

Sourcing responsibly

A market insight into sustainability attitudes and practices



FOREWORD

As a UK-GBC Gold Leaf member, Tata Steel has made a public commitment to integrate sustainability in to its business operations, and to demonstrate its commitment by leading and advocating practices that are environmentally responsible, ethical and fair.

As one of the first organisations to apply BES 6001 for responsible sourcing, Tata Steel has already shown willingness to lead the way in its own organisation. UK-GBC is highly supportive of this report, as demonstration that Tata Steel is committed to understanding and furthering sustainability principles, specifically responsible sourcing, throughout the construction industry.

Achieving a sustainable built environment will require effort and collaboration from every part of the supply chain, and so we welcome an insight driven approach to understanding the barriers and opportunities in sustainable sourcing. UK-GBC believes its members and its team have an important role to play in both raising awareness of sustainable solutions, and articulating the business case for sustainable products and procurement.



Julie Hirigoyen

Chief Executive Officer, UK Green Building Council



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TATA STEEL AND RESPONSIBLE SOURCING

Responsible sourcing has become an important issue on the sustainability agenda in the construction industry.





Building designers and contractors have become increasingly aware of the provenance of the materials they use in construction projects; they want to be confident that their sustainability efforts are backed by the products they use. As one of the world's leading steel producers, Tata Steel has supported this requirement through continuous improvement and our commitment to managing our operations and supply chain responsibly.

Tata Steel was the first and remains the only steel producer to acquire the BRE responsible sourcing standard BES 6001 for a complete range of construction products manufactured in the UK.

We are committed to the design of more sustainable products, which are lighter, more durable and produced with fewer resources.

Responsible sourcing forms a key part of our **Life Building** approach, which takes a holistic view of implementing sustainable practices in construction, and inspires us and our customers to think beyond now.

We encourage the industry to focus on life cycle, with a view on how new construction and refurbishment can benefit a brighter future that creates prosperity, not problems. To drive this forwards, we focus on three key areas.

Collaboration, through more sustainable building design practices and early vendor involvement enables greater knowledge sharing and leadership. This then supports industry growth through higher building ratings, which then leads to greater experience that helps create more appealing and engaging spaces in an environmentally responsible way.

This approach makes steel stand out as a material offering valuable sustainability benefits and an excellent return on investment. As steel can also be upcycled into a higher performing material, this offers enhanced quality and increases its environmental value.

Tata Steel is also committed to investing in breakthrough technologies. We are a proud member of ULCOS (Ultra-Low CO₂ Steelmaking), a pioneering partnership of 48 European organisations committed to a 50% reduction of CO₂ emissions in steel production by 2050.

Our UK manufactured steel construction products are certified to 'Very Good' category under BES 6001, therefore, architects, engineers and contractors can be sure, when engaging Tata Steel in their supply chain, that our products have been produced sustainably.

This also enables specifiers to secure maximum credits under the Responsible Sourcing of Materials section of other standards, such as BREEAM.

EXECUTIVE SUMMARY

As we become increasingly aware of the continued environmental impact of modern society, businesses around the world are placing greater emphasis on sustainability in order to become more socially responsible, take responsibility for the environmental impact of their operations and reflect their corporate values. Given the importance of the construction industry in particular, and its impact on the world around us, there is a broad range of opportunities for companies throughout the supply chain to enhance, and therefore benefit from, improved sustainability practices that support a more sustainable future for the industry and society.



In working towards a more sustainable future, steel plays a vital role.

Specifiers need to use materials that offer critical benefits to a building's performance and longevity, such as strength, versatility and durability. Products which also feature highly on the industry's sustainability agenda, offering higher ratings and demonstrating companies' environmental actions, are putting themselves above their competition. Offering the capabilities to meet these criteria, steel is an essential material in the construction sector. Its use goes beyond typical roof, floor and wall products and forms a foundation that brings our buildings and cities to life. In working towards a more sustainable future, steel plays a vital role.

Tata Steel commissioned a survey to gain insight into the construction industry's views and attitudes regarding sustainability and, more specifically, responsible sourcing. This report reveals the findings, evaluates the impact on material selection and specification, and assesses what this means for the UK construction industry.

There is real opportunity for construction product manufacturers to provide support and guidance in the specification and selection of materials.

The responsible sourcing survey was a quantitative study conducted via email using Building and Building Design (BD) databases, and completed by architects, consultants, contractors, developers, engineers and building inspectors.

Overall, the results indicate that sustainability plays an important role for many businesses in the construction sector and for most people working throughout the supply chain. Responsible sourcing was ranked highly across a number of responses, with BES 6001 the second most recognised related standard. This highlights a good presence and awareness of responsible sourcing within the sector, as well as an opportunity to drive this aspect of the sustainability agenda further.

An interesting outcome were the high scores of financial burden as an obstacle to improving sustainability performance, and values/ethics as a driver behind specifying or purchasing responsibly sourced materials. This reveals a potential compromise the industry may feel it needs to make in order to balance the two factors, but also ties into the wider debate of the true cost of sustainability. The results point towards the need for increased awareness of how to apply sustainable technology and life cycle thinking within modern building design and construction, and identify which options add the greatest benefit.

The report demonstrates that, as businesses across the construction industry continue their efforts to implement sustainable practices, there is real opportunity for construction product manufacturers to provide support and guidance in the specification and selection of materials. This, along with focus on responsible sourcing and early vendor involvement, will help designers to achieve the most sustainable solutions.

RESEARCH METHODOLOGY



Tata Steel conducted a survey in March 2016 to gain an insight into and a greater understanding of current sustainability attitudes and practices across the construction industry.

The survey questions were developed by Tata Steel with a specific focus on capturing valuable insights relating to responsible sourcing, covering areas such as influencing factors, standards and levels of adoption. A key aim of the survey was to acquire an understanding of the maturity of the market in relation to sustainability and responsible sourcing, as well as drivers behind, and obstacles to, improved sustainability performance.

The results will also help us to improve our approach to market on sustainability issues, identifying potential knowledge gaps or opportunities to increase awareness and understanding of the benefits of responsible sourcing.

The survey was distributed via direct emails from Building and Building Design (BD) databases.

The results provided us with tangible data from people in roles throughout the supply chain, equipping Tata Steel with a cross-market perspective of current attitudes towards sustainability.

PLEASE CONFIRM
YOUR ROLE IN
CONSTRUCTION

HOW MANY
PEOPLE WORK
IN YOUR COMPANY?

THE WHO, THE WHAT AND THE WHERE

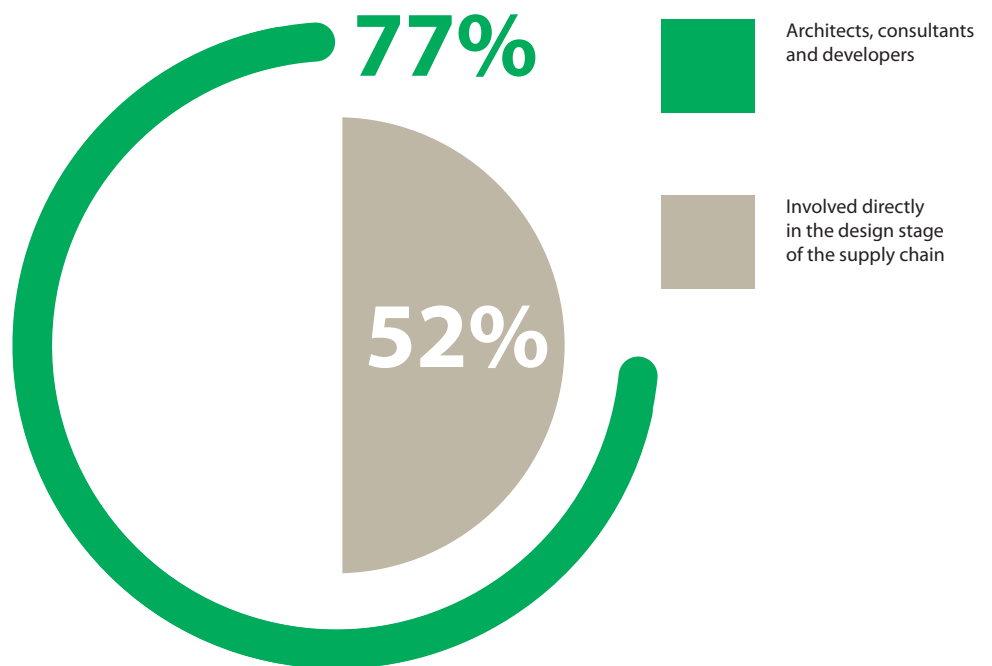
Data showed that there was a good proportional split across the respondents' company sizes. Ranging from 1-10 employees up to 5,000+, the survey results provided a balanced representation of the construction supply chain.

Over half (52%) are involved directly in the design stage of the supply chain;



390 respondents.

The survey received 390 responses with over half (52%) involved, 77% were architects, consultants and developers, while others included building surveyors, engineers, planners, manufacturers and installers.

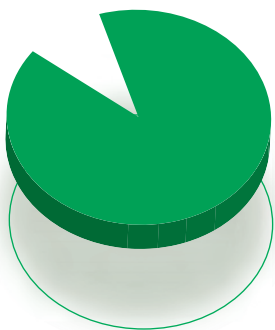


SURVEY RESULTS AND EVALUATION



1. Do you have, or do you plan to have, a sustainability plan/strategy?

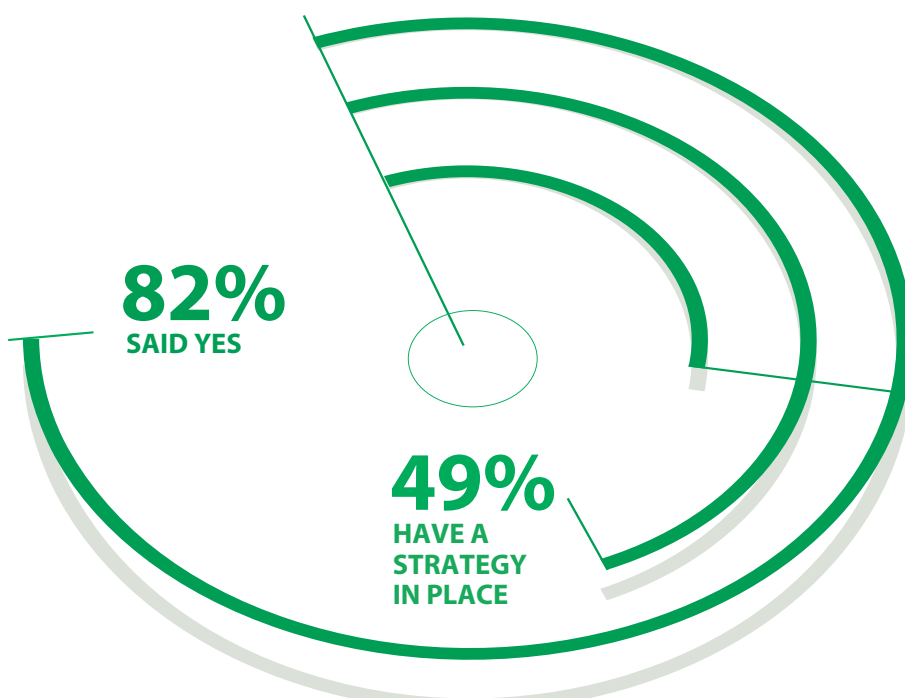
90%
OF CONTRACTORS
SAID YES



82%
SAID YES

49%
HAVE A
STRATEGY
IN PLACE

33%
HAVE A
STRATEGY
PLANNED

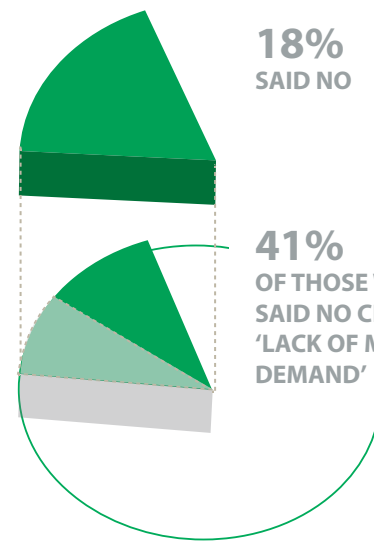


The responses to this initial question were extremely encouraging, with over 80% of respondents answering 'yes' – nearly half (49%) have a sustainability strategy in place and 33% have one planned. This demonstrates the importance of sustainability for the construction industry, particularly for contractors, of whom 90% responded favourably – the highest 'yes' response of all roles in the supply chain.

Of the 18% of respondents who don't have a sustainability strategy in place or planned, 80% cited 'lack of market demand' and 'no legal obligation' as their reasoning behind it, while others mentioned 'lack of leadership buy in' and 'lack of expertise'.

18%
SAID NO

41%
OF THOSE WHO
SAID NO CITED
'LACK OF MARKET
DEMAND'



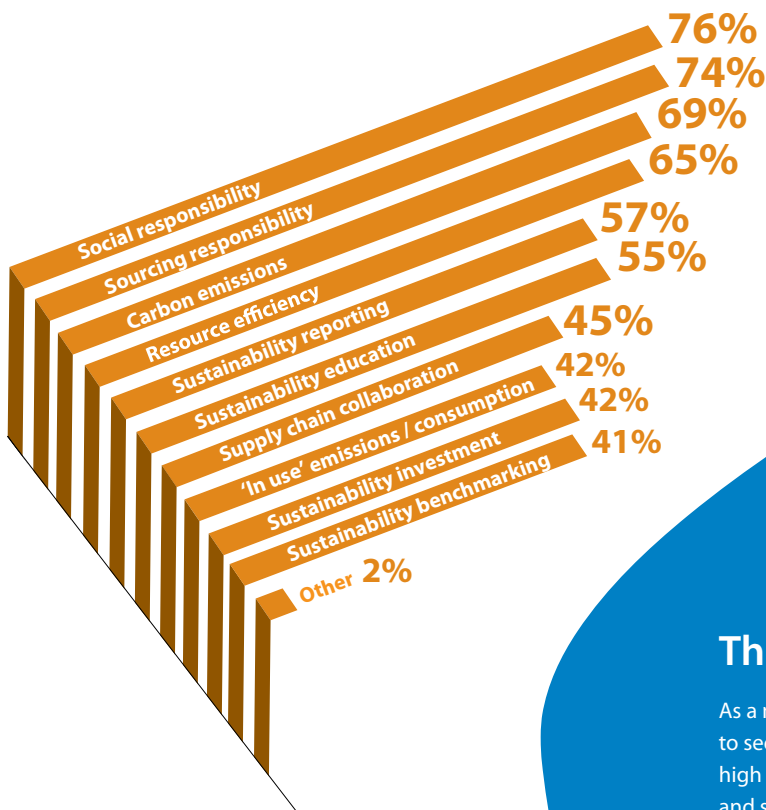
2. In terms of your organisation's commitments to sustainability, which themes are included?

75% of respondents' companies have made commitments to sustainability performance. 'Social responsibility' came out on top as a key theme, with 76% of the population selecting that criterion. This result comes as no surprise. For architects, the social impact of space is top of mind, with considerations about how the building will be used and how it can perform most efficiently being key to its design. While for contractors a key focus is limiting the effect of the build on the local community.

While social responsibility is an architect's primary focus, it is the other factors that help achieve this.

It is therefore unsurprising to see high response rates to themes such as carbon emissions, resource efficiency, sustainability reporting, education and, in particular, sourcing responsibly.

It is clear that this latter theme is high on the industry's agenda, ranking second in the list. This is representative of the growing role that provenance plays in the marketplace, with product selection based increasingly on an ethical approach.



Respondents were able to choose multiple options, so the percentages reflect the number of answers as a proportion of the number of people who responded to the question.

The view from Tata Steel

As a manufacturer of BES 6001 certified products, Tata Steel is pleased to see so much emphasis placed on responsible sourcing, with other high scoring themes including carbon emissions, resource efficiency and sustainability reporting. Our investment in breakthrough steel making technology and the expansion of our responsible sourcing certification and environmental reporting mean that customers are assured of responsible supply from Tata Steel, and can benefit from increased building certification ratings for their building asset.

3. Rate the importance of sustainability themes to your organisation.

While it is perhaps unsurprising that ‘health, safety & wellbeing’ and ‘community/social responsibility’ finish in the top three, it is encouraging to see ‘responsible sourcing’ high on the agenda, ranking fourth out of the eleven sustainability themes. This is a positive result and an indication of the growing importance of this factor to businesses across the industry.

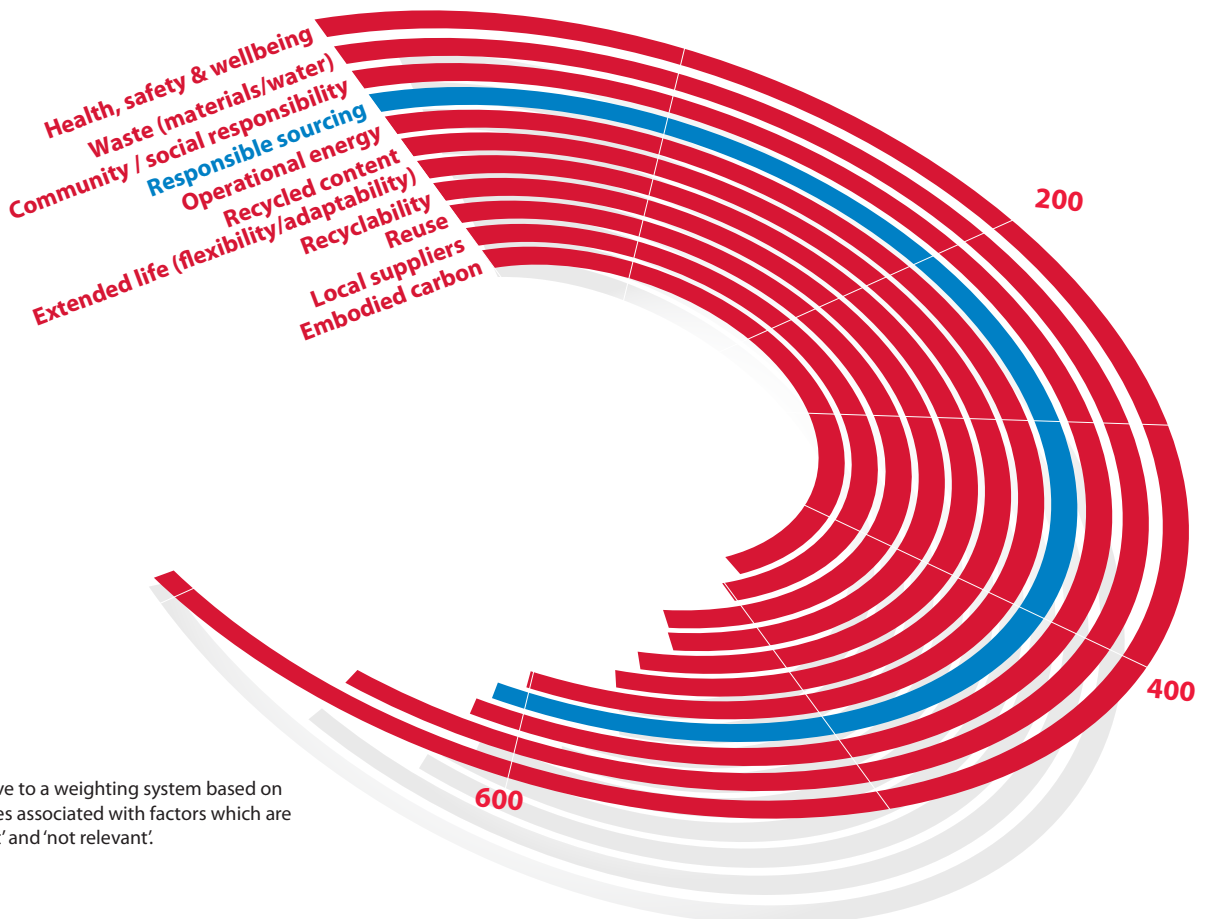
‘Recycled content’ and ‘recyclability’ were close scoring themes, presenting an opportunity to highlight the differentiation between the two and reinforce the benefits of recyclability over recycled content.

Less recognised as a key theme, having been ranked fairly low, ‘Reuse’ also offers opportunity. This is certainly the case in the context of steel, whose reuse potential has far-reaching benefits, such as cost savings, reduced emissions, enhanced speed of construction, minimised waste generation, and consistently high quality.

The view from Tata Steel

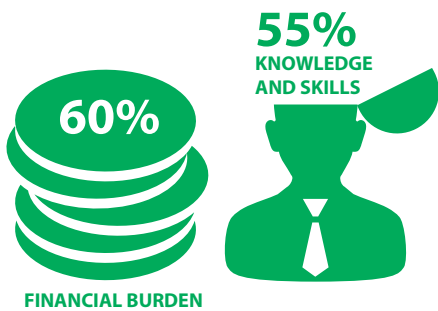
While ‘recycled content’ is important in sustainability discussions across many materials, the case is different for steel. At the end of its life, almost 100% of steel is recycled. While the development of higher strength steels has led to reduced weight products and systems, offering significant advantages for the ‘in use’ phase of a building’s life, steel offers benefits throughout the life cycle and will, as a minimum, be recycled at the end of its life. What is key, therefore, is not recycled content, but the need to ensure that products and systems are designed to be recyclable, with manufacturers thinking beyond ‘design and build’ into the ‘deconstruction’ phase. This requires a material with adaptability and flexibility to ensure recycling or reuse, and steel offers the versatility to meet these needs.

Steel can also be recycled without being downgraded and is one of the few materials that can be recycled to a higher quality or higher value purpose than its original use. Recyclable materials such as steel play an important role in the sustainability of buildings, which is vital in the context of responsible sourcing and a key focus area at Tata Steel. It is important to ensure that, in assessing any material for construction use, the entire life cycle is considered, including end of life scenarios. Only by taking a life cycle view will optimum resource efficiency be achieved.



Scores are relative to a weighting system based on decreasing values associated with factors which are ‘critical’, ‘relevant’ and ‘not relevant’.

4. What do you consider to be the main obstacles to improving sustainability performance in the built environment?

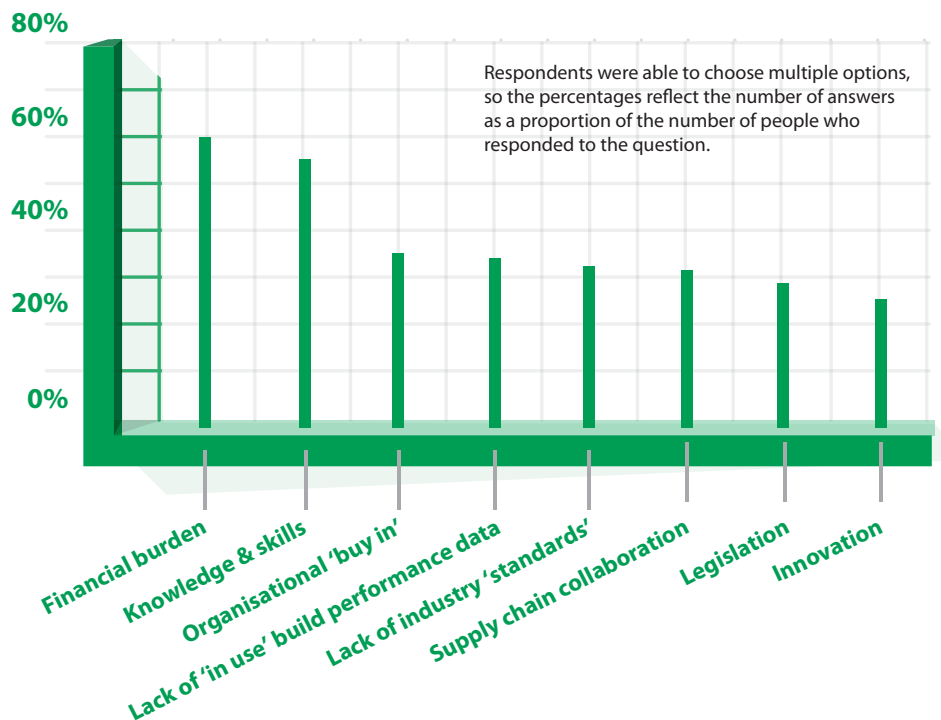


Receiving 60% of responses, 'Financial burden' was considered the leading obstacle to improving sustainability performance. Concern over the potential cost that sustainable measures could incur may derive from a lack of understanding of the benefits that total life cycle cost or a building's 'in use' performance can generate. This is supported by the high score of 'Knowledge and skills', ranked second at 55%, which reinforces a potential lack of training or provision of knowledge regarding sustainability within the industry. In light of the increasingly important role that sustainability plays, this gap will likely be filled over the coming years as people share experience and insight, and the industry evolves. By enhancing knowledge and continuing to improve industry best practice, these changes will filter through to standards and legislation, helping to raise the sustainability benchmark for future construction projects.

'Lack of 'in use' build performance data' was ranked by 34% of respondents as a further obstacle. Building design can only improve if the industry has access to use data to understand how people interact with and use the space. The results allude to a wider issue regarding the absence of this information, and demonstrate the need to place more importance on the value that this can bring to construction projects.

Building Information Modelling (BIM) plays a key role here. BIM level 2 offers numerous benefits both during the design stage – via coordinated communication between teams and 3D models – and for facilities management thanks to a wealth of digital product data.

However, it is the move to BIM level 3 that will really start to tackle this issue. Whilst Level 2 BIM seeks to enable the operational improvement of a building, level 3 BIM will endeavour to maximise the functional efficiency of a building.



The view from Tata Steel - 'In use' performance

Tata Steel see real value in this move towards building performance improvement. By utilising sensor technology and the Internet of Things (IoT) real, 'in use' performance data can be recorded allowing buildings to be monitored and adjusted to deliver tangible results for building owners. Whilst the overall performance of the building will be the focus, construction product companies can use the technology to record and analyse over time the real performance of their products. This will not only drive product development but

also allow real comparative data to be used to give construction clients confidence that they will get the performance that they are paying for.

In the future, 'in use' data will be the key tool for construction product companies to demonstrate quality differentiators and real performance. Riding the wave of these new technologies will allow product manufacturers to move towards offering energy saving solutions rather than unverified and intangible product characteristics.



The view from Tata Steel – Life cycle thinking

There appears to be a perception within the construction industry that sustainable procurement is costly to a business. The evidence also suggests that a life cycle view is not being considered. Sustainable development in the built environment makes business sense, for example:

- The reduced weight of a steel component through using higher strength steels can enable further design freedom and, therefore, a potential increase in asset utilisation or value.
- Excellent air-tightness and insulation properties of a wall panel or the renewable energy source integrated into that panel can generate large reductions in the operating costs of a building.

In many cases, the life cycle benefits and operational and disposal cost savings will outweigh the initial capital expenditure.

Working with a sustainability-focused supply chain partner such as Tata Steel from the outset not only gives you access to our expertise and technical guidance, but also ensures that a building's life cycle is front of mind in order to optimise resource efficiency and reduce the total cost of ownership for a given project.

At Tata Steel, we strive to work with customers during the design stage of a project, forging a close partnership from the start to provide technical assistance and continuous support throughout. Decisions made in the design phase often have a major impact on product quality, life cycle and cost, so this stage requires effective coordination with suppliers to increase efficiencies. Early vendor engagement provides a real advantage to architects, main contractors and engineering designers, helping to optimise projects and leverage the benefits of different sustainable solutions in the supply chain.

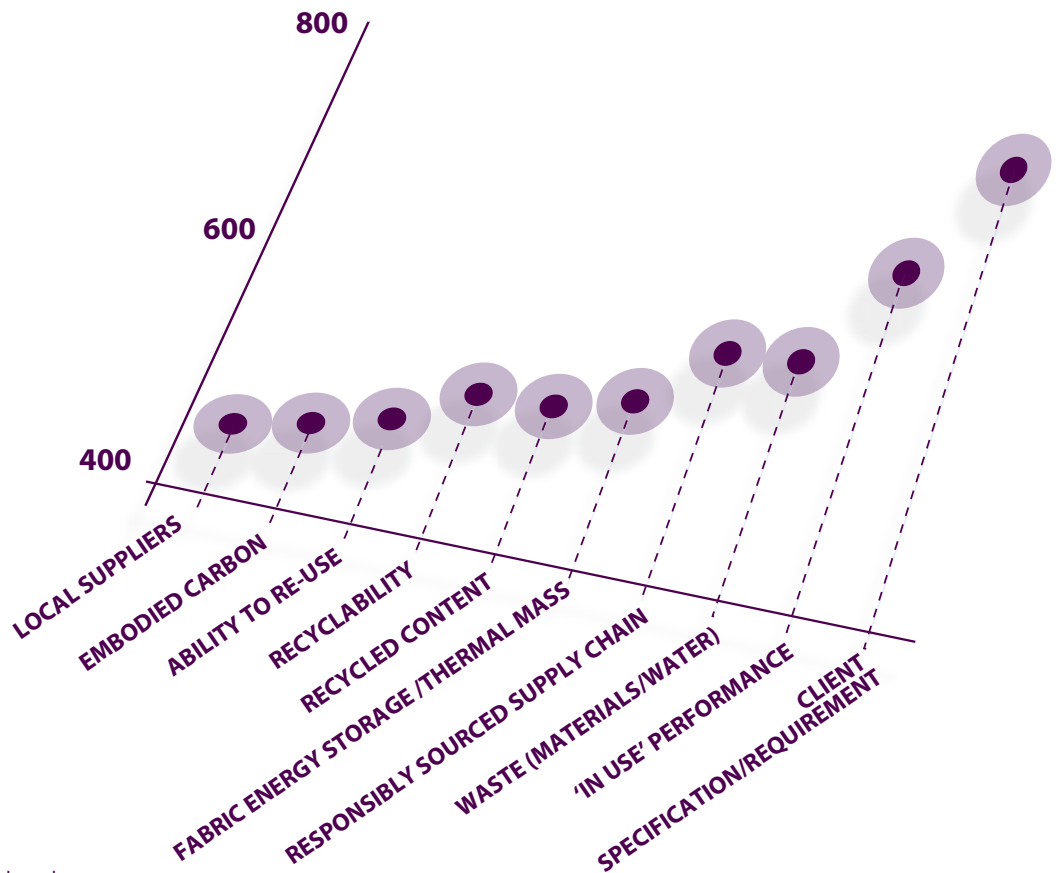
5. When considering the choice of products or services in the built environment, can you rate the following factors?

Receiving the most 'critical' responses and the least 'not relevant' responses, 'Client specification/requirement' dominates the results, demonstrating a clear need to impact specification to drive supply chain adoption of responsible sourcing.

This is closely followed by 'In use' performance, reflecting the understanding of the respondents in the importance of not just constructing a building but also in operating it sustainably.

Responses of 'Recyclability' and 'Recycled content' were fairly matched, which is encouraging and demonstrates an awareness within the industry of the importance of recycling and the value of considering this factor in construction projects. There is now the opportunity in the steel industry to drive the recyclability agenda and emphasise the benefits of this over recycled content, as discussed on page 12.

'Waste' and 'Responsibly sourced supply chain' also ranked closely though inconsistently, with the latter receiving more responses than 'Waste' under both the 'critical' and 'not relevant' ratings. Overall, both factors scored highly, which is a positive result for the steel industry, as the material is fully recyclable, generates minimal waste and can be certified to BES 6001 for responsible sourcing.

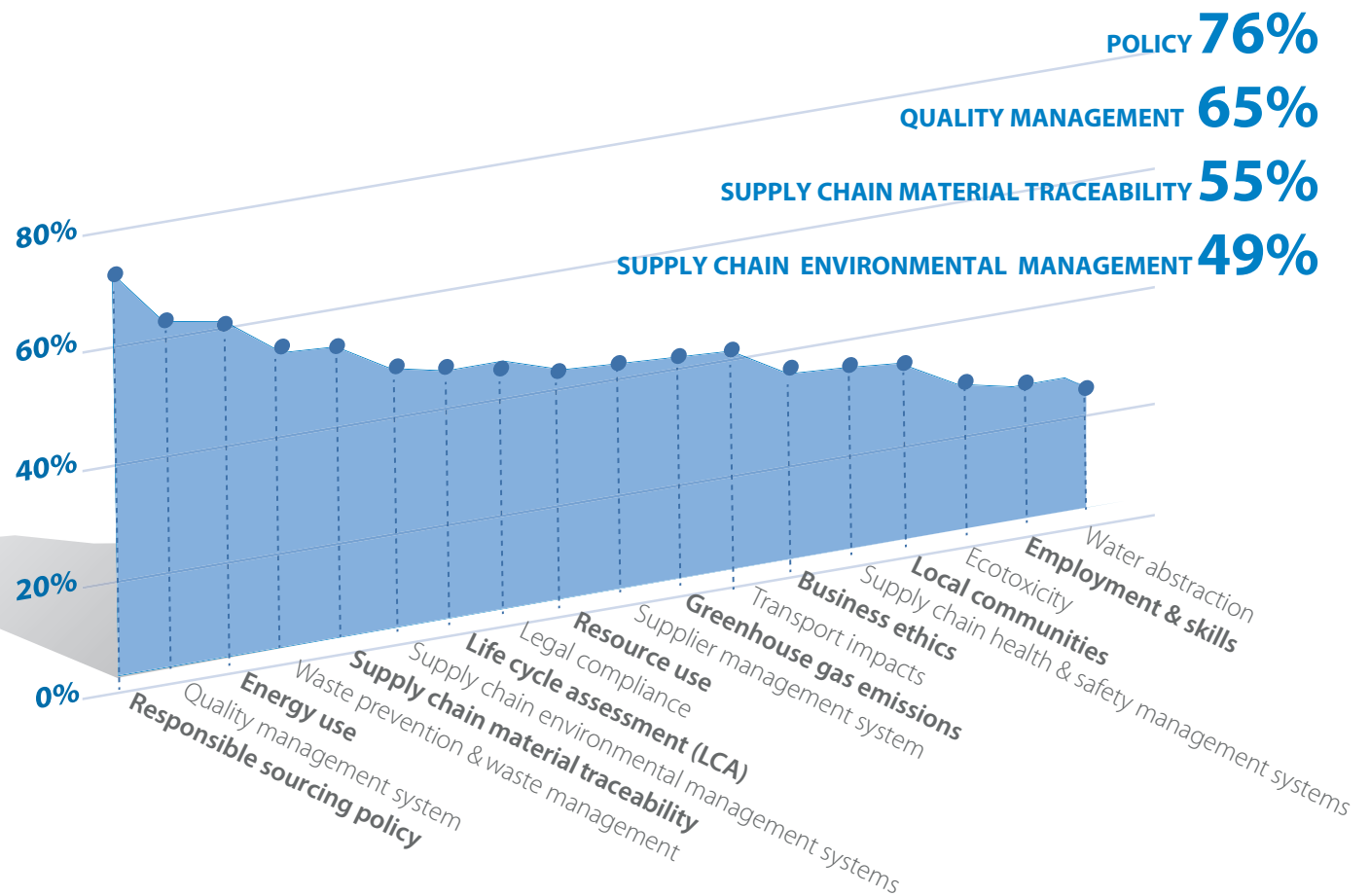


Scores are relative to a weighting system based on decreasing values associated with factors which are 'critical', 'relevant' and 'not relevant'.

6. Highlight the items you understand responsible sourcing standards such as BES 6001 encompass for a supplier wishing to achieve certification.

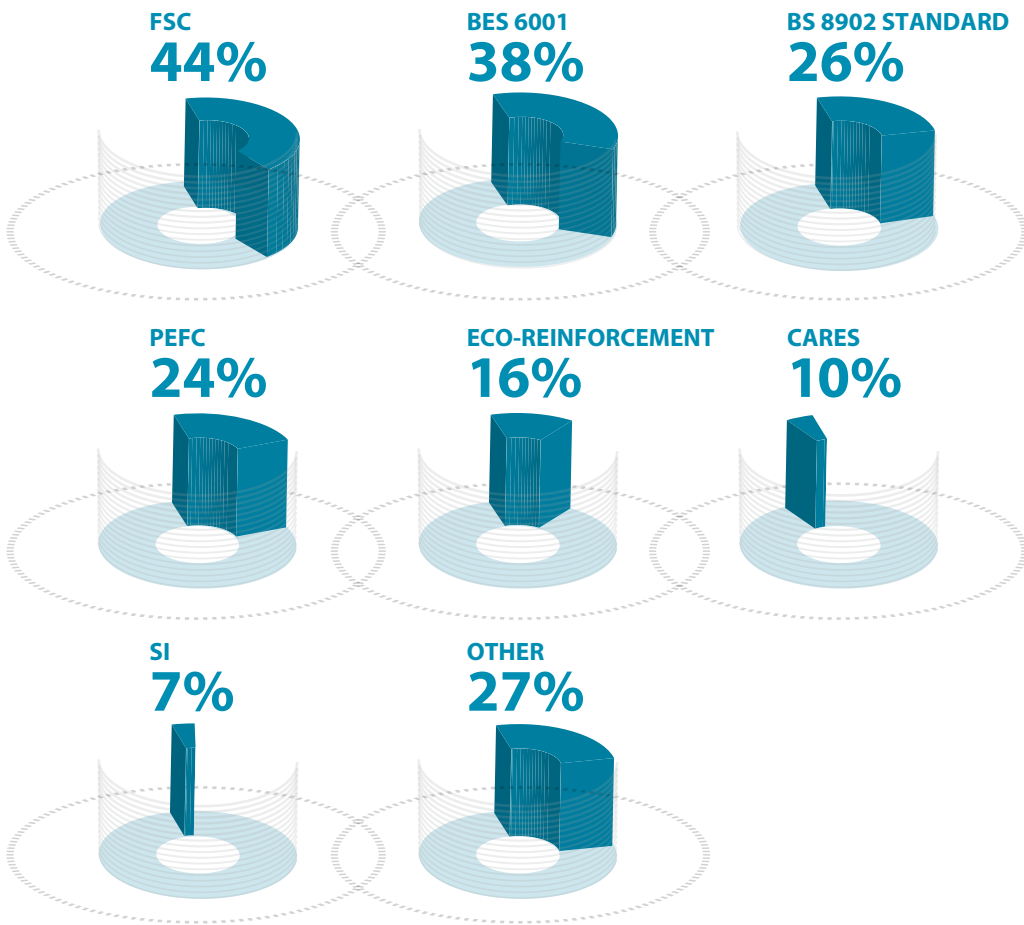
The results here highlight the need for further education in the market as to what responsible sourcing actually means. The majority of the respondents here understood it to focus on policies and energy used in manufacture, whereas in reality all the listed criteria form part of responsible sourcing standards.

The breadth of the themes can present a challenge to companies in obtaining certification under standards such as BES 6001, particularly for complex organisations with long supply chains like Tata Steel.



Respondents were able to choose multiple options, so the percentages reflect the number of answers as a proportion of the number of people who responded to the question.

7. In terms of responsible sourcing standards, do you use/have experience of the following?



With identification from nearly half of the respondents (44%), Forest Stewardship Council (FSC) was the clear leader, which is not surprising due to the global footprint, ubiquity and longevity of the organisation. The high score (38%) of BES 6001, ranked second in the list, highlights strong awareness of the standard which was developed to provide independent certification for manufacturers supplying products for the construction industry.

12% of respondents selected 'Other', specifying Government Flexible Framework, NaturePlus, Blue Angel, Environmental Choice NZ, Global GreenTag, Declare, Greenspec UK, LEED, BREEAM and ISO 14001. While the latter three are not responsible sourcing certifications, it is encouraging to see awareness of such a broad range of standards and associations relating to sustainability.

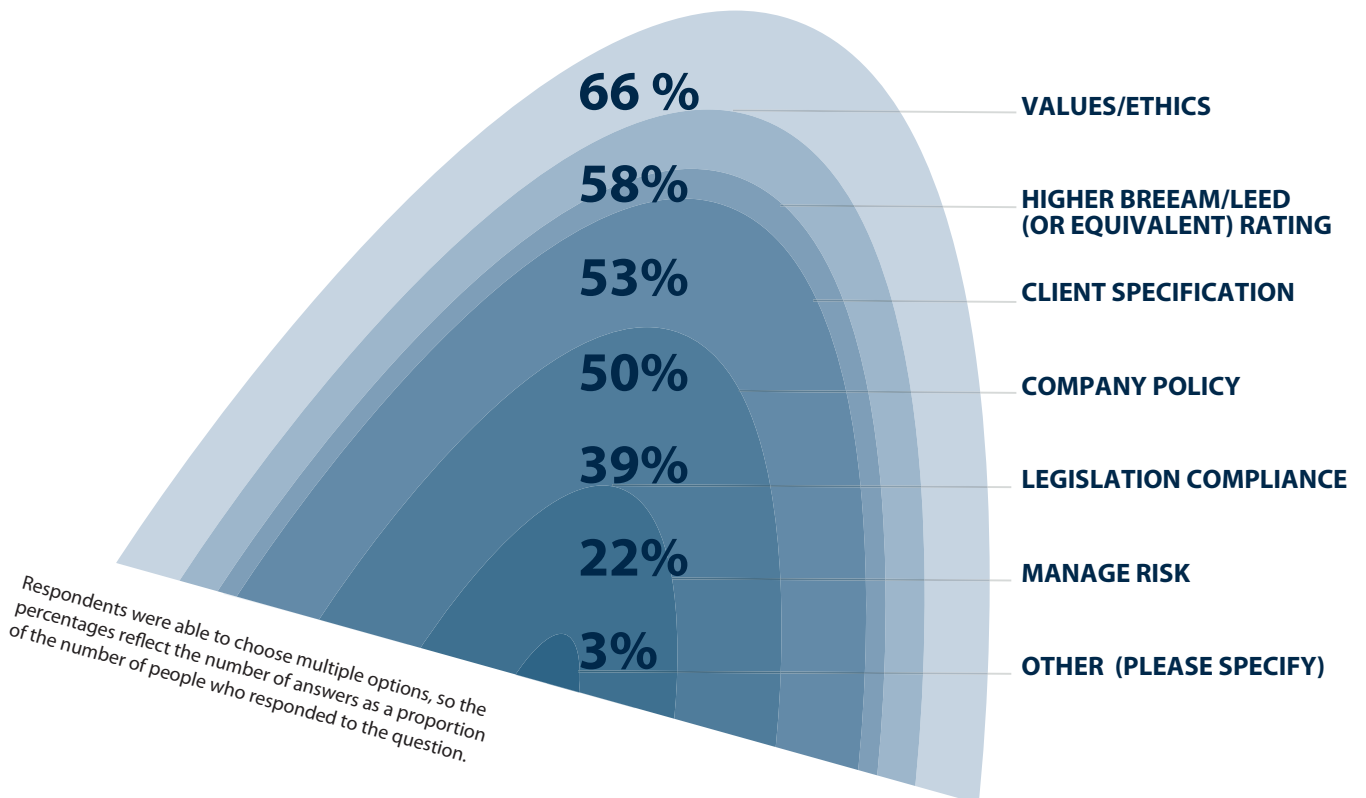
Respondents were able to choose multiple options, so the percentages reflect the number of answers as a proportion of the number of people who responded to the question.

8. What causes you to specify or purchase responsibly sourced materials?

'Values/Ethics' topping the list with two thirds of the respondents is a positive sign, and corresponds with the results of question two, where 'Social responsibility' was the most commonly featured theme in businesses' commitment to sustainability performance. It is interesting to consider this outcome in the context of question four's results, where 'Financial burden' was deemed the primary obstacle to improving sustainability performance.

Companies may be struggling to balance their sustainability values and beliefs with the perceived cost of investing in social responsibility measures. This connects to the need to emphasise the importance of total life cycle cost over initial capital expenditure. By highlighting the fact that sustainability doesn't have to cost more, companies can truly act according to their values and commit to specifying or purchasing responsibly sourced materials.

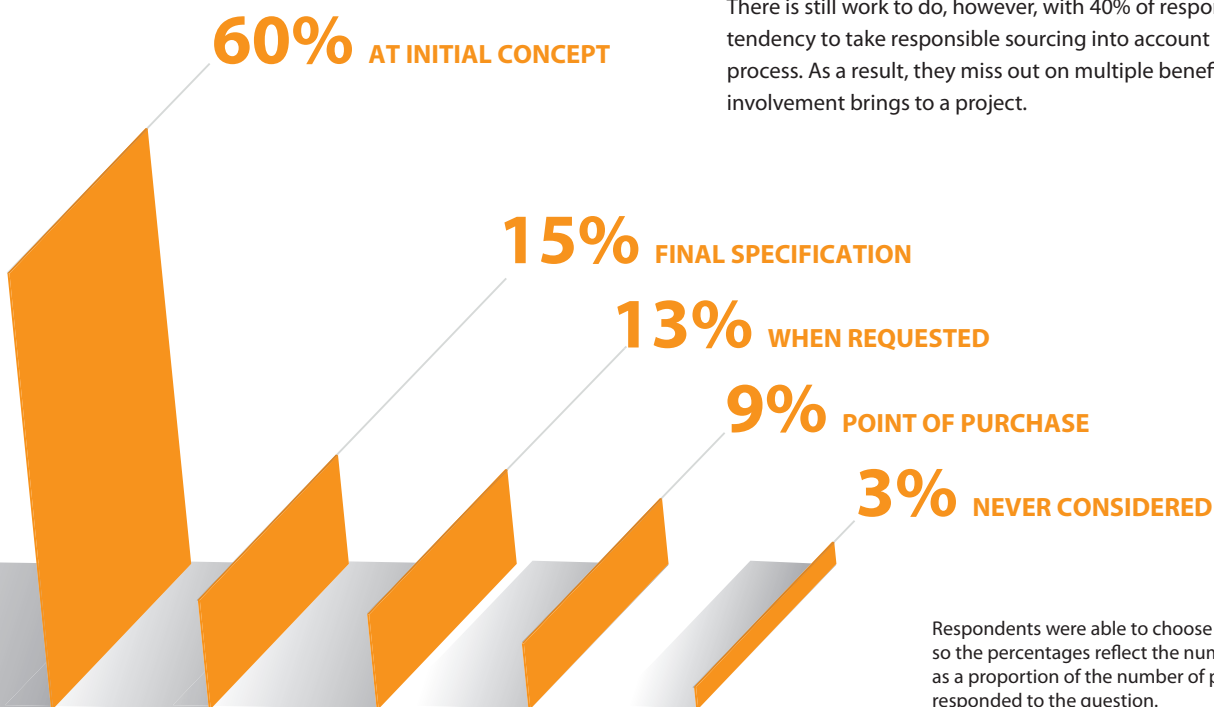
The high score of 'Higher BREEAM/LEED (or equivalent) rating', in second place with 58%, reveals an understanding within the construction industry of how using responsibly sourced materials can secure credits. Increased BREEAM and LEED or equivalent ratings are clearly a key motivator for the market when it comes to sustainability.



9. At what point/stage does responsible sourcing become important/considered for your activities?

'At initial concept' was the clear front-runner, with 60% of respondents selecting this stage, demonstrating the importance of considering sustainability in the early design phase. This is a very promising result, which denotes the significance of early vendor involvement to ensure specification of responsibly sourced materials.

There is still work to do, however, with 40% of respondents stating their tendency to take responsible sourcing into account further along the process. As a result, they miss out on multiple benefits that early vendor involvement brings to a project.



Respondents were able to choose multiple options, so the percentages reflect the number of answers as a proportion of the number of people who responded to the question.

The view from Tata Steel

To have such a strong proportion of respondents considering responsible sourcing in the initial stage is a real opportunity for the construction industry. As a manufacturer and supplier of responsibly sourced products certified to BES 6001, both we and our customers benefit from early engagement in the design process. Specifying responsibly sourced materials at this point, where the vision forms rather than at the purchase or build stage, means we can ensure that a sustainable project and higher building certification scheme ratings become reality.

Multiple crucial factors need to be taken into account at this stage to ensure that the benefits of steel are realised and that teams can optimise a building's design and fulfil client expectations. These include Building Regulations, planning requirements and client needs. Balancing these criteria can be difficult due to the (potentially conflicting) interaction of various elements of the building envelope.

Developing a ranking system for enhancements may be an effective solution to the issue. This would facilitate the evaluation of options in relation to the costs over a project's baseline estimate and a comparison with the potential payback period, avoiding additional expenses and achieving project efficiencies.

THE VIEW FROM THE MARKET

‘Responsible sourcing is the next big issue in sustainable design and development.’

In my view, responsible sourcing is the next big issue in sustainable design and development. For too long the construction industry has purchased and installed building products without knowing where they came from, how they were made, or even where the original materials came from. The first thing we need to fix as an industry is to remove the negative impacts of the materials we use, then remove the negative impact of the building itself.

Without doing the first aspect, achieving the second becomes more difficult and only patches up the problem, rather than fixing it. Companies such as Tata Steel, by adhering to recognised standards like BES 6001, show the rest of the supply chain how to take the lead in responsible sourcing. And by doing so, make designers’ lives easier by presenting them with a ready-made solution to the challenge of sourcing building products in a responsible way. The rest is up to us.

Rory Bergin
Partner, Sustainable Futures at HTA Design LLP



‘We must move beyond perceived higher costs and consider ‘life cycles’.



Steel is a global commodity and an important material for the construction industry’s transition to a more sustainable, circular economy. BES 6001 is welcomed by the industry and is recognised in many certification schemes. It helps BAM to meet client expectations and provides us with a level of comfort and assurance.

BES 6001 has made a valuable contribution to the responsible sourcing of construction products. Providing enhanced levels of credibility and assurance that environmental, ethical, social, organisational and supply

chain (including labour practices) needs and standards are met.

As the industry learns that there is no such thing as ‘externalities’. We must move beyond perceived higher costs and consider ‘life cycles’ and do all that we can to source our products responsibly.

Tata Steel’s report shows that manufacturers can provide support and guidance for designers and contractors alike. I applaud Tata Steel’s hard work in achieving BES 6001 across its highly complex supply chain.

John Hutton
Head of Sustainability, BAM Nuttall

CONCLUSION



We can demonstrate that raw materials have been sourced ethically and our steel products manufactured with sustainability in mind.

Sustainability as a whole is clearly a high priority within the construction industry, particularly at the top of the supply chain, where many contractors and architects are working to an established or planned sustainability strategy.

As part of this, responsible sourcing resonates well, with strong awareness of related standards, such as BES 6001, and the benefits that certification can deliver.

While the survey highlighted a positive industry-wide approach to sustainability and responsible sourcing overall, it also revealed areas of opportunity for businesses to improve their sustainability practices. For example, more emphasis needs to be placed on recyclability, rather than recycled content, of steel products to gain full value from a building component. Education, too, is required to fill the perceived knowledge gap and reinforce the benefits of a building's total life cycle cost, rather than viewing sustainable procurement as too costly to achieve.

Thinking ahead is also critical. Consideration of how a product will affect a building's performance and how it will be used at the end of a building's life will enable architects to meet sustainability targets, increase building certification scheme ratings and ensure optimum efficiency throughout a building's life cycle. Responsible sourcing and early vendor involvement are key to achieving this and the sector can benefit from consideration of responsible sourcing at an earlier stage in the process. Factoring in product provenance and engaging material suppliers in the early design phase can only be advantageous to a construction project, delivering benefits such as life cycle cost savings, improved credentials and ensuring a long-term, sustainable contribution to the industry.

For further information please call +44(0) 1244 892011 or email construction.marketing@tatasteel.com

The view from Tata Steel

Tata Steel is proud to lead the way in responsible sourcing for the construction industry. Architects, contractors, developers and building owners can all benefit from working with a dedicated steel producer offering BES 6001 certified construction products. We can demonstrate that raw materials have been sourced ethically and our steel products manufactured with sustainability in mind. By thinking beyond the building, we ensure that our customers benefit from responsibly sourced materials which are built to last.

www.tatasteelconstruction.com

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