

Deep Tube Upgrade Programme

The content within this document has not yet been updated to reflect the name change from New Tube for London Programme to Deep Tube Upgrade Programme. For any references to New Tube for London or NTfL within this document, please read Deep Tube Upgrade Programme or DTUP as appropriate.

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New Tube for London Programme

Project: Train Systems

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NTfL Aesthetic Design Brief



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Document History

Revision	Date	Summary of changes
Draft 0.1	16/04/15	First draft moved from TfL team generated PPT doc into original NTfL template. Minor wording updates using track changes
Draft 0.2	04/06/15	Updates section 3 to address review comments. Sections 4, 5 and 6 added.
Draft 0.3	24/06/15	Project team update to align terminology and wording with train technical requirements format and insert cross references to the NTfL DOORs requirements database.
Draft 0.4	02/07/15	Updates to section 4, whole doc changed to landscape, other image updates following review mtg.
Draft 0.5	07/07/15	Updates to incorporate additions in section 2 & roundel change in appendix 2 to match 1-382 reqt.
Draft 0.6	08/07/15	Change to doc. title, fonts and item 26 following mtg 8/7/15
Draft 0.7	09/07/15	Incorporating additional MA comments
Draft 0.8	13/07/15	Updates to lighting related reqts to merge MA suggestions with CM email
Issue I	20/07/15	First Issue

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I Introduction

The New Tube for London (NTfL) Design Vision is an aesthetic design concept which has been developed by London Underground (LU) and Transport for London (TfL) to define the aesthetic design requirements for the NTfL Rolling Stock.

As part of the NTfL Rolling Stock tender process, perspective NTfL Rolling Stock suppliers are required to submit their own representations of the NTfL Design Vision as applied to their own train technical proposals as evidence of how they will deliver the NTfL aesthetic design requirements. These train technical proposals will need to fully comply with all relevant legislation, standards and train technical requirements while delivering the NTfL Design Vision as defined by this design brief.

This document is intended to act as a design brief containing specific written guidance to assist Rolling Stock suppliers in interpreting and applying the NTfL Design Vision.

The specific key aesthetic design features detailed in sections 3, 4 and 5 of this document have been used to generate formal requirements which have been incorporated into the Train Technical Specification. Cross references to Train Technical Specification requirement numbers are shown in square brackets throughout this document.

Individual Rolling Stock supplier aesthetic designs will be evaluated by representatives of the LU and TfL design teams against each of these individual requirements. The scores for each individual requirement will then be incorporated into the overall tender evaluation scoring process.

As per all other parts of the NTfL Rolling Stock tender evaluation, each submission must demonstrate minimum level of compliance with each individual requirement in addition to meeting or exceeding the defined minimum threshold for the average score for each section of the Train Technical Specification.



2 NTfL Aesthetic Design - Background and Principles

The design brief for the NTfL needs to be considered in terms of both the LU's history of rolling stock design and its future requirements for customer experience. Recent deliveries of rolling stock to LU, although exemplary in terms of construction, have raised justifiable debate within LU as to the integrity of the train's design, the overall 'look and feel' and the impact on customer perceptions of the train, their journey and of LU as a brand. This led to work that supports that fact that the nature and quality of aesthetic design is critical both in terms of delivering customer requirements and expectations as well as maximising benefits in terms of build/construction and maintainability of rolling stock.

In 2013 LU/TfL initiated a wide-ranging review of rolling stock design requirements and after a tendering exercise worked with PriestmanGoode (PMG) to deliver a set of core aesthetic 'principles' (listed below) and an illustrative narrative of what the NTfL should look like in terms of our customer vision and desired experience. This NTfL Aesthetic Design Brief is the outcome of that work.

The train is an inherent part of a customer's journey – from origin, through journey, to destination – and each element under LU's control must be considered as holistic, flowing and intuitive, so underpinning the customer's perception of safety, order, timeliness and of managed spaces.

Taking this as a starting point, the initial view of the NTfL should be a combination of fluidity of motion yet an understated shape and solidity that is strongly associated with LU's trains. At a glance the train's front end should reflect the shape and nature of the train as a whole with a clarity of form and function which informs the customer that this is an LU train and is reassuring to the specific journey about to be undertaken.

The side elevation of the train is both driven by operational requirements (doors and window dimensions) as well as a purity of design – the train should be clean, sleek and simple yet not sterile and off putting. This needs to be shown by careful consideration of materiality, colour and texture, with the strong horizontal elements delivered by the solidity of the body side and roof being balanced by the nature of the windows and glazing. These must come together to visually tie the exterior together in a seamless fashion in proportion to the visual 'draw' and verticality of the doors. Clues as to the nature of the internal space, such as the existence of the window pillars, must be subtly reflected as a proportional, vertical detail on the exterior.

The train interior must be at first glance as the doors open both welcoming and inviting in what is acknowledged as being in the most demanding of mass rapid transit environments. The view must encourage flow and movement into, through and out of the car by combining elements of the built interior hardware and structure with finishes, colour, texture and light whilst meeting all functional and technical requirements (legal, operational and maintainable). This is seen at its clearest in the relationship of the design and shape of the floor finishes and the ceiling soffit design that must mirror and reflect each other, integrating the many requirements demanded of them whilst being an inherent part of the whole design.

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The car saloon interiors are considered carefully to deliver both a feeling of linearity and flow that we would wish to encourage, whilst at the same time being visually 'partitioned' so as to accord a degree of customer familiarity and a sub-conscious understanding of the space, its nature and function. The internal elevations are purposely architectural in nature with a strict relationship between the scale of the car interior, the body shape and the human element. The relationship of seat upstand, seat base depth, seat back height, window and the continuation into ceiling and curvature of the car is directly related to the human scale of foot, hip, shoulder and head, and is an inherent part of how customers will relate to that space in advance of the use of it.

Horizontally, much is made of the nature to the car being read as a series of discrete bays, each with a specific function and purpose, forming part of a rhythm to the interior. The seating bays by way of the physical appearance of the 'frame', the strong use of materiality, colour, shape and detailing is key to this rhythm. The visual 'frame' is developed as constant motif throughout the car, with the use of self-finished materials being consistent across all furniture such as hand rails, fittings, beading, edging and armrests, helping to give a sense of quality and consideration to the interior.

Underpinning all these features is the use of light. In order to meet all luminance requirements whilst not developing a harsh, glaring interior, lighting design must consider appropriate levels, colour and position to deliver overall operational levels of light but also delivers the car interior as a multi-functional, and for customers, multi-purpose space — standing, seating and whilst in movement. Overall, light must help deliver a welcoming space that is comfortable where needed and brighter where required, a layering of light delivered so as to accentuate the carefully crafted interior space for customers.

The challenge is that although elements need to be considered and detailed as individual components, all must come together as a coherent whole to create a mass rapid transit train of exemplary quality, with benefits of both build and supply (as detailed in the technical specifications and requirements), cost, use and maintainability over the whole life cycle of the stock. It must become a 'trademark' of train design for the Tube, for London and an international vision and benchmark for lighting design.

In order to fully realise a 'New Tube for London', TfL have created a set of seven overarching aesthetic design principles to be applied to the NTfL Rolling Stock. These building blocks are needed to ensure that the visual design language is applied consistently. These principles seek to build upon TfL's most successful design periods, and allow TfL to move forwards as an organisation without attempting to recreate a pastiche of the past.

The LU Rolling Stock aesthetic design principles are listed and colour coded below. The colour coded circles are used below each image in this document to illustrate how they have been interpreted in the reference design. This is intended to help guide bidders on their design proposals and will provide guidance on interpreting our aesthetic design requirements.



Core Aesthetic Design Principles for NTfL:

- Use of a singular and focused design language through all aspects of the train interior curves, angles, colours and materials.
- A strong use of patterns, textures and materials.
- Use of colour banding throughout the train from dark to light, creating feeling of height either through the horizontal or vertical planes.
- Consistent spacing, positioning and size of windows / doors to create a constant rhythm and 'human scale' considered to be crucial on an open train configuration.
- Considered use of lighting to create a sense of personal space and remove the feeling of clinical sterility.
- Seating to be a single form / factor with careful attention to proportionality.
- Fixtures and fittings and all customer touch-points to be of a high perceived quality achieved via the intelligent use of materials and techniques.

The NTfL Design Vision is a confident design proposal that is both familiar and contemporary. Careful consideration has been given to create a design vision that is achievable based on both functionality and aesthetics. Each piece should be aesthetically relevant and coherent, having a role to play in a well-orchestrated design. All components including panelling, colours and materials are harmonized to create a resolved an attractive environment.



3 NTfL Design Vision – Key Design Features

3.1 General

Any train design features or components which are not explicitly listed or mentioned in this document, or are not explicitly shown in the Design Vision images in this document, shall be carefully aesthetically integrated into the design in accordance with the aesthetic design principles detailed in section 2 and taking design cues from the imagery shown throughout this document [6368].

3.2 Train Exterior

The front of the train is understated and has a confident, dynamic character which projects a sense of speed and efficiency. All functional features are treated with restraint and understatement which implies that the overall exterior design avoids dating easily. The front elevation of the train is determined by the constraints of the tunnels. Within this profile a number of key design details exist.

1. Front Profile

The profile of the front of the train shall incorporate a compound curve over the glazed fascia with the centre of the train protruding further forwards and blending down into the sides and lower running panels. The profile shall be symmetrical about the vertical axis. [6360]

The angled front face of the train shall sweep smoothly and shall be blended into the larger sides of the train, particularly the lower section which flows further inward than the upper section as shown in Illustrations 1 and 2. [6363]

2. Lighting Halo

One of the key aesthetic features of the front and rear of the train is a lighting 'halo'. The lighting halo shall consist of an LED lighting strip which follows the outside profile of the carbody around the top and sides of the train before cutting inside along the bottom of the windscreen glass at an angle towards the M-door. The lighting halo shall be visually continuous above the M-door unless it can be demonstrated that there is physically insufficient space to fit the halo above the destination display. [5762]

The upper section of the lighting halo (above the headlight) shall illuminate white or red to match the illumination state of the headlight and tail light at all times when one end of the train is a controlling (active) end. [5776]



Within the boundary of the lighting halo there shall be a visually continuous black area which shall incorporate the central M-door (from level with the bottom of the headlights upwards), windscreen and door glazing, grabrails and windscreen wipers as shown in Illustration 2. [6365]

3. Headlights

The headlights shall be visually integrated into the bottom section of the illuminated ribbon. [5764]

4. Windscreen Shape

The windscreen glazing edge shall closely follow the profile of the lighting halo on three sides and finish close to the M-door surround on its inside edge as shown in Illustration 2. [6432]





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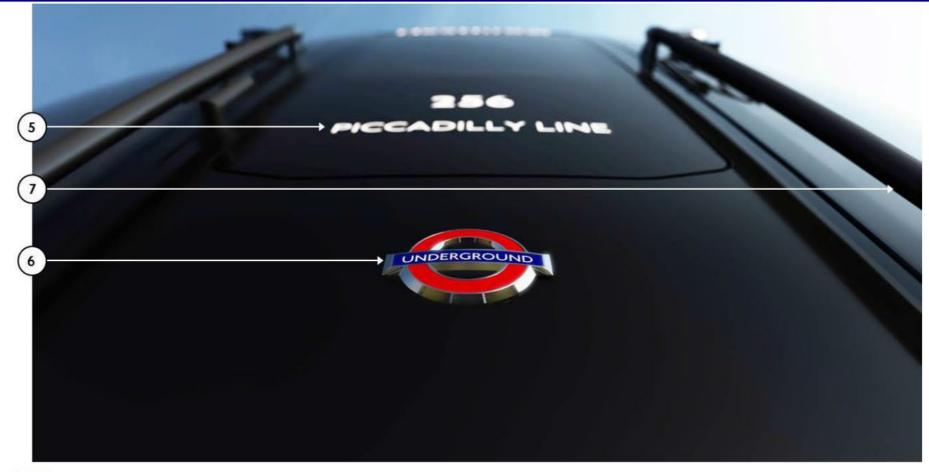


Illustration 3

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5. Text

All text shown on the outside of the train shall use New Johnston Medium typeface as defined in Appendix 1. [6433]

All text shown on the exterior of the train shall be in sentence case and suitably scaled to compliment the exterior design of the train while meeting The Rail Vehicle Accessibility Regulations (RVAR) and train technical specification requirements for visibility and fonts. [6366]

All text on the train exterior, whether it is fixed signage or VEIDs, shall be coloured white with a contrasting black background. [5081]

The name of the LU line over which the train will operate shall be displayed centrally on the M-door using one or two lines of text. [6370]

Car numbers shall be positioned on lower right hand side of the front of the train as shown in Illustration 3. [6371]

The Train Number Indicator display shall be positioned centrally on the M-door. [6373]

The overall layout of information on the front of the train shall ensure overall proportionality between each of the individual elements. [6375]

6. Roundel

A TfL Roundel, with a brushed steel or similar unpainted metal finish, as detailed in appendix 2, shall be fitted on the M-door.

Note - This requirement differs from the Roundel shown in the NTfL Design Vision images in this document which show an LU roundel with incorporates Underground text and colour. [6376]

The positioning and the sizing of the TfL Roundel on the M-door shall be in accordance with Illustration 2 and Illustration 3, i.e. positioned centrally below the window on the M-door against an integrated black background. [6378]

7. M-door grab poles and door handle

The M-door grab poles and door handle should blend into the background colour scheme to minimise the visual impact of these features on the front of the train. [6435]





Illustration 4

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8. Livery band

A blue livery band shall run horizontally along the length of the side of each car below the saloon windows as shown in Illustration 4 and Illustration 15. The height and colour of the livery band shall match the middle section of the roundel. There shall be proportional breaks in the livery band either side of saloon doors (100mm from door) and to accommodate the roundel and car numbers on each car. [6383]

9. Roundel

A London Underground Roundel, as specified in Appendix 3, shall be shown horizontally centrally between the 2 sets of double doors on the body side and vertically in line with the blue livery band on both sides of each car. [6384]

10. Bodyside windows

External bodyside windows shall have the appearance of multiple individual divided window units. [6389]

11. Door windows

The lower edge of the door windows shall be at the same height as the lower edge of the bodyside window glazing and the upper edge of the door windows shall finish higher than the bodyside windows in order to allow passengers standing in the vestibule area to view signage on platforms. [6391]

12. Door indicator lights

External door visual indicator lights shall be positioned to run vertically along the full height of the inside edge of each door window as shown in Illustration 5. These indicator lights shall be capable of illuminating and flashing in green and red colours as appropriate to indicate the status of the doors to passengers. [4954]

13. Window surround

The windows shall be included in a strongly delineated horizontal feature, proportional in height to the exterior elevations as a whole, and broken only by car doors and car body ends, and this shall be emphasized by the use of colour and materials so as to form a visual black strip as shown in Illustration 4. [6393]



14. Window trim

The horizontal window feature shall be delineated against the car body livery by the use of a naturally finished metallic trim detail to both top and bottom of the window strip. The interior layout of body pillars shall be mirrored on the exterior by a subtle use of a vertical naturally finished metallic trim shown on the black horizontal window strip as shown in Illustration 4. [6394]





Illustration 5

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3.3 Train Interior

The interior aesthetic design vision is flowing and integrated to create a welcoming and exciting environment.

Colours on the interior are broken down into 3 basic building blocks. First, a darker tone used at the base of the train wears well and is better at hiding dirt. Second, a mid tone colour is then used in the mid section between the seatback and the lower ceiling. Third, a light tone is used in the ceiling area to lift the interior.

The moquette design is both a key customer touch-point as well as presenting continuity with past rolling stock. Additionally it is a feature synonymous with LU, and unlike all other elements within the train interior offers a creative canvas on which an aesthetic design can be place as well as a point for secondary branding.

15. Longitudinal seating

Longitudinal passenger seating shall be visually continuous across adjacent seats but shall in fact be sculpted in shape to provide individual seats that are both visually inviting and physically comfortable as shown in Illustration 6. This shaping is intended to help to break up any bench-like appearance. [6392]

A clear visual distinction shall be preserved between the passenger seat base (seat pan) and seat back with the back appearing to float above the seat as shown in Illustration 6. [6395]

All seating in the saloon shall be upholstered in the NTfL moquette design as defined in section 5 of this document. [6396]

The top section of the passenger seat back shall be upholstered in 'e-leather' or an equivalent hardwearing, wipe-clean material as shown in Illustrations 6, 7 and 8. [6413]

16. Armrest

Passenger seat armrests shall have a hard-wearing, metallic satin finish on their main body and have a hard-wearing coloured insert on their top surface as shown in Illustration 6 and 7. [6397]

17. Draught screens

Draught screens shall be secured and enclosed on three sides by panelling and the structure at the end of the seating. The unsecured exposed edge of the draught screen shall be parallel to adjacent grab pole as shown in Illustration 7. [6398]



18. Seat End Panel and Pediment

The bench seat end panel and pediment (structure below bench seat) shall be visually integrated such that together they enclose the longitudinal seating, wrapping around smoothly with end panels sweeping seamlessly from the inside vertical to the outside horizontal surfaces as indicated in Illustration 7. [6399]

The bench seat end panels and pediments shall be of a hardwearing construction and finish. [6400]

A continuous satin metallic edging strip, to match armrest finish, shall run from the top of the bench seat end panel, down along the side of the first seat and along below the bottom of the seat cushions as shown in Illustration 7. [6401]

The outside faces of the bench seat end panels shall incorporate a mid-height horizontal bar with a satin metallic finish as shown in Illustration 7 and Illustration 8. [6402]

A TfL Roundel, with a brushed steel or similar unpainted metal finish, as detailed in appendix 2, shall be fitted on the centre of the seat pediment grille below the central row of seats in each car. The positioning and the sizing of the TfL Roundel shall be in accordance with Illustration 20, i.e. positioned centrally within the grille section of each pediment. [6445]







Illustration 6

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Illustration 7

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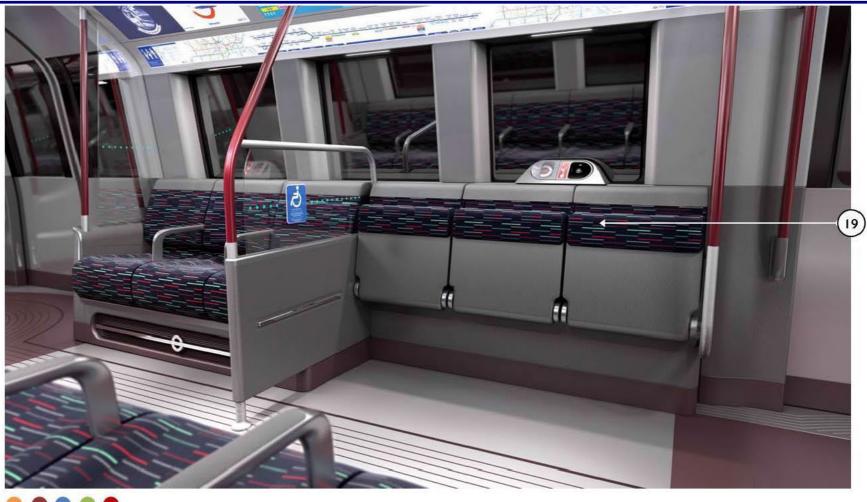


Illustration 8

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19. Tip up seating

The moquette on tip-up seats shall wrap over to the underside of the seat cushion to visually align with the top of the wheelchair backboard or bench seat end panel when in the vertical stowed position. The remainder of the underside of the tip-up seats shall use the same material and finish as the bench seat end panel and pediment as shown in Illustration 8. [6403]

20. Priority seats

Priority seats shall be visually distinguishable from other seating in the saloon by the use of the LU standard Priority Seat pictogram woven into the moquette back panel of all designated seats as shown in Illustration 25. This pictogram shall both a) be centred to the seat back and moquette repeat; and b) deliver a 30-point colour contrast to the surrounding moquette pattern by use of the colours and tones given in the moquette pattern specification as detailed in Section 5. [6521]

An LU standard sign/pictogram, as shown in Illustration 29, shall be shown on the interior car body panels adjacent to each designated Priority Seat. [6522]

21. Gangway

The inter-car gangway area aesthetic representation shall be carefully aesthetically integrated with the rest of saloon design. Protrusions inside of the adjacent panelling and structures shall be minimised to ensure that an unobstructed view is maintained between cars. [6406]

22. Grab poles

Vertical grabpoles shall be angled backwards from base to top away from the car centre as shown in illustration 10 in order to prevent a stiff rectilinear aesthetic quality. This shall not apply to floor to ceiling grab poles. [6404]

Grabpoles shall have naturally finished metallic ends. The remainder of the grabpoles shall be finished in a coloured nylon / polymer (or equivalent) based powder coat to provide a highly durable finish with suitable levels of grip and visual contrast with surrounding features. [6405]

23. Window lighting -

The lighting scheme shall include light sources which assist in defining the shape and position of the windows and seats [6526].



The lighting scheme shall include light sources from behind seats which assist in meeting the specified lighting illuminance levels required for seated passengers. The use of multiple light sources is intended to avoid unwanted shadowing from standing passengers and to avoid the need for excessively bright light sources which are further away from the defined illuminance measurement positions. [6527]

24. Windows

Windows shall be provided in the carbody side which enable platform-side and non-platform-side station names shown in the LU roundel to be read by seated passengers. [1865]

Windows shall be provided in the bodyside doors which enable platform-side station names shown in the LU roundel to be read by passengers standing in the door vestibule area and seated passengers. [1866]

The size, shape and proportion of carbody side windows shall be consistent with Illustrations 8, 9 and 10. This proportionality of the windows is required to deliver the sense of linearity of the saloon, tempered with the strong sense of rhythm and partitioning that assists in passengers subliminal understanding of the space. [6407]







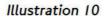
Illustration 9

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25. Digital screen cover panel

Digital customer information and digital advertising screens shall be in a horizontal row above the non-digital customer information and signage in the general position shown in Illustration 10 and Illustration 11. These screens, and any associated protective covers, shall be visually integrated with surrounding panelling. [6409]

26. Route maps and signage

Non-digital customer information and signage shall generally be positioned in a horizontal row above all carbody side windows and below the row of digital screens in the general position shown in Illustration 10 and Illustration 11. [6410]

27. Doors

Apart from a kick plate/runner inspection plate at the base of the door that should be finished in a darker material to match the skirting detail, the interior door skin should visually be of a single, self finished metal material. [6437]

Internal door visual indicator lights shall be positioned to run vertically along the full height of the inside edge of each door window as shown in Illustration 11. These indicator lights shall be capable of illuminating and flashing in green and red colours as appropriate to indicate the status of the doors to passengers. [4955]

28. Passenger Emergency Alarm

The Passenger Emergency Alarm (PEA) unit design shall be integrated within the train interior using similar or complimenting colours and finishes to the surrounding panelling, whilst also being visually distinctive such that passengers can easily identify its location and its function. [675]

The PEA unit shall incorporate a means of providing positive visual feedback to users, in the form of aesthetically integrated coloured lights, symbols and/or text, both when the alarm has been activated, and when specific functions such as talkback mode have been enabled in order to prompt the correct user responses. [6412]





Illustration 11





Illustration 12

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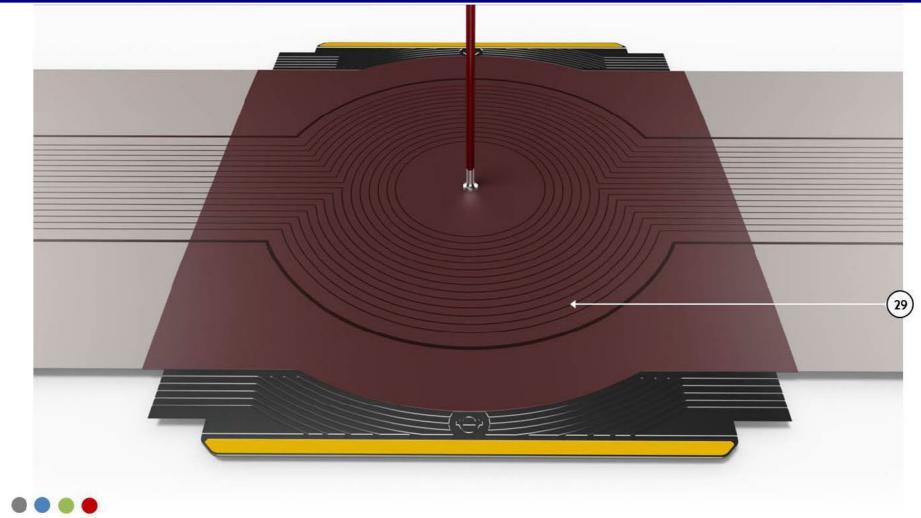


Illustration 13

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29. Flooring

The flooring shall incorporate a pattern which appears to flow seamlessly throughout carriages comprising of concentric lines radiating around vestibule grab poles and merging into longitudinal lines in corridors creating a roundel shape. The outermost line shall be of a heaver weight than inner lines to emphasize the roundel feature. [6414]

This floor pattern is important to create linearity, visual coherence, and a welcoming feel to the train interior. [6414]

The floor pattern itself is not required to be grooved but grooves may be used where they are required to assist with cleaning or drainage of liquids. [6416]

30. Ceiling detail/soffit pattern

Ceiling panels running the length of each carriage shall reflect the use of lines and the roundel shape in vestibule areas as used on the flooring pattern. The ceiling pattern shall be integrated with air-cooling, light fittings, LED lighting strips and other functions where required. [6417]

31. Saloon lighting scheme - general

Light sources shall be carefully designed in terms of their hierarchy, location and the illuminance levels that are needed to give both the functional and aesthetic requirements of the design. [6528]

Light sources shall be carefully integrated within the overall physical design of the door vestibule area, including the ceiling and grab pole positions, so as to create and enhance the nature of the space, and illuminate key passenger touch points such as the grab poles. [6529]

The linear nature of the interior saloon space shall be emphasized by the design and position of luminaires that are a holistic part of the ceiling and soffit designs. [6530]

The lighting scheme shall provide sufficient illumination to facilitate typical passenger activities such as reading at seated and standing positions and good visibility of passenger information and passenger alarms, etc. whilst ensuring passenger visual comfort by minimising glare and excessive uncomfortable levels of light. [6531]

The lighting scheme shall fulfil the basic requirement for safe passenger navigation of the space, including access and egress from the train. The lighting scheme shall provide adequate illumination for compatibility with CCTV and to ensure a sense of safety within the passenger space. [6532]



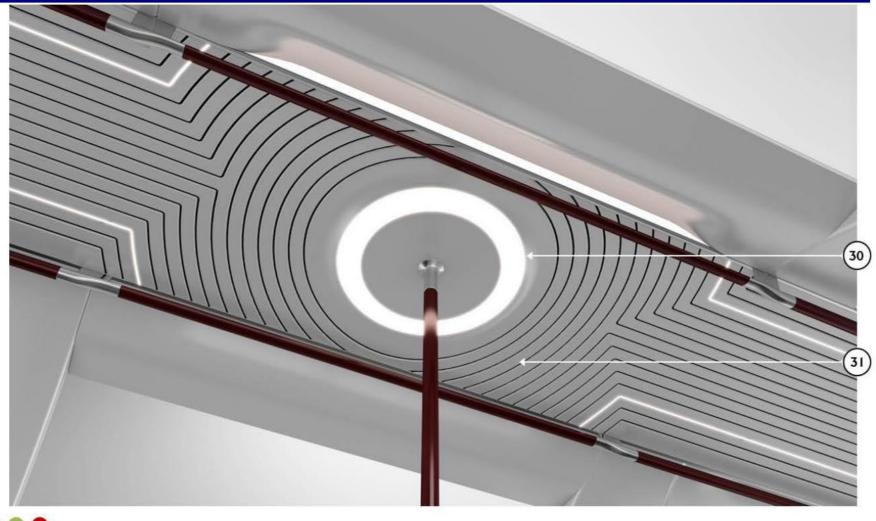


Illustration 14

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4 Colour Specification

4.1 Train Exterior

The colours and finishes used on the exterior of the train shall be in accordance with this section. [6387]

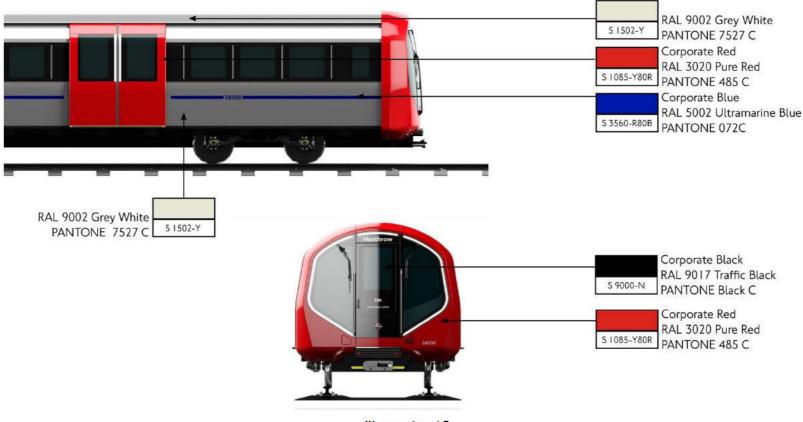


Illustration 15

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4.2 Train Interior

The colours and finishes used on the interior of the train shall be in accordance with this section. [6388]

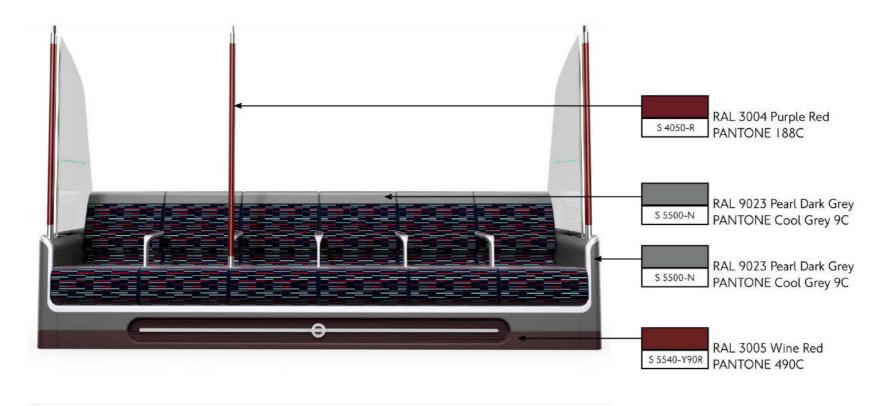


Illustration 16



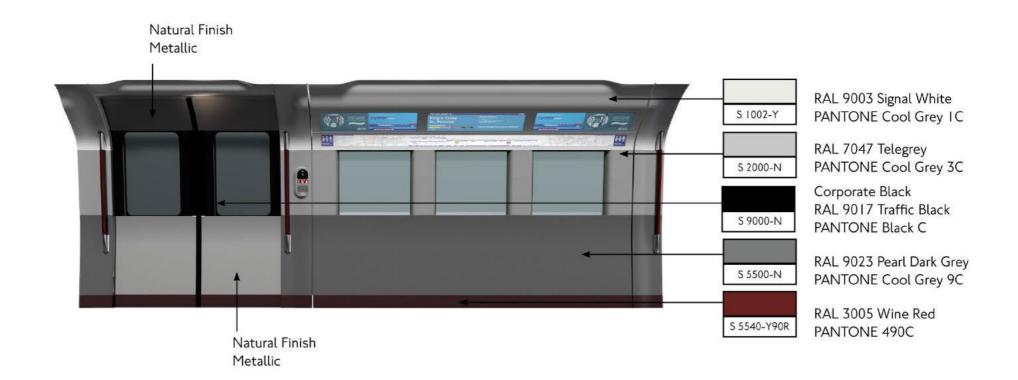


Illustration 17

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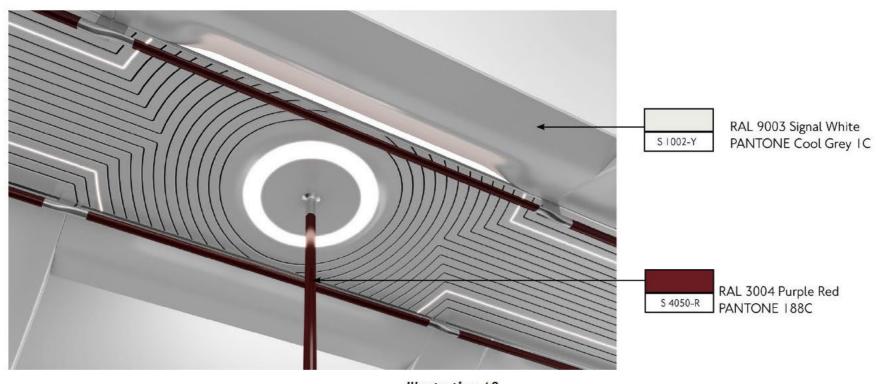


Illustration 18



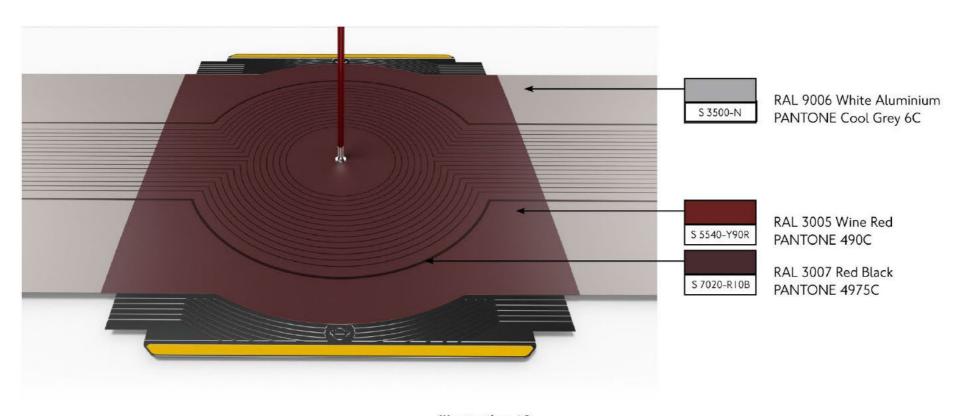
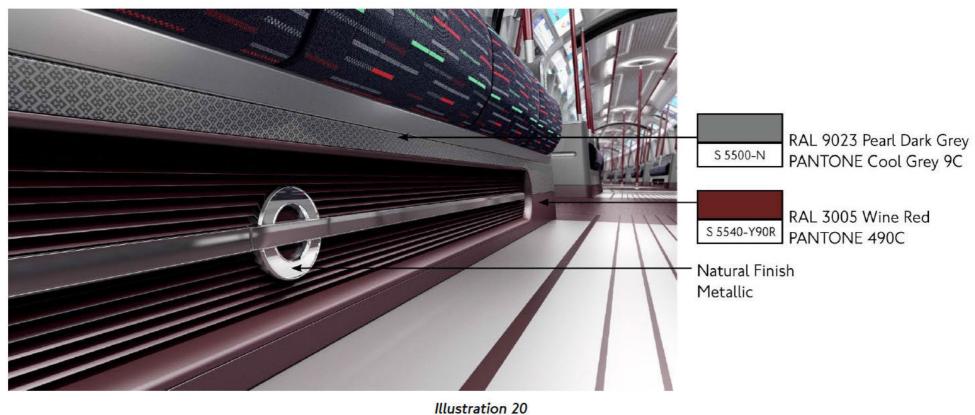


Illustration 19







5 Moquette Pattern Specification

Technical requirements for the moquette are detailed in the NTfL Train Technical Specification. The moquette provided shall be in accordance with the following pattern specification:

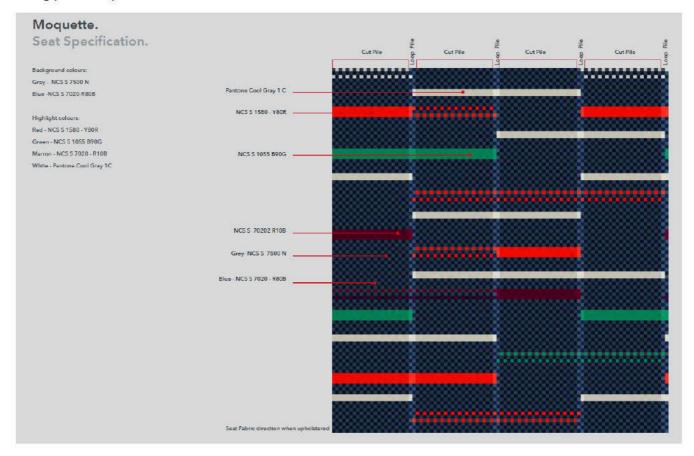


Illustration 21



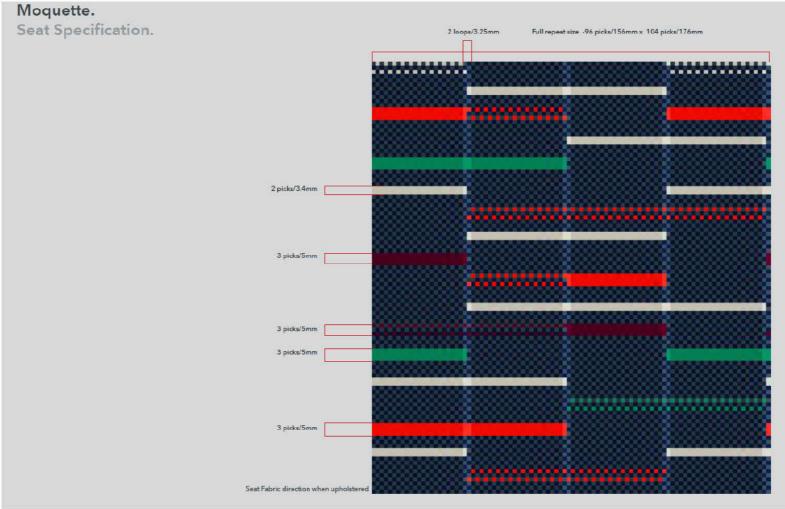


Illustration 22

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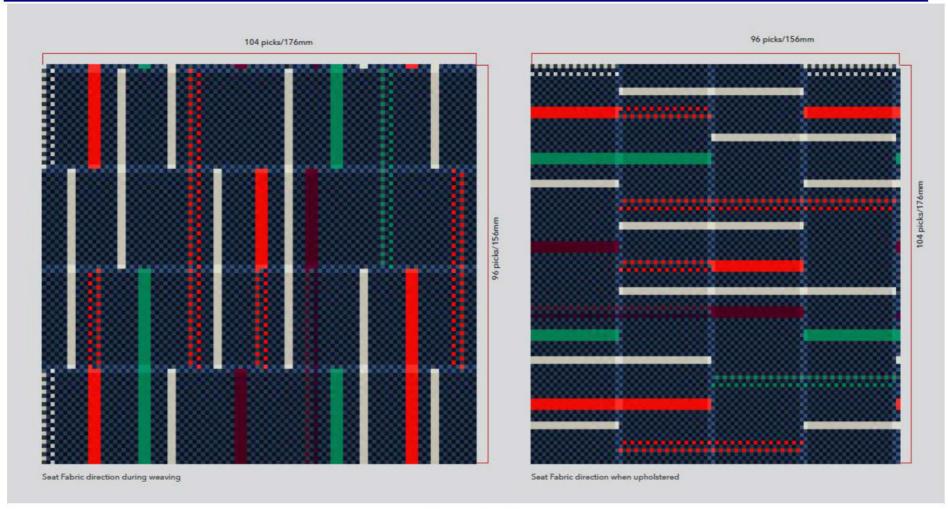


Illustration 23



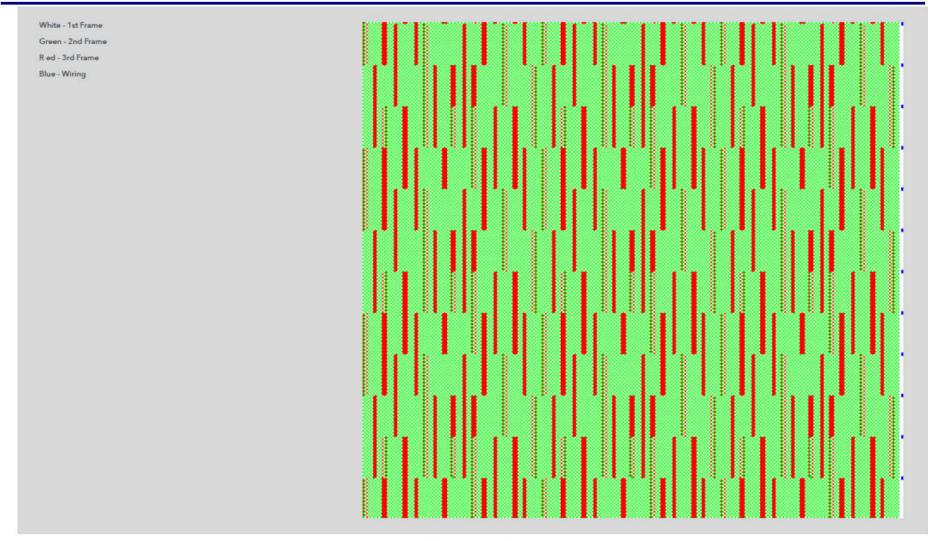


Illustration 24

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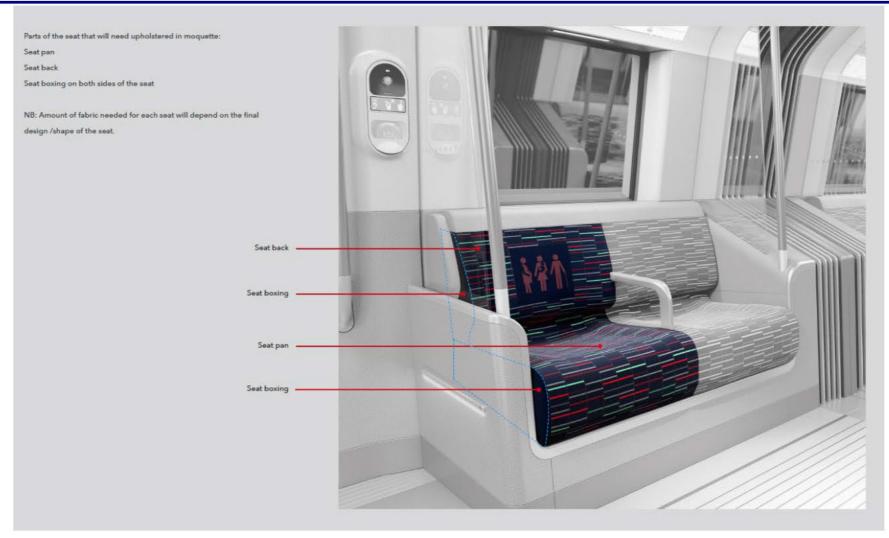


Illustration 25

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6 Abbreviations

The following abbreviations are used in this document:

Table 6-1 — Abbreviations	
Abbreviations	Definition
NTfL	New Tube for London
TfL	Transport for London
LU	London Underground
RVAR	Rail Vehicle Accessibility Regulations
PRM	Person of Reduced Mobility



7 Appendices

Appendix I – New Johnston Typeface

[Extract from Transport for London - London Underground Basic Elements Standard Issue 2]

Unless otherwise specified, New Johnston Medium font shall be used for text.

The typeface used by LU is New Johnston. It is exclusive to TfL and should be applied for via the TfL website:

tfl.gov.uk/corporatedesign

Headings

These are set in New Johnston Medium.

Body text

This should be set in New Johnston Book or New Johnston Light.

Book has been designed specifically for clarity and legibility at 12pt (or below).

At sizes above | 2pt, New Johnston Light should be used for body text.

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890£/.,"():;

New Johnston Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890£/.,"():;

New Johnston Light

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890£/.,''():;

New Johnston Book

Illustration 26

Ab

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Appendix 2 – TfL Roundel

Guidance:

• The TfL roundel on the front of the train, and below the seat pediment in the centre of each car, shall be a plain, embossed, 3-D roundel with a a brushed steel (or similar unpainted metal) finish as shown below.



Illustration 27



Appendix 3 - LU Roundel

Guidance:

- The LU roundel on the side of the train shall be use the corporate design composed of an open circle and a bar with the name of the mode "UNDERGROUND" displayed in white on the bar in New Johnston Medium upper case text.
- The roundel shall have a depth of 355mm as shown in Illustration 28 below and must not be distorted or modified in any way.
- An exclusion zone where no other graphic elements should be placed should be maintained around the mark and the roundel. The
 exclusion zone to be maintained between the roundel and the blue livery band shall be 10% of the width of the roundel bar itself on both
 sides.



Illustration 28



Appendix 4 – Priority Seat Label

Guidance:

- To be displayed above all Priority Seats in the row of non-digital customer information.
- Dimensions shown here are for reference only.



Illustration 29

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