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Design perspectives:

# sustainable living.



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# Introduction

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In March 2020 Design Council launched its strategy which sets the direction of work for the next four years. It has identified three strategic priorities where the greater use of design could make a significant difference and subsequently benefit peoples' lives: improving health and wellbeing; enabling sustainable living; and increasing design skills.

This short report is intended to prompt a discussion about the part that design can play in supporting and enabling sustainable living. It draws primarily on the findings of interviews that Shared Intelligence was commissioned to carry out with 12 experts in the field.

The aim of the interviews was to gather perspectives on the most pressing issues over the next four years in relation to sustainable living and the part that design is making, and could make, to address them. It should be noted the interviews informing this paper were conducted before COVID-19 was declared a pandemic.

The paper begins by considering the wider context of the role of design and sustainable living, in the light of the United Nation's Sustainable Development Goals. We then set out the pressing issues identified by our interviewees and explore the role that design and the design process has in relation to each of them. Finally, we come back to the core contribution of design to enable sustainable living.





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# Design and sustainable living

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The starting point for a consideration of the contribution of design to sustainable living must be the United Nations' 17 Sustainable Development Goals. The UN describes its goals as “the blueprint to a better and more sustainable future for all. They address the global challenges we face, including those relating to poverty, inequality, climate change, environmental degradation, peace and justice. The 17 goals are all interconnected, and in order to leave no-one behind, it is important that we achieve them all by 2030.”

Reflecting the broad scope of sustainability, the goals are very wide-ranging including healthy living; quality education; affordable and sustainable energy; resilient infrastructure; inclusive, safe and resilient cities and settlements; sustainable consumption and production; and action to combat climate change. Our interviewees were keen to stress the potential scope and breadth of design and its contribution to sustainable living.

*“Design is everything. People often think about design in an artistic way, but absolutely everything involves design, from what kinds of houses we live in, to what kind of transport we use and how our food is packaged.”* Kate Burningham, Reader in Sociology of the Environment, University of Surrey.

Sophie Thomas, Founding Director of Thomas Matthews, stressed the importance of design in decisions about how products and services are manufactured, delivered and used. She added:

*“These add up to design being an agent of change in terms of moving towards how we live sustainably on the planet.”*

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Kate Burningham

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# The pressing issues

When asked what they saw as being the most pressing challenges in relation to sustainable living, our interviewees responded in a variety of ways. Some raised broad strategic goals such as delivering the government’s target for reducing greenhouse gas emissions to net zero by 2050. Others raised more tightly defined challenges such as the need for a more sustainable approach in particular industries – from fashion to construction. A theme raised by several interviewees was the importance of the relationships between designers, their clients and the public. Design has a fundamentally important role to play in ensuring that products, processes and services make it easier to live sustainably than unsustainably. This, in turn, will give manufacturers and other businesses the confidence to invest in sustainable products and processes.

Drawing on all 12 interviews we have identified four key challenges which provide a strong basis for exploring the role of design in securing sustainable living. They are summarised in the table below and are explored in more detail in the following sections.

Issue	Challenge
Sustainable and resilient communities and places	How can we design places and communities which can help achieve the Sustainable Development Goals, including achieving the government’s target for reducing greenhouse gases to net zero by 2050?
Shared, natural resources – soil, water and air	How can we conserve scarce resources and address the significant equity issues involved in accessing them?
The circular economy	How can we create the conditions in which we keep resources in play for as long as possible, extract maximum value from them and recover and regenerate products and materials?
Designers, clients and the public	How can we design products, processes and services that make it easier to live sustainably?

# Sustainable and resilient communities and places

## Social sustainability

One of the UN's Sustainable Development Goals has a specific focus on sustainable cities and communities and several other goals have a clear place dimension including the goals relating to education, energy, decent work and economic growth. There are also very close links between the action required to promote health and wellbeing and to secure sustainable living: both requiring action on features such as transport, the environment, housing and employment.

Several interviewees identified house building as an area in which good design can help to create more sustainable communities. It is important that we think about the way we design, construct and operate buildings in order to contribute to the reduction of carbon emissions. Our aim should be to build homes that support residents through each stage of life from childhood to old age.

*"As designers we can directly have an impact on climate change through the design of new houses and associated infrastructure. We can help to ensure that people move into a home that is easy to live in sustainably."* Clara Bagenal-George, Associate, Elementa Consulting

*"Why are we still building homes with gas boilers?"*  
Darryl Evers, Director of Economy, Infrastructure and Skills, Staffordshire County Council

*"We must pay more attention to the kinds of heating systems we install in our homes, how we heat our water, the quality of insulation."*  
Kate Burningham Reader in Sociology of the Environment, University of Surrey

While housing and buildings are certainly an incredibly important aspect of sustainable living, it is crucial to think about other features of the local environment. Our open spaces have a powerful role to play in this. Our rooftops, personal and communal gardens, streets, road and rail verges, allotments, parks and even the green belt and national parks are all important. Examples include the role of plants and trees in enhancing biodiversity and absorbing carbon; managing water through retention schemes and sustainable drainage systems; ensuring our soil stays healthy to sustain plant and wildlife; and thinking more creatively about where we can grow food, such as placing growing boxes on station platforms or in car parks.

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*"Design is fundamental to how we think about creating better places....We need to pay more and more attention to how we design places, schools, homes and communities to enable sustainable living and meet greenhouse gas reduction targets."*

Darryl Evers

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The accessibility of neighbourhoods is also important, reducing the need for the use of the private car. This means thinking about connectivity to green and play space, shops, schools, sports and leisure facilities, restaurants and so on. Having all of these within walking and/or cycling distance helps reduce car use, which contributes to cutting carbon emissions. Providing frequent and reliable public transport, safer and more pleasant pedestrian and cycling routes is not only more sustainable but also supports people to live more active and healthier lives.

Everyone has a responsibility to live sustainably, but well-designed places, with strong policies to underpin these approaches, are crucial to achieving our aspirations for sustainable living. Many of the interviewees were clear that design

has an important part to play in securing sustainable communities: action which is illustrated by Design Council's work on design reviews, healthy communities and the current public health focus of its Design in the Public Sector programme.

Darryl Evers is clear that building sustainable communities hinges on good design at every level, from strategic planning, through local plans to the design of neighbourhoods and recycling bins. He said: *"Design is fundamental to how we think about creating better places....We need to pay more and more attention to how we design places, schools, homes and communities to enable sustainable living and meet greenhouse gas reduction targets."*





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## Transport, connectivity and infrastructure

Transport contributes significantly to both air pollution and climate change. Structural and infrastructural changes will be key in enabling more sustainable lifestyles and achieving the UK's net zero target.

Good design is integral to achieving sustainable connectivity.

*"The design of the infrastructure can contribute to reducing greenhouse gas emissions. The ways in which streets are designed can encourage cycling and walking and constrain car use. There's a lot of knowledge about how streets and footways can be designed to create areas that are pedestrian friendly and make driving a less desirable option. It's about designing in sustainable living."*

Kate Burningham

Toby Thornton, Technical Director of WSP, talked about the role of the design process in future-proofing new infrastructure. He also highlighted the role of good design in influencing the thinking of the development industry.

*"It is important that new property and development propositions come to the market which are more personalised, tailored to consumer needs and with net zero principles embedded across the scheme design. We need to encourage people-centric planning for places and move away from a cookie cutter approach to new development."*



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## The construction industry

Urgent action is required to decarbonise the building and construction industry. A significant amount of energy is used in every stage in the life of a building, its construction, its use and maintenance, and its demolition. A net zero carbon benchmark which is 100 per cent circular involving the re-use of materials and a design which allows for the building's disassembly should be a key project delivery. At present, however, the construction industry is responsible for 49 per cent of carbon emissions.

For Yolande Barnes, Chair of the Bartlett Real Estate Institute, the people-centred focus at the heart of the design process is critically important. She says that the construction industry tends to find this difficult and that the “real revolution” comes through doing things with, rather than for, people. She argues that an understanding of markets is a really important component of good design but it is equally important to understand the potential gap between technological solutions and how they are actually used.

*“Maybe designers get their sums wrong, or humans use things in a way which was not intended. It is important to design with people rather than at them. For a design to be truly sustainable, technical solutions have to result from the design process rather than being a driver of it.”*

For Polly Billington, Director of UK 100, changes in government policy and regulation are essential if the potential of design in this area is to be realised.

*“We lack a ‘carbon MOT’ for new homes which would drive an uptake in low carbon design, retrofit and sustainable appliances. The energy market is rightly heavily regulated, but it is not incentivised to drive low carbon outcomes. Place based solutions are not happening at scale because of a lack of capacity and barriers to investment. There isn't a whole systems approach on a place-based basis for integrated net zero solutions for communities. The current incentives from Treasury and from MHCLG and DfT (and also to a certain extent BEIS) militate against the applying of good frameworks for clean energy, design and planning.”*

Graven Hill, Bicester. Copyright Graven Hill



# Shared natural resources – soil, water and air

Water, soil and air are three natural resources we share and cannot live without. All three are subject to pollution, degradation and contamination and, if life on earth is to flourish now and into the future, it is critical that we clean and protect them.

It is easy to underestimate the importance of soil as its uses are often hidden. While its use in the agricultural and forestry industries are more apparent, soil is also critical for storing carbon; helping maintain biodiversity through being a habitat for wildlife and microbes; storing water and preventing flooding and it can even act as a cleansing agent for air and water. In the building and construction industry, it is often the material used for buildings across the world. However, as soil is a non-renewable resource, we cannot afford to take it for granted.

Interviewees identified water as a sustainable living challenge to which design had a significant contribution to make. There are several dimensions to this including flooding, of the type and intensity that many parts of the UK experienced during winter 2019, droughts and water scarcity. These have severe impacts on human, plant and wildlife, as well as our industries.

Scarcity also has the added impact of making water more expensive, and therefore less accessible, which increases inequality. Better water management through good design can help mitigate and prevent these impacts.

Darryl Eyers is convinced that there are some important questions here for designers, developers and planners to address:

*“We need to design infrastructure, communities and housing to mitigate against flood risk. We are building too many developments with tarmac or concrete front gardens which do not absorb water in a sustainable way.”*

Bridget Snaith, Partner at Shape Landscape Architecture and Senior Lecturer in Landscape Architecture at the University of East London, identified common ways in which designers can contribute to tackling flood risk, such as designing in flood storage areas, grey water management and sustainable drainage. She gave examples of projects which have achieved this effectively, including Sutcliffe Park in Lewisham and the Olympic Park in East London. Bridget also talked about droughts:

*“We need to be more resourceful in the use of water in this country. We must retain and save water for periods of drought.”* Bridget Snaith

These approaches can be used in new developments or retrofitting existing ones. Action can include taking rivers out of culverts, protecting flood plains, managing uplands and preventing road run off. Legislation and policy can be used to ensure that measures such as these are adopted on a more widespread basis. Water companies have a particularly important part to play in reducing the loss of water through leakages. The incorrect use of sanitation is also a prevailing issue that must be addressed as it causes river and sea pollution of coastal habitats and marine life through sewage expulsion. Using sewage for biofuels could be an effective method of preventing sewage being directed into water courses.



On a national scale, the over-extraction of water from ground sources is not sustainable and must be addressed. The Environment Agency has highlighted the threat of running out of water in the imminent future. There is a need for more sustainable reservoirs which can make a huge contribution to water supply and management.

With more people living in cities than ever before, urban air quality has become a serious concern. Pollution is particularly damaging to the health of children. Exposure to vehicular air pollution during pregnancy or in the early years has been linked to delays in cognitive development. It is important to note that air pollution is an issue not only in relation to health and wellbeing but also inequality: the most polluted urban areas tend to also be the areas with the lowest property values.

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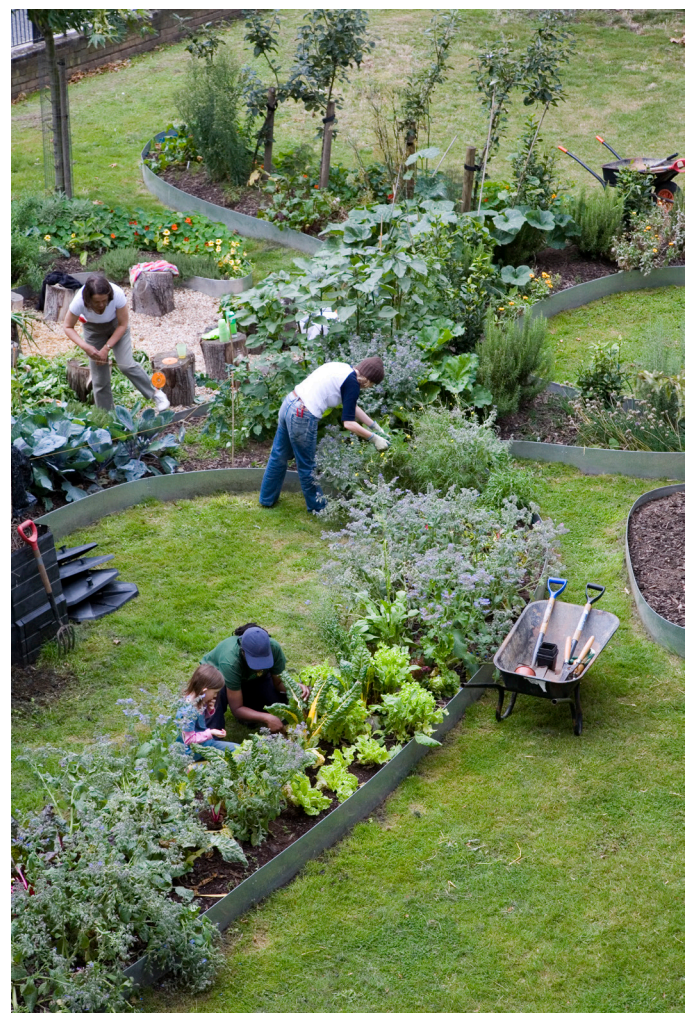
**“We need to be more resourceful in the use of water in this country. We must retain and save water for periods of drought.”**

Bridget Snaith

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Design Council, with its holistic approach to the design of places, products and processes, as well as its focus on policy is well-placed to address the current challenges UK cities and local authorities are facing because of air pollution. As our CEO, Sarah Weir said in her recent message supporting the new air pollution programme of the Guy's and St Thomas' Charity:

*“There is a pressing need to use the evidence we already have and overcome the structural and infrastructural, economic and political barriers that have been impeding our ability to improve air pollution. Our politicians and built environment professionals must be ready to listen to their communities' concerns and take decisive action to address this major health issue.”*



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# The circular economy

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Many of our interviewees pointed to the role of design in supporting a shift to a circular economy as the preferred response to the challenges associated with the use of scarce resources and waste disposal. A circular economy is one in which resources are kept in use for as long as possible with maximum value being extracted from them. Then action is taken to recover and regenerate products and material from them, significantly reducing the volumes of waste that require disposal. This has implications for manufacturers, retailers, consumers, councils and the recycling industry. It has the potential to reduce waste, boost productivity and reduce the impact of the environment.

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Design has a major contribution to play in helping the shift to a circular economy. Sophie Thomas, for example, pointed to the ability of designers to think both at a system-wide level and then deep dive to look at a particular product.

She added:

*“This is a great skill to have when you’re thinking about sustainability and the circular economy because you can alternate between different scales.”*

Sophie Thomas argues that it is important to think about systems design:

*“Rather than simply designing a product, you are actually designing a system through which the product might get to the customer and then back to a business where it is recovered or recycled.”*

This, she says, will require more thought to be given to what happens once a product has been bought and beyond its useful life.

*“Many designers’ thinking stops at the point a product is manufactured or bought. We are currently at the beginning of a journey. A lot more can be done in this space.”*

Simon Widmer, Design Network and Creative Lead at the Ellen Macarthur Foundation made a similar point, stressing the contribution that design can make in creating products and services that fit within their surrounding eco-systems. This includes taking into consideration what happens to products after their use phase at the design stage.

This, he argued, would draw on the user-centred nature of the design process, creativity and genuine systems thinking. This, he pointed out, requires design to foster an integrated approach:

*“It is essential that we drive systemic change, that we don’t have fragmented initiatives that are not co-ordinated. The danger of fragmentation is a key challenge.”*

Rebecca Earley, Co-Director of the Centre for Circular Design, identified the clothing and textile industry as one in which the concept of the circular economy is particularly relevant. She pointed to the need to achieve a balance between choice in clothing, cost and the need for a more sustainable approach. She sees design as having a key role to play in reducing over-consumption without damaging the quality of the experiences that are associated with fashion and clothing.

*“Design can help to tackle some of the barriers to recycling, including confusion about how to use the recycling infrastructure and about what materials can be recycled and how.”* Jo Rowan, Associate Director, Priestman Goode.

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**“Rather than simply designing a product, you are actually designing a system through which the product might get to the customer and then back to a business where it is recovered or recycled.”**

Sophie Thomas

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# Designers, clients and the public

An important theme running through the interviews is the need for developers, manufacturers and service providers to be confident that their customers, the public, will buy or use sustainable products and processes. This is inextricably linked with the aspiration that it should be easy to act in a sustainable way and preferably easier than acting in an unsustainable way. The design process, which engages both clients (manufacturers, developers, councils) and the public (consumers, users, residents) provides a tool for addressing these issues.

*“Design has an important part to play in helping to develop new forms of production and consumption, new business models and new community systems. We need to make sustainable products and processes more desirable, easier to use, more attractive.”* Chris Sherwin, Director, Reboot Innovation

*“There is a real challenge about how we make sure that design is a fundamental part of the process from a commercial point of view. We need to get to a situation where consumers are demanding better design to deliver sustainable living.”* Darryl Evers

*“There is a fear among some clients that sustainable solutions may not be accepted by the public.... Change has to be attractive and culturally appropriate. It should be easy for people to understand how life can improve by following sustainable practices. Solutions developed through design processes have to be both accessible and adaptable.”* Bridget Snaith

*“The aim must be to find ways of designing interventions or products so that they are easy to use for people. It’s not about trying to change people’s minds but designing ways of living more sustainably more easily.”* Kate Burningham

There are signs that this message is beginning to get traction.

*“There is a greater interest and appetite from people to address sustainability issues now, both at corporate and consumer level. If we want long-lasting positive impact, we need change in both the supply and the demand of sustainable products and services.”* Jo Rowan

Choice was identified by one interviewee as an important driver of change for designers to exploit.

*“Some efforts focus on educating citizens and users telling them what they should do. However, it’s important to look up-stream at the design stage and re-design the solutions that people can choose from.... Designers have the power to reimagine attractive products and services that fit within systems that really work in the long-term and that are regenerative.”* Simon Widmer

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**“There is a fear among some clients that sustainable solutions may not be accepted by the public.... Change has to be attractive and culturally appropriate.”**

Bridget Snaith

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## Design's contribution to sustainable living

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The shift to a circular economy, the development of sustainable communities and homes, action to tackle floods and water shortages, the importance of engaging producers and users in the process: these are all complex tasks. All our interviewees were confident that designers and the design process has a significant contribution to make to each of them.

Several interviewees pointed to aspects of the design process that they felt were particularly helpful in relation to sustainable living.

*“Our design is insight-led. We collaborate with clients on comprehensive projects that look not only at how we improve products and services, but how the companies themselves operate. Unlocking these key insights enables us to focus on human-centric design solutions that enhance user experiences and encourage sustainable behaviours at corporate and individual level.”* Jo Rowan

*“We need to use the design approach to support systemic change on a cross-industry level – bringing stakeholders together around a positive vision – in order to meet the challenges involved in sustainable living. The design process can help to look at the system as a whole and identify intervention points for systemic change.”* Simon Widmer

Constructive challenge, which is a feature of processes such as design reviews, was highlighted by two interviewees as an important contribution.

*“We need to get into the habit of reviewing designs so that designers can challenge each other and collaborate to provide optimal solutions.”* Bridget Snaith

*“It’s important to bring a range of expertise to design reviews. Our industry doesn’t operate in a silo, we need to work with engineers, manufacturers, suppliers, marketers to ensure design solutions are fit for purpose.”* Jo Rowan.

Finally, some interviewees pointed to relevant skills that designers have or could acquire to support the role of design in this area.

*“There is real potential for the design approach, for someone skilled in facilitating a process sitting in the middle of all the specialists with a part to play in developing sustainable solutions.”* Chris Sherwin

*“We need to look at how to reduce carbon within our ingredients as a designer. We need to be training or encouraging designers on how to make sustainable choices on what materials to use.”* Sophie Thomas.

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*“We need to use the design approach to support systemic change on a cross-industry level – bringing stakeholders together around a positive vision – in order to meet the challenges involved in sustainable living. The design process can help to look at the system as a whole and identify intervention points for systemic change.”*

Simon Widmer

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# Design Council's contribution to sustainable living

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Design Council has an important convening role, bringing together the people and organisations that need to work with each other on the complex social, political, economic and environmental challenges associated with sustainable living: government, private corporations, the financial sector, civil society, universities and science and technology. The design process has the potential to support the types of changes that are required to enable sustainable living: new ways of working, new forms of governance, reformed procurement processes and new economic models.

Design's contribution to sustainable living and the delivery of the Sustainable Development Goals is reflected in Design Council's work. For example, over the last six years, our [Design in the Public Sector](#) programme, in partnership with the Local Government Association, has supported over 90 teams of local public sector staff and their partners to deliver positive and sustainable change by developing innovative new products and services. Through our work on [healthy place-making](#) and inclusive environments over the last 20 years, we have encouraged built environment professionals to put people first and create places and neighbourhoods that allow people to live healthier and more sustainable lives.

On behalf of the Ministry of Housing, Communities and Local Government, the Department for Business, Engineering and Industrial Strategy and Homes England, Design Council is currently working in partnership with BRE, MOBIE and RIBA Competitions to develop a new vision for the [home of the future](#). This work confirmed the public's desire for homes that clearly respond to a climate emergency using sustainable design and construction, providing access to green space and encouraging walking and cycling.

Design Council is also part of the Government's [High Streets Task Force](#), supporting local authorities and community groups to transform their high streets and town centres, and create more liveable and sustainable places for all. In the future Design Council's pioneering [Design Economy](#) research will be seeking to move beyond just measuring economic value of design to include the environmental impact of design. Our commitment to embracing sustainability in all its complexity is clear. We now look forward to working with current and new partners across public and private sectors to ensure it is embedded meaningfully into what we do, now and well into the future.

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