

Arts University Bournemouth (AUB) Sustainability and Net-Zero Programme

1.0 Introduction

AUB acknowledges global climate change and the ecological crisis and wishes to play its part in mitigating against unwanted outcomes of these issues. Furthermore, AUB is aware of its own environmental impacts, through operational practices and capital projects, and is committed to eliminating, reducing or compensating where this is not possible, these impacts in an innovative, efficient, and transparent way. The aim of the Sustainability and Net Zero (SNZ) programme is to eliminate, reduce, or compensate AUB impacts and achieve net zero by 2030.

1.1 Message from the Principal and Vice-Chancellor

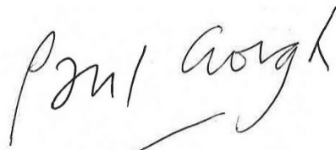
At the heart of the AUB Strategy are four core values that guide our practices and behaviours. Of the four, our value of staying 'connected' speaks powerfully towards the AUB Sustainability Programme, and our ambitions towards neutrality:

"We are better for our diversity. We are enriched by the depth of respect we have for each other and the strength of our relationships with our people, our places and with the planet. Through our commitment to working with those who are different to us, or challenge us, we grow stronger together, creating new synergies, global connections and sustainable futures."

Our commitment to an environmentally sustainable future builds on significant achievements at AUB over the past five years. Having already achieved ISO14001:2015 and platinum status as an Eco-Campus, during the lifetime of this Strategy, we will embrace the spirit and practices of the United Nations Sustainable Development Goals across all aspects of AUB's teaching, research and engagement. We are already seeing this in the new undergraduate curriculum, which staff have co-designed.

We have shown real commitment in becoming a signatory of the Global Climate Letter for Universities and Colleges, issued through EAUC (Environment Association for Universities and Colleges), and AUB has committed to reach net zero by 2030. We have gained certification as a registered Fairtrade university, with the top grade 3 stars. During 2020/21 AUB was presented on the global Fairtrade website as one of three HEI case studies for Fairtrade. We create a great many environmentally sensitive and progressive projects across the University, through AUB Human and through live and simulated briefs. These will continue to expand and deepen.

These are all significant achievements for which AUB ought to feel proud. But there is always more to do. The programmes of work set out in the document will be supported by the University and our Board of Governors as we move creatively - and credibly - towards a sustainable and net zero future.



Professor Paul Gough
Principal and Vice-Chancellor

1.2 AUB Strategy 2030

In June 2020 AUB set out its Strategy 2030 that communicated its Vision, Goals, Values, and Operational Plans. The whole strategy can be viewed at [here](#). AUB's values are:

INNOVATIVE

With an open mind we try new things, nurture ideas, trigger creativity and develop solutions. Through our innate curiosity, practice-based enquiry, and industry-partnered projects we work with our students, staff, and stakeholders to tackle problems and encourage authentic innovation

COLLABORATIVE

We strive to make a difference in all that we do. Through our collaborative approach we aim to be the agents of positive change for our students, staff, and the communities we serve. Through the applied excellence of our learning, teaching, and research we strive for relevance to make a positive impact.

CONNECTED

We are better for our diversity. We are enriched by the depth of respect we have for each other and the strength of our relationships with our people, our places and with the planet. Through our commitment to working with those who are different to us, or challenge us, we grow stronger together, creating new synergies, global connections, and sustainable futures.

PASSIONATE

Education transforms lives: a creative education transforms society. Through our sense of purpose and determination for the best education, research and partnering with industry, we empower our people to learn, grow and connect. We care about the work we do, the respect we have for each other, and the powerful sense of belonging that characterises everything we do.

2.0 Context

2.1 Global

Climate change and ecological degradation are leading issue's in today's society.

The Intergovernmental Panel on Climate Change (IPCC) cycle of Assessment reports have made clear that anthropogenic activities are causing the Earth's biogeochemical processes to alter causing likely temperature increases and other extreme weather events. The IPCC Special Report on Global Warming furthermore highlighted the significant differences between keeping warming at 1.5°C and 2°C above that of preindustrial levels. Average global temperature is currently (2021) approximately 1.1°C warmer than pre-industrial times (IPCC 2021). The likely consequences of climate change include heatwaves, water scarcity, and extreme rainfall events (with increased regularity), that in consequence will impact food production, water availability, economic growth, inequality, and health.

2.2 National

The United Kingdom (UK) Government in 2019 pledged to be net-zero by 2050 pursuant of the Climate Change Act 2008. The strategy can be seen [here](#).

The UK Climate Change Committee 2020 Sixth Carbon Budget recommends a scale up of investment, alongside policy adaptation, behaviour change and a commitment to clean technology, if the UK is going to meet the targets set.

2.3 Local and Sector

Both Bournemouth, Christchurch and Poole (BCP) and Dorset councils have declared climate emergencies. BCP have stated their intention to be net zero as an organisation by 2030 and the area itself by 2050, and Dorset council net zero by 2040 and the area by 2050.

The EAUC declared a climate emergency in 2019.

3.0 AUB

AUB's Carbon Management Plan and Sustainability Plan both expired in 2021 and the SNZ will replace both documents. The Sustainability Plan originally expired in 2020 but was extended by a year to allow for SNZ programme development. The Sustainability Plan was a success with a 48% CO₂e reduction from baseline 2005/6 to 2020 (original expiry date used for whole 'Plan' analysis), alongside water use reduction, a decrease in waste production and a significant increase in recycling reaching 60% in 2021.

AUB has pledged to be net zero by 2030 and is a signatory of the EAUC Race to Zero. The SNZ will enable AUB to meet its signatory net zero pledge; set non-emission targets; establish targets in relation to wider sustainability issues (such as supporting biodiversity); and will align with the University's strategic vision and values. The SNZ will need to be considered and reflected throughout all AUB policies and procedures.

A Net Zero Task Force is established with the aim to set the initial programme, report on performance to Environment Committee, and make any necessary adjustments during the lifespan of the programme (and likely beyond).

3.1 Net Zero Target

AUB signed the EAUC Net Zero pledge in 2021. Net Zero is defined at AUB as that set out in the Race to Zero Interpretation Guide:

An actor reduces its emissions following science-based pathways, with any remaining GHG emissions attributable to that actor being fully neutralized by like-for-like removals (e.g., permanent removals for fossil carbon emissions) exclusively claimed by that actor, either within the value chain or through purchase of valid offset credits.

It is important to accept that not all emissions will be eliminated and residual – currently unreachable – emissions will need to be neutralized (section 3.9). This may be due to technological or potentially financial reasons.

3.2 Sustainable Development Goals

AUB supports Sustainable Development Goals (SDG's) and is concentrating on five, whilst acknowledging that universities are institutions that can address all seventeen. Curriculum 21 development (since renamed) introduced the SDG's (alongside Equality, Diversity, and Inclusion goals (EDI's) and Graduate Attributes) into content and outcomes. The SNZ will work in symbiosis with SDG's.



3.3 Overarching approaches

The approaches utilized to achieve net zero by AUB are documented in Table 1.

| Approach | Description |
|---------------------------------------|--|
| Governance | <ul style="list-style-type: none"> • Clear definition of control of net zero. Ultimately it is the whole AUB community, but distinct from this, the prescribed holistic control of practices, processes, and procedures at governance level • Ensure all policies have considered and reflect net zero • Individual responsibility is acknowledged via top-down approach cascading through the AUB hierarchy structure • Clear and proactive support and funding opportunities, for net zero and sustainability projects |
| Engagement and Behaviour Change | <ul style="list-style-type: none"> • The support of the AUB community will be key to delivering success • Improve student and staff engagement through improved communication, initiatives, and engagement. • Ensure all AUBSU activities are aligned to net zero and encourage, promote, and initiate student engagement (alongside and in symbiosis with the above) • Cascade room booking system where energy efficient buildings and rooms (that are suitable) are used first • Investigate engagement programmes and implement if beneficial • Wherever possible, ensure sustainable behaviour is easier than non-sustainable behaviour • Undertake environmental risk assessments in all areas of the University to identify efficiency gains and promote best practice |
| Sustainability and Net Zero Education | <ul style="list-style-type: none"> • Continue the excellent work instigated by C21 and the introduction of SDG's (section 3.2) into the curriculum • Introduce a Carbon Literacy programme • Create a communication plan that is annually updated |

| | |
|------------------------|--|
| | <ul style="list-style-type: none"> • Seek opportunities to promote sustainable research within course portfolio provision • Ensure provision for AUB community feedback to the programme |
| Energy and Technology | <ul style="list-style-type: none"> • Installation of heat pumps or other non-fossil fuel heat and water systems throughout the campus • Increase the provision and use of renewable on-site technology e.g., PV panels • Reduce the energy required to cool buildings via the use of new technology when fitting or replacing cooling equipment • Regular maintenance and checking of TREND energy system to improve efficiency |
| Information Technology | <ul style="list-style-type: none"> • Ensure cloud storage is investigated and used • To further the transition from desktop to laptop • Enhance any benefits from agile working |
| Travel | <ul style="list-style-type: none"> • To install the 'travel hierarchy' into behaviour change for commuting purposes but also as part of business travel • Transition AUB vehicle fleet to electric or if appropriate hydrogen • Investigate and implement automated procedures that ensure scope 3 agile working emissions are captured and reported on • To utilize technology where possible to limit the amount of travel undertaken • Travel to AUB document to provide significant incentives to promote sustainable transport methods |
| Waste | <ul style="list-style-type: none"> • Maintain the zero to landfill • Promote the consideration of waste at procurement level and then further encourage (using the waste hierarchy) reuse, repair, and recycling before general waste • Lower the amount of waste generated (using the waste hierarchy) and thus lowering waste to energy recovery • Monitor waste streams and engage to lower • Ensure construction waste is considered throughout lifecycle of a project and designed out whenever possible • Investigate improvements required to raise the AUB accommodation portfolio recycling rate and lower overall consumption |
| Procurement | <ul style="list-style-type: none"> • Procurement is one of the most significant sources of emissions and the most difficult to calculate • Actively engage with AUB supply chain to gather performance data • Reassess Sustainable Procurement Policy to ensure it aligns with sustainability and net zero programme • Provide education to staff (with procurement responsibilities), but also the wider community regarding 'responsible purchasing' guidance • Investigate and implement automated procedures to gather procurement data and associated emissions • Report on procurement emissions using GHG protocol reporting procedures |

| | |
|---------------|---|
| Reporting | <ul style="list-style-type: none"> • Continue to report on performance using approved template that ensures continued stability in reporting whilst allowing flexibility • Ensure reporting can communicate performance within the internal AUB community, but also external sector comparisons • Continue to use accepted protocols and best practices to calculate emissions • Install long-term energy, heat, and water monitoring equipment |
| Capital Works | <ul style="list-style-type: none"> • All new builds and refurbishments to be aligned to UKGBC (United Kingdom Green Building Council) net zero framework • Ensure staff training is provided for all new builds so that performance drop off does not occur to significant levels • Refurbishment will be required to lower energy usage and ensure resilience to fluctuations for energy provision. Utility and waste generation should be monitored and reported upon • Water efficiency technology and appliances will be used to raise efficiency |
| Food | <ul style="list-style-type: none"> • Promote healthy eating options and all dietary requirements • Promote awareness of food waste and food choice impacts and evolve practices to lower food waste |
| Biodiversity | <ul style="list-style-type: none"> • Consider the impacts on biodiversity of procedures, practices, and projects (including construction) and use 'expert knowledge' to mitigate when necessary • Use nature-based solutions to prevent the overheating of buildings alongside noise abatement |

Table 1. Approaches to achieving SNZ programme aims and targets

3.4 Risk

The AUB Risk Register is owned by the Executive Director of Operations and Planning. It covers the key strategic, operational, and financial risks to University sustainability over time, as well as academic and reputational risks which, AUB recognises the risks to the University from climate change and the ecological crisis and is recorded in the AUB Risk Register – *Failure to respond to climate emergency and sustainability imperative.*

The Risk Register is subject to regular review and is received by every meeting of the Governors Audit & Risk Committee, which meets five times a year. The Governors expect to see a clear identification of the risks, and the mitigating actions which the University has put in place. Each risk is owned by a member of the senior team, and the sustainability risk is owned by the University Secretary, as Chair of Environment Committee and of the Net Zero Task Force.

We recognise that there are financial risks to the University from the programme. Many of the proposed actions, such as the replacement of gas boilers with clean technology, are expensive; and the net zero requirement for the estate adds significant cost, both in design and construction costs. We will look to utilize Government grants to lower this risk where we can.

Staff and students have a strong interest in sustainability, and this is also likely to be something which prospective staff and students take very seriously. We recognise that failure to operate in a sustainable way could damage our reputation – at the same time, good environmental practice can provide positive good news stories. We therefore acknowledge the risk that failure to deliver on our net zero commitment could have a serious reputational risk.

AUB is certified to ISO14001:2015 which contains an Aspects and Impacts Register. This register identifies environmental risks to the University from operations and natural events e.g., extreme weather. Furthermore, a PESTLE (Political, Economic, Social, Technological, Legal, and Environmental) analysis is recorded that highlights climate change and the associated risks and opportunities. The PESTLE will be updated and amended to ensure it is inclusive of the SNZ. The ISO14001:2015 framework is audited each year.

3.5 Boundary

The 'boundary' sets the parameters of the University's responsibilities – how far its influence can reach – as set by the AUB. AUB will report in line with HM Environmental Reporting Guidelines (2019), using operational control boundary definition:

Your organisation reports on all sources of environmental impact over which it has operational control. Your organisation has operational control over an operation if your organisation or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.

3.6 Baseline

Previous AUB Sustainability Plans adhered to a baseline as set by HEFCE (Higher Education Funding Council for England) (abolished in 2018 with many of its functions now taken over by the Office for Students (OfS)). However, with the aim of the SNZ programme to achieve net-zero, setting a nominated year to compare against is less important. Indeed, the most recent year of data would usually be the most appropriate to use. The COVID-19 pandemic resulted in campus closures which skewed the data for 2019/20, which means that data from the academic year 2018/19 will be most appropriate. Using the most recent representative data also ensures the accuracy of Science-Based-Targets approach to lower emissions on the journey to net zero in line with 1.5°C (section 3.8).

To further scrutinize; AUB has recently expanded its estate with further developments due soon and so a review of the baseline year and/or its corresponding data may be required. Furthermore, inadequate data for many scope 3 emissions will result in increases once calculation(s) are possible, and an annual reassessment will be required.

3.7 Scopes

'Scope' is a term used to define a type of emission. To eliminate the chance of double counting, scopes are broken down into three categories:

- Scope 1 covers direct emissions, for example from building energy use (such as heating or cooling), or fuel consumed by owned or leased vehicles
- Scope 2 covers indirect emissions and are associated with the purchase of electricity, steam, or other forms of energy (both heating and cooling)

- Scope 3 covers indirect emissions associated with a wide range of activity: any items or materials which are purchased; supply chains; transport and distribution; business travel including remote working; commuting; and waste generated in operations. It also includes the emissions from any assets which are leased by an organisation

AUB reports against scopes 1, 2, and 3. Table 2 below lists each of the main sources of emissions at AUB, indicating in each case the scope; data management arrangements; and assessment of data confidence. The final column indicates whether this source is currently included in calculations. Table 3 explains the criteria for the banding. The aim is for all emissions sources to eventually be green.

| Scope | Emission Source | Data Management | Data Confidence | Baseline Inclusion |
|-------|-----------------------------|--|---------------------|--|
| 1 | Gas | Good data from contract portal | High | Yes |
| 1 | AUB Fleet Vehicles | Good data, calculated from litres of full use rather than milage | High | Yes |
| 1 | Other emissions e.g., AHU's | Data available | Medium | Yes |
| 2 | Electric (inc T&D) | Good data from contract portal | High | Yes |
| 3 | Water | Good data from contract portal | High | Yes |
| 3 | Wastewater | Good data from contract portal | High | Yes |
| 3 | Operational waste | Good data from contract portal | High | Yes |
| 3 | Flights | Poor data. Only captured when booked through travel company and then not separated from other travel methods. Flights independently booked may be missed | Low | No |
| 3 | Rail | Medium data. Travel company data captured although unsure of calculation method. Independent bookings may be missed. | Medium | Yes |
| 3 | Commuting | Data poor due to old travel survey. 2021 travel survey undertaken and a commitment to survey every two years will improve this | High (2021 onwards) | Yes |
| 3 | Construction waste | Poor data. Future new builds will report, and refurbishment waste captured through waste contract portal. | High (2021 onwards) | No data for baseline but included 2021 onwards |

| | | | | |
|---|--|---|--------|----|
| 3 | Hire Vehicles | No data available | Low | No |
| 3 | Procurement | No data available | Low | No |
| 3 | Agile Working | No data available | Low | No |
| 3 | EV Vehicle external charging (inc T&D) | No data available | Low | No |
| 3 | Delivery emissions | Crude calculation based on partial distance from local depot and back (may form part of future procurement calculation) | Medium | No |

Table 2. Scopes to include in (2021) inventory and data integrity

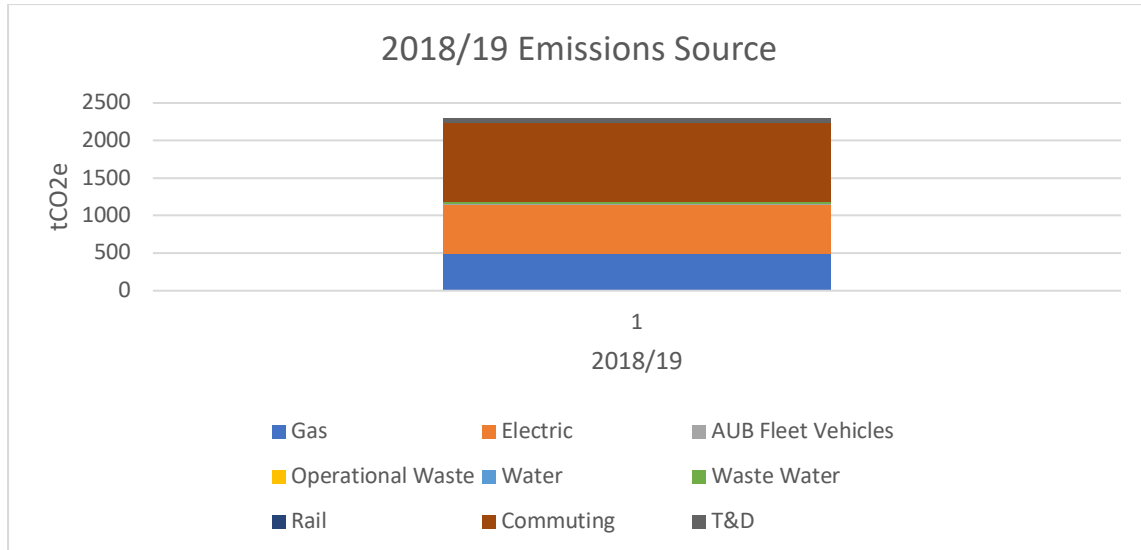
| Selection Criteria | Baseline inclusion | Meaning |
|--------------------|--------------------|--|
| Red | No | Data is currently unavailable |
| Amber | No | Data is available " but further clarifications or improvements needed before inclusion is acceptable |
| Amber | Yes | Data capture may not be complete, but no clarification of use is required, and current data is preferable to non-inclusion |
| Green | Yes | High confidence of good data |

Table 3. Scope inclusion selection criteria

The net zero inventory – the total emissions to be included – will constitute the emissions from Table 2 with 'High' or 'Medium' data confidence and 'Yes' in the baseline inclusion column. (Where data is currently excluded, AUB will set a target to collect acceptable data as part of its Sustainability pathway.)

AUB has taken the 2018/19 data which is aligned to the SNZ inventory confirmed in Table 2, and this is given in Graph 1 and Table 4. These emissions total 2,288.328 tCO₂e and will be used in the Science-Based Target trajectory (section 3.7). As can be seen, commuting was much the biggest source of emissions, followed by gas, electric, and electrical transmission & distribution. Table 2 will be updated throughout the programme, especially as scope 3's analyses progress; for example, the figures for commuting will be revised based on the results of each annual travel survey. (Procurement is a large 'category' and will likely need revising).

2018/19 emissions from SNZ (2021) inventory scope:



Graph 1. 2018/19 emission source data

| Emission Source | tCO ₂ |
|-----------------------------|------------------|
| Gas | 502.488 |
| Electric | 641.601 |
| AUB Fleet Vehicles | 12.923 |
| Operational Waste | 5.597 |
| Water | 7.356 |
| Wastewater | 15.084 |
| Rail | 1.78 |
| Commuting | 1,045.69 |
| Transmission & Distribution | 55.809 |
| Total | 2,288.328 |

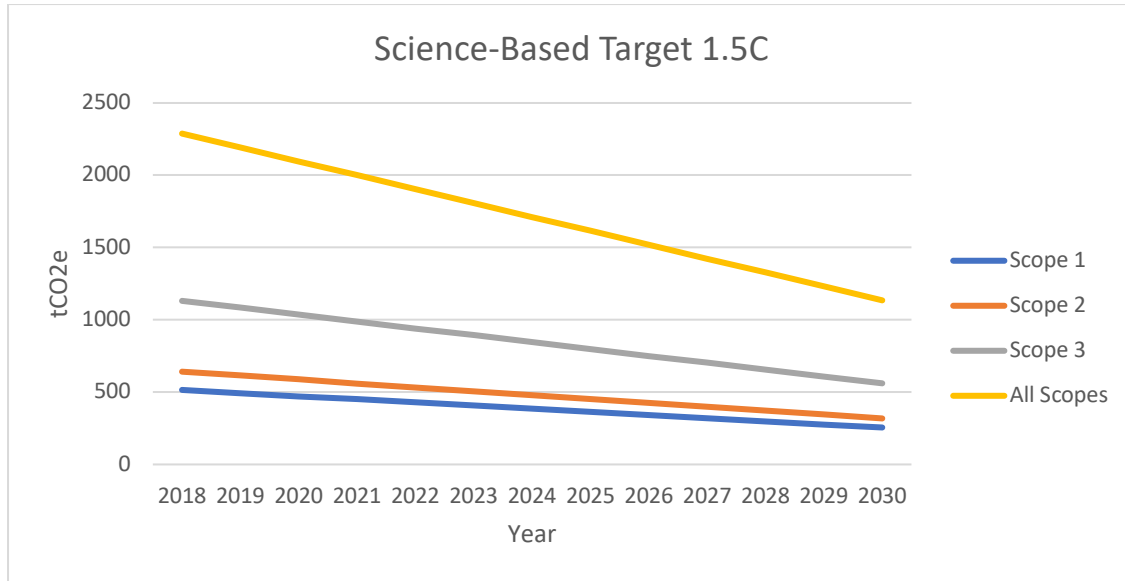
Table 4. 2018/19 emission data

3.8 Science-Based Target

AUB will use a science-based target (SBT) to set the trajectory of decrease, limiting emissions on the path to net zero, and set the minimum emission decrease prior to any potential neutralization. It is anticipated that EAUC will create a higher education sector SBT which will be a strong tool for AUB to assess progress. This would be preferable to the existing global Science Based Targets initiative (SBTi) scheme¹, although that tool will be used to measure annual performance until any alternative is available.

AUB will use an absolute reduction approach following a 1.5°C trajectory as recommended by the IPCC. Graph 2 and Table 5 demonstrates what a 1.5°C absolute reduction trajectory will look like for the proposed SNZ inventory. It breaks down the level of reduction per scope alongside the total (all scopes) reduction trajectory.

¹ A partnership between CDP, World Resources Institute (WRI), the World-Wide Fund for Nature (WWF), and the United Nations Global Compact (UN Global Compact)



Graph 2. Science-based target 1.5°C trajectory (absolute reduction) per scope and all scopes

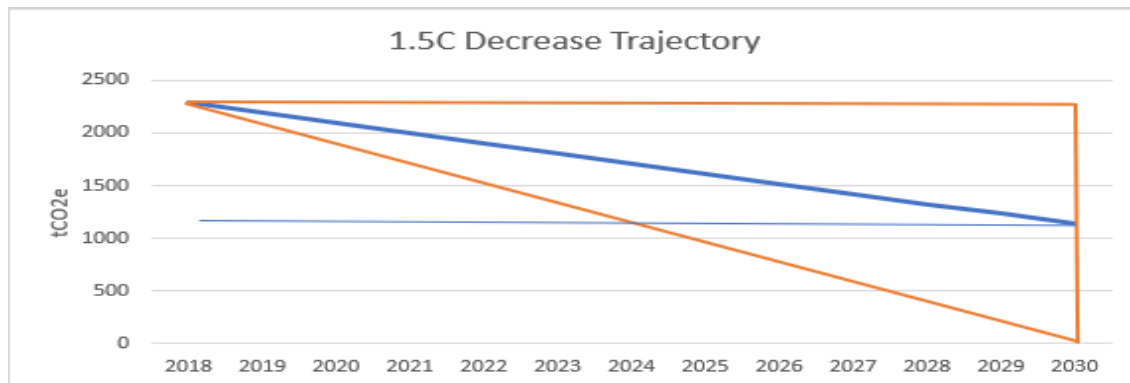
| | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2024/25 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|
| Scope 1 | 515.411 | 493.7637 | 472.1165 | 450.4692 | 428.822 | 407.1747 | 385.5274 |
| Scope 2 | 641.601 | 614.6538 | 587.7065 | 560.7593 | 533.812 | 506.8648 | 479.9175 |
| Scope 1&2 | 1157.012 | 1108.417 | 1059.823 | 1011.228 | 962.634 | 914.0395 | 865.445 |
| Scope 3 | 1131.316 | 1083.799 | 1036.283 | 988.766 | 941.2493 | 893.7327 | 846.216 |
| All Scopes | 2288.328 | 2192.217 | 2096.106 | 1999.994 | 1903.883 | 1807.772 | 1711.661 |
| | | | | | | | |
| | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | |
| Scope 1 | 363.8802 | 342.2329 | 320.5856 | 298.9384 | 277.2911 | 255.6439 | |
| Scope 2 | 452.9703 | 426.0231 | 399.0758 | 372.1286 | 345.1813 | 318.2341 | |
| Scope 1&2 | 816.8505 | 768.256 | 719.6615 | 671.067 | 622.4725 | 573.878 | |
| Scope 3 | 798.6993 | 751.1827 | 703.666 | 656.1493 | 608.6327 | 561.116 | |
| All Scopes | 1615.55 | 1519.439 | 1423.327 | 1327.216 | 1231.105 | 1134.994 | |

Table 5. Science-based target data between baseline year 2018/19 and 2030/31.

Graph 3 shows in diagrammatic form the area in which projects to decarbonize will sit. The horizontal orange line represents no change to emissions over time, although does not acknowledge any potential increase from estate expansion.

More significantly, the diagonal orange line shows the reductions which would be required to achieve net zero without neutralization (recognising that there is some residual carbon which cannot be eliminated). In practice, of course, progress is unlikely to be linear; some years will see significantly greater reductions than others.

The blue diagonal line shows the implications for AUB of using 1.5°C absolute reduction target over time. This indicates the progress which AUB would need to make on an annual basis to reach the target by 2030.



Graph 3. Science-based 1.5°C target trajectory (blue line). Orange triangle represents current (2021) project boundaries with no change in emissions and zero emissions (residual not represented).

Ultimate success will be emissions remaining under the 1.5°C trajectory between current date and 2030 and reaching as near to net zero by 2030 as possible. As an absolute minimum, AUB will expect to deliver reductions which meet the 1.5°C trajectory target by 2030, whilst acknowledging any carbon emissions which have not been eliminated by that date will need to be neutralized to deliver on our net zero commitment. The science-based target will change over time as the net zero inventory changes.

3.9 Dual Pathway

AUB intends to address all three scopes in the SNZ programme whilst acknowledging current restrictions on the ability to calculate certain scope 3's (as described above in section 3.6). A dual pathway approach will be used. An indicative simple diagram to demonstrate is shown in Figure 1.

The dual pathway consists of a single timeline (including key dates). To the left hand-side is the net zero programme with projects to address the inventory that constitutes our net-zero pledge. This include AUB's REGO (Renewable Energy Guarantees of Origin) (non-traded) renewable electric energy contract: that is, the University has a contract which guarantees that electricity only comes from renewable sources. This approach is common across the HE sector.

The right-hand side of the timeline will constitute broader sustainability targets. This pathway will include projects such as net-biodiversity gain, sustainable curriculum, and other non-emission inventory targets. Importantly, targets on the Sustainability Pathway will include projects to lower energy use (including those generated through green tariffs), and targets to achieve scope 3 calculations not yet included in the net zero inventory. Any scope 3 calculation methodologies which have been developed and are confirmed as acceptable (by the task force) will be annually assessed and will then be moved into the net zero inventory and pathway, in line with AUB's ambition to address all scopes.

The complexity of the programme, coupled with the need for clarity will require 'radical transparency' with the SNZ programme. AUB will be clear that all emission scopes and sources are included, but that (to date) we cannot calculate them all and therefore, it would not be correct to place them in the net zero inventory (or give any impression that they were included). AUB will target emissions (on the Sustainability pathway) that we cannot currently calculate, through improvements in data management, and upon success, transfer them into the net zero inventory and pathway. So, AUB address all scopes and source emissions but only credit 'AUB' when correctly accounted for.

This message is complex but radical transparency dictates clarity. AUB will utilize its Marketing and Communications team to articulate this vital message in a transparent, accurate, but accessible way.

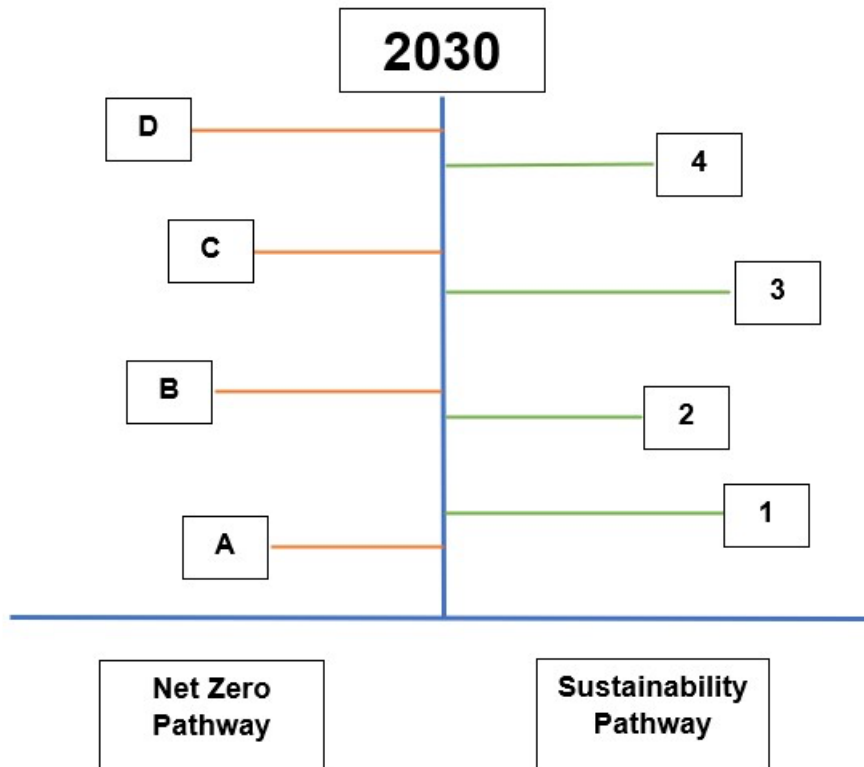


Figure 1: Dual pathway visual example. Projects A-D represents net zero projects, projects 1-4 represent Sustainability targets. Projects A-D and 1-4 represent the SNZ. Net zero pathway reported Market-Based and sustainability pathway Location-Based

4.0 Offsetting

Part of AUB's climate strategy (SNZ) will require offsetting to neutralize and compensate for residual greenhouse gases that cannot be reached or cannot be addressed within the timeframe set. This is a payment to receive credit for a unit of emission reduction or removal conducted by another actor.

AUB's offsetting criteria will be unique whilst closely following the Oxford Principles for Net Zero Aligned Carbon Offsetting (Appendix – provides further detail).

The main criteria are:

- AUB will investigate every opportunity to cut and reduce its emissions as priority
- AUB accepts that certain emissions are unavoidable. This can be from unavoidable institutional operations e.g., wastewater, or emissions that are unavoidable in that moment in time e.g., transition to electric bus fleet. Unavoidable emissions will be offset to achieve net-zero ambitions.
- The environmental integrity and high-quality of all offsetting projects will be assessed by the SNZ Task Force group. This may include consultancy advice and invitees including students and staff to the group.

- AUB will always employ transparency in communicating the amount of offsetting and the type of projects supported.
- The offsetting criteria will be evaluated each year to ensure continuous improvement and best-practice up-dates.
- AUB will prioritise carbon removals over carbon reductions. Carbon removals sequester carbon from the atmosphere reducing current levels e.g., tree planting. Carbon reductions remove future carbon from being emitted, lowering future emissions e.g., improving cookstoves
- AUB will ensure that offsetting projects are additionality projects (additionality projects are undertaken because of your payment, rather than a project that was already predisposed to happen, and you claim saving for) as far as can reasonably be assessed through standardized or project-specific approaches and as advised by consultancy
- AUB will prioritize permanence of carbon storage projects over the long-term. AUB acknowledges that certain shorter-lived permanence projects can have immediate impact and co-benefits e.g., biodiversity.

5.0 Projects to Populate the Pathways

The projects to populate the pathways will be developed over the coming weeks/months. Workshops and Task Force meetings will set innovative, challenging but feasible targets for the Sustainability Pathway.

The Net Zero Pathway will include an initial Heat Decarbonisation Plan (HDP) for the campus and satellite buildings. AUB has applied for Salix² funding for North Building; and the University will make further applications if the opportunities arise. Other projects (such as lowering commuting emissions) will lower the total further.

Table 6 is an initial projection of emission reductions for the net zero programme. Ideally, of course, AUB would wish to lower emissions further than the science-based target to help mitigate against climate change and to limit the amount of neutralization (off-set). Table 6 to 12 highlight projects and target ideas that will be evaluated and prioritised by the Task Force. New projects and targets will be added as and when appropriate.

5.1 Net Zero Targets and Projects

| Emission Source | Target | Project | Date | Baseline tCO ₂ e | Approx. tCO ₂ e Saving |
|-------------------|------------------------|---|------|-----------------------------|-----------------------------------|
| Gas | 0% emissions | Install Heat pumps | 2030 | 502.488 | 502.488 |
| Electric | 0% emissions | Maintain renewable energy through REGO or PPA | 2030 | 641.601 | (*) 641.601 |
| Vehicle fleet | 0% (onboard) emissions | Electric vehicles | 2030 | 12.923 | 12.923 |
| Operational waste | 25% decrease | Investigate waste streams and | 2030 | 5.597 | 1.079 |

² Government grants to support decarbonisation

| | | | | | |
|--|-----------------------------|--|------|-----------|------------------|
| | (tonnes weight) | reduction opportunities through behaviour change and procurement | | | |
| Water | 18% reduction (m3) | Behaviour change, waterless toilets | 2030 | 5.925 | 1.066 |
| Wastewater | 18% reduction in water (m3) | Behaviour change, waterless toilets | 2030 | 12.193 | 2.195 |
| Commuting | Reduce 48% | Behaviour changes and travel incentives | 2025 | 1,045.690 | 461.040 |
| T&D | Electricity projects | Electricity projects | 2030 | 55.809 | 11.195 |
| Baseline Total tCO₂e | | | | | 2,282.226 |
| Savings tCO₂e | | | | | 1,633.587 |
| 2030 Total tCO₂e | | | | | 648.639 |

Table 6. Net zero inventory – market-based reported. (*) heat pumps will increase electric use but calculated as minus from gas use due to REGO – emission saving is market-based net zero inventory exclusively and zeroed for location-based Sustainability pathway below.

5.2 Sustainability - Energy and Water

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|------------|--------------------|---|------|---|-----------------------------------|
| Gas | 0% emissions | Install heat pumps to replace gas boilers | 2030 | 502.488 | 502.488 |
| Gas | 0% emissions | Change cooking heat from gas to electric | 2025 | Not known | Saving already counted (SAC) |
| Electric | 0% emissions | Maintain renewable energy through REGO or PPA | 2030 | 641.601 | (*) 0 |
| Electric | 8% reduction (kWh) | Investigate, encourage, and promote behaviour changes | 2030 | (641.601) 2,510,176.056 (kWh) | 51.328 200,814.084 (kWh) |

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| | | | | | |
|------------|--|--|--|-----------------------------------|----------------------------------|
| Electric | Increase PV power input by 50% by 2025 and across all available roof space by 2030 | Extend PV provision throughout campus | 2025 and 2030 | (641.601) | 3.085 (2025) |
| Electric | Investigate benefits. | Introduce battery technology for electric storage in buildings | Investigate benefits by 2025 | N/A | N/A |
| Electric | 10% reduction (kWh) | Investigate ISO5001 implementation | 2025 to complete (begin 2023) | (641.601) 2,5101,176.056 (kWh) | 64.160 251,017.605 (kWh) |
| Electric | Reduce printers throughout campus 40% | Decreasing the number of printers to lower energy and paper use | Aiming for 40% reduction in printers by September 2023 | (641.601) | TBC |
| Electric | Migrate 15% of AUB systems (virtual & physical) | Moving to cloud storage will lower energy use from system use and cooling requirements | 2025 | (641.601) | TBC |
| Electric | AUB computer base to at least 60% laptops | Reduce desktop computers (personal and suites) and replace with laptops | 2023 | (641.601) | TBC |
| Monitoring | Purchase SMART monitoring technology | Purchase or acquire use of energy and water monitoring software | September 2023 | 648.957 (electric and water only) | 64.896 (based on 10% saving) |
| Water | 8% reduction (m3) | Reduce water use through behaviour change | 2030 | 5.925 and 17,222m ³ | 0.474 and 1,377.76m ³ |
| Water | 10% reduction (m3) | Install non-water urinals and toilets (investigate | 2024 | 5.925 and 17,222m ³ | 0.592 and 1722.2m ³ |

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| | | | | | |
|--|--|-------------------------------------|--|---------------------|---|
| | | chemical use) | | | |
| Wastewater | 18% reduction in water (m3) | Behaviour change, waterless toilets | 2030 | 12.193 17,222 m3 | 2.195 tCO ₂ e 3,099.960m3 |
| Water | Investigate potential to use grey water for toilet flushing or other potential water flushing requirements | Harvest rainwater | 2023 target to have investigated possibility of water harvesting | TBC | TBC |
| Baseline Total tCO₂e | | | | | 1162.207 |
| Savings tCO₂e | | | | | 689.218 |
| 2030 Total tCO₂e | | | | | 472.989 |

Table 7. * Saving is net-zero only, and not deducted from Sustainability total. Totals in blue are repeat baseline data and not included in total. An increase in emissions from electricity associated with transition to heat pumps will subsequently change the total.

5.3 Sustainable Resource Management

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|------------|--------------------------|--|------------------------------------|---|---|
| Waste | 25% reduction (t weight) | Investigate waste streams and associated reduction opportunities through behaviour change and procurement activity | 2030 overall reduction 12% by 2025 | 5.597 tCO ₂ e 202.17t (weight) | 1.079 tCO ₂ e 50.55t (weight) |
| Waste | 20% food waste reduction | Investigate food procurement , portion size, increase food waste capture, increase food giveaway schemes | 2026 | 6.464t (weight) | SAC (0.028 tCO ₂ e and 1.294t (weight)) |

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| | | | | | |
|--|---|--|---|-----|---|
| Waste | Recycling rate 65% (adjust for accommodation waste) | Waste audit, procurement opportunities, education | 2030 | 59% | SAC 11t (weight) of waste going to energy from waste |
| Waste | zero one-use coffee cups on campus | Restrict one-use coffee cup use to visitors, Open Day, or other special events and only served from one eatery | Advertise/communicate from September 2023 no longer using one-use coffee cups. Sell AUB reusables in all AUB coffee outlets | TBC | TBC |
| Baseline Total tCO₂e | | | | | 5.597 |
| Savings tCO₂e | | | | | 1.079 |
| 2030 Total tCO₂e | | | | | 4.518 |

Table 8. Sustainable Waste Management. Blue data is repeated baseline data and not included in total.

5.4 Travel

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|------------|--------------------------------------|---|----------------|---|-------------------------------------|
| Travel | Zero staff car commuting emissions | Car permits to include off-set | September 2023 | 461.040 | 461.040 |
| Travel | Reduce staff car use by 8% | Other travel incentives | 2025 | 461.040 | SAC 6.521 tCO ₂ e |
| Travel | Zero emissions for AUB fleet vehicle | Replace Fiat 500 with EV (or hydrogen) vehicle | 2022 | 2.644 | 2.644 |
| Travel | Zero emissions for AUB fleet vehicle | Replace Ford Crew with EV (or hydrogen) vehicle | 2029 | 1.459 | 1.459 |
| Travel | Zero emissions for AUB fleet vehicle | Replace Renault Van with EV (or hydrogen) vehicle | 2029 | 1.311 | 1.311 |

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| | | | | | |
|--------|--------------------------------------|---|---|-----------------|-----------------|
| Travel | Zero emissions for AUB fleet vehicle | Replace Smart Car with EV (or hydrogen) vehicle | 2023 | 1.444 | 1.444 |
| Travel | Zero emissions for AUB fleet vehicle | Replace i30 with EV (or hydrogen) vehicle | Replace with electric vehicle if technology supports long distance travel by road | 2.028 | 2.028 |
| Travel | Zero emissions for AUB fleet vehicle | Replace i800 with EV (or hydrogen) vehicle | 2029 | 1.213 | 1.213 |
| Travel | Zero emissions for AUB fleet vehicle | Replace Luton Van with EV (or hydrogen) vehicle | 2029 | 1.163 | 1.163 |
| Travel | Zero emissions for AUB fleet vehicle | Replace Relay with EV (or hydrogen) vehicle | 2029 | 1.661 | 1.661 |
| Travel | Zero emissions of AUB bus fleet | Electrification of the bus fleet (by contract negotiation) | 2035 | TBC (Sept 2022) | TBC (Sept 2022) |
| Travel | Data capture | Obtain flight data through automated procedure | September 2023 | N/A | N/A |
| Travel | Data capture | Obtain rail data through automated procedure | September 2023 | 1.78 | N/A |
| Travel | Data capture | Obtain hire vehicle data through automated procedure | September 2023 | N/A | N/A |
| Travel | Delivery emissions | Keep using current calculation until further clarity on procurement | On-going | 41.290 | TBC |
| Travel | Data capture | Obtain overnight | September 2023 | N/A | N/A |

| | | | | | |
|--|--|------------------------------------|--|--|------------------------------------|
| | | stay data for emission calculation | | | |
| Baseline Total tCO₂e | | | | | |
| | | | | | 517.033 |
| | | | | | Savings tCO₂e |
| | | | | | 473.963 |
| | | | | | 2030 Total tCO₂e |
| | | | | | 43.070 |

Table 9. Travel. Blue data is repeated baseline data and not included in total.

5.5 Sustainable Campus

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|------------|--|--|-----------------------|---|--|
| Food | Improve healthy options and lower associated emissions year on year | Improve sustainable, ethical, and healthy eating options in eateries | On-going | N/A | Student survey and food audit/assessment |
| Buildings | Refurbishments to existing buildings to raise energy, heat, and water efficiency | Existing buildings will need refurbishment to lower energy, heat and water costs and improve efficiency and net zero | Refurb report 2025/26 | 648.957 (electric and water only) | TBC |
| Buildings | All new builds to be at least one of net-zero, BREEAM, or WELL standard | Eliminates potential net-increase from campus expansion | 2022 | 648.957 (electric and water only) | No increase from campus expansion or refurbishment |

Table 10. Sustainable Campus. Blue data is repeated baseline data and not included in total.

5.6 Biodiversity

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|--------------|--|---|----------|---|---|
| Biodiversity | Demonstrate year on year net-biodiversity gain | Increase biodiversity net-gain through various projects | On-going | Set a baseline | Use a net-biodiversity gain matrix for 2024 onwards |

| | | | | | |
|-------------|--|---|----------------------------------|------------------|---|
| Pollinators | Set a percentage target to increase pollinator friendly ecology and habitats to mitigate against the ecological crisis | Introduce, improve pollinator friendly ecology | On-going | Set a baseline | Use a net-biodiversity gain matrix for 2024 onwards |
| Hedgehogs | Obtain hedgehog friendly campus status | Work towards gold certification over the next three years | December 2024 gold certification | No certification | Gold certification |

Table 11. Biodiversity

5.7 Social Justice

| Focus Area | Target | Project | Date | Baseline tCO ₂ e (unless stated otherwise) | Approx. tCO ₂ e Saving |
|-------------|---|---|---|---|--|
| Governance | Ensure all AUB policies reflect net zero commitments | Assess all policies to ensure | | No policies checked | All policies assessed |
| Palm Oil | Reduce / eliminate uncertified palm oil use | AUB signed up (11/21) so an initial analysis will set a baseline and then target improvements | Catering – September 2022 and then new target for other contracts | Non-signatory | Signatory |
| Fairtrade | Maintain Fairtrade certification | Re-certify every two years | 2022, 2024, 2026, 2028 and 2030 | Uncertified | Certified |
| Procurement | Contract tender procedures consolidated. Data capture started for 'other' procurement | Investigate emissions and social justice issues upstream in the supply chain | 2022 and ongoing to 2030 | N/A | Data capture and calculations will move aspects into other categories and net zero inventory |

Table 12. Social Justice

5.8 Emission Inventory – Net Zero

| Emission Source | Baseline | Projects Saving | 2030 |
|-------------------------------|------------------|------------------------|---------------|
| Gas | 502.488 | 502.488 | 0 |
| Electric | 641.601 | 641.601 | 0 |
| Vehicle Fleet | 12.923 | 12.923 | 0 |
| Operational Waste | 5.597 | 1.079 | 4.518 |
| Water | 5.925 | 1.066 | 4.859 |
| Wastewater | 12.193 | 2.195 | 9.998 |
| Commuting | 1,045.690 | 461.040 | 584.650 |
| Transmission and Distribution | 55.809 | 11.195 | 44.614 |
| Total | 2,282.226 | 1,633.587 | 666.12 |

Table 13. Net Zero, Market-Based reported, inventory

5.9 Emission Inventory - Sustainability

| Emission Source | Baseline | Projects Saving | 2030 |
|-------------------------------|------------------|------------------------|------------------|
| Gas | 502.488 | 502.488 | 0 |
| Electric | 641.601 | 118.573 | 523.028 |
| Vehicle Fleet | 12.923 | 12.923 | 0 |
| Operational Waste | 5.597 | 1.079 | 4.518 |
| Water | 5.925 | 1.066 | 4.859 |
| Wastewater | 12.193 | 2.195 | 9.998 |
| Commuting | 1,045.690 | 461.040 | 584.650 |
| Transmission and Distribution | 55.809 | 11.195 | 44.614 |
| Total | 2,282.226 | 1,110.559 | 1,171.919 |

Table 14. Sustainability, Location-Based reported, inventory

| Document Control | Name and Position, or Group | Version |
|-------------------------|---|----------------|
| Author | James Jackson Environment & Sustainability Manager | v1 |
| Edit | SNZ Task Force Group | v2 |
| Edit | SNZ Task Force Group | v3 |
| Edit | SNZ Task Force Group | v4 |
| Edit | SNZ Task Force Group | v5 |