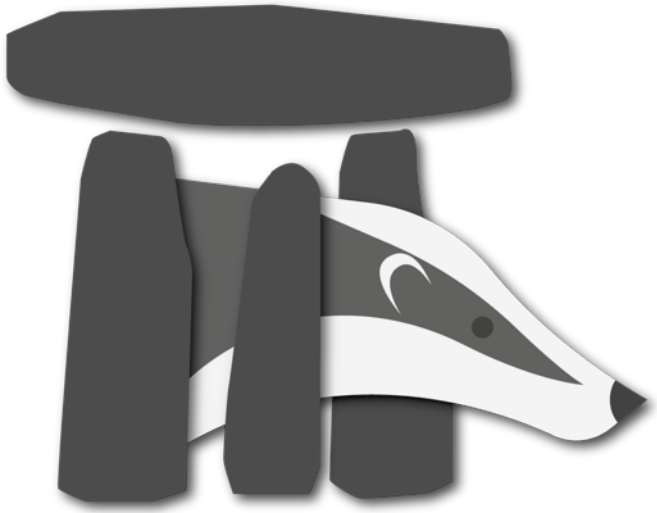


highways england

Design Vision
Technical Solution | Design Rationale Statement

Your design rationale statement shall provide the following information as a minimum:

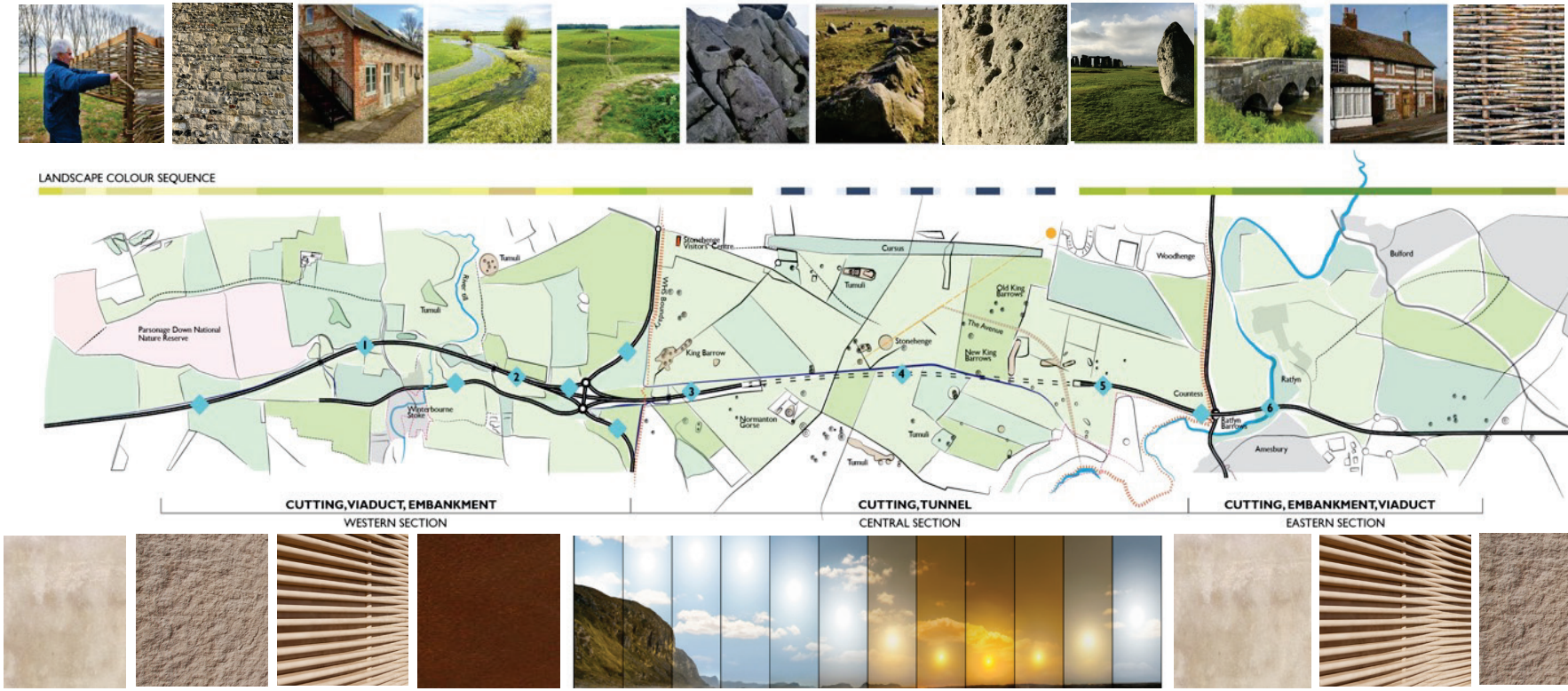
1.1. a summary and demonstration of the materials palette and outline structural forms for the Scheme's key structures (which includes the River Till viaduct, the green bridges, the tunnel bores, the western tunnel approach structures, the eastern tunnel approach structures and the Countess Roundabout flyover structures), including:

- 1.1.1 the colours, finishes, textures, materials, fixtures and key components;
- 1.1.2 the rationale for selecting the proposed materials palette and structural forms;

1.2. an explanation and demonstration of how the Design Vision and the Design Principles have been interpreted and incorporated into your design.

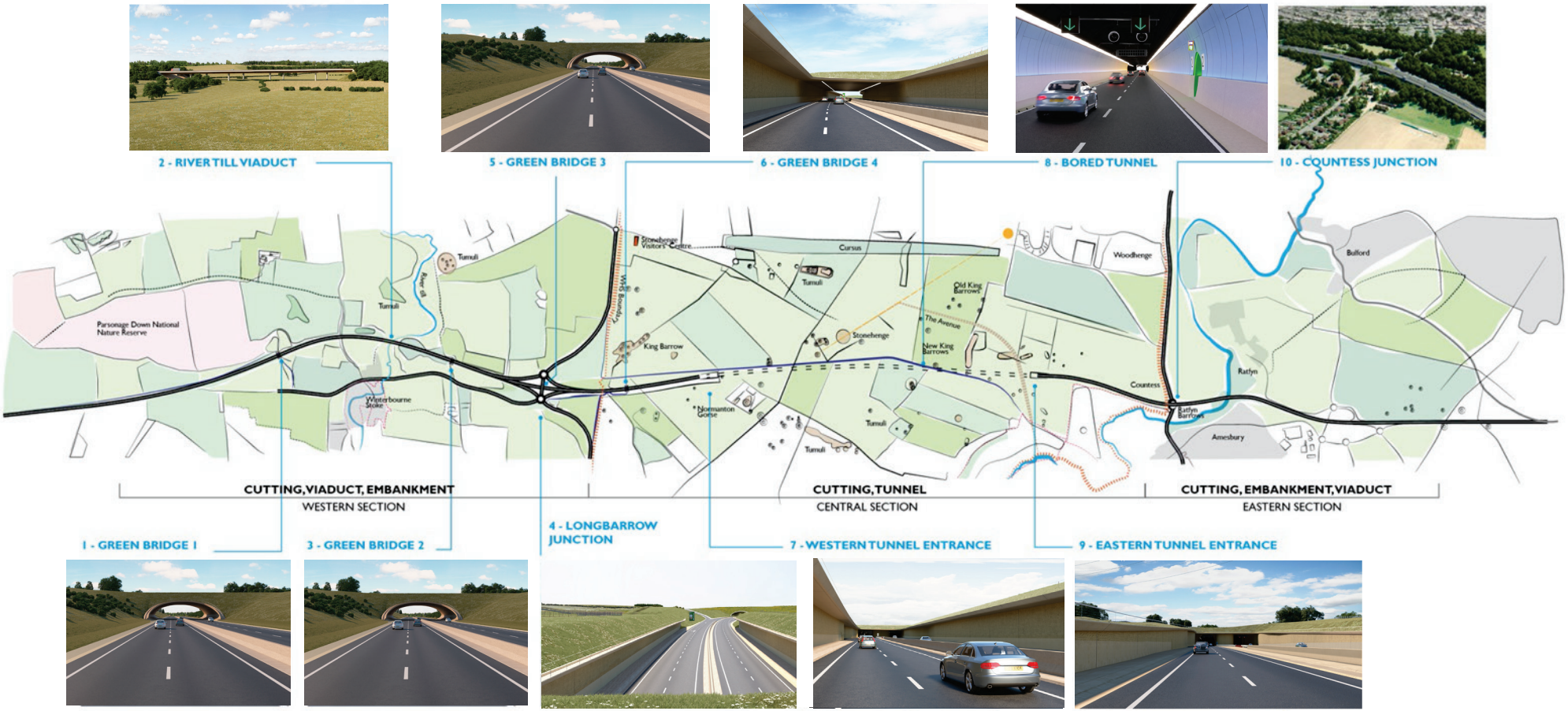
1.1 Design Vision: Summary and Demonstration of the Materials Palette

Our design vision provides a unifying concept across the 3-character areas defined for this project. Our design approach to the integration of the road and key structures responds to the landscape character and project aims; the western section more concealed and recessed into the landscape, the central section completely concealed in a tunnel, and the eastern section more open and visible in the landscape. **Our vision responds to the historic landscape through use of elegant, high quality and imaginative design features to provide a positive user experience (P-G04).** Our proposal is for a **refined and minimal common material palette** that **responds to the 'rich natural tones' and textures of the local area (P-PWS02).** A rough, textured surface finish applied to the cutting walls and tunnel approaches reflects the quality of the local sarsen stone while the woven textured surface for visual screens and noise mitigation takes inspiration from local skills and craftsmanship, **providing a strong connection to the character of the surrounding landscape and materials (P-PWS02).** Inside the tunnels themselves, the subtle use of light enhances the driving experience and recognises the significance of light within the presence of the World Heritage Site.



1.1 Design Vision: Outline Structural Forms for the Scheme's Key Structures

We have developed **a clear design rationale which respects and responds to the historic landscape (P-G04).** Aligned with our **common approach to materials, colour and finishes across the project, (P-PWS02)** our design vision also provides a continuity of geometrical form across the key elements along the route that is **sympathetic to the character of the surrounding landscape (P-PWS01).** Taking inspiration from the undulating forms of the Parsonage Down and the local landscape, the simple curved forms expressed on the green bridges are also reflected in the shaping of the other structures along the route.

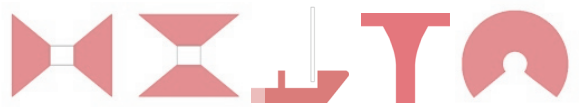


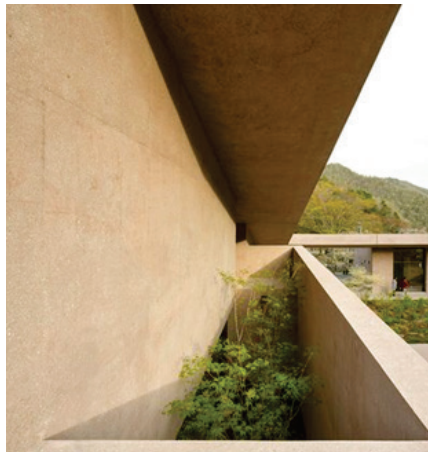
1.1.1 & 1.1.2 Materials Palette and its Rationale

Our Design Approach

We have developed a **common material palette with a refined selection of material, colour, texture and finish (P-PWS02)** that provides visual consistency across the route with subtle variation to reflect the local identity of the 3-character areas. Wherever possible we have proposed durable, self-finished materials to minimise maintenance.

Group A – Vertical, horizontal & curved surfaces, edges and piers





Material

- **Material:** Precast/in-situ concrete
- **Colour:** Warm natural tones

Finish

- **Type 1:** Smooth Cast
- **Type 2:** Natural Textured
- **Type 3:** Timber shuttered finish
- **Type 4:** Precast Textured

Type 1

Type 2

Type 3

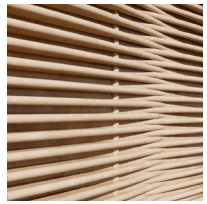
Type 4

Group B – Applied Surfaces

Material

- **Material**: Vitreous Enamel
- **Colour**: Lighting to achieve colour

Group C – Screens and Barriers



Material

- **Material 1**: Lightweight concrete, basketweave appearance
- **Material 2**: Pre weathered galvanised steel

1.2 Design Vision Interpretation: Typical Edge Treatment

Proposed edge concept
The design proposal for a consistent edge treatment provides a link between all the structures associated with the new road as well as forming a key visual interface between landscape and road structures. Combined with a cantilever, this also reduces the wider visual impact of the cuttings at the tunnel approaches.

Pedestrian fence
The proposed design is simple and unobtrusive; it provides safety while minimising visual clutter. A pre-weathered galvanised finish has been selected for durability to minimise maintenance and reduce the visual impact from outset.