



**High Speed Rail (London – West Midlands)
Act 2017**

HS2 Ltd

Warwick District Council

Dalehouse Embankment and Finham Brook Viaduct

Materials Schedule

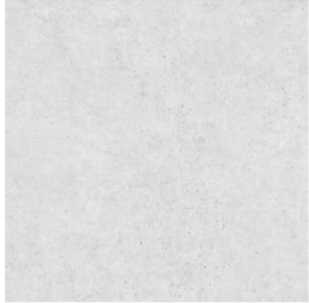
WAC.PS.10022

Material Schedule (For Approval)

This Material Schedule covers the following construction elements associated with the Schedule 17 Plans & Specifications Approval for Dalehouse Embankment and Finham Brook Viaduct application:

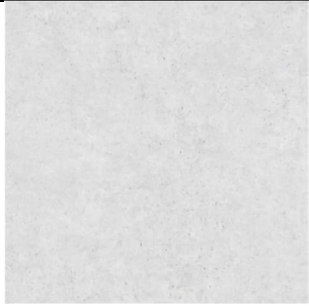
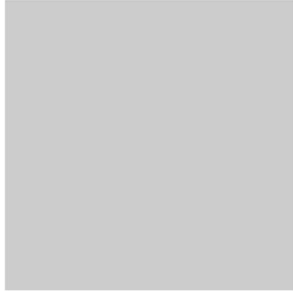
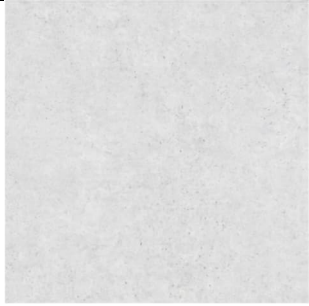
- Viaduct parapets
- Viaduct deck and beam structure
- Wingwalls and abutment
- Pier
- Scour Protection

Table 1: Dalehouse Embankment and Finham Brook Viaduct Materials Schedule

Asset Area	Material	Finish Type	Colour	Product Information / specification	Image
Parapet					
Parapet – external facing	Precast concrete	F3	Natural Grey	The resulting finish shall be smooth and of uniform texture and appearance. The formwork lining shall leave no stain on the concrete and shall be so joined and fixed to its backing that it imparts no blemishes. It shall be of the same type and obtained from only one source throughout any one structure. Any imperfections in the finish will be made good. Internal ties and embedded metal parts shall not be used. Permanently exposed concrete surfaces shall be protected from rust marks and stains of all kinds.	

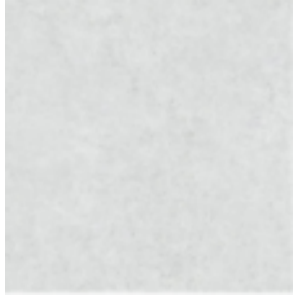
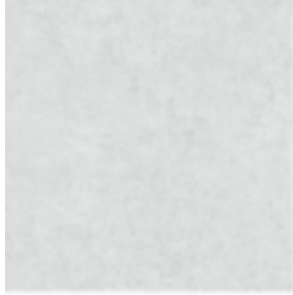
Schedule 17 Plans and Specifications

Dalehouse Embankment and Finham Brook Viaduct
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Parapet – internal facing	Precast concrete	F4	Natural Grey	<p>The resulting finish shall be smooth and of uniform texture and appearance.</p> <p>The requirements for class F4 are as the same for class F3 except that internal ties and embedded metal parts shall be permitted.</p>	
Deck and beam structure					
Top of deck	Reinforced concrete deck	U4	Natural Grey	<p>Hard smooth steel trowelled finish</p> <p>The concrete shall be levelled and screeded to produce a uniform surface. When the concrete has sufficiently hardened and the bleed water evaporated the surface shall be trowelled to produce a hard dense surface free from screed marks and exposed aggregate. Finally the surface shall be lightly textured with a wooden float or equivalent</p>	
Others (sides and soffit)	Reinforced concrete	F3	Natural Grey	<p>The resulting finish shall be smooth and of uniform texture and appearance. The formwork lining shall leave no stain on the concrete and shall be so joined and fixed to its backing that it imparts no blemishes. It shall be of the same type and obtained from only one source throughout any one structure. Any imperfections in the finish</p>	

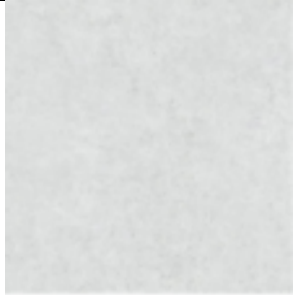

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				will be made good. Internal ties and embedded metal parts shall not be used. Permanently exposed concrete surfaces shall be protected from rust marks and stains of all kinds.	
Beam	Precast Concrete Deck Beam	F3	Natural Grey	Smooth pre-cast concrete with no pattern	
Bearing Shelves	Concrete	F3 / F4	Natural Grey	Smooth pre-cast concrete with no pattern	
Robust Kerbs (sides / top)	Concrete	F5		The resulting finish shall be smooth and of uniform texture. Any blemishes and imperfections, such as discolouration and fins, shall be made good. Provision for the embedment of	Image not available

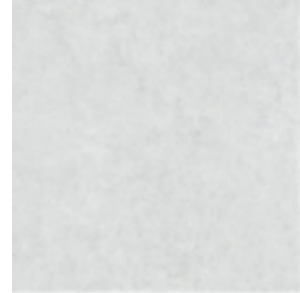
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				metal parts in the permanent works on a regular spacing, shall be allowed	
Pier structure					
Pier	Concrete	F3/F4	Natural Grey	Smooth pre-cast concrete with no pattern	
Scour protection	Riprap	CP90/250 grading stone		Riprap is a graded angular stone, sized to resist scour from the design flood event. When placed in an area susceptible to scour, riprap interlocks due to the angular nature of the stones, and protects from the scour potential arising from fluvial flood events. The scour protection is formed from riprap and sheetpiles. Sheet piles are offset 1.5m from the pilecap, riprap is then placed between the pier and the and the sheetpiles, and then extending beyond the sheetpiles to the top of bank but not into the watercourse.	 <p>Generic image of scour protection (Riprap)</p>

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Abutment and wingwalls					
Diaphragm	Concrete	F3 / F4	Natural Grey	Smooth pre-cast concrete with no pattern	
Wingwall and Abutment	Concrete	F3 / F4	Natural Grey	Smooth pre-cast concrete with no pattern	