**AUB Sustainability Plan: background paper**

The Arts University Bournemouth is committed to managing its environmental footprint and minimising its environmental impact by promoting a sustainable approach to work and lifestyle, and routinely considering sustainability as part of all its decision-making

**1. Introduction**

1.1 As part of its commitment to Corporate Social Responsibility (CSR), outlined in the Strategy Map associated with the Strategic Plan, the University has developed a Sustainability Plan which sets out its priorities and targets for environmental sustainability.

1.2 The Plan is owned and monitored by Environment Committee, and progress is reported regularly to the Estates Committee of the Board of Governors. .

1.3 The priorities, actions and targets in this plan supersede the commitments expressed in the Carbon Management Plan 2011, and comprise a comprehensive summary of the University’s environmental commitments.

1.4 The Plan focuses on five key areas of activity, specifically:

* + - **Minimising carbon emissions**
		- **Managing the use of finite resources**
		- **Reducing emissions associated with travel**
		- **Managing the estate efficiently**
		- **Developing staff awareness and engagement**

**2. Background**

2.1 The Arts University Bournemouth developed its Carbon Management Plan in 2011, which set out targets for carbon reduction in line with the proposed sector reduction levels set out by HEFCE. However, the targets did not take account of the growth both in the estate, and in student numbers, since 2005/06 (which was the benchmark year). Further developments were also planned, and the proposed reductions were thus unrealistic.

2.2 The University has now developed a more holistic approach to sustainability, which reflects more broadly on its environment impact. The Sustainability Plan sets out a range of indicators to test sustainability, with a range of actions together with targets.

2.3 In setting these revised targets, the University acknowledges that it will not meet the original targets set out in the Carbon management Plan.

**3. Carbon emissions**

* 1. The University’s initial priorities were all around carbon emissions, calculating the figures based on electricity and gas consumption. The target set for the higher education sector by the Higher Education Funding Council for England (HEFCE) was a 40% reduction against 2005/06 levels by 2020.

3.2 Consultants Briar Associates noted in their 2014 progress report for the University that “*the methodology used to report emissions from electricity emissions was significantly revised by Defra/DECC in 2013. Therefore, the carbon footprints calculated previously for the original carbon management plan are not comparable with the carbon footprints calculated in this report”.* This brings into question the validity of the 2005/06 baseline, irrespective of the challenges posed by the significant increase in the scope of the estate since that time.

3.3 The target set by the University reflects an ambition to reduce emissions per capita by the same proportion as was originally targeted as an overall figure (concerns about the methodology for measuring outputs notwithstanding). It may prove possible to secure greater improvements, but this already represents a serious challenge for the University.

3.4 Significant improvements have been made since 2011, with considerable activity undertaken by the University. Some of this has been supported by Salix funding, which can be borrowed against savings which have to be realised within a five-year time period. Work which has been undertaken includes (but is not restricted to) improved lighting controls; introduction of LED lighting; server virtualisation and consolidation; increasing replacement of desktop computers with laptops, with all computers, monitors and peripherals ‘Energy Star’ compliance; and increasing remote access to applications and high-end resources.

3.5 The University is currently unable to measure the specific carbon savings against these projects. However, it is now proposed to introduce improved sub-metering to achieve building level data for electricity, gas and water through the provision of Automatic Meter Reading. This will both enable improved monitoring and targeting of resource use, and will also support awareness raising activities.

**4. Managing the use of finite resources**

4.1 The University wishes to minimise its use of finite resources, including water and paper. At the same time, it wishes to recycle as much waste as possible,

4.2 Working with the South Coast Affinity Group (SCAG) and waste management company BIFFA, the University has significantly improved its waste management processes. No waste is now sent to landfill; any waste which cannot be recycled is sent to continental Europe (using cargo ships which would otherwise be crossing empty), and incinerated in powerful, emission free furnaces which in turn generate power.

4.3 More can be done to improve waste recycling, and this will be a priority action. This should be a two pronged attack with both physical improvements of recycling facilities and the nurturing of cultural changes. A review of the current provision of recycling bins both internally and externally across campus is necessary. This will identify areas for recycling hubs across campus. Particular consideration will be given to the management of recycling within open offices, cellular offices and communal areas.

Campus Services will then collaborate with the marketing team to produce branding for both internal and external recycling hubs to promote recycling with staff and students. Also, consistency of facilities will be crucial instead of the sporadic nature of bin designs we currently have across campus. Recycling hubs that have a consistent and aesthetically pleasing look will assist the promotion of recycling. Also, transparency of recycling figures and targets will get staff and student buy-in.

4.4 Smarter metering will enable a better overview of water usage, and initiatives will be considered to support reductions. Apart from cultural change, more detailed analysis of the data and ongoing leak surveys will support this target.

4.5 Some steps have already been taken to reduce paper usage, including the introduction of charging students for printing and copying; and the increased use of electronic versions of papers for committees and other meetings. The University will target a reduction in paper usage, through enhanced use of digital technology and a reduction in the number of desktop printers throughout the University.

**5. Reducing emissions associated with travel**

5.1 One of the major ways in which the University can reduce its overall environmental impact is by reducing carbon emissions through travel. These form part of Scope 3 emissions, defined by the Carbon Trust website as: “Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc”.

5.2 The University has a Travel Plan which sets out its objectives in respect of staff and student travel, actions to be taken in support of these objectives, and annual targets. The Travel Plan seeks to discourage car usage for commuting to the University, and most notably to discourage single car occupancy. The Car Parking Policy is designed to support the same aims. Given the location of the University, and the limited public transport options available, some creativity is required to consider how to deliver this outcome. Travel surveys and a car park audit have been undertaken to inform planning, as has an open meeting for all staff who wished to attend; in addition, staff in Campus Services will contribute the feedback which has been received during the last two years on the operation of the existing Policy.

5.3 An important aspect of the travel strategy is the University’s engagement with Bournemouth University and First Bus to provide an effective bus service to the Talbot campuses. The Head of Campus Services works with colleagues at Bournemouth University to ensure that the service is fit for purpose, and takes account of the demands of both universities, including during undergraduate vacation periods.

5.4 For information, the dedicated services as of May 2015 are:

* + U1 Dorchester House (Bournemouth station) to University Campus. Service runs from 0800 to 2222
	+ U2 Poole town centre to University Campus. Service runs from 0810 to 2230
	+ U3 Southbourne to University Campus, via Boscombe and Charminster). Service runs from 0752 to 2237
	+ U4 Westbourne to University Campus, via Bournemouth town centre. Service runs from 0825 to 1935

Travel is also discounted or free on the M1 and M2, and services 13 and 15.

5.5 In considering the development of its Travel Plan, the University also has to consider the impact of offsite locations which form an integral part of the student experience, specifically at Elliott Road, ArtSway and Bournemouth Pavilion.

5.6 The other notable feature in Scope 3 emissions in relation to travel is travel on University business. Naturally, travel to higher education fairs in the Far East, for example, can only be by aeroplane, and the carbon footprint of such activity is necessarily high. Within Europe, and certainly within the UK, there is potential for using more carbon-efficient modes of transport, although it must be acknowledged that some of these may expend more time. On occasion, it may also be possible to replace face-to-face meetings with Skype, or similar forms of communication, with no loss of business efficiency.

5.7 Initiatives to encourage “greener travel” will be considered as part of the future planning process.

**6. Managing the estate efficiently**

6.1 One way in which the Higher Education Funding Council for England (HEFCE) has historically reviewed the efficiency of institutions is through a calculation of space utilisation (ie the frequency with which rooms are utilised, and their occupancy rates when utilised). This was of particular importance when considering applications for capital funding, as the Council was concerned that some demands were predicated on an unacceptably poor use of the existing space.

6.2 The notion of producing national benchmarks and comparators for utilisation is challenging, as there are very different needs across subject disciplines (for instance, many humanities subjects will teach using a classroom-based format and then expect students to work in the Library or in their study bedroom, whereas both the sciences and the creative arts are likely to make specialist spaces available for students to use in their independent study time). In addition, the pre-existing structure of some buildings – especially in older institutions – makes reconfiguration difficult, and can impact on teaching delivery by dictating the way in which some subjects are delivered.

6.3 Nevertheless, the annual Estates Management Return (ERM) made by institutions to HESA does provide some data on the space available within institutions, and the amount of space per student (or staff and student combined). This can give an indication of how efficiently the space is actually being used. (This should be considered alongside figures on student satisfaction, for instance, to confirm that the use is not detrimental to the student experience.)

6.4 The net internal area (NIA) for teaching, divided by the total number of students, gives the m2 per student. Of 150 institutions for which figures are listed in the 2012/13 Estates Management Return, the lowest space per student is recorded at Birkbeck College (0.61m2) and the School of Oriental and African Studies (0.82m2), and the largest at the Royal College of Art (13.14m2) and the Conservatoire for Dance and Drama (12.56m2). Of particular interest are the following institutions:

Arts University Bournemouth 2.90

Ravensbourne 2.99

Norwich University of the Arts 4.30

University for the Creative Arts 4.51

Falmouth University 4.56

University of the Arts, London 4.89

6.5 The Arts University Bournemouth is the most efficient of all the specialist creative arts institutions in this table. Another table gives the “Gross internal area in metre2 per student and staff full-time equivalent (FTE)”, which considers the total internal area of the institution, and divides by the total of both staff and students. Birkbeck is again the most efficient according to this table, with 3.8m2 per individual, but to cite the same institutions:

Falmouth University 8.7

University of the Arts, London 8.5

Ravensbourne 8.2

University for the Creative Arts 7.7

Norwich University of the Arts 7

Arts University Bournemouth 5.5

6.6 Again, the Arts University Bournemouth is the most efficient specialist institution in this table.

6.7 There are of course important balances to strike between utilising space effectively, and providing sufficient space for all students and staff, and the University does not propose to set reduction targets. However, it does intend to remain the most efficient of the specialist institutions given in the group above.

6.8 The efficient management of the estate in a sustainable manner also includes ensuring that existing and new buildings are managed as efficiently as possible. This includes the use of building systems such as BEMS (Building Energy Management System), which controls heating and cooling systems to ensure efficient use. Equally, the routine upgrading and development of the estate will provide opportunities to make buildings more efficient.

6.9 Likewise, any new buildings will adopt the BREEAM standard, and will take account of the need to control emissions. This is significant for securing planning permission, and can restrict certain elements of building design, but overall this will produce a significant reduction in emissions.

6.10 While not in itself a mark of sustainability, the University can support its claim for environmental responsibility by demonstrating that its use / proposed use of buildings is significantly more carbon-efficient than alternatives which have been proposed, or could be implemented. For example, using 2011 Ofgem figures for average household medium level energy consumption, the alternative use of the TVT site for 49 residential dwellings would produce an annual carbon footprint as below:

* Gas – 16,500 kwh per house
* Electricity – 3,300 kwh per house
* 1.2 tonnes of CO2 per year for a four person house with the above consumption figures *using carbon calculator (http://www.carbonfootprint.com/calculator.aspx)*.
* 2 cars, one diesel, one petrol each doing 10,000 miles a year = 7.02 tonnes
* Based on energy consumption and vehicle usage only; 49 houses with 8.22 tonnes of CO2 per year = **402.78 tonnes**

6.11 The University will thus expect to demonstrate that its proposed use of any new sites (including incidentals such as Scope 3 emissions) would be likely to be lower than the emissions from the alternative use, and as such it can make a strong claim to sustainable development.

1. **Developing staff awareness and engagement**

7.1 Throughout its discussions about improving its position in regard to environmental sustainability, Environment Committee has noted that the biggest single impact will be achieved through cultural change. Encouraging staff and students to consider sustainability as part of their routine decision-making and behaviours can make a significant difference to what the University is able to achieve.

7.2 There are three ways in which the University will seek to influence staff and student behaviour. The first of these is compulsion: policies and procedures can ensure that sustainability is given a high priority and is incorporated within decision-making processes. The second might be described as “nudge theory”, where the sustainable choice is also the more attractive solution because it is associated with other benefits. The third, which may have the greatest impact overall but is the hardest to measure, is through awareness-raising so that sustainable behaviours become the accepted norm. At its most basic level, this might be as simple as ensuring that no recyclable material is put into a waste bin.

* 1. These three approaches are not exclusive; often they can and will work together to produce the desired outcome. There will also be occasions where initial compulsion itself leads to greater awareness and thus behavioural change (an example often cited by the Committee is the requirement for drivers to wear seat belts, which was a controversial law when introduced in 1983 but is now routine, everyday behaviour).
	2. It should also be noted that this area of focus is not divorced from any of the priorities listed above; and it is not valuable in itself. Success in improving awareness and engagement is likely to drive improvements in each of the other categories.
	3. One obvious area where the policy framework can drive consideration of energy efficiency and carbon emissions is procurement. These criteria must be included within a mandatory procurement process, for example working with the existing procurement consortia eg Southern Universities Procurement Consortium (SUPC), and South Coast Affinity Group (SCAG) for waste procurement.
	4. There is also the potential to work closely with other institutions such as Bournemouth University, the University of Southampton and the University of Portsmouth (who form part of SCAG). In particular, there may be an opportunity to work more closely with Bournemouth University to drive more efficient processes in relation to energy, given the close proximity of the two campuses.
	5. Additional mechanisms might also be developed which “nudge” users towards the most sustainable solution to a procurement issue, whilst not determining final decisions. The feasibility of such an approach will be considered during the coming years.
	6. Likewise, other policies and processes will be reviewed to identify any obvious environmental impact, and whether this can be highlighted as part of the decision-making process. The most obvious of these is travel, both in terms of commuting and in terms of traveling away from the University on business. The University may be able to develop further incentives to discourage the higher carbon-cost alternatives, or at least to ensure that the carbon footprint of each journey is properly considered as part of the decision-making process.

7.9 Equally, there are ways in which the structure of the University can support carbon efficiency, by ensuring that it features in relevant job descriptions and is part of how overall staff or faculty / directorate performance is assessed.

7.10 Staff can also be involved through membership of particular working groups, or champions for a particular element of the Plan; and it is imperative to work with the Students’ Union, given the high proportion of students as members of the University community and users of the campus.

7.11 An excellent example of how students can be involved is the three-year agreement with the Woodland Trust to plant 1000 trees per year for three years, as a carbon offset, at nearby Slades Farm. Around 100 staff and students took part in the planting of the first 1000 trees in December 2014, and this was an excellent way for the University to demonstrate that it is serious about carbon reduction, and takes its responsibilities in respect of carbon reduction and sustainability seriously. .

7.12 Given the nature of the campus, there is very limited potential for promoting biodiversity. This is one area where the University does not currently have significant development plans. However, it is committed to maintaining the current levels of biodiversity insofar as possible, and considering options for development if these become available.