



LIFTING THE LID HIGHER

Changing student attitudes and behaviours towards recycling and waste

Contents

3 Executive summary

6 Introduction

8 Updating the data · Students today

32 Beneath the data · Influencing behaviour

42 Conclusions, insights, opportunities

Executive summary

What do university students think about recycling, how much do they recycle and what motivates or deters them?

In pioneering research with the National Union of Students, we asked these and associated questions of students in 2013, publishing the findings in our report *Lifting the Lid*¹.

Six years later, we repeated the survey. Based on the 2019 research, this *Lifting the Lid Higher* report reveals how much attitudes and behaviour have changed, and the current challenges and opportunities for embedding and encouraging greater sustainability in the higher education sector.

The COVID-19 pandemic in 2020 brings further challenges, as its impact on the higher education sector will be acute. However, the new circumstances make it even more pertinent to explore and encourage greater sustainability among higher education institutions.

¹ www.suez.co.uk/-/media/suez-uk/files/publication/liftingthelid-sitauk-1304-web.pdf



Headline findings

Students today are more active recyclers than their predecessors six years ago. Though practically all questions about students' attitudes and behaviours indicate a positive trend, more emphatic change might have been expected amid unprecedented levels of concern about the climate and environment.

The numbers of students recycling regularly and the general level of commitment to recycling among students have both increased:

- + 85% are committed recyclers and just 6% admit to not recycling (down from 11% in 2013).
- + 69% of respondents say they still recycle when it requires extra effort (up from 60%).
- + A quarter of students (25%) only recycle when it's convenient.

Where students live has a significant bearing on their recycling activity, and cultural factors are also influential:

- + Only one in three students in privately-owned halls of residence makes an additional effort to recycle (33% compared with 61% of those in university halls).
- + International students from outside the EU are less likely to make the effort than EU or UK nationals (42% versus 73% and 74%, respectively).

The convenience and scope of recycling services and facilities play a crucial part in raising the proportion of material resources recovered on and off campus:

- + Only 45% of respondents say recycling at their term-time accommodation is 'very convenient' (falling to 27% in privately-run halls).
- + Providing more bins, in more convenient locations and collecting a wider range of materials are the best ways to boost recycling (according to 40-50%+).
- + Inconvenience remains one of the main barriers to recycling (30% of non-recyclers give this as a reason).

More coherent communication about recycling and its benefits is needed to motivate students and to reinforce recycling as a social norm and also peer influence:

- + 50% have no recall of receiving information about recycling on campus, rising to 60% at their term-time accommodation.
- + 32% of non-recyclers say that the other students in their accommodation don't recycle either.
- + 10% of non-committed recyclers say that 'nagging' motivates them to recycle.

While the findings suggest that some universities at least have been able to improve their recycling services and support since 2013, they also point to opportunities to raise performance and change behaviour.

Changing behaviour

Like other behaviours, an individual's decision to recycle or not is influenced by a variety of factors, many of them subliminal. An integrated, system approach informed by behavioural insights is more likely to achieve effective and sustainable results.

This report cites examples of innovative solutions delivered at various universities with the support of waste service providers, charities and other partners.

At Aston University, the SUEZ behaviour change programme is guiding a new, holistic approach to recycling and resource management. Using the ISM (Individual, Social, Material) tool to capture the input from all relevant stakeholders, the partners evaluated existing facilities, waste streams and behaviours – from shopping to littering – before agreeing priorities and devising a programme of action.

This is comprehensive and so far includes:

- + Achieving 'quick wins' in a new Students' Union building by switching to reusable glasses and metal straws, and introducing food waste collection.**
- + Training Freshers' Week mentors (the Aston Aunties) to convey green messages to newly arrived students.**
- + Making recycling facilities more user-friendly.**
- + New on-shelf product labelling with recycling information in the Union's shop.**
- + Providing special collection services for more challenging waste streams, such as crisps packets and biro pens.**

Introduction

The challenges surrounding resources, waste and pollution have risen up the public agenda over the last decade. Recycling and resource management has never been more widely accepted as important, if not essential, by so many in our society – from businesses and industry to households and institutions, public and private.

Against a backdrop of mounting concern over the climate emergency, media reports – and not least, TV programmes such as *Blue Planet II* – have brought home both the scale of the global emergency and of particular problems, such as plastic waste. Data tracking of online browsing shows that in the UK, searches for ‘plastic recycling’ increased by 55% during December 2017 when the programme first aired. Retailers and manufacturers of food and other products have announced various initiatives and trials to use alternatives to plastics or minimise their impacts.

Plastic waste and resource management featured prominently too in the government’s 25-year environment plan published in January 2018. *A Green Future: Our 25 Year Plan to Improve the Environment*² pledges to work towards ‘our ambition of zero avoidable waste by 2050’ and the ‘target of eliminating avoidable plastic waste by 2042’.

Yet, there is growing concern that household recycling rates in the UK are reaching a plateau (2017 saw just a slight increase to 45.7% from 45.2% the year before).

Also, the increase in the amount of non-recycled household waste (15.1 million tonnes in 2016, up from a low of 14.4 million tonnes in 2013³) is a worrying trend cited by MPs.



² www.gov.uk/government/publications/25-year-environment-plan

³ House of Commons, (2018), Household recycling in the UK: Briefing paper

Higher education institutions worldwide – like some progressive corporations and many of the UK’s local authorities – have recognised the climate emergency. In July 2019, an open letter from more than 7,000 universities⁴ across six continents set out a three-point plan to:

1. **Commit to going carbon neutral by 2030, or 2050 at the very latest.**
2. **Mobilise more resources for action-oriented climate change research and skills creation.**
3. **Increase teaching and learning about environmental and sustainability education across curricula, campus and community outreach programmes.**

The higher education sector is important for several reasons, and SUEZ has invested in several pieces of research focusing on universities and colleges.

It is a sector that is significant in scale. Following strong growth over the previous decade, there were 164 higher education institutions across the UK in 2017-18 with some 2,340,000 students⁵.

University is also a significant time in the life of a young adult. Amid the other changes that follow on from leaving school, and often home, existing habits and attitudes may be disrupted or transformed, and new behaviours and opinions can be embedded that will endure through life. Not only will these values be carried on into future households, but also companies and other organisations where graduates will work, influence or lead.

University challenge

Understanding the behaviour and attitudes of students around recycling and waste is crucial for universities seeking to improve their waste and recycling performance, and it can contribute to the national effort to raise recycling rates more widely. Before our *Lifting the Lid* research in 2013, relatively little was known about how students felt about recycling and what influenced their actions when disposing of waste.

Further light on the sector’s capabilities and performance in this area was shed by another SUEZ study assessing waste management strategies in 2014.

Following our original research, we have again partnered with the National Union of Students (NUS) to update our knowledge of attitudes to recycling and behaviour among a new generation of students. With just a few additions, the questions were broadly the same, probing what motivates them, which barriers they face when trying to recycle, and their experiences of recycling while at university.

This report also introduces insights from the theory and practice of behaviour change. Work started with Aston University illustrates how, through a behaviour change programme, we can identify new ideas and take an integrated approach to promoting recycling and more responsible management of material resources.

The report concludes with recommendations for higher education institutions to consider as they endeavour to take their resource management and recycling to a higher level.

⁴ www.universityworldnews.com/post.php?story=20190710141435609 www.sdgaccord.org/climateletter

⁵ www.universitiesuk.ac.uk/facts-and-stats/Pages/higher-education-data.aspx

Updating the data - Students today

In 2013, when our original research was conducted, the proportion of the UK's household waste recycled edged above 44%. After rapid growth from a low base in the first decade of the millennium, recycling in the UK has continued to grow, but very slowly. Various studies have shown that this reflects, among other factors, how commitment to recycling varies widely with socio-demographic factors, including age.

Working with the National Union of Students, SUEZ set out to establish where the university sector and their students sat in the spectrum of recycling behaviour. *Lifting the Lid* painted a mixed picture. It showed that the proportion of committed recyclers was lower among students than the UK population as a whole. While half thought they were doing all they could to recycle, there was notable resistance as respondents reported that they were not aware of available services or that their housemates and peers were not motivated to recycle.

The 2019 research tracks how attitudes and behaviour have changed among the university student population. Before outlining those findings, here is a short recap of what the 2013 research revealed.

What *Lifting the Lid* revealed

Our original research showed there were positive attitudes to recycling among students, while also highlighting various opportunities and challenges:

- + More than half (nearly 55%) of students described themselves as committed recyclers, while at the other extreme, 11% did not recycle at all.
- + Again, around half of respondents thought they were recycling as wide a range of materials as practicable, but this varied with type of accommodation. Students living in halls of residences needed more support. More than a quarter were not aware of the halls' recycling collection system and this was higher where halls were privately operated.
- + The environmental benefits of recycling were a key motivator: 75% of recyclers wanted to avoid waste going to landfill and nearly 68% saw recycling as 'doing the right thing'.
- + The main barriers to recycling were a lack of awareness of recycling collections (39%) and a perception that no one else in their accommodation recycled (24%).
- + Half of respondents had no recollection of receiving information on recycling, either on campus or at their accommodation.
- + Respondents' main suggestion for boosting recycling was increasing bin provision. More than half (almost 52%) called for more bins on campus, and a slightly smaller proportion (nearly 48%) saw this need at their term-time home.

University policy and organisation

We followed up in 2014 with further research, this time focusing on the management of universities and colleges. The research team evaluated the maturity of each organisation in terms of its approach to waste management and recycling, understanding of waste generation, and minimisation strategies and goals.

A central finding was that universities with larger student numbers and/or multiple sites tended to perform better than those with smaller numbers or single sites. This reflected the resources and expertise available to manage waste, as well as shape and implement strategy.

Methodology

The overarching aim of this latest research was to deepen the understanding of student attitudes and behaviour towards waste and recycling. The methodology mirrored that adopted in 2013 for *Lifting the Lid* research, to ensure consistency and assess how attitudes and behaviours among students have changed in the six years between the two studies.

Working with the National Union of Students, more than 50,000 students across the UK were emailed, directing respondents to the online survey. This was supported by social media to reach students beyond the TOTUM cardholder audience.

The survey achieved a sample of 1,089 responses. This level of response is statistically representative of the UK student population at a 99% confidence level, with a 3.9% margin of error. Responses have been weighted by gender and by type of accommodation to align with national statistics collected by the Higher Education Statistics Agency⁶.

Research findings

Lessons learned in 2019

The research for this report was conducted in 2019. This student opinion survey took a similar form to the original research. Again, it was promoted as a 'campus lifestyle' survey in order to counteract any bias around the issue of recycling and to reflect the UK student population as a whole.

Students who identify as distance learners are excluded from the results due to the questionnaire's requirement to provide feedback on experiences of recycling on campus.

We believe that our findings, summarised below, provide useful insights into the outlook of the current generation of university students on recycling and waste issues, and the degree of change there has been over the intervening six years.

The main themes explored are:

- + Attitudes and behaviour around recycling**
- + Awareness and use of recycling facilities**
- + Influence of university on recycling behaviour**
- + Motivations and barriers to recycling**
- + Improving recycling performance**
- + Information and communications**

⁶ www.hesa.ac.uk/data-and-analysis/students

Attitudes towards recycling and behaviour

A question of commitment

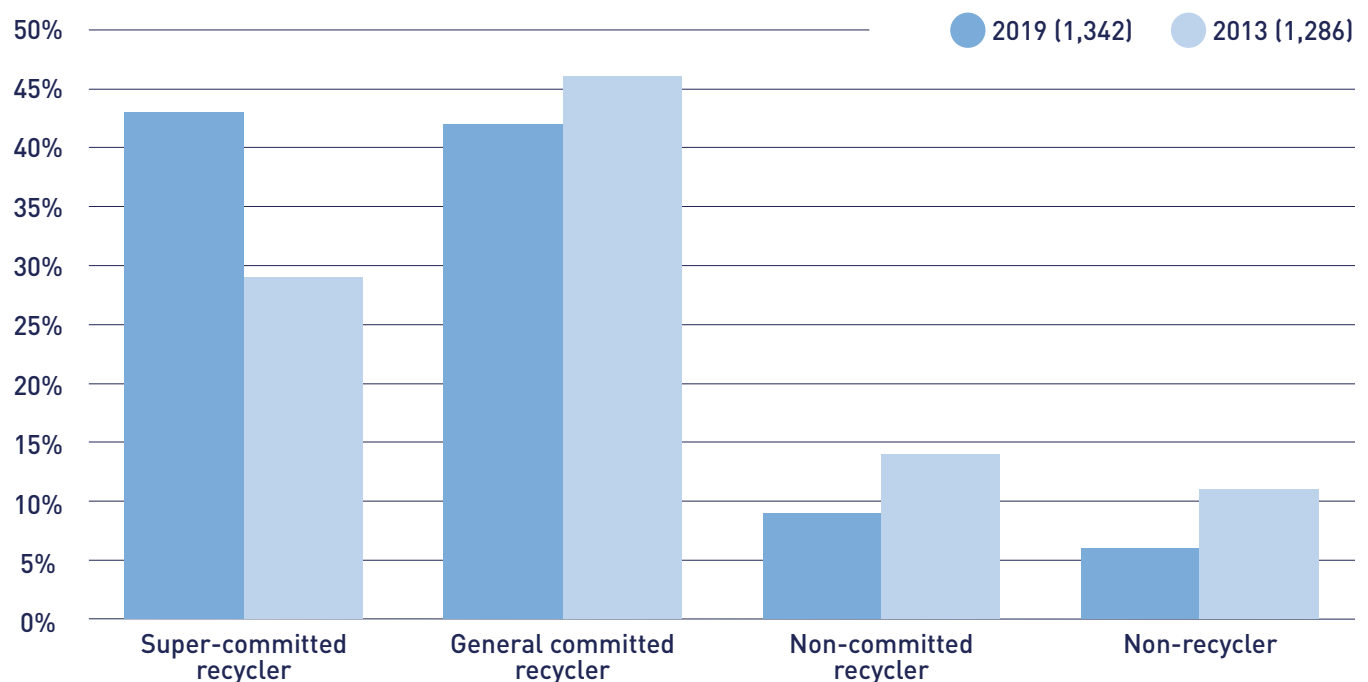
Six years on from our previous survey, more students now see themselves as committed recyclers. Commitment was measured using a metric developed by WRAP (the Waste and Resources Action Programme), based on answers to a series of statements about people's values and recycling behaviour⁷.

On this basis, a large majority (85%) of students can be classified as 'committed' recyclers. They split evenly between 'super-committed' recyclers (43%) and 'general' committed recyclers (42%). There have been increases both in the number of recyclers and their commitment since 2013.

This greater commitment to recycling does not quite mirror the heightened levels of concern voiced by young people on environmental issues in recent years. In a 2019 tracker survey by the National Union of Students, for example, 91% of students said they were 'very or fairly concerned' about climate change, up from 76% in 2014⁸.

At the other extreme from the 'super-committed', the number of respondents owing up to not recycling at all has declined from 11% in 2013 to just 6% today. Non-recyclers and non-committed recyclers together account for 15% – a reduction from 25% six years before. Yet, it is clear that a sizeable segment of the student population still needs persuading to recycle – whether through service improvements, more targeted communication or other measures, such as behaviour change programmes.

Figure one · Committed recycler metric



⁷ www.wrap.org.uk/sites/files/wrap/WRAP%20ME%20Guidance%20-%20Annex%203.pdf

⁸ sustainability.nus.org.uk/our-research/our-research-reports/energy-and-climate-change/climate-change-tracker

Making an effort

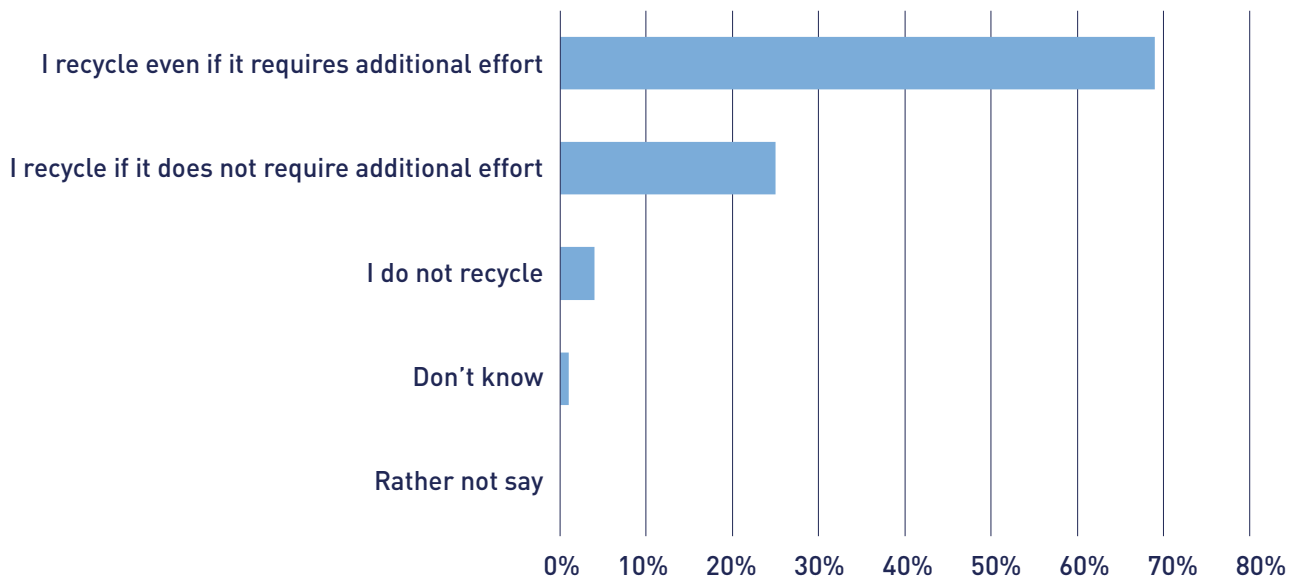
That higher commitment to recycling is reflected in respondents' actions. Nearly seven out of 10 students (69%) say they still recycle even if it requires additional effort. The equivalent figure in 2013 was 60%. Again, this is another welcome increase, though it lags behind students' growing concern about the environment.

A quarter of students (25%) routinely recycle only when it requires no extra effort. Whether or not this suggests that the self-reported commitment to recycling is overstated, it certainly underlines the importance of ensuring that recycling facilities are readily available and easy to use.

Various socio-cultural factors are also in play. Take nationality, for example – only 42% of international students from outside the European Union are likely to go to additional effort to recycle, compared with 73% of EU students and 74% of UK natives.

Figure two · Level of effort and recycling

**Which of these statements best describes your attitude to recycling?
[1,042]**



Where students live also has a major bearing on attitudes to recycling and behaviour. As in 2013, those based in privately-owned halls of residence are less committed. Only a third make any additional effort to recycle. In other types of accommodation, twice as many students say they do – 61% of students in university-owned halls of residence, rising to 71% among those living in privately-rented houses.

Lifestyle changes

This disparity is most likely related to the level and suitability of facilities and service provided affecting the amount of effort required to recycle. Although students staying in private halls are less committed, they appear to be willing to recycle more. They make up almost a third (31%) of all respondents who say they are considering making a positive change to their recycling behaviour.

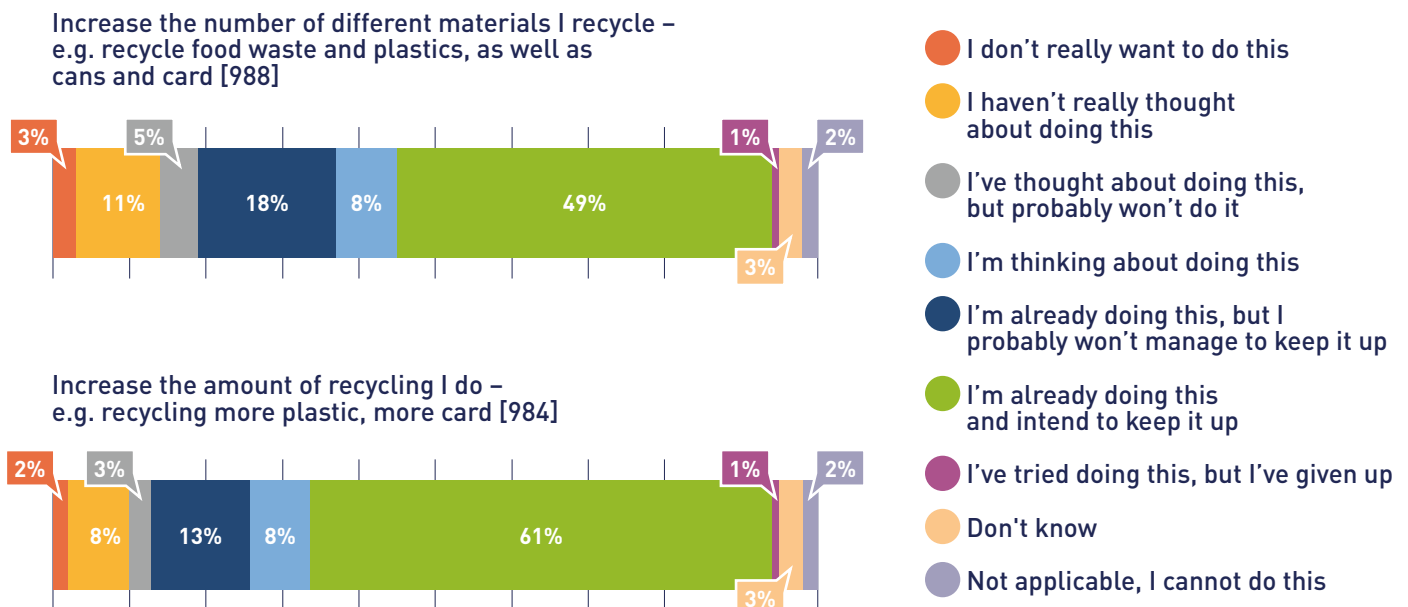
Overall, more than half of all respondents feel they are doing all they can in terms of increasing the amount they recycle or the range of materials they recycle.

That leaves a sizeable proportion of the student population in need of further support or encouragement to improve. For example, around a fifth of respondents are either thinking of recycling more or are already doing so and struggling to keep it up (13% and 8%, respectively).

Gender also influences attitudes to recycling. The majority of both sexes are already trying to increase the amount they recycle and intend to continue, but women (65%) outnumber men (55%). Consumer research⁹ from 2016 suggests that male perceptions of recycling as a feminine attribute may inhibit their willingness to recycle.

Figure three - Potential lifestyle changes

Here are some changes that people might make to their lifestyles. For each one, which answer applies to you personally at the moment?



⁹ Is Eco-Friendly Unmanly? The Green-Feminine Stereotype and Its Effect on Sustainable Consumption Journal of Consumer Research, Volume 43, Issue 4, December 2016, Pages 567–582, doi.org/10.1093/jcr/ucw044

Recycling as a habit

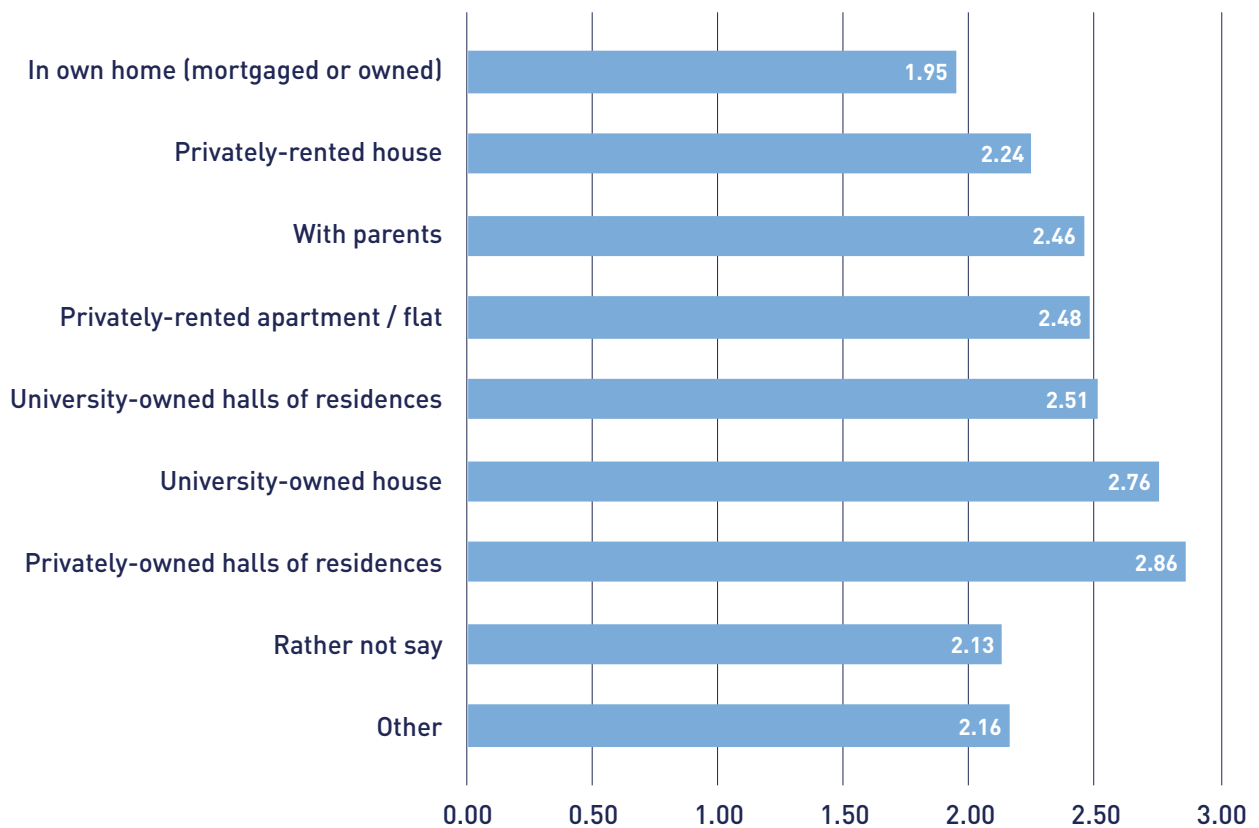
To what extent has recycling become a habit? Students were asked to indicate their level of agreement with a series of statements that allow the strength of the recycling habit to be measured using a recognised index¹⁰.

Overall, their responses suggest that recycling behaviour is strongly engrained and it has strengthened somewhat since 2013. The average score was 2.4, on a scale of 1-7 where 1 is the most deeply embedded behaviour and 7 is weakest.

The force of habit varies with accommodation type. It is strongest among homeowners and students privately renting houses, and increasingly weaker among those residing in privately-rented flats, university halls and houses, and privately-run halls.

Figure four - Force of habit

To what extent do you agree with the statements describing how you relate to recycling?



¹⁰ Verplanken, B. and Orbell, S., 2003. Reflections on past behavior: A self-report index of habit strength. *Journal of Applied Social Psychology*, 33 (6)

Relative importance of recycling

The vast majority of respondents (93%) say recycling is important to them. The degree of importance is broadly in line with the level of commitment voiced earlier, 54% say it's 'very important', and 39% say it's 'quite important'.

Again, living circumstances and cultural factors influence these responses. More students living in privately-rented houses see recycling as 'very important' to them personally (57%) than residents of private halls (37%). Students from the UK and EU are also more likely to stress recycling's importance than their counterparts from non-EU countries. Though continental Europeans diverge here with 65% of EU students holding this view compared with 55% of those from the UK and 41% of other international students.

Figure five · Attitudes towards recycling

Thinking about recycling your waste, which of these statements best describes how important recycling is to you personally?

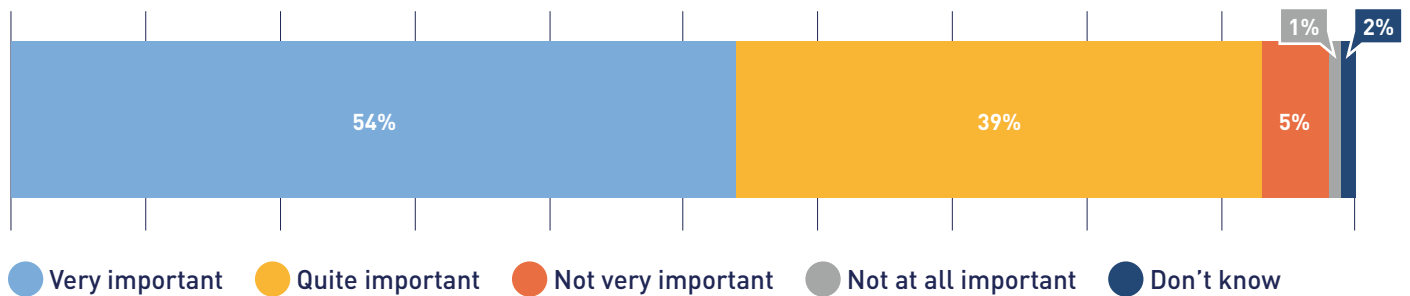
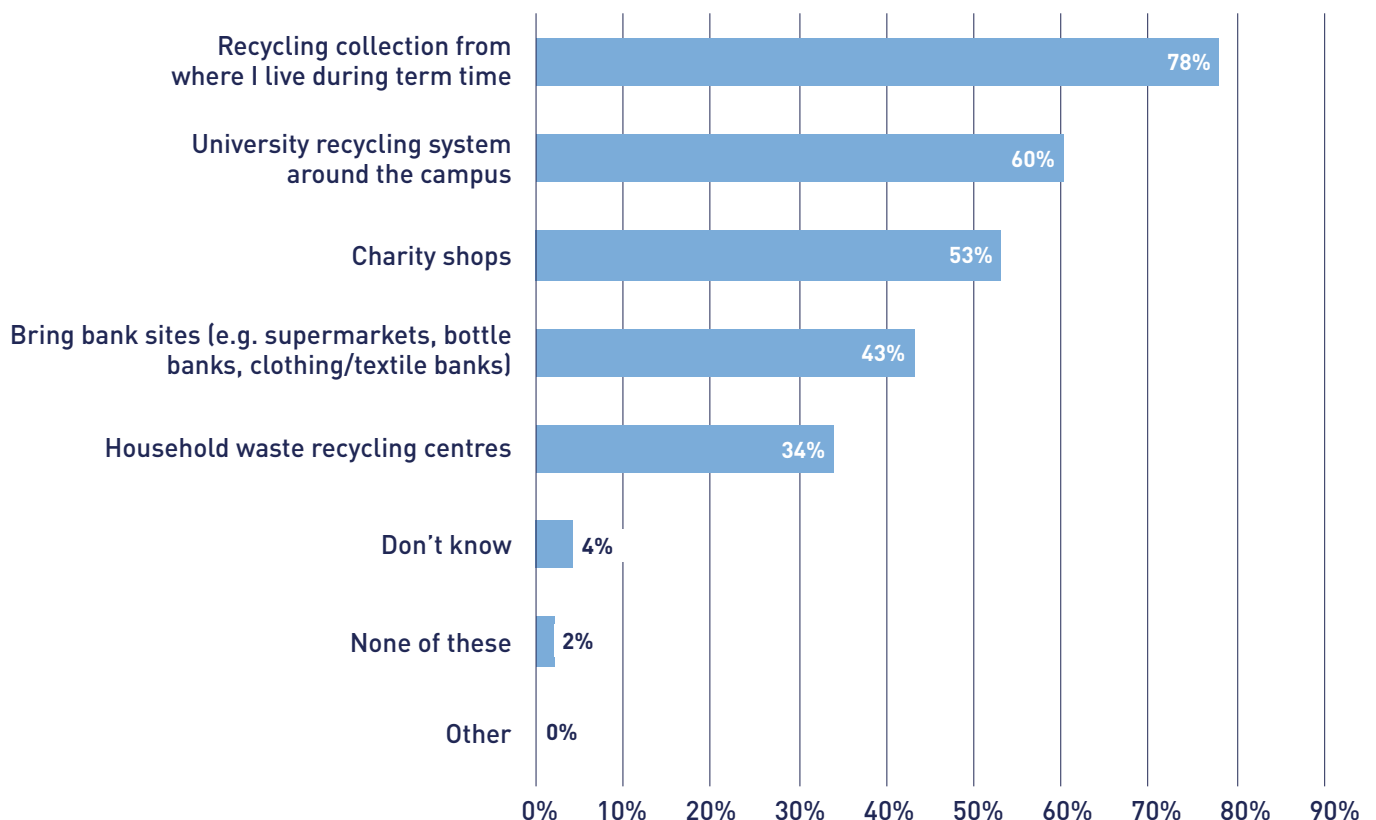


Figure six · Awareness of facilities for recycling

What facilities for recycling are you aware of?



Using recycling facilities

The bulk of recycling occurs at respondents' term-time accommodation, reflecting where most waste is likely to be generated. Around eight out of 10 respondents report recycling plastic, paper, card, cans and glass at their residence. On campus, the proportion of students recycling these materials is about 40% or lower.

While at their residence, 63% recycle food waste, but this falls to just 20% on campus.

For other waste items not commonly covered by collection services – such as textiles, shoes, waste electrical items and batteries – alternative methods of recycling are sought by some students. 51% say they take textiles and shoes to charity shops, while 38% return batteries to supermarkets or bring sites.

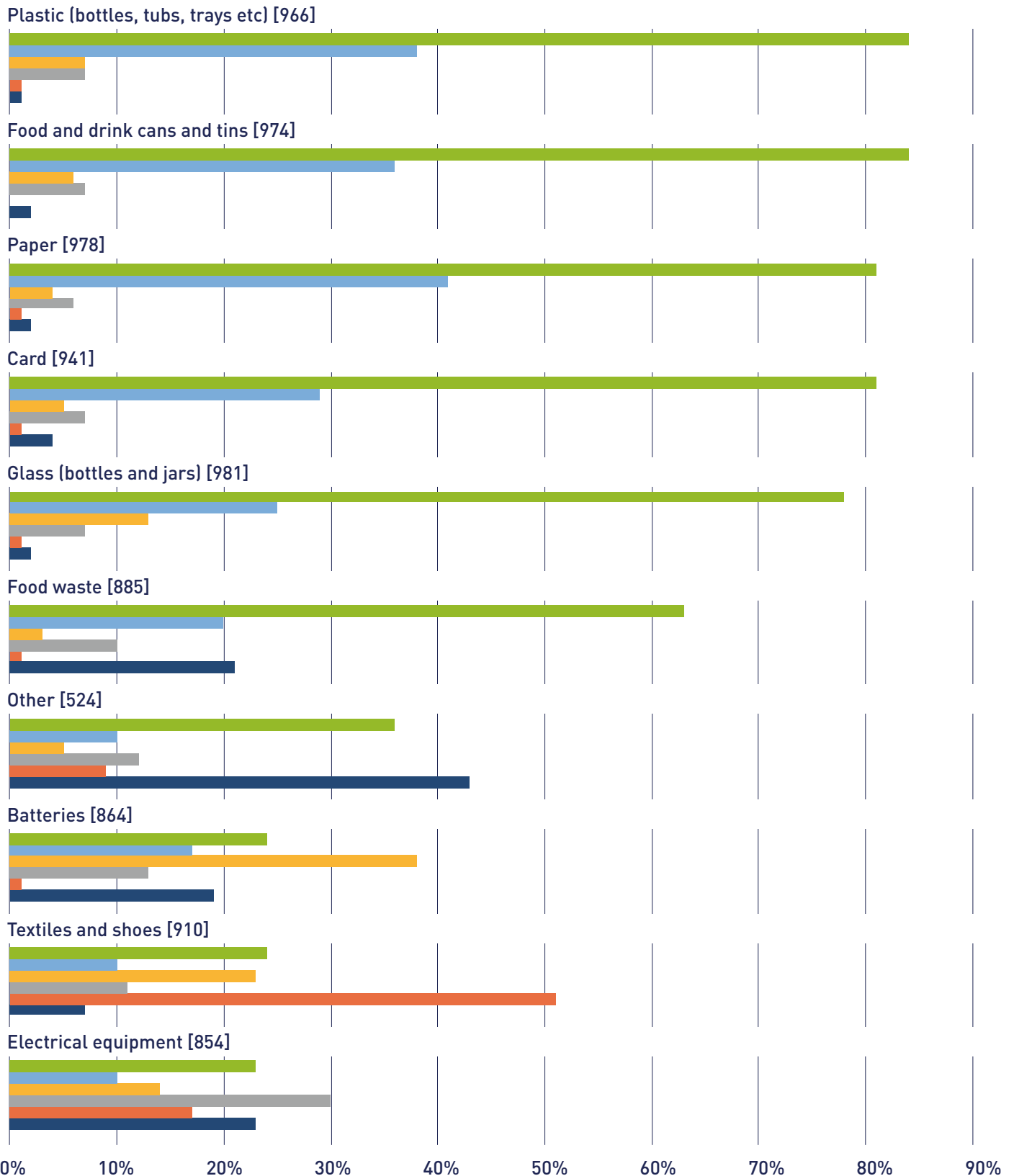
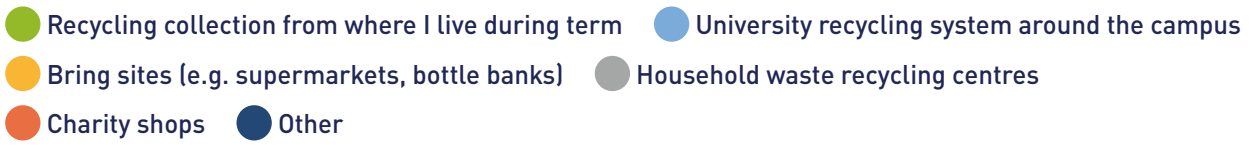
The results suggest there may be scope for improving the levels of recycling on campus for many waste streams, not least food waste. Research by the Food Standards Agency has revealed growing concern, among younger people, about food waste. Its tracker survey of public attitudes showed that the proportion of those aged 16-25 expressing concern about the issue rose from 37% to 49% in the six months between May and November 2018¹¹. Such concern is expected to rise, reinforced by the wider roll-out of domestic food waste collections by local authorities.

For less frequently recycled items, organising end-of-year clear-outs and collections at halls of residence is good practice. Providing more recycling points on campus and information about local centres and bring sites could increase take-up at other times.

11 https://www.food.gov.uk/sites/default/files/media/document/attitudes-tracker-wave-17-november-2018-report_5.pdf

Figure seven - Recycling behaviour at university

Which materials do you recycle and where do you recycle them?



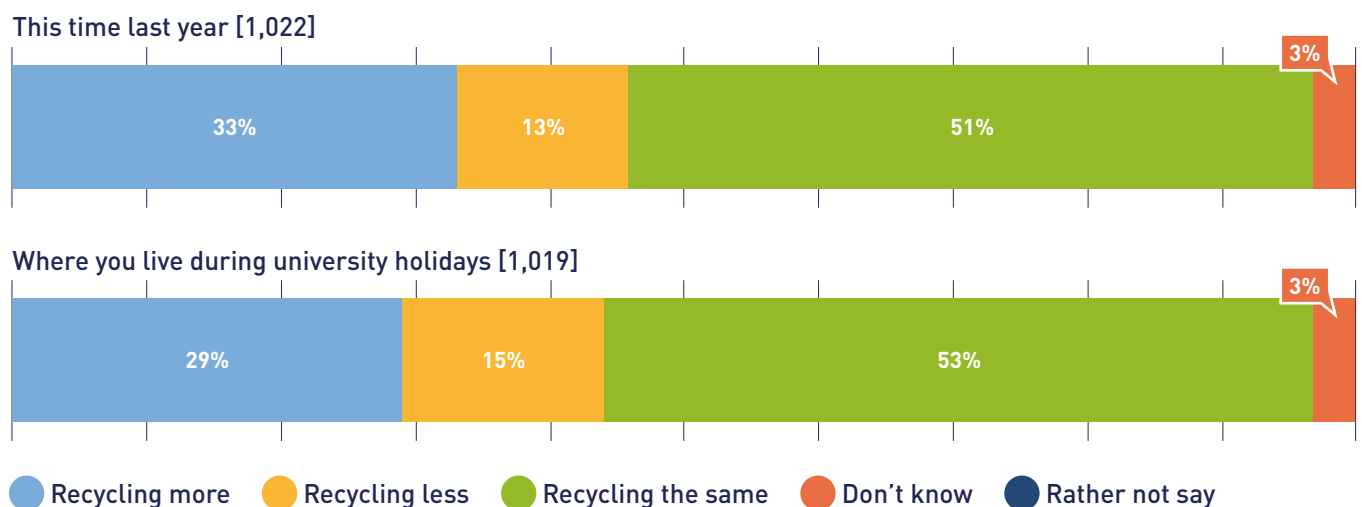
Influence of university on recycling behaviour

A third of students (33%) claim to be recycling more on campus than they did a year before, while 51% recycle the same amount and 13% admit to recycling less.

A similar pattern emerges when respondents compare their recycling behaviour when at university and during holiday time, but the proportion who recycle less rises slightly to 15%.

Figure eight - How recycling behaviour has changed with time and location

Compared with this time last year / your accommodation during holidays, would you say the amount of waste you recycle has increased, decreased or stayed the same?



The dominant reason why respondents are recycling less than before relates to facilities rather than lifestyles. Inferior services at university are the primary cause (figure nine), a finding consistent with our research back in 2013. Peer influence is also a factor.

The provision of recycling facilities is the main enabler, too, for those who have stepped up their recycling activity (figure 10). Better facilities offering greater convenience clearly tops the list of reasons given by respondents.

It is encouraging that many respondents have become more aware of the environmental challenges and want to do something positive. Echoing earlier findings, a move to more independent living arrangements also leads to a greater sense of responsibility for some, while others cite social pressure to recycle.

The linkage between changes in recycling behaviour (both positive and negative) and the comparative awareness and availability of recycling facilities points to the need for consistently high standards of service provision – whether on campus or off.

Figure nine · Reasons for recycling less at university

If you are recycling less, please tell us why.

Reason	Count
Limits to services offered at university / Better or more facilities offered elsewhere	69
Not easy	5
Influenced by other people (e.g. cannot motivate flatmates)	13
Too busy / Lack of time	1
Less consumption means less waste produced	5
Someone else recycles	8
Negative press about recycling	1

Figure 10 · Reasons for recycling more than before

If you are recycling more, please tell us why.

Reason	Count
Better facilities / Makes it easier	203
Greater awareness of environmental issues / Desire to do something to address environmental issues	149
Greater understanding of recycling / Recycling systems	41
Friend/family persuaded / Social pressure	29
Become habitual / Got used to doing it	14
Improved packaging instructions/materials	20
Different living situation (e.g. more independent living)	34
Producing more waste	12
Had more time to recycle	2

Policy and collaboration

A number of actions proposed by government in England should reinforce some of the reasons students give for recycling more. These policy developments would improve product labelling, promote greater standardisation of recycling services for both household and commercial waste, and could see the introduction of a deposit return system for beverage packaging along with significant changes to the extended producer responsibility system.

Raising performance to meet recycling targets for packaging materials also requires collaboration across the value chain, as other work by SUEZ shows. The challenge is formidable. Taking into account leakage of materials at the collection and reprocessing stages, to achieve a target of just 60% would require that 90% of people recycle their packaging, 90% of it in the right way, while doing this 90% of the time.

Policy incentives, communication and cooperation between producers, retailers and other stakeholders need to be of the highest order to drive up recycling rates.

Ease of use

Recycling systems need to be designed to be user-friendly to maximise take-up. Respondents seem to find recycling at their residence somewhat more convenient than on campus – again with the exception of privately-managed student halls.

On campus, four out of five students find recycling convenient or easy to use. Around a third say it's 'very convenient / easy', whereas almost one in two rate the system as 'fairly convenient / easy'. This still leaves a small minority (of up to 20%) who say the system is not convenient enough or don't know.

The placement, size, style and labelling of bins are design factors that affect their usage. Improving recycling systems so that what is now 'fairly convenient / easy' becomes 'very convenient / easy' will automatically raise participation and recycling rates.

Figure 11 · Ranking the convenience of recycling facilities

Thinking about how convenient it is for you personally to recycle your waste, would you say it is...?

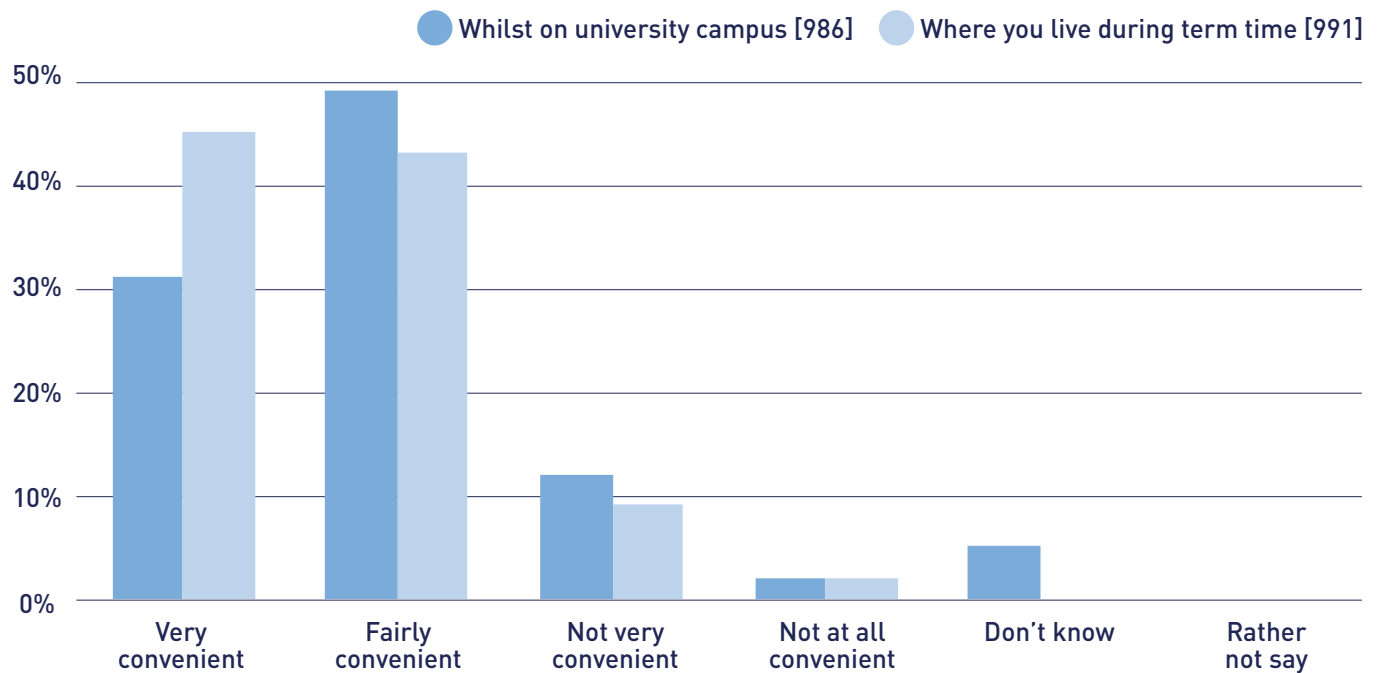
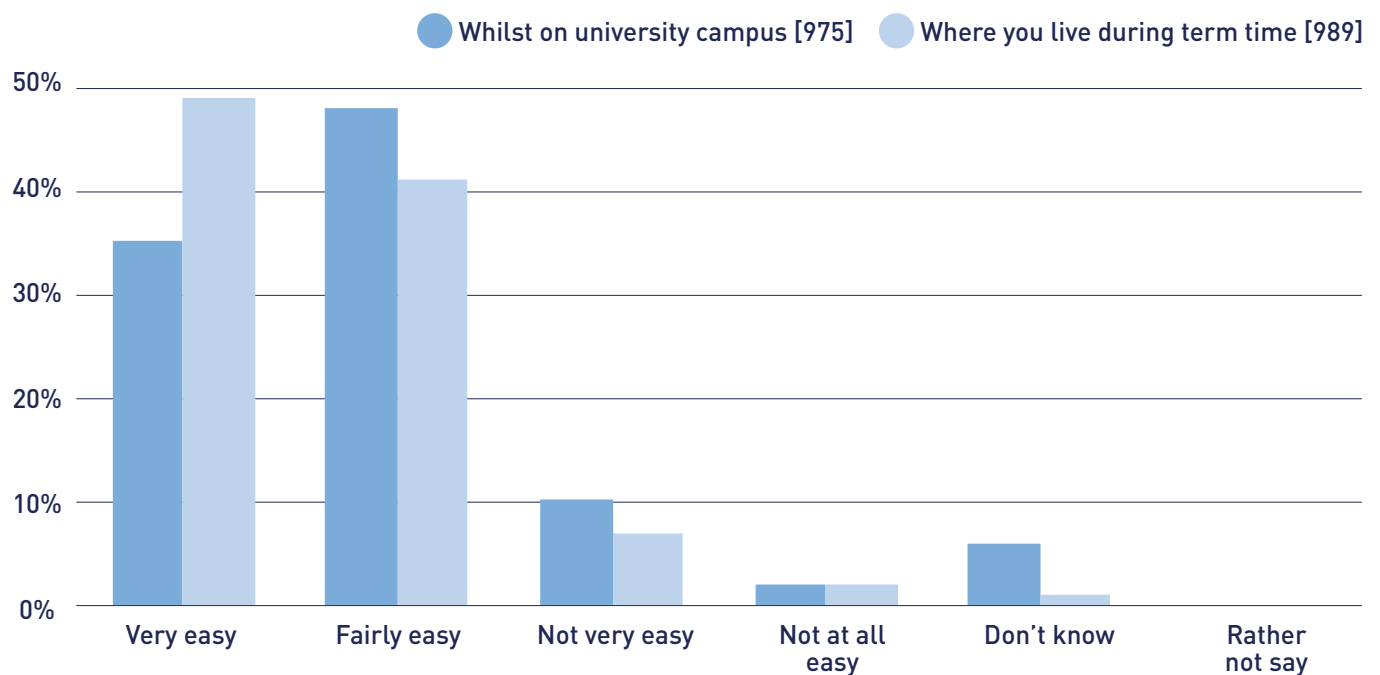


Figure 12 · Ranking the ease of use of recycling facilities

Thinking about how easy it is for you personally to recycle your waste, would you say it is...?



When it comes to their term-time accommodation, respondents are generally more positive about facilities. However, the small minority (around one in 10) who are not impressed are likely to include more students living in halls of residence not provided by their university.

Overall, less than half of all respondents rate recycling at their term-time accommodation as 'very easy' (49%) and 'very convenient' (45%). The figures for university halls of residence are slightly lower (45% and 43%, respectively). However, where halls are privately managed, only 27% of their tenants say it is 'very convenient' to recycle and 30% say it is 'very easy'.

This may reflect an infrastructure legacy problem. In some halls of residence, there is limited space to provide designated bins for multiple recycling streams as well as residual waste. A sustainable design standard is needed to ensure that when such accommodation is refurbished, or replaced, these facilities can be provided.

Greater harmonisation of recycling services across local authorities and universities, including in-house and outsourced halls of residence, will also help to embed the recycling habit as students move between different types of accommodation.

Motivations and barriers to recycling

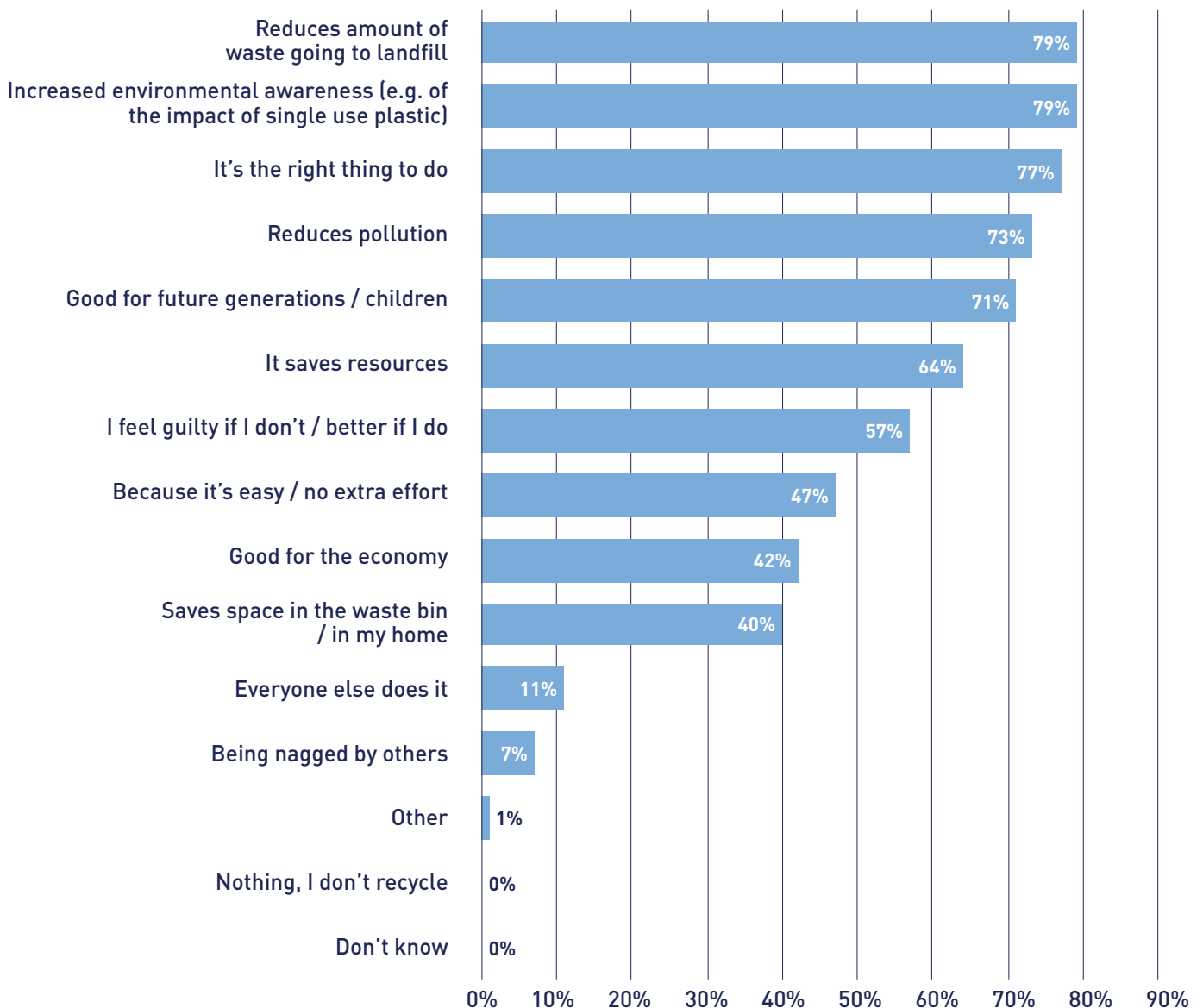
When designing recycling strategies and systems for universities, it is important to take into account what motivates students to recycle and any practical or perceived obstacles.

Environmental awareness and the benefits of diverting waste from landfill are the motives they cite most often (79%). Echoing WRAP's research¹² that shows recycling is now a social norm in the UK, 77% of respondents say 'It's the right thing to do' – up from 68% in 2013. Failing to recycle is more likely to engender a guilty feeling – 57% now share this sentiment, against 41% of their counterparts of six years before.

Although not a primary motive, peer pressure plays a part, more so among reluctant recyclers. One in 10 respondents (11%) acknowledge that 'everyone else does it', while 7% admit to being nagged to recycle by others. This rises to 10% for non-committed recyclers.

Figure 13 - Motivations for recycling

Which of the following, if any, motivates you to recycle?



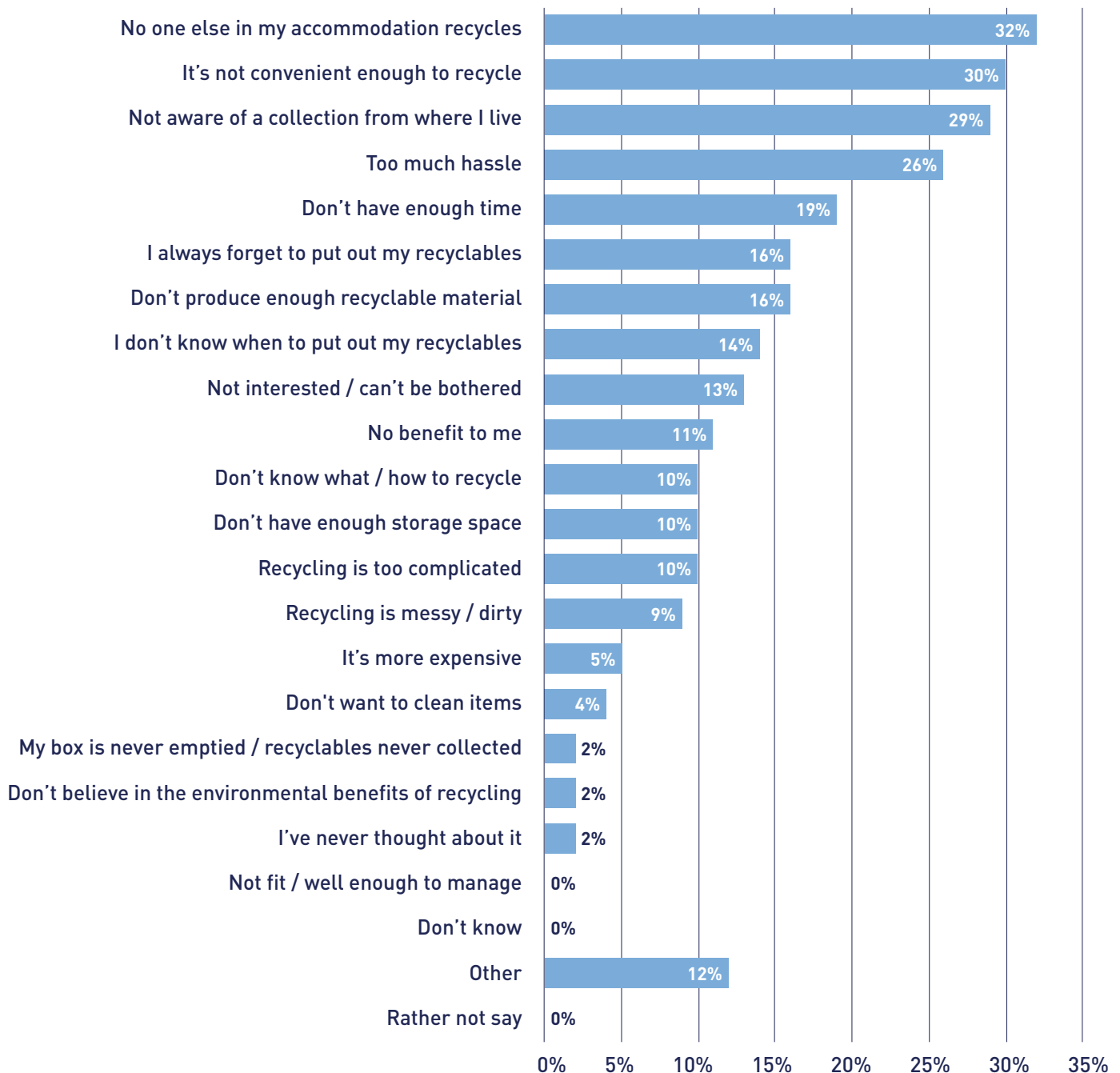
¹² www.wrap.org.uk/sites/files/wrap/WRAP%20Barriers%20Synthesis%20Full%20Report%20final%20121214%20PUBLISHED%20-%20PDF.pdf#page=15

Non-recyclers are more likely to cite their peers' behaviour, at least as an excuse – 32% say 'no one else in my accommodation recycles'. Inconvenience (30%) and ignorance of local recycling collections (29%) are the other main reasons given.

This lack of awareness, along with other barriers, from the hassle factor to a shortage of storage space, can be linked to the circumstances of those sharing communal facilities. WRAP has noted that such households lack the trigger of a set collection time/date to reinforce routine recycling behaviour. The more transient lifestyle of students can also involve domestic arrangements that lack organisation. Building design, as already mentioned, is another factor as halls of residence may lack the space for facilities to store separated recyclables as well as a residual waste bin.

Figure 14 · Reasons for not recycling

You said that you don't recycle... why don't you recycle, or why did you stop recycling?



Improving recycling performance

The best way to encourage students to recycle more is to provide more bins, in more convenient locations and for a wider range of materials. Each of these three improvements was recommended by about half of the respondents to the 2019 survey, with some variations between campus and term-time accommodation.

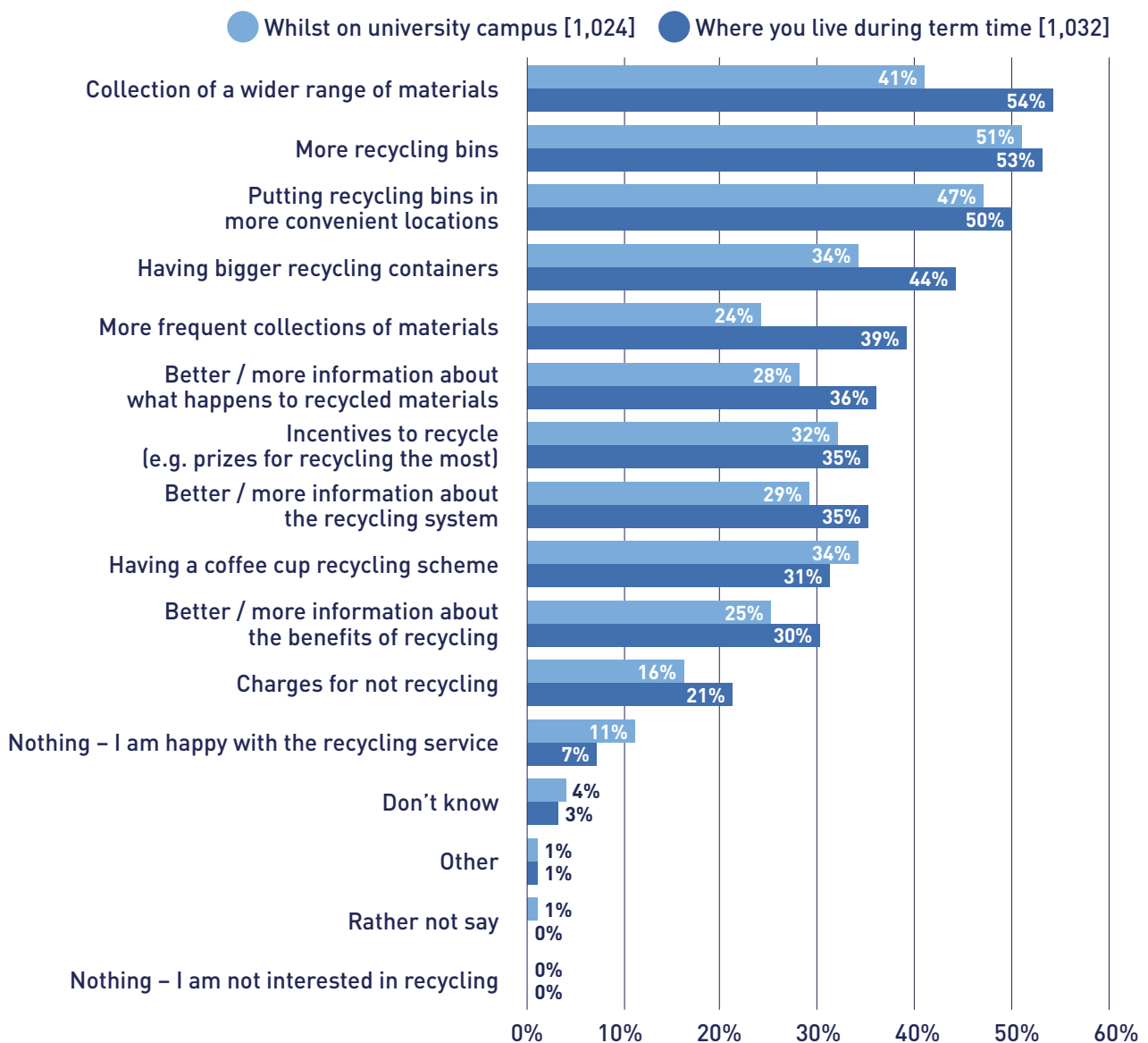
It is notable that these priorities continue to dominate six years after the original *Lifting the Lid* research. Others, such as frequency of collection and capacity of recycling containers, have slipped down the ranking, reflecting improvements in recycling systems on and off campus.

Practical experience shows that how these systems are designed, from the placement of bins to signage and labelling, can have a major impact on participation and recycling rates.

There has been a small reduction since 2013 in the demand for better information about the recycling set-up, the benefits of recycling and what happens to recycled materials. However, some still see the need for more communication and even more are still not getting the message.

Figure 15 - Triggers to recycle more

What, if anything, would persuade you to start recycling or to recycle more?



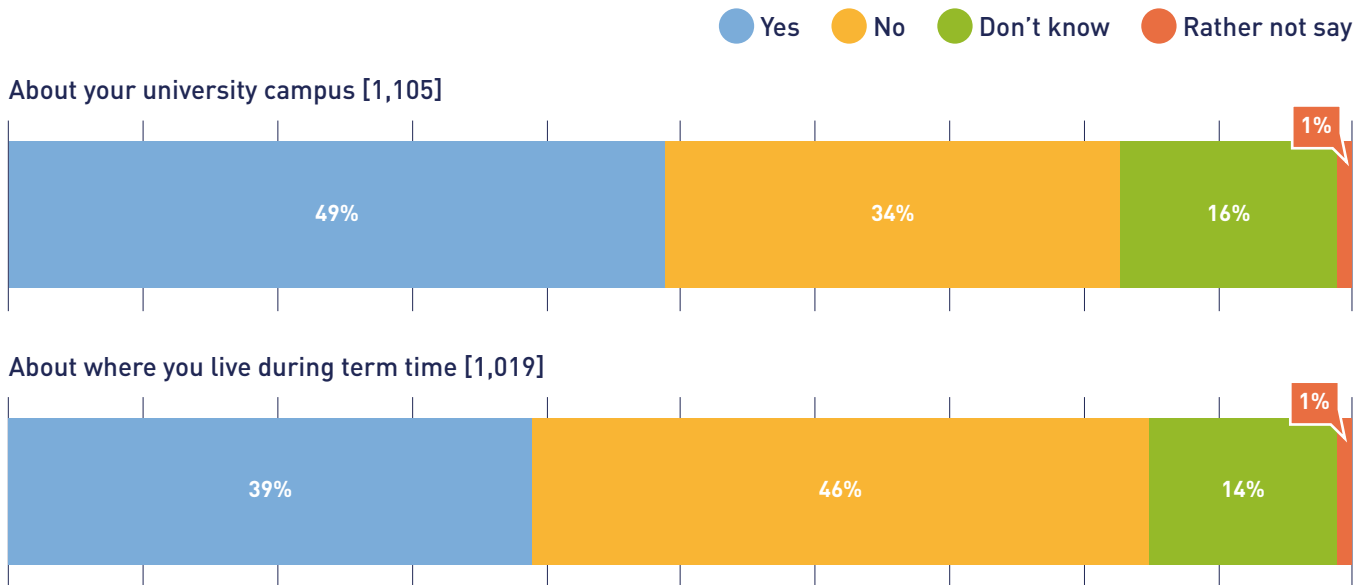
Information and communications

Our survey results suggest that over recent years at least some universities have stepped up their communications with students about recycling. Almost half (49%) of students recall seeing promotional material since joining university, up from 37% in 2013. However, a large communications gap remains to be bridged to reach the one in two students who said they have never received any information about recycling or can't remember.

There has been little change in awareness of information about recycling at term-time accommodation: 39% recall seeing or hearing something on this subject, as was the case in 2013.

Figure 16 · Recall of promotional information at university

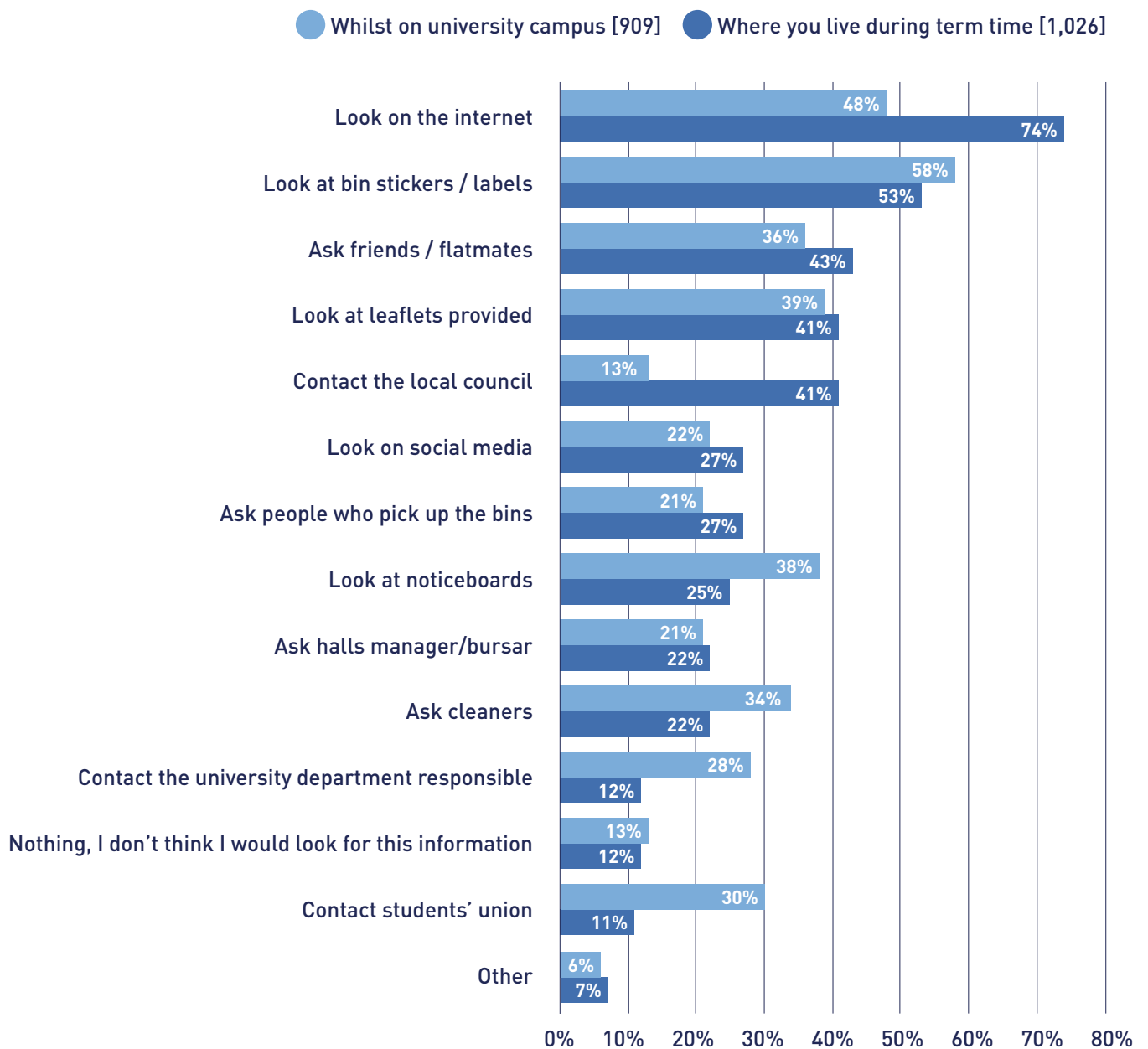
Have you seen or heard any promotional material about recycling since you have been at university?



Communicating with students about recycling needs to be multi-channel. The respondents look to a variety of sources for information. On campus, clear bin labelling and signs are crucial for informing on-the-go decisions about what can be recycled and where – this was a top-three choice for 58% of respondents. Going online was the next most popular option (48%), followed by noticeboards (38%), demonstrating that the internet is by far the most important port of call for information on recycling at students' term-time accommodation.

Figure 17 - Sources of information on recycling

Where would you look if you wanted information about the recycling and waste services?

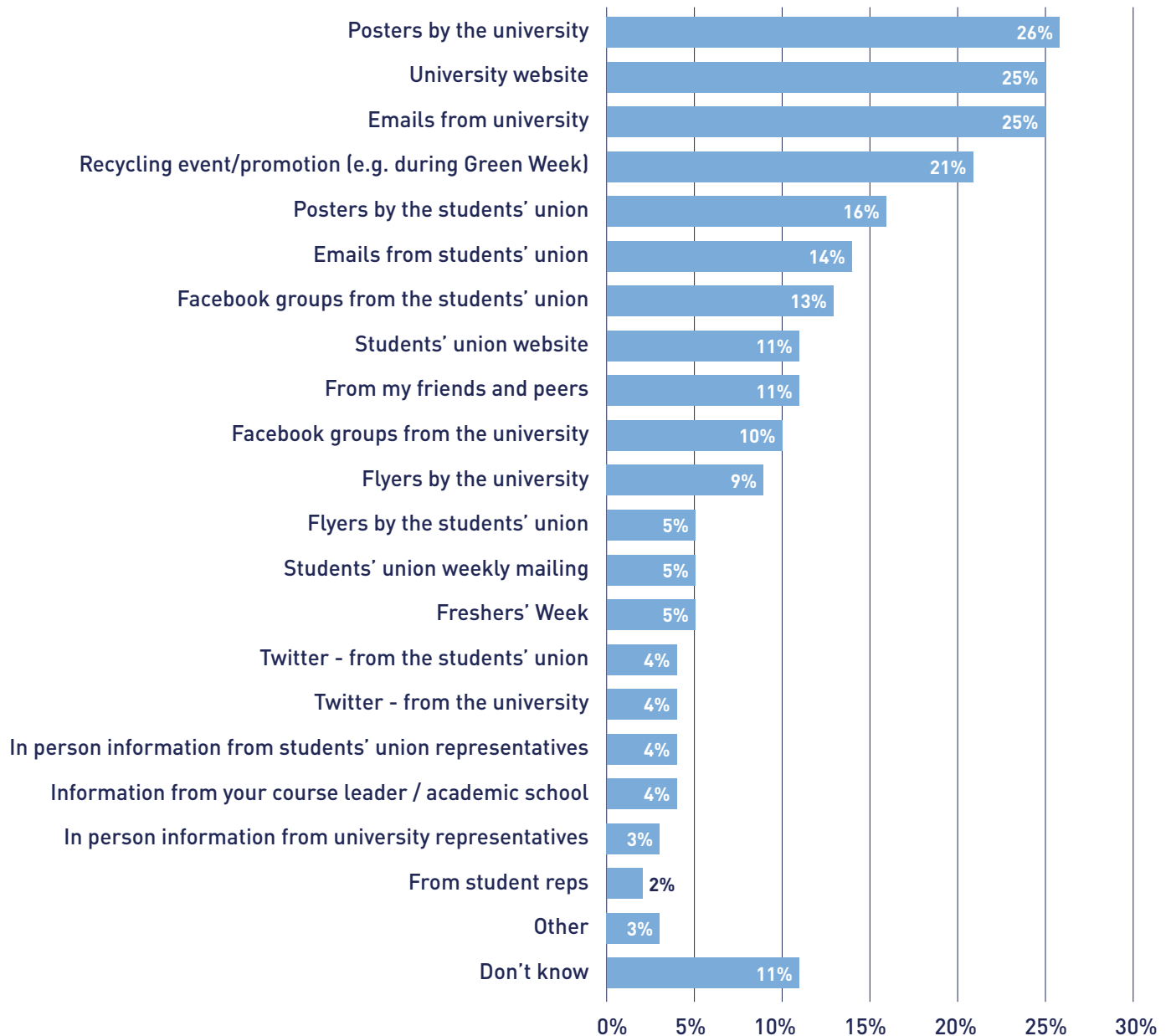


Communicating with students about recycling is challenging, and not just because each academic year brings a new cohort that needs to be educated about services on campus and their role in managing resources sustainably. There is no consensus among students on the best channels for relaying that information.

Asked about their preferred method of communication, respondents' choices range from traditional methods to social media. The most popular suggestions are: posters around campus (26%), the university's website and its email messages (each 25%), and events or promotions dedicated to recycling (21%).

Figure 18 - Preferred ways of receiving information

What is your preferred method of communication for receiving information about recycling? [1,107]

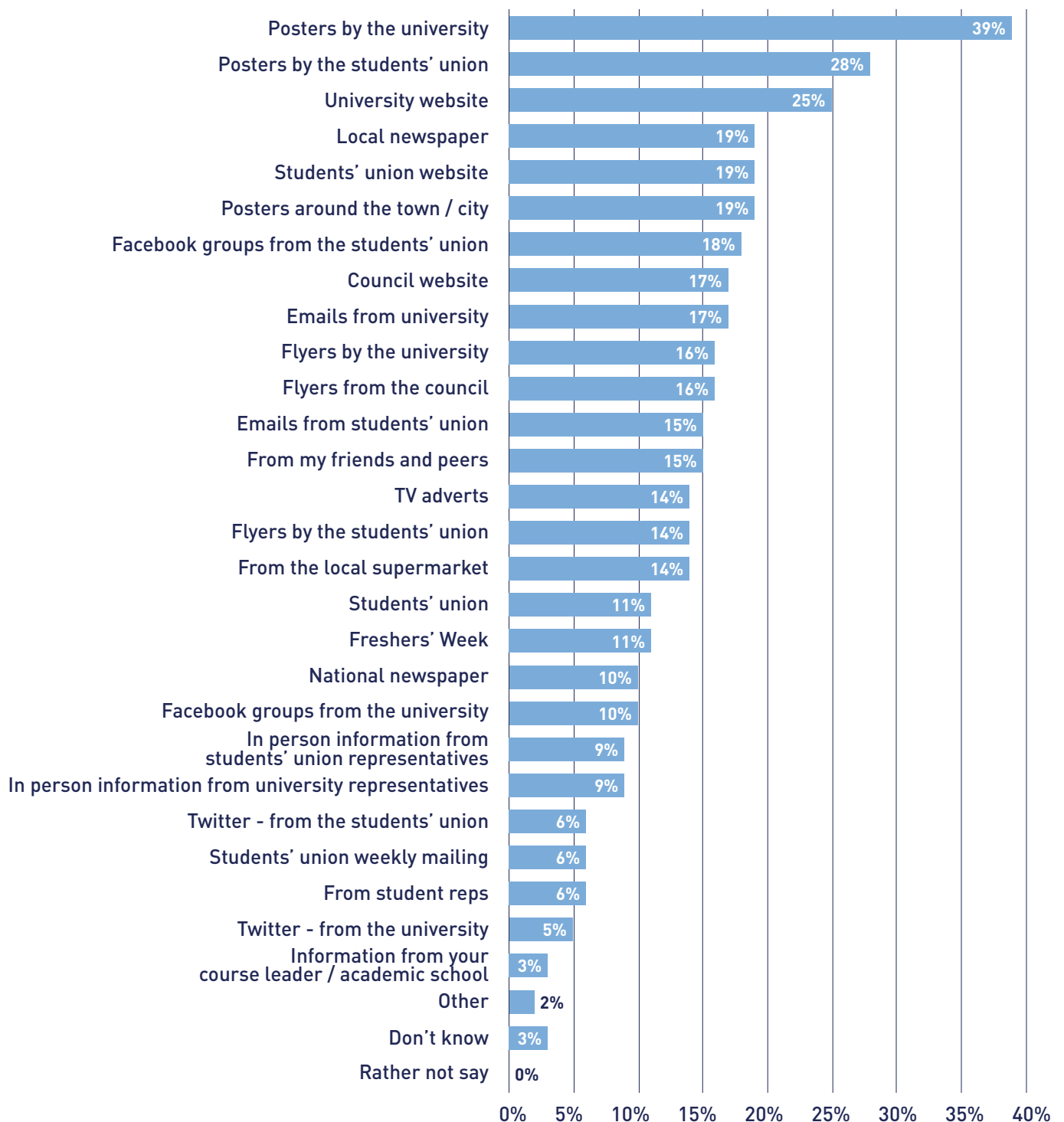


As to how memorable information on campus recycling services is, there's a fair degree of alignment between level of recall and those communication preferences. More traditional, physical communications such as posters achieve the greatest recall (39% for those posted by the university, and 28% for the student union's).

A quarter recall seeing relevant information on the university website. This forum has become more effective since the 2013 research (when 16% recalled using this source). Not surprisingly, social media has also become more important as information channels. Twice as many (18%) remember getting information on recycling via the students' union Facebook group in 2019 than in 2013 (9%).

Figure 19 - Recall of communications about recycling

What promotional material did you see or hear? [580]



The recycling information students are receiving is generally effective. 71% agree or strongly agree that they can better understand what can and cannot be recycled.

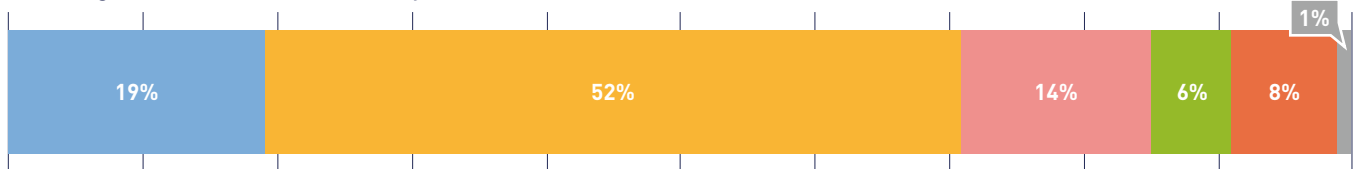
However, the information is less effective in other respects. 38% of students feel it does not help them understand the recycling scheme overall or the benefits of recycling, while 41% still do not know the details of recycling collections.

Figure 20 - Value of information received

To what extent, if at all, do you agree or disagree that the promotional material has helped you to understand the following?

● Strongly agree ● Agree ● Neither agree nor disagree ● Disagree ● Strongly disagree ● Don't know

Knowing what can and can't be recycled [573]



Understanding the recycling scheme overall [574]



Understanding the real benefits of recycling [573]



Knowing when your recycling will be collected [573]



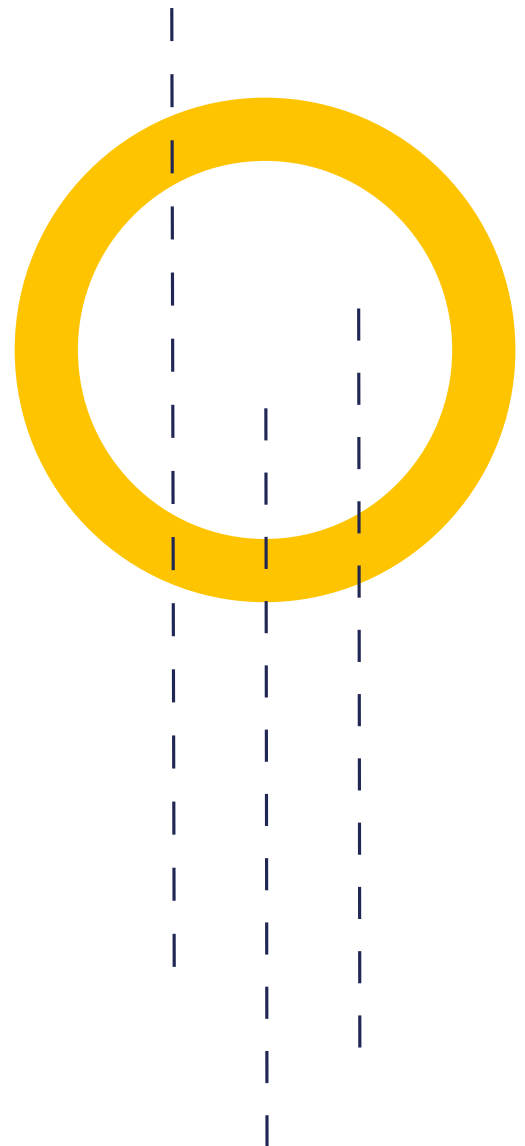
Points to consider

The findings highlighted in this report show that more students are committed to recycling, higher education institutions have taken steps to support their recycling behaviour, and there is the potential – and willingness within the student population – to do more.

These lessons and opportunities are set out in more detail at the end of this report, but they should be borne in mind when considering strategies for raising recycling rates and, in particular, for effecting behaviour change.

Points to consider include:

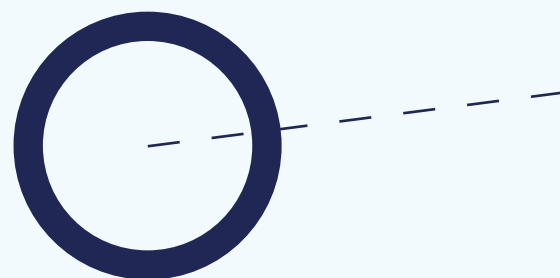
- + Respondents' desire to recycle as wide a range of materials as possible, and the need for appropriate facilities and services.
- + Action on plastics and packaging is a high priority, with implications for procurement policies as well as recycling services.
- + The need not just for a better understanding of what can and can't be recycled, but also the university's strategy and the sustainability benefits.
- + The importance of peer pressure and strategies to 'nudge' students to alter their recycling behaviours.
- + How inconsistency in provision and communication at private and university-owned halls of residence, and on and off campus, continues to hamper the recycling habits.
- + Standards of recycling provision and performance could be levelled up by sharing best practice across the higher education sector.
- + Universities also need to engage and liaise more closely with private operators of halls of residence, local authorities and other stakeholders.



Beneath the data - Influencing behaviour

Even the simple, everyday decisions and actions of people tend to be influenced by multiple factors. This understanding of behaviour – behavioural theory – is increasingly being used to prompt changes in behaviour. It draws on insights from various sources and academic disciplines, including economics, psychology and sociology, as well as behavioural science.

Behaviour change is now seen as a core part of public policy-making, and most Whitehall departments have a behavioural insight team or a ‘nudge’ unit. A growing number of organisations in the private sector are also recognising the benefits of behaviour change. SUEZ has collaborated with leading experts in the field and we have developed our own behaviour change programme.



Why behaviour change

There is widespread acceptance that many of the most complicated problems in our society are whole-system challenges, whether that's tackling knife crime, protecting bees and pollinators, or curbing single-use plastics. Recognising this, it makes sense to see behaviours as emerging from interrelating factors that reinforce one another. Sometimes this results in behavioural 'lock-in', so that people find it hard to change, even if they want to.

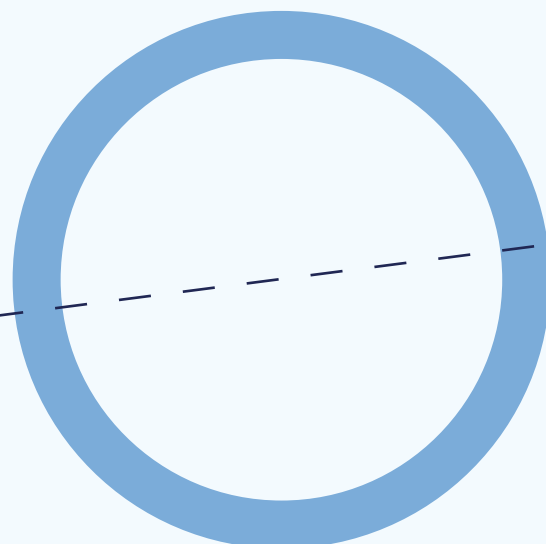
Effective intervention, therefore, requires understanding at several levels and engaging multiple stakeholders. For any given behaviour, the change process starts with bringing together all the relevant stakeholders that have an interest in that specific behaviour.

Applying a behaviour change approach involves translating between theory and practice, and often working in cycles of action and reflection, learning and adapting as we go.

Behaviour change

“A way of working based on the understanding of behaviours and audiences which results in learning and change.”

— Andrew Darnton,
behaviour change expert and
consultant to the UK government



How SUEZ works through behaviour change

Over a decade ago, SUEZ introduced a vision of living in a society where there is no more waste. Working towards this vision requires a holistic approach to the behaviours around waste, recognising the interrelationships between partners and all stakeholders. With our partners' support, SUEZ can bring the infrastructural change required to enable improvements in how society manages its resources – and many of those developments are already happening, such as the shift away from landfill. However, ensuring the effective take-up of new infrastructure and services, to pave the way for a circular economy that makes the most of its resources, requires new thinking and a broader approach.

Having identified behaviour change as a promising area, SUEZ engaged with leading experts – notably, Andrew Darnton, a consultant to UK government, who has devised enhanced behavioural change techniques. Thanks to this expertise, we have been able to develop our own programme for behavioural change, which involves working alongside customers and devising bespoke interventions to improve segregation of materials, reduce long-term costs, increase engagement, and secure greater control of second-hand resources.

We are now beginning to see the benefits of this new way of working with customers, including universities.

Higher education best practice

Our research shows how students' attitudes and reported behaviours in relation to waste have moved on since the first survey in 2013. The 2019 cohort of students are more committed to recycling and its environmental benefits, and – even among the less committed – there are indications that better communication, facilities and peer influence can take recycling to a higher level.

Practice in UK universities has moved on too. SUEZ is seeing first-hand how the growing desire for improved environmental performance is leading partners to work with their supply chains and engage more widely with stakeholders.

Some universities are taking an integrated approach, with initiatives that target the behaviour of students (and sometimes staff) and involve innovative ways of handling different waste streams. Some have programmes that are student-led and include interventions that are explicitly seen as behaviour change, drawing on theory and data to build a better understanding of how students behave.

Innovative approaches

Several UK universities are taking innovative approaches to waste minimisation that go beyond facilities management to encourage behaviour change among students.

Examples include:

Manchester Metropolitan University and University of Manchester – *Give it, don't bin it*

The two universities are collaborating to reduce waste and increase re-use of goods. As a result, £1.3 million worth of unwanted goods have been donated to the British Heart Foundation.

University of Worcester – *Moving Towards Zero Waste Plan*

Its 'white bag' clothes recycling scheme involves the waste contractor, student landlords and the city council. It has expanded to include high-rise buildings and a social landlord. In 2018, 455 bags of clothing (with an estimated worth of £6,370) were donated to charity.

University of Salford – *reUSE schemes*

Students can arrange for the recovery of furniture for re-use using an online platform. Launched in November 2011, it generated savings of £422,000 by 2016.

Liverpool University – *Green Guild*

In partnership with this student-led department, several initiatives – including 'bin awareness days', new container combinations, recyclable cups and moving from bottled beer to draught – raised the guild's recycling rate from 24% to a 56% average and a 79% peak.

Which waste behaviours

Identifying which behaviours to prioritise is the first decision in any behaviour change process. There is a wide range of waste-related behaviours that universities seek to influence – whether to achieve financial savings or reduce environmental impact.

Questions that can guide this task of identifying the most important behaviours to target include:

- ⊕ **What evidence is there on waste behaviours? For example: impacts, uptake, past and likely future trends.**
- ⊕ **Which waste behaviours (or outcomes) are already being targeted in the relevant strategies of the university, the local authority, government or local interest groups?**
- ⊕ **Which interventions have been tried to date and to what extent have they worked or not?**
- ⊕ **Who else is involved in this behaviour and/or this locality? Who might want to partner in an intervention?**

Using the waste hierarchy to sort them, here are examples of some behaviours that may be relevant if not already being considered:

Reduce

single-use plastic bottles, littering, growing your own food, contamination (of recyclable / reusable items).

Reuse

reusable drinking cups and water bottles, furniture, clothes, bikes, books.

Recycle

paper, glass, plastics, food packaging, food waste, print cartridges.

Changing behaviour the ISM way

Practitioners need a practical tool to apply the theory when developing and delivering behaviour change interventions on the ground. ISM (Individual, Social, Material) is seen as the most comprehensive.

ISM is our preferred method for bringing stakeholders together around shared behavioural challenges, identifying the factors shaping those behaviours and then working together to devise whole-system approaches that result in lasting change, both in the behaviours and the systems that perpetuate them.

ISM was created by Andrew Darnton with colleagues at the University of Manchester and launched by the Scottish government in 2013.

The ISM approach is illustrated by a single figure symbolising the three contexts for considering human behaviour

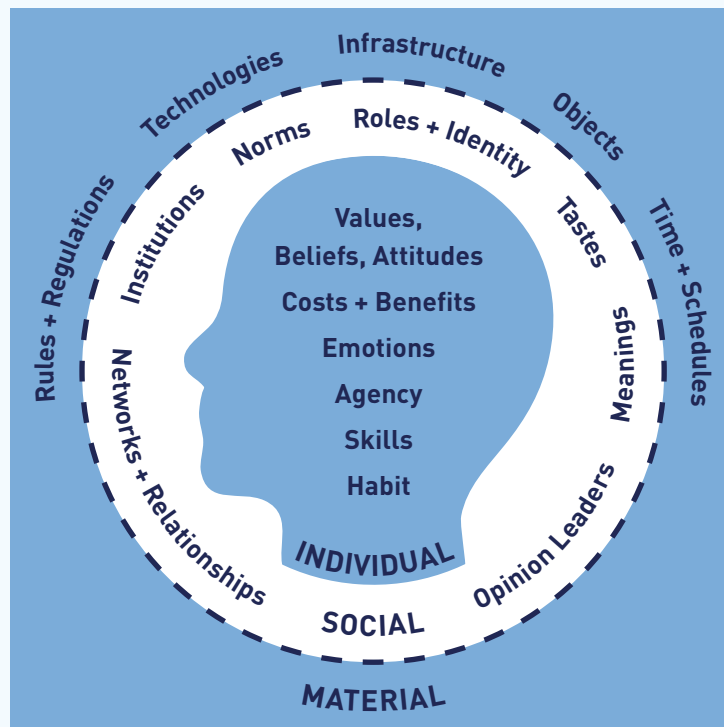
– the individual, social and material. Key factors in understanding behaviour are known from behavioural economics, social psychology and sociology. ISM helps put these main factors in context – arranged in the three areas: the head (individual), circle (social), and outer square (material).

Using the ISM tool involves co-design and co-production. Such collaboration is vital for effective action on complex behaviours where no one organisation or individual has control.

Waste-related behaviours fit this description perfectly. They arise from the choices made by individuals in what they consume and how they dispose of what remains. These decisions are influenced by the social circles and institutions in which individuals move and spend their time. All these activities are circumscribed by infrastructure and service

arrangements determining which wastes are collected, and what can be reused and recycled.

The process of using ISM is as important in producing results as the content of the model itself. In essence, stakeholders gather around a shared behavioural challenge and then work together to map



the factors influencing that behaviour onto the ISM model. Through this process, stakeholders develop a shared understanding of the behaviour and identify their relative roles in bringing about change.

Universities have proven ideal settings for using ISM, notably with the support of the National Union of Students, students and staff. At SUEZ, we see ISM playing a pivotal role in delivering sustainability solutions across these institutions.

Behaviour change in action - Aston University

Located in Birmingham, Aston University is committed to research, enterprise and inspiring teaching that delivers global and local impact. The institution is also recognised for its sustainability credentials. Ranked as a 'first-class' university by People and Planet¹³, Aston University has won several Green Gown awards, the international scheme for recognising excellence in sustainability in further education.

Since 2015, SUEZ has been working with Aston University to manage its waste and achieve recycling targets year-on-year. We have analysed the campus' different waste types and worked on innovative ways to recycle or reuse these waste resources, so the university can grow its contribution to the circular economy.

With that aim in mind, SUEZ and Aston University set out to understand how behavioural change could build upon operational service improvements already implemented to reduce waste further and increase recycling.



The Adrian Cadbury building, home of Aston Students' Union

13 peopleandplanet.org/university/129355/ul19

Identifying the challenges

Aston University has a clear sustainability objective: to increase recycling and reduce waste. While the university continues to grow, attracting more students and increasing its workforce, the university faces the challenge each year of inducting a fresh intake of students with little awareness of its sustainability policy or recycling services.

A joint working group identified the key behavioural challenges as contamination of materials in recycling bins and litter in public spaces. Three areas of the campus were the main focus of concern:

- + **Students' union building:** The biggest problem was that non-recyclable packaging was being put into the wrong bins.
- + **Lake area:** Empty drink containers and other items of litter (such as cigarette butts and packaging) were left scattered around, especially in warm weather.
- + **Library:** Students were bringing in and leaving behind single-use coffee cups.

During our discussions, it became clear that the purpose-built students' union building was a particular priority. This new £10 million building provides a modern and attractive social space for students to enjoy. It was agreed that to maintain the quality of the building's environment, influencing behaviours related to recycling would be the focus of the working group's efforts. Simply put, this meant getting the right waste in the right bin.

A comprehensive approach

Quick wins in the students' union building

Our initial behaviour change sessions identified a number of quick wins in the students' union building that could be set up ahead of the new academic year. These interventions involved changes to the product offering, bar staffing and recycling service:

- + **Increasing the range of drinks available in draught in reusable glasses eliminated the need for glass bins for bottles in front of the bar and the related health and safety risks.**
- + **A new policy, backed up by additional security staff in the bar after 6pm, was introduced to discourage students from taking glasses and bottles out to the lakeside.**
- + **A collection service for food waste was introduced within the building.**
- + **Reusable cups were promoted at the coffee shop.**

Inducting new students

Because students are a transient population, universities have to constantly reinforce key messages. New students arriving at Aston University are supported and mentored by the 'Aston Aunties'. This is a well-established programme that uses student volunteers to explain the way things work around the campus. The Aunties were identified as an important channel for reinforcing the importance of sustainability to the university and what that means for new students.

For the first time, the Aunties were trained to share key 'green messages', draw attention to their university's Top 10 place in the People & Planet University League tables for 2019. They were also trained to promote the university's partnership with Surfers Against Sewage, the grassroots movement tackling plastic pollution and protecting the UK's coastline.

By clearly communicating the standards and expectations of the university, it is hoped that the new students will adopt responsible behaviours with respect to littering and recycling from the start of their university life. This is all the more important given that our joint research with the National Union of Students has shown that first-year students are less likely to recycle than returning students.

Better segregation

Before deciding on any interventions to support the objective of getting the right material in the right bin, the working group analysed the composition of the general waste and recycling materials being generated within the students' union building. The team also carried out an observational study of student behaviours when disposing of materials inside and around the building. This work identified two main causes of contamination:

- ⊕ **There were high volumes of food contamination, as well as non-recyclable packaging, within the mixed recycling – attributable to student uncertainty at the point of disposal.**
- ⊕ **Paper and card were wet due to liquids leaking from discarded drinks containers, causing the materials to break down, so mixed recyclables had to be treated as general waste.**

A new segregation system was implemented. Bins for mixed recycling were replaced with a dedicated container for plastic bottles and cans – which make up the largest waste stream within the building. There is now also a container for paper/cardboard only, to minimise contamination from food waste.

Recycling labels

Labelling can reinforce the work on better segregation by clarifying what products can and can't be recycled, and the appropriate bin. The students' union shop is developing an on-shelf labelling system with colour codes corresponding to the correct disposal method.

Making recycling more user-friendly

Our research shows that, to motivate non-recyclers, recycling systems must be convenient to use and easy to understand. This means ensuring bins are strategically located, messaging is simple and direct, and any hurdles to quick decision-making at the point of disposal are removed. Relevant measures taken include:

- + Strategic design:** Bins were concentrated in locations with the highest footfall, such as by tables outside the students' union building, within the coffee shop and in workspaces. The design also allowed for further signposting to direct students to the nearest recycling point.
- + Effective communication:** Installing the main recycling point in a prominent position within the students' union building signals to students the importance of the recycling habit and the materials that bins are designed for. The working group has also discussed the potential further measure of adding see-through boxes above the bins to display examples of the appropriate products and packaging, if necessary.
- + Removing barriers to disposal:** We also helped identify the type of containers that would make recycling easy for students. Open-top bins have replaced containers with a closed lid design. Students in any doubt can quickly look directly into the bin and identify the correct container.

Challenging material collection

The university now provides special collection services for two more challenging waste streams through TerraCycle, the innovative specialist in hard-to-recycle waste.

Bic Biro pens are collected in a cardboard container, which is sent to TerraCycle via pre-paid postage.

Crisp packet collections have been added in the students' union building, with separate bins alongside the dedicated recycling containers. The packets are separated by plastic type, cleaned and extruded into plastic pellets to make new recycled products. This service diverts a high-volume waste, as crisps are one of the students' union shop's biggest sellers.

User profiling

Aston University use the EPOS (electronic point of sale) monitoring company Yoyo. The university now interrogates data from the shop's sales to better understand who their customers are (such as, which courses they study), so communications may be targeted at specific demographics within the student population.

Planned interventions

A series of other actions are under consideration, planned or in hand. These include:

Teaching recycling

The university is investigating the potential to include recycling, responsible waste behaviour and environmentalism within relevant courses. This would be through elective modules, involving special projects in partnership with selected companies and using the topic as part of coursework.

Engage with private halls of residence

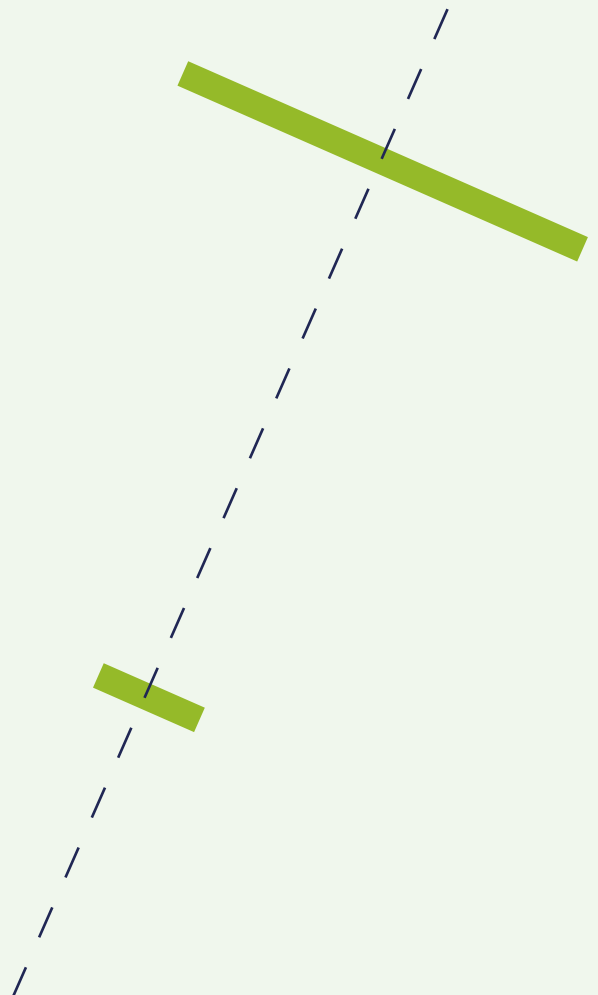
All halls of residence owned by the university were sold to UNITE in 2016. Our research with the National Union of Students highlights the challenges of improving the recycling behaviours of students living in privately-run halls. The university intends to engage with UNITE, and other private operators, to identify ways to support these improvements, with a focus on more consistent communication to students across campus and at their accommodation.

Freshers' Week initiatives

Engaging with suppliers to minimise the generation of waste continues to be a concern for the university. Freshers' Week fairs can generate a significant amount of single-use plastic items – for food, drinks or gifts – which quickly end up in the bin. From 2020, the university is ensuring that external suppliers who support Freshers' Week reduce the number of single-use items they provide.

Progress and monitoring

The success of these interventions will be monitored by measuring waste and recycling volumes, and through regular waste composition analysis. Aston University and SUEZ will continue to use the ISM model to explore further opportunities for influencing behavioural change at other buildings across the campus.





Conclusions, insights, opportunities

Our findings show some intriguing changes in the attitudes and behaviours of students since our initial *Lifting the Lid* research in 2013. Participation and commitment to recycling have increased in six years. However, it might be expected that such improvements would be more pronounced given the backdrop of mounting concern about the environment and changing climate, among the public and, in particular, the young.

The research also indicates that universities have made progress in promoting recycling, improving services and communicating with students about them. At the same time, the findings point to gaps that persist in waste management strategies – not least the challenges associated with privately-run halls of residence – as well as wider opportunities to promote more sustainable use of material resources.

Greater engagement by universities will be the key to exploiting these opportunities – engagement with students and their union representatives, with residential landlords, with waste management service providers, with the supply chain, with the higher education sector as a whole and with local authorities.

Such engagement with a range of stakeholders will also be essential if universities are to harness the behaviour change strategies that could take recycling to a higher level.

Based on our experience and research, we believe there are five main areas of opportunity for the higher education sector to explore.



Share standards and best practice

Further education institutions can learn a lot by collaborating with each other.

- + Universities with limited resources can accelerate their progress towards higher recycling rates and more sustainable resource management by adopting methods tried and tested by larger institutions. While some initiatives may be beyond their means, other measures will be cost-effective even for smaller establishments.
- + Common standards for resource management – covering, for example, the range of materials collected for recycling on campus and at halls of residence, the design of facilities, and benchmarks for recycling rates and participation – would help spur the performance of the sector as a whole.
- + Universities should also look to the recycling and waste collection services provided by their local authorities when planning and commissioning their own services. Greater consistency in provision across campus, student halls and rented houses will strengthen and reinforce the recycling habits of students through their stay at university. This would also be in line with government proposals for greater standardisation of local councils' waste and recycling collection, at least in England.



Inform and engage

Students today are more committed to recycling and there is a willingness, even among the less committed, to do more. Universities need to harness and nurture that support, as well as young adults' wider concerns about sustainability and environmental protection.

- + Communication around waste and recycling may have improved, but one in two students has not got the message – less than 50% could recall receiving relevant information.
- + Not only is there a new intake to educate each year, students' preferences for receiving communications about recycling services are fragmented. A multi-channel approach is required to deliver the right information in the right place.
- + Given the variations revealed in attitudes to recycling, communication strategies may need to take account of the different needs and priorities of overseas students, males and females, where they are living and the stage of their studies.
- + Communications need to put waste and recycling in the context of the university's wider sustainability strategy. If this is seen to be coherent, credible and vigorously promoted, students are more likely to support recycling initiatives and persuade their peers to join in. This points to the need for a joined-up communications strategy. From prospectus to open day, Freshers' Week to graduation, students should be encouraged to buy in to the environmentally-responsible ethos of the institution.

3

Liaise with landlords

Students living in privately-operated halls of residence recycle less than their counterparts in other accommodation and are less willing to make an additional effort to recycle. Yet, these students are also more likely to consider changing their behaviour.

Universities have a joint responsibility with commercial landlords to encourage responsible recycling behaviour among these students. By opening a dialogue, universities can promote joint initiatives, such as:

- + **Coordinating the design of services and facilities to minimise confusion between those on-campus and at halls of residence.**
- + **Ensuring the collection schedule is easy to understand and clearly communicated.**
- + **Harmonising bin labelling and messaging to students on recycling and related matters.**

Setting out guidance on good practice or minimum standards could also encourage landlords to improve the recycling facilities and support they provide to their tenants.

4

Widen waste services

Students are looking to universities to enable them to recycle a greater range of materials. They are increasingly concerned about food waste. When it comes to other, less commonly collected waste items – such as batteries and electrical goods – only a minority access alternative recycling facilities.

Various steps can be taken to address these challenges:

- + **Commission site audits and waste composition analysis.**
- + **Identify waste items that contaminate recyclables and additional materials that can be segregated.**
- + **Ensure that waste services and receptacles are designed to fit the behaviours and movements of students around campus.**



Change behaviour

The number of non-recyclers has almost halved since 2013 (to 6%) and today's recyclers are more committed. Yet, when we take account of those who don't share that commitment, there remains a sizeable swathe of 15% who are unconvinced.

The main barriers to recycling also seem to have shifted. In 2013, almost 40% of non-recyclers said they were unaware of recycling collections. Six years later, one in three non-recyclers pleads that nobody else in their accommodation recycles. Inconvenience is the next major reason given (by 30% of non-recyclers).

If the unprecedented alarm over global warming and agitation among the young over the climate emergency have not changed these students' behaviour, other levers will be needed if universities are to continue increasing recycling rates. A holistic approach that combines insights into human behaviour as well as improvements to services and facilities is going to be most effective. In addition to the recommendations already listed, this would entail:

- + **Close collaboration between university, waste service provider and other stakeholders, including students and the supply chain.**
- + **Harnessing the input from these stakeholders and behavioural insights, using a practical tool such as ISM.**

- + **Not only analysing waste streams and identifying contamination and litter hotspots, but also studying student flows and behaviour around campus.**
- + **Designing and locating recycling facilities and services to go with the grain of that behaviour.**
- + **Training Freshers' Week ambassadors / mentors to convey 'green messages' and the sustainability ethos of the university (as with Aston Aunties), as well as communicating this at other contact points.**
- + **Considering innovative approaches for challenging waste streams, in partnership with charities and/or specialists.**

By taking an integrated approach to recycling and resource management, universities can sustain the hard-won progress of recent years and fulfil their obligations as environmentally-responsible institutions within the higher education sector.

Acknowledgements and more information

The research for this report was commissioned from the National Union of Students on behalf of SUEZ recycling and recovery UK.

If you would like to discuss the findings of this research in more detail and how SUEZ can help, please contact us:

Tel **0800 093 1133**

Email **enquiries.uk@suez.com**

SUEZ recycling and recovery UK,
SUEZ House, Grenfell Road
Maidenhead, Berkshire SL6 1ES

www.suez.co.uk

