

M25 junction 28 improvement scheme

TR010029

9.62 The road to good design guide summary table

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Infrastructure Planning (Examination Procedure) Rules 2010

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Table of contents

Chapter	Pages
1. Introduction	4
2. The road to good design review	5
Appendix A. The road to good design	14

Tables	
Table 2.1: The road to good design principles applied within the Scheme design	5

1. Introduction

- 1.1.1 This document sets out Highways England's response to the Examining Authority's request to submit the Highways England The road to good design (2018)¹ guide (Appendix A) and provide an explanation of how the principles with the guide are incorporated by the Scheme.
- 1.1.2 The road to good design guide establishes a set of principles for good road design which follow the themes of people, places and processes. They are not instructions for how to design a road but provide the basis for road schemes to be objectively reviewed. The 10 design principles are:
- Makes roads safe and useful
 - Is inclusive
 - Makes roads understandable
 - Fits its context
 - Is restrained
 - Is environmentally sustainable
 - Is thorough
 - Is innovative
 - Is a collaborative process
 - Is long-lasting
- 1.1.3 Highways England has incorporated the principles of good road design in this Scheme and has prepared a summary table (Table 2.1 below) capturing the key considerations and measures taken during the development of the preliminary design.

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672822/Good_road_design_Jan_18.pdf

2. The road to good design review

2.1.1 Table 2.1 below sets out how the M25 junction 28 Scheme has incorporated the road to good design principles at the preliminary design stage.

Table 2.1: The road to good design principles applied within the Scheme design

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
Makes roads safe and useful	<p>The purpose of the Scheme is to improve journey time reliability and reduce delays through the junction during peak and off-peak periods. The Scheme will also improve the performance of the A1023, A12 and M25 approaches to the roundabout, reducing the risk of queuing from the junction 28 roundabout onto the M25 motorway. The Scheme will also address safety issues, reducing the number and severity of accidents and support economic growth as described further in Principle 2 below.</p> <p>The preferred junction 28 configuration option is single two-lane cloverleaf like loop road which is considered to be more advantageous in terms of maintenance and avoiding disruption to traffic compared to a single-lane loop road.</p> <p>Collaborative workshops with Highways England and other stakeholders including the police, Connect Plus Services (M25 maintainer) and Transport for London have been undertaken to understand the safety and operational challenges and identify design features to address these. Safe maintenance access also been discussed and incorporated into the design for those parties affected by the Scheme. For additional security, installation of digital signage, variable message signs and CCTV which provide facilities to manage road space safely and provides rapid incident response, are included within the design.</p> <p>Deer fencing and other mitigation measures are being proposed to avoid and minimise the risk of deer collisions.</p>
Is inclusive	<p>Local housing and employment growth in Romford, Essex and the wider southeast are supported by the efficient movement along the A12 to the west of the M25. The Scheme design provides ease of access on the road network to Brentwood and Romford, thus encouraging travellers to visit local facilities and amenities, resulting in helping local businesses and supporting greater economic activity and development within these areas.</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>For all local residents, the improved performance of the junction 28 roundabout together with the expected reduction on queueing and delays on the A12 eastbound off slip, will improve accessibility to local areas including London.</p>
<p>Makes roads understandable</p>	<p>Junction 28 is surrounded by areas of woodland, agricultural land, a golf course and un-managed fields. Mature vegetation alongside the roads helps direct the users' focus according to the intended road use and screens unwanted distracting elements. For example, the M25 and A12 slip road views are directed towards either the roundabout or the main line M25 and A12 only. The aim of the Scheme is to limit vegetation removal as far as possible and to keep users focus on the road and unwanted distracting elements.</p> <p>Planting near and within the new loop road has been designed to ensure that there are no restrictions to drivers' sight as they travel around the loop road from the M25 to the A12. Carefully placed individual trees and grassland will be provided to mitigate the environmental impacts from the loop road but also ensure safety of the drivers.</p> <p>The proposed design will see enhancements in accordance to Design Manual for Roads and Bridges (DMRB) standards for traffic signs. This includes new signs along the M25 northwards approach to junction 28 which will encourage drivers to use the new loop road to reach the A12 travelling eastbound rather than the existing off slip which takes people through the roundabout. The existing off slip will be staying open. A 50-mph speed limit is proposed for the new loop road however, a bend warning and 'reduce speed now' signs will be placed prior to the bend on the loop road to warn drivers about what is coming up and give them enough time to respond. Chevron signs will be placed at regular intervals around the bend. Overall the design has removed sign clutter.</p>
<p>Fits its context</p>	<p>The Scheme fits in with the existing context as the design follows the contours of the existing land. Where existing vegetation is removed to accommodate the changes, mitigation planting is proposed to integrate the Scheme back into the local landscape character.</p> <p><u>Materiality - Hard</u></p> <p>The three-tier junction 28 is a dominant feature within the existing landscape which is surrounded by mature highways vegetation. The main train line from London serving the east of England is located approximately 300 m south of junction 28 and runs in east to west direction following a similar route to the</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>A12. Overhead electricity pylons run in a north to south direction and are a dominant feature of the landscape.</p> <p>The Scheme includes the construction of four new bridges. The bridges have been designed to be open span to allow for floodplain requirements and mammal passage. Two of the bridges (Maylands and Grove bridges), located on the southern side of the loop will be steel beam bridges which are in keeping with the existing materiality of the bridges over the A12 at junction 28, while the other two bridges (Alder Wood and Duck Wood bridges), located at the northern side of the loop road would be precast concrete beam bridges. Reinforced earthworks for the abutments of the bridges will be used in place of concrete or steel which would provide environmental and visual benefits. The use of retaining walls also minimises the impacts on the environment including avoiding areas of ecological value, water bodies and veteran trees.</p> <p><u>Materiality - Soft</u></p> <p>The planting design reflects and responds to the existing landscape character of the area. The landscape character is predominantly rural and characterised by strongly undulating wooded farmland/wooded hills with extensive patches of woodland, small-scale field patterns with mature tree lined field boundaries, and narrow, quiet and sinuous rural lanes connecting small-scale settlements. A sense of tranquillity exists away from main road corridors.</p> <p>Wherever possible, existing vegetation has been retained and no areas of ancient woodland have been affected. Existing woodland forms a key function of screening and integrating the junction into the landscape.</p> <p>The planting design for the junction responds to the existing context. Areas of woodland will be provided around the new loop road to provide screening. Woodland will be planted on earthwork slopes which have been designed to be a 1/3 gradient which is suitable for planting. Areas of highways vegetation and grassland will also be provided to provide habitats for various species and commuting routes for bats.</p>
Is restrained	<p>Throughout the design development, the land take requirements of the Scheme have been minimised wherever possible. The proposed Scheme ensures that existing businesses at Grove Farm are still able to operate while providing a functional loop road to enable the Scheme to meet the objectives set out in the Case for the Scheme (Table 3.1, APP-095).</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>The design of the Scheme has, where possible, placed new infrastructure within the line of the M25 corridor to minimise the footprint required for construction and reduce disruption to traffic on the M25 while under construction.</p> <p><u>Environment</u></p> <p>The junction 28 Scheme configuration is a single two lane cloverleaf like loop and in most parts it follows natural contours of the adjacent field, reducing overall visual impact on landscape.</p> <p>Watercourse crossings and realignments have been designed to limit the need for hard bank protection to reduce potential impacts on these features.</p> <p>Realignment of the Ingrebourne River will be designed as naturally as practicable (including meanders) to provide suitable foraging and commuting habitat for otter. The design will include resting areas for otters and scrub planting to provide shelter for this species.</p> <p>During preliminary design, site surveys identified veteran trees within the Scheme extent. A design review was undertaken and a section of the loop road and a drainage pond and earthworks were re-designed to avoid the loss of these trees (see Appendix C, section 1.4 in the Case of the Scheme (APP-095)).</p> <p><u>Drainage</u></p> <p>Significant lengths of unlined ephemeral drainage ditch will be created to manage ‘clean’ runoff from non-pavement surfaces due to the increase of the vegetation proposed within the plan, this will allow surface run off to increase in time causing a lower flood risk. These ditches will also generate habitat that mitigates a loss of existing ephemeral drainage ditches to the Scheme. The effects of the Scheme will be aiming to reduce the footprint for the floodplain by supporting the A12 slip road on a retaining wall instead of a large embankment structure.</p> <p>The drainage system has been designed to meet Water Framework Directive (WFD) toxicity standards at points of discharge to natural water.</p> <p><u>Lighting design</u></p> <p>Operational lighting will be sensitively designed, and an appropriate lighting strategy will take into consideration the nocturnal species. The underside of bridges of the loop road over watercourses will not be lit to avoid disturbance to bats and to encourage bats to pass under the loop road.</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>The Scheme has been designed to be material efficient thus limiting the depletion of primary materials or other resources.</p>
<p>Is environmentally sustainable</p>	<p>The Scheme has been designed as far as possible to avoid key environmental features. However, the creation of the new loop road, bridges and culvert extensions will have effects upon the environment and as such is accompanied by an Environmental Statement. To mitigate these effects the Scheme design includes widespan bridges to allow rivers and floodplain to continue functioning naturally, particularly during floods. Sections of the Ingrebourne River and the Weald Brook have been realigned to a more natural course to restore complex in-channel habitat. Mitigation measures embedded in the design include lowering of the floodplain to provide storage and wetland habitat, creation of backwaters as still water habitat and coppice rotation of riparian trees to create a more diverse light climate in the river corridor. Natural river beds and mammal passages are incorporated into culvert designs to ensure upstream and downstream habitats remain connected. Significant lengths of unlined drainage ditches will be created to manage clean run off and generate habitat for wildlife.</p> <p>The Scheme will provide ecological mitigation and compensation for the permanent loss of land within the Ingrebourne Valley Site of Metropolitan Importance for Nature Conservation. Proposals include reinstatement of habitats in temporary working areas, on new earthworks, around ponds and flood compensation areas. Specific mitigation measures for protected species will include creation of ponds and refuges for great crested newts, basking areas for reptiles and installation of bird and bat boxes. Works on the rivers described above will create new wet habitats for various species.</p> <p>Woodland planting will be provided along the loop road to screen the new road from nearby receptors. All land that is used for temporary works during construction will be restored to the reasonable satisfaction of the owners of the land.</p> <p>The preliminary environmental design is shown on Figure 2.2 (APP-012) and an Outline Landscape and Ecological Monitoring and Management Plan (LEMP) (APP-072) set out the ecological and landscaping features which will be developed further during detailed design and implemented as part of the Scheme. The Outline LEMP set out the aims and objectives for creation and long-term management of new landscape and ecology features within land permanently acquired for the Scheme.</p>
<p>Is thorough</p>	<p>The project team comprising of both engineering and environmental disciplines, worked collaboratively to arrive at the final preliminary design, to ensure that all design elements are tied together in a holistic way.</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>Consultation with stakeholders has ensured the design fits into context and reflects an understanding of people and place.</p> <p>Mitigation measures for the Scheme have been developed in liaison with the local authorities, the Environment Agency and Natural England to ensure that they are appropriate and were supported. Consultation was also undertaken with the landowners and other interested parties and their feedback was taken into consideration in the design. This included optimising the size of the balancing pond in Grove Farm to reduce its size and impact on the land holding.</p> <p>Liaison with the major utility companies whose plant is affected by the Scheme has also been undertaken to understand the impacts and agree diversionary works. Options for diversions were identified and assessed in order to identify the most appropriate solution. There are many constraints imposed by these companies and much work has been undertaken to agree provisions which can be accommodated within the Scheme constraints, objectives and timescales.</p> <p>All relevant guidance and applicable standards were considered during the design process and a number of design iterations were identified and reviewed. For example, the height and location of the realigned A12 slip road and loop road bridge was reviewed until a solution was found which met both engineering, environmental and utilities constraints. Where departures from standards were required this would mean the design had a better fit into its context, these were pursued and included, providing that whole life safety was not compromised.</p> <p>The Preliminary environmental design is shown on Figure 2.2 (APP-039) and an Outline Landscape and Ecological Monitoring and Management Plan (LEMP) (APP-072) sets out the ecological and landscaping features which will be developed further during detailed design and implemented as part of the Scheme. The Outline LEMP has been developed in consultation with stakeholders. The Outline LEMP set out the aims and objectives for creation and long-term management of new landscape and ecology features within land permanently acquired for the Scheme. The final version of the LEMP will be a key part of the Scheme delivery.</p>
Is innovative	<p>Innovation has been embedded in the Scheme design where feasible. There is a combination of significant constraints within the Scheme which has required innovative thinking in order to accommodate the constraints as well as meet stakeholder requirements.</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>The new A12 slip road is complex and has required collaborative thinking to ensure that where it crosses over the watercourses, it meets the Environment Agency's requirement to achieve a minimum clearance above the floodplain, the head room required for the High Voltage, 275 kV National Grid overhead electric line and impacts the existing woodland as little as possible.</p> <p>A lightweight fill for the new A12 slip road embankment has been proposed in the design to reduce the need for excavation of the soft alluvium in the area which will minimise effects on Grove Farm and also reduces lorry and digger movements area.</p>
Is a collaborative process	<p><u>Design team collaboration</u></p> <p>Regular weekly meetings were conducted between the engineering and environmental teams to ensure a thorough understanding across the teams of the potential constraints and opportunities for efficiencies. The environmental considerations fed into the design through these meetings and provided the opportunity to influence and develop a robust design proposal for the Scheme.</p> <p>The collaborative approach allowed the team to draw on experienced team members across the UK and globally, whilst contributing to driving operational efficiencies for a more considered design by understanding of the environmental and engineering constraints and find appropriate solutions.</p> <p><u>Stakeholder collaboration</u></p> <p>Consultation on the Scheme includes both informal (non-statutory) (undertaken in 2017) and formal (statutory) consultation (held early December 2018 to January 2019) and further supplementary and targeted consultations (December 2019, February 2020, January 2021).</p> <p>Six public consultation exhibitions were planned between 17 November to 5 January 2017 which gave stakeholders and local residents an opportunity to view Scheme proposals for the three proposed options, talk to the project team members and provide feedback on the proposals.</p> <p>Statutory public consultation on the Scheme was held between 3 December 2018 and 28 January 2019 (an extension to the consultation was made to 28 February 2019) to provide some specific groups of consultees an opportunity to respond).</p> <p>A supplementary consultation was held later in the Schemes development between 4 November 2019 and 2 December 2019 and 4 February to 28 February as a result of a number of key design changes and newly identified impacts during the preliminary design stage.</p>

Good design principle	How the M25 junction 28 Scheme has incorporated the good road design principles
	<p>Throughout the preliminary design stage, a number of non-statutory consultation meetings have occurred to discuss issues with key stakeholders and to obtain and provide information on the Scheme. This has included regular meetings with the Environment Agency, Natural England, Cadent Gas, UKPN, BPA and National Grid, the local authorities: Essex County Council, London Borough of Havering and Brentwood Borough Council and key landowners including Grove Farm, Glebelands Estate, Maylands Golf Club and Gardens of Peace.</p>
Is long-lasting	<p>In the Scheme design, pavements have been designed to last 40 for years, structures to last for 120 years and road surfacing to last for 10 to 20 years with routine maintenance intervention.</p> <p>The Scheme considers vulnerability to climate change in various assessments and infrastructure design, e.g. The Drainage Strategy Report (APP-092) requires that all drainage infrastructure, i.e. carrier pipe diameters, attenuation features, for example ponds, and the surface water collection system, should be sized for a 20% climate change allowance. This ensures a more robust design providing for future increase in rainfall intensities due to climate change.</p> <p>The lighting for the Scheme has been optimised and over designing is avoided to minimise potential light pollution effects to find a balance between safety and the environment. LED lighting allows for remote control through a Central Management System which in turn helps with energy efficiency and saving. The use of LEDs is a good investment in the long term as it will result in reduced on-going maintenance and operational costs, including a significant reduction in traffic management and energy costs.</p> <p>The technology designs use Highways England’s standard equipment and are specified to have 15-year lifetime. The new ducting will be designed to have spare capacity. Power supplies will also be sized with spare capacity. These factors will help enable additional facilities to be added in future to deal with future traffic demands, thus making it future ready.</p> <p>The long-term durability of retaining structures and earthworks is considered in the design, resulting in minimised maintenance requirement and reduced costs.</p>

Appendices

Appendix A. The road to good design



The road to good design



A wide-angle landscape photograph showing a multi-lane road bridge crossing a large reservoir. The bridge is a concrete structure with a road surface, and several cars are visible on it. The surrounding landscape consists of rolling hills with green and yellowish-brown vegetation, suggesting a rural or semi-rural setting. The sky is filled with large, grey clouds, creating a dramatic atmosphere. The overall scene is a blend of natural beauty and infrastructure.

inclusive
safe and useful restrained
innovative fits in context
long-lasting understandable
thorough collaborative
environmentally sustainable

Our vision

We aim to put people at the heart of our work by designing an inclusive, resilient and sustainable road network; appreciated for its usefulness but also its elegance, reflecting in its design the beauty of the natural, built and historic environment through which it passes, and enhancing it where possible.

Content

Foreword	7
Introduction	8
Connecting England	10
Connecting people	12
Connecting places	14
Connecting processes	16
Strategic Design Panel	20

10

Principles of good road design

Good road design:

- 1 makes roads safe and useful
- 2 is inclusive
- 3 makes roads understandable
- 4 fits in context
- 5 is restrained
- 6 is environmentally sustainable
- 7 is thorough
- 8 is innovative
- 9 is collaborative
- 10 is long-lasting

Foreword



As we deliver the biggest investment in our strategic road network in a generation we have been challenged to ensure that, as well as being safe, efficient and affordable, our roads are also beautiful. This aspiration, which I share, will deliver roads which not only serve a purpose but are also each examples of excellence.

To achieve this will require a shift in design culture within both Highways England and the wider roads sector. Fortunately we have the support of the Strategic Design Panel, whose work in shaping our vision and principles of good road design is invaluable. Panel members are drawn from a wide range of organisations; all committed to helping us achieve our goal.

The defined principles will help us place good design at the heart of everything we do, and ensure our roads better serve the people who use them and the environments through which they pass. And we will embed them for the future, ensuring a design-led approach becomes central to the requirements and advice contained in the Design Manual for Roads and Bridges.

I have great confidence that in meeting our challenge we will deliver safer, better, beautiful roads which connect people and connect our country. Because we believe a connected country is better for everyone.

Mike Wilson

Chief Highways Engineer and
Chair of Strategic Design Panel

Introduction

The purpose of this document is to challenge thinking about the design and quality of our roads.

Every day countless decisions are made regarding the strategic road network. These all have the potential to enhance or erode the distinctive character of a location, and our experience of driving through it. They could relate to the direction of a major road project, or a smaller, minor improvement or piece of maintenance; all can change a place for better or worse.

For many technical decisions are also design decisions and affect the quality and appearance of the network. By focussing on good design, Highways England can make a difference to the experience of road users and the communities through which our roads pass. Good design is a powerful tool for achieving a higher quality of life, as well as greater economic vitality and a more efficient use of resources.

We need to design in a way that is sensitive to the context of a road's surroundings and

responsive to the needs of those who use it and the communities through which it passes; this will create a vital piece of infrastructure that is not only functional, but also makes a positive contribution.

To support our vision for the network, we have established a set of principles for good road design which follow the themes of people, places and processes. These will encourage better design and provide the basis for road schemes to be objectively reviewed. For close engagement with communities, careful assessment of context, robust decision making and collaborative working, are all vital if ongoing road investment is going to truly enhance our urban and rural environments.

By focussing on good design, Highways England can make a difference.

Connecting England

The road to good design connects people, places and processes to achieve better outcomes.

These themes encompass 10 principles of good road design and support our aspirations for a network that responds better to both people and places through improved design processes.

Connecting people

People are at the heart of our design work, making good roads safe and useful, inclusive and understandable. Good road design reflects users' needs, engages with communities and works intuitively for all.

Connecting places

Good road design demands a deep understanding and response to place, to create a quality aesthetic experience for the user and wider community. This is restrained and environmentally sustainable design, in fitting with the context.

Connecting processes

A successful outcome focussed on people and places requires good design processes. These are collaborative, thorough and innovative, generating long-lasting outcomes that are of benefit to users and the wider community.

10 design principles

Our 10 principles are based on universal ideas of good design. They are not instructions for how to design a road, but are prompts to improve design quality and outcomes.

Design generally combines utilitarian, technical and economic considerations with aspects of place and culture. Universal good design is thus a balance and coordination of aesthetic, functional and technological considerations.

Road design is more bound to place and function than other design fields, with specific demands of technical design and safety that must be met. Since aesthetic considerations must accept these demands, the potential for variation is more challenging, but still possible for many elements such as signs and lighting for example.

The aesthetics of road design is further distinguished as many of its qualities are dictated by place itself. Our view of the landscape, particularly rural, is generally conservative and this has helped preserve its beauty, but presents a specific additional challenge for road design to be place responsive.

The journey to safer, better, more beautiful roads starts here.

Connecting people

Good road design:

1 makes roads safe and useful

Safety is fundamental to good road design; it is integral to both the usefulness of its function and the confidence of road users and their well-being. Good design creates safe roads which support and link to other wider imperatives, both nationally and locally, and that are fundamentally useful, meeting users' need for mobility effectively.

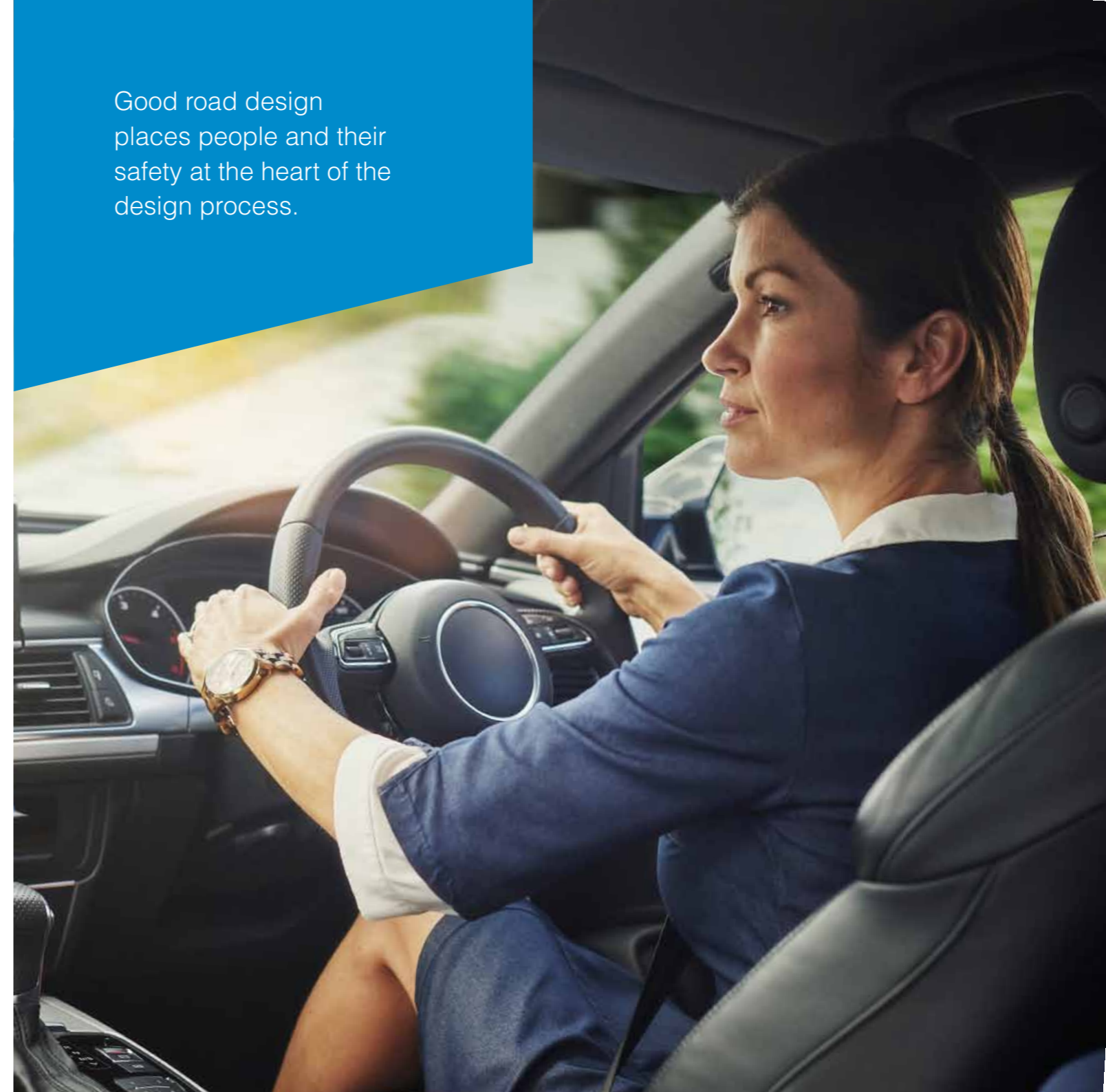
2 is inclusive

Inclusive environments facilitate dignified and equal use by all. An inter-disciplinary design process involves and places people's needs and views at its heart, nurturing well-being and creating a shared sense of ownership of the road. All users and communities are considered carefully in order to reduce barriers to access and participation, particularly mindful of the most vulnerable.

3 makes roads understandable

Easy to read, a good road is intuitive to use so as to be safe and efficient for all. 'Self-explaining roads' focus on the essentials and eliminate unnecessary and confusing clutter to make them legible, while responding to place and enhancing both environmental and economic outcomes.

Good road design places people and their safety at the heart of the design process.



Connecting places

Good road design:

4 fits in context

The aesthetic quality of a road and its design in relation to the places through which it passes, is integral to its function and the experience of those that use it. Good road design demonstrates sensitivity to the landscape, heritage and local community, seeking to enhance the place while being true to structural necessities. It builds a legacy for the future.

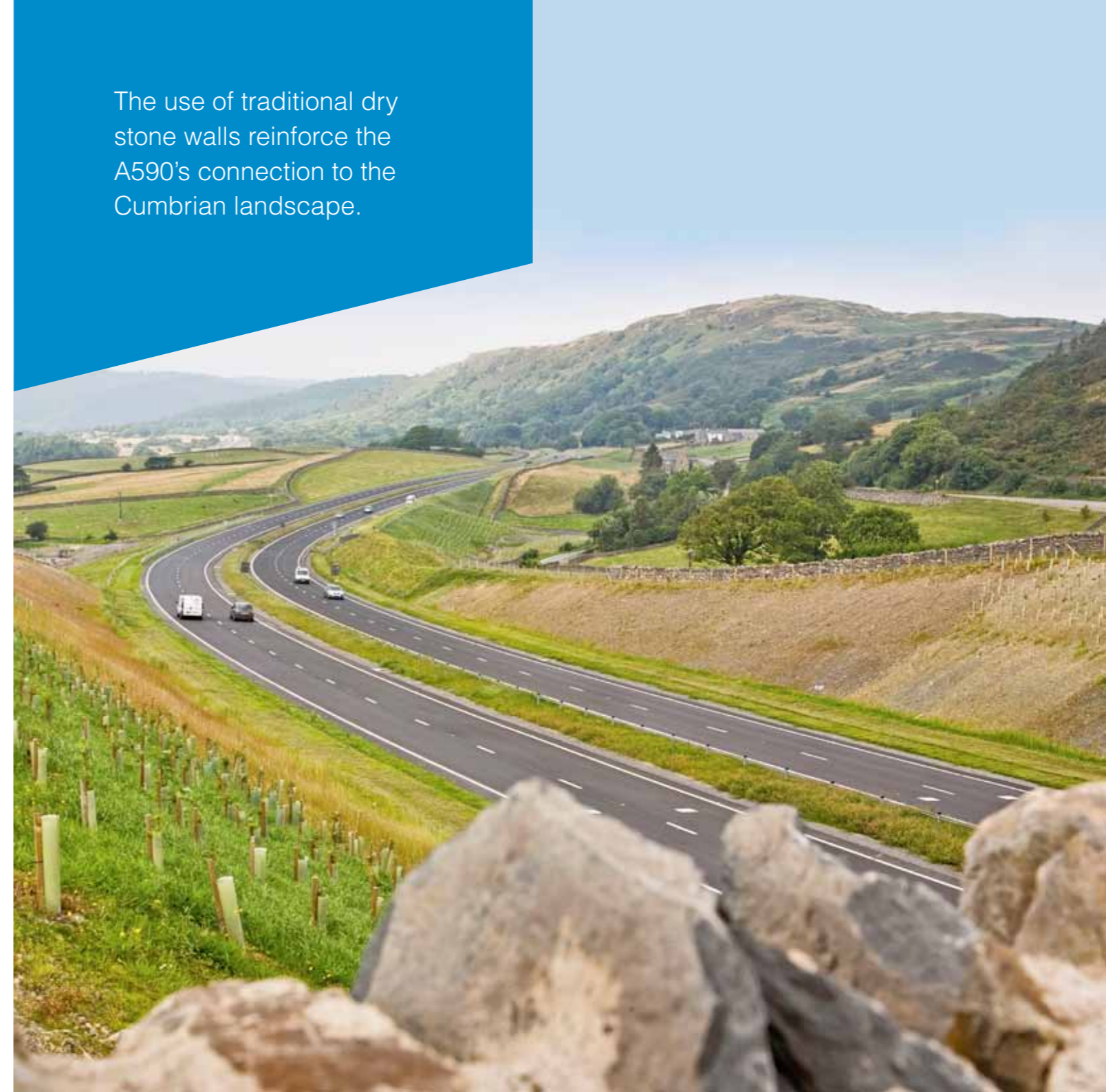
5 is restrained

Functional, but responding positively and elegantly to the context, good road design allows for the expression of the character and identity of the places and communities through which a road passes. Good road design can enhance a sense of place and add to what we have inherited, particularly through the use of appropriate materials and traditions, but does not make unnecessary superficial or superfluous visual statements.

6 is environmentally sustainable

Making an important contribution to the conservation and enhancement of the natural, built and historic environment, good road design seeks to achieve net environmental gain. It is multi-functional, resilient and sustainable, allowing for future adaptation and technical requirements, while minimising waste and the need for new materials.

The use of traditional dry stone walls reinforce the A590's connection to the Cumbrian landscape.



Connecting processes

Good road design:

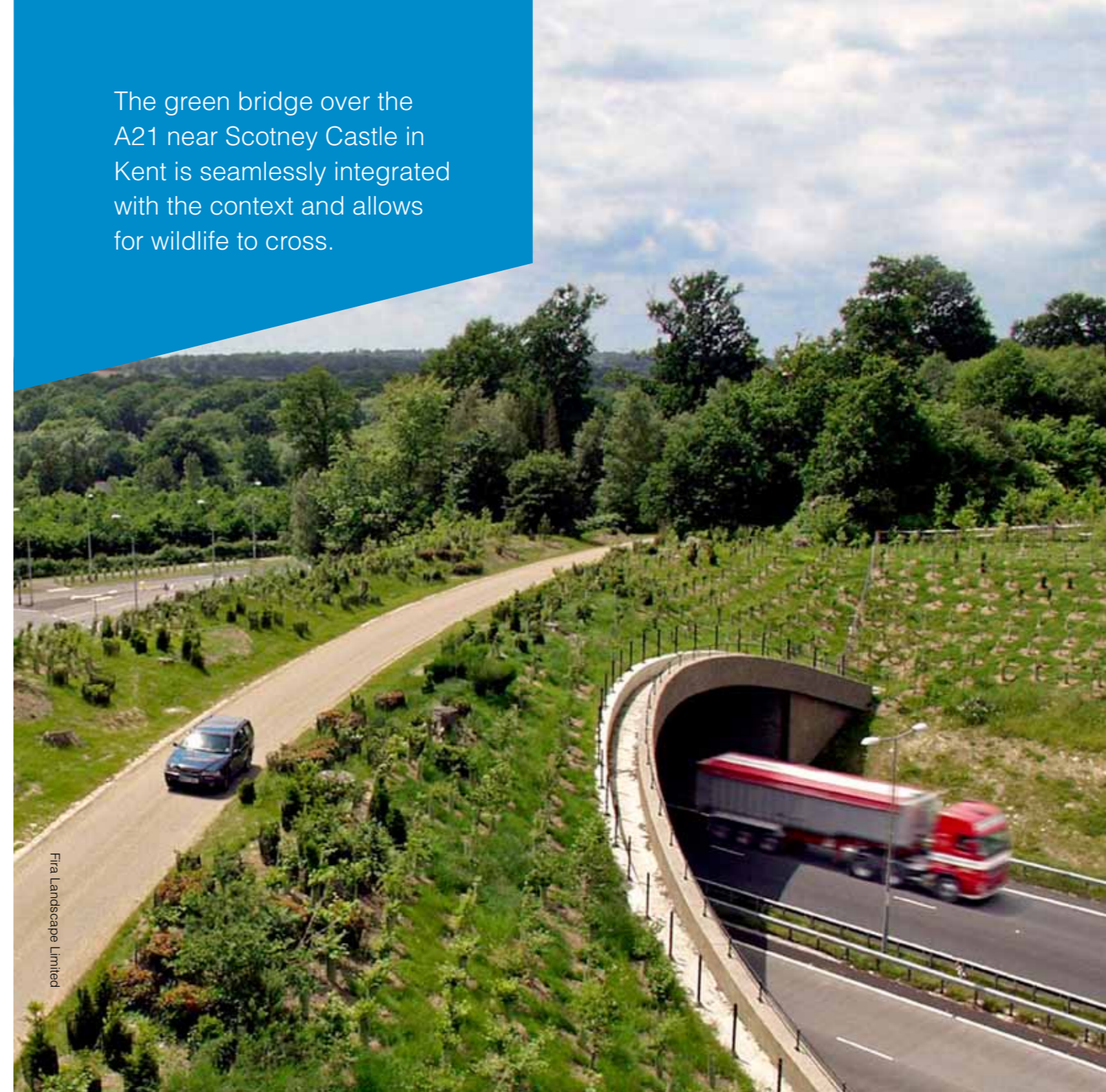
7 is thorough

The result of robust processes that create a continual cycle of improvement, good road design starts with an in-depth understanding of people, place and context; learning from best practice worldwide. The design of all elements of the road environment are considered together and integrated into a responsive design.

8 is innovative

Responding positively to change, good road design captures opportunities for betterment and develops in tandem with emerging new technologies. Designing to a standard is not the same as achieving good design; an innovative and resourceful approach that is mindful of context is necessary to achieve better outcomes.

The green bridge over the A21 near Scotney Castle in Kent is seamlessly integrated with the context and allows for wildlife to cross.



Connecting processes

Good road design:

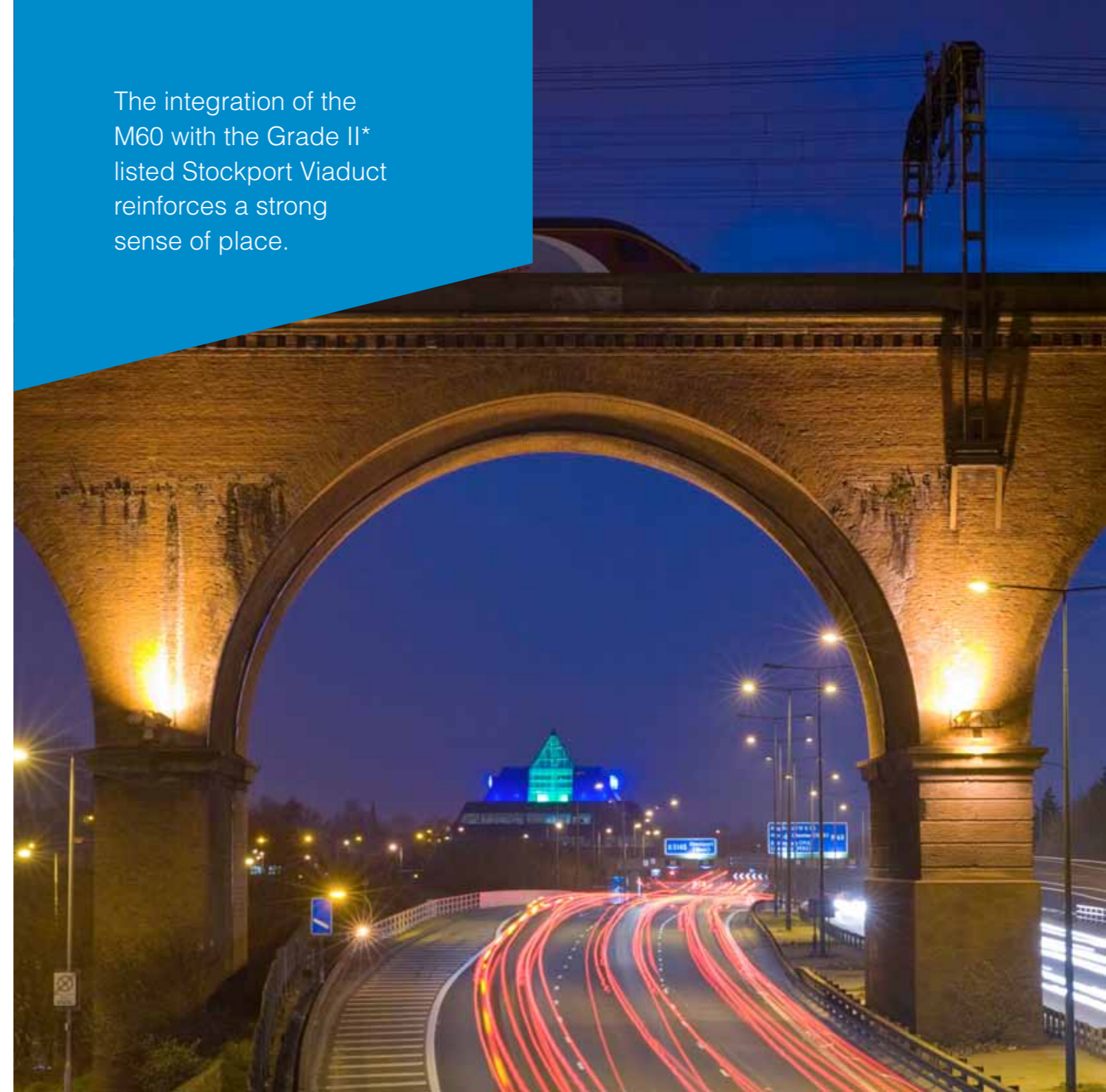
9 is collaborative

Collaboration ensures roads are useful to and accepted by the communities they serve. Collaborative working requires a rigorous process that identifies dependencies and wider opportunities, and facilitates effective communication and engagement from the start. Community engagement will be led by a local sense of culture, place and value.

10 is long-lasting

With quality materials and careful detailing, good road design brings lasting value. The design process requires sufficient time for challenges to be resolved before delivery and is adaptable to future needs and technologies as part of the commitment to whole-life operation, management and maintenance.

The integration of the M60 with the Grade II* listed Stockport Viaduct reinforces a strong sense of place.



Strategic Design Panel

The Highways England Strategic Design Panel is supporting the company to make a step change in the design quality of the strategic road network.

This change will see that design excellence in landscape, engineering and the built environment is at the heart of Highways England projects. The Panel seeks to ensure the strategic road network displays design quality through being safe, functional and effective, responding positively and sensitively to landscape character, cultural heritage and communities, while also conforming to the principles of sustainable development.

The work of the Panel takes place in the context of the government's wider road investments and its role is to independently advise Highways England on its approach to implementing projects and day to day operations. While the Panel does not have a statutory function in its own right, its advice and guidance can inform the statutory consent processes.

Highways England seeks advice from the Panel:

- to embed a context led approach into the development of the network
- on the design of road improvements, network management and operations
- on the development of relevant design standards and processes
- as required by the Secretary of State

The Panel takes an integral multi-disciplinary approach that sees design as a way to add value to projects by maximising opportunities and not simply as a mitigation tool. It publishes an annual progress report on its work and oversees the independent design review of individual Highways England projects.

Strategic Design Panel members:

Campaign for Better Transport
Design Council
Transport Focus
Chartered Institute of Highways and Transportation
Institution of Civil Engineers
Landscape Institute
Historic England
The Prince's Foundation
Institution of Structural Engineers
Royal Institute of British Architects
Campaign to Protect Rural England
Natural England
National Trust



inclusive
safe and useful restrained
innovative fits in context
environmentally sustainable
collaborative
understandable
long-lasting
thorough

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