Fan Motors on AHU18	Emergency Works	16044	Electricity	15,000	€1,355	7,785.0	Technical	Electrical	Christian Maas	Replacement of Motor of Extract Fan and replacement of Supply Fan with a group of EC Blue Fans including Control Panel.	3-Mar-22
041	Roof Works of Link Building between North and South Building	Summer Works 2024	13799	Natural Gas	5,000	€230	1,225.0	Technical	Thermal	Sean O'Connor	Roof improvement works including upgrade of insulation	19-Apr-23
042	Replacement of MPC AHU	Summer Works 2024	16045	Natural Gas	3,000	€138	735.0	Technical	Thermal	Christian Maas	Replacement of Existing AHU with two no Heat recovery Units	19-Apr-23
043	Replacement of Ventilation System in S101/2	Summer Works 2024	16043	Natural Gas	5,000	€230	1,225.0	Technical	Thermal	Sean O'Connor	Replacement of Extract System with Heat recovery system	19-Apr-23
044	Upgrade of Link Building between North and South Building	Pathfinder Project Application	16046	Natural Gas	30,000	€1,380	7,350.0	Technical	Thermal	Christian Maas	Upgrade of Façade to near zero energy loss	19-Apr-23
045	Lighting Repairs and Replacements as part of ongoing Maintenance 2023	Maintenance	16014	Electricity	8,000	€723	4,152.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	19-Apr-23
046	Lighting Repairs and Replacements as part of ongoing Maintenance 2024	Maintenance		Electricity	12,000	€1,084	6,228.0	Technical	Electrical	Colm McCourt	Items that are being addressed as part of ongoing Maintenance.	29-Jan-24
047	Replacement Of Pool AHU in DkIT Sport	Stand Alone		Natural Gas	50,000	€2,301	12,250.0	Technical	Thermal	Christian Maas	Replacement of AHU due to failure of old unit to control	28-Jan-24
048	Insulate Ductwork in Whitaker Building	Stand Alone		Natural Gas				Technical	Thermal	Christian Maas		4-Jun-24
049	Insulate Floor opes in Whitaker Building	Stand Alone		Natural Gas				Technical	Thermal	Christian Maas		4-Jun-24
050	Replacement of Water Booser Unit RDC	Stand Alone		Electricity	1,500	€135	778.5	Technical	Electrical	Christian Maas		4-Jun-24