Design Manual
NR/GN/CIV/200/06

NetworkRail

Retail Design Manual for Stations

Image 0.1 The Lawn retail area at Paddington Station

Document verification

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How to use the guidance suite

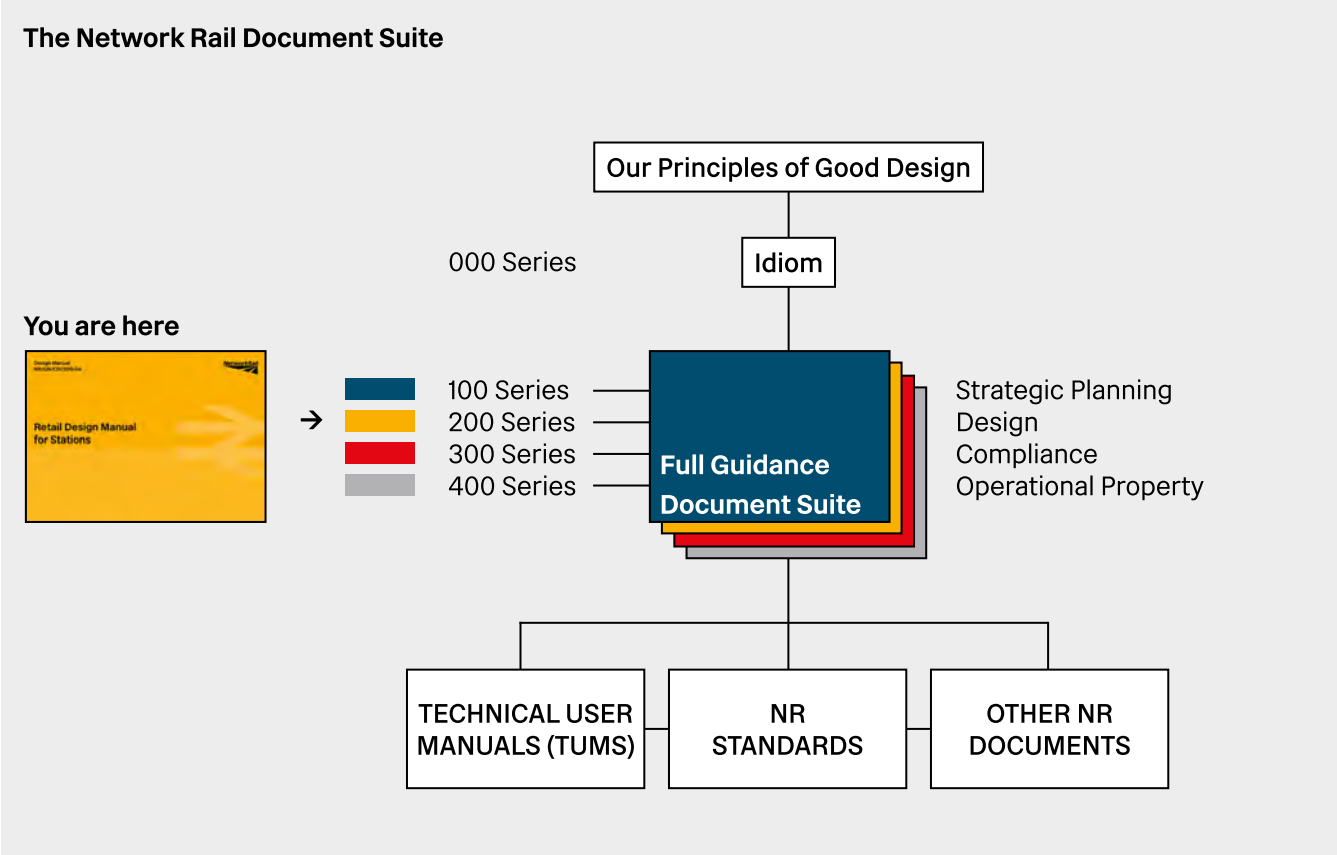


Figure 0.1 Network Rail Document Suite Summary

References to other documents

- Code of Practice Guidance
- National Standard
- Network Rail document
- NR Guidance Suite Reference
- Other Reference Documents

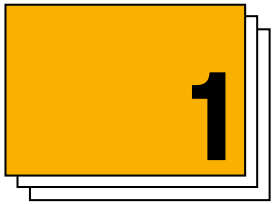
Example

National Standard

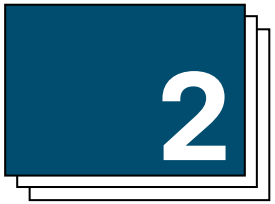
PRM NTSN GEGN:8615
Information regarding the level of accessibility of all stations must be freely available. Operating rules shall be made to ensure that information regarding the level of accessibility of all stations is available.

A full list of relevant documents, and other guidance suite documents is contained in the appendix.

About this document

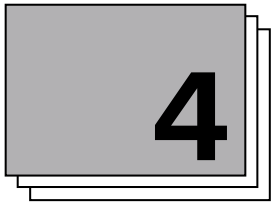


Section 1
Purpose and Scope
Describes the scope and context of this design guidance document.



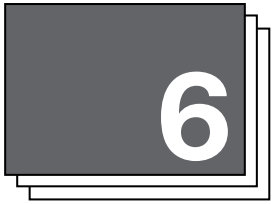
Section 2
Strategic Vision of Station Retail
Defines the vision of Network Rail for retail units at British stations.

Section 3
Retail Master Planning Strategies
Explores the issues relevant to the development of retail facilities at a station.

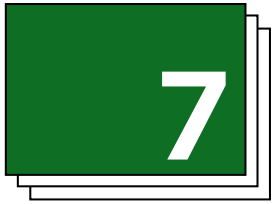


Section 4
Relationships to Station Facilities
Placing retail units in the context of other passenger facilities.

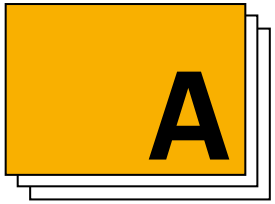
Section 5
Retail and Commercial Typologies
Defining the different types of retail typically provided at stations.



Section 6
Retail Design and Detail
Design considerations for shopfront details including materials, thresholds and signage.



Section 7
Design Control and Approval Processes
A process for tenants to consult with their landlord and seek necessary approvals.



Appendices A–E
- → A: Case Studies
- → B: Sustainability
- → C: Glossary
- → D: Reference Documents
- → E: Credits & Acknowledgements

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Hint and tips
To quickly navigate this document clink on any of the sections or titles on this page.

To return to the contents page you can click on the Double Arrow symbol.

Image 0.2 Signage coordinated with historic features at Glasgow Central Station

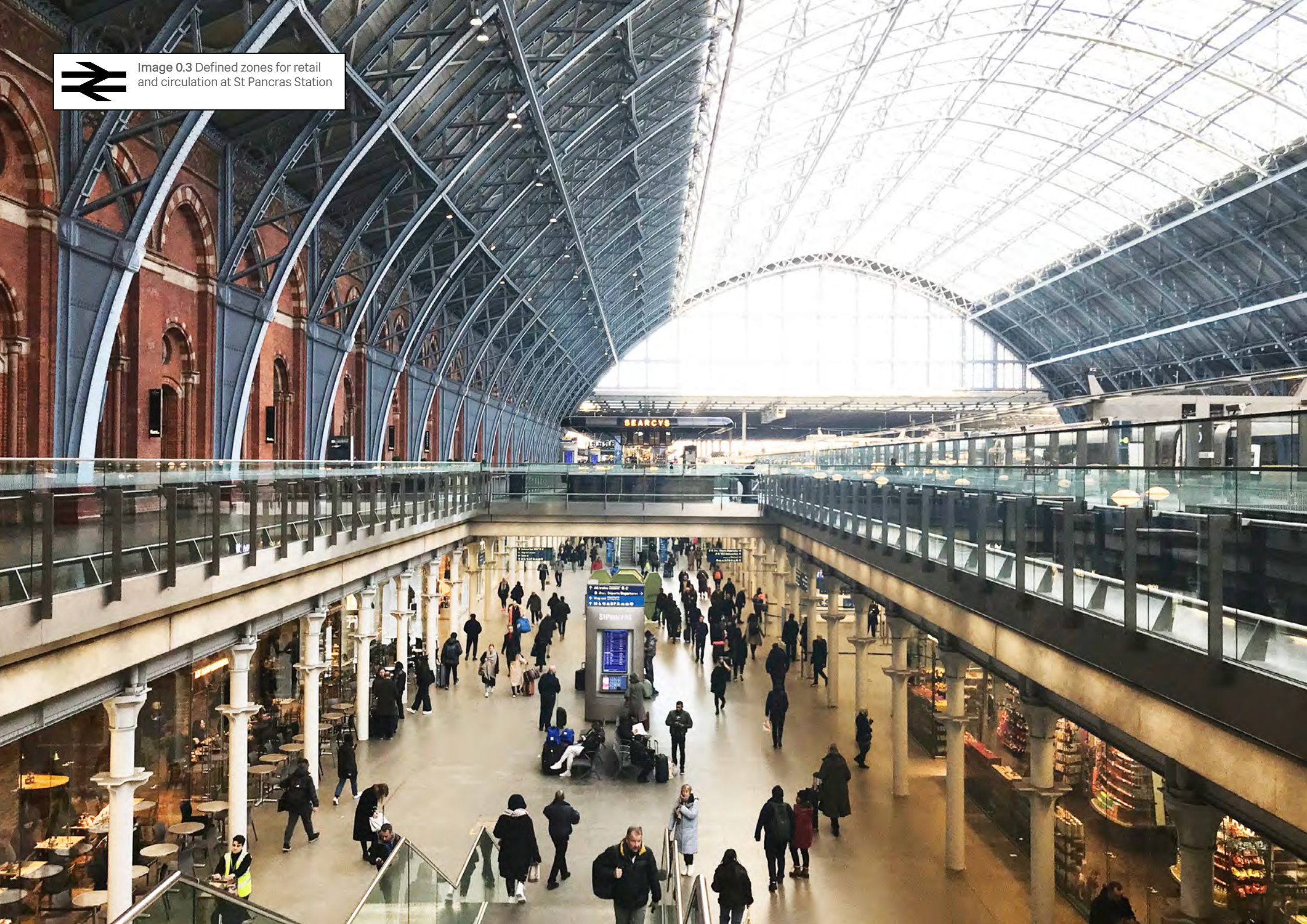


Image 0.3 Defined zones for retail and circulation at St Pancras Station

1

Retail Design Manual for Stations

Section 1: Purpose and Scope

Image 1.1 Kings Cross Station, mezzanine retail above main concourse

1.1 Introduction

The retail, food and drink offer at a railway station is a key part of the travel experience for many rail users. When viewed from a wider perspective, the commercial and social facilities at a station are often a valuable resource for non-travellers in the communities where they are located.

The 'offer' at a station should be customer-led and capable of accommodating changing requirements over time in a sustainable manner. Being static and constrained by previous decisions limits opportunities, and hence the retail units are highly important to the long-term image and function of the station.

Retail should be coordinated with defined zones for wayfinding, ticketing and information to keep the station organised and easy to navigate. The units created by tenants should be secondary to infrastructure such as station signage, whilst also clear and legible such that passengers and customers gain a clear understanding of the commercial offer at the station. It should be remembered that a station which balances station facilities with the retail offer will maximise the potential for both.

Lastly, the retail units at a station should be a successful revenue stream for the landlord at a station, with this being either Network Rail (for a Managed Station) or the relevant Train Operating Company (for a Franchised Station). The landlord at a station should share this Design Manual with their tenants to create retail units whose viability

Image 1.2 Retail Frontage, Glasgow Central Station

1.1 Introduction

is strengthened by their relationship with the railway station. Retail facilities at modern stations range from individual vending machines to major department stores; this Manual explores the challenges and opportunities across this full range

Commercial providers have been integrated into stations since the earliest stages of the development of railways in Great Britain. When preparing for their journeys, passengers through the Victorian era into the 20th century bought newspapers, food and other essentials. Whilst many of these needs remain consistent today, the breadth and depth of commercial opportunities has flourished, to the extent where the best modern stations offer a comprehensive choice of products and services.

The Williams-Shapps Plan for Rail, published in 2021, defined a vision for the future of the network entitled Great British Railways (GBR), which is summarised in 10 outcomes. The focus on the creation of a modern passenger experience, alternative approaches to ticket purchasing, and engagement of local communities are amongst themes which have relevance for the retail facilities at a station.

The GBR vision includes a 'Retail Revolution' relating to the ways in which tickets will be purchased. It will become easier, simpler and more flexible; the traditional ticket office will be replaced by other methods, including rail and intermodal tickets sold by third parties including retailers who might sell

Image 1.3 F&B Unit, Birmingham New Street Station

1.1 Introduction

other products (newsagents or cafes) or services (such as hotel bookings or concert tickets). This will therefore blur the boundary between ticket purchasing and conventional retail, creating opportunities for tenants and landlords. Modern customers of stations will have an increasingly diverse range of needs within the retail offer of a station, from essentials through to niche products.

This Design Manual therefore sits within this context, placing the design of retail units into the context of a rail system which is about to enter its next stage of development. It is intended for use across all 2,500 stations in Great Britain, ranging from large-scale station masterplan redevelopments through to the fit-out of independent, individual units at smaller stations.

The consistent application of this Design Manual over a period of several years will enable, in an accumulative manner, a cohesive image and appearance of the retail provision at an individual station even when there is not the sweeping change of a larger masterplan project. It should also enable the creation of a cohesive customer environment across the rail network.

Other Reference document

Great British Railways, The Williams-Shapps Plan for Rail. Department for Transport.

Image 1.4 Retail Frontages, St Pancras Station

Image 1.5 London Bridge Station, retail facing the high street

Retail Design Manual for Stations

Section 2: Strategic Vision of Station Retail

2

Image 2.1 Waterloo Station, mezzanine retail

2.1 Vision

This manual reflects the Network Rail vision for retail at stations across Great Britain. This has a number of key themes, as described below.

Improve Customers' Travel Experience

- → Deliver a cohesive and comprehensive retail environment to address the needs of a wide range of users
- → Enhance vibrancy of station through engaging food and beverage offering

Safeguard Railway Cultural and Heritage Assets

- → Retain distinctive qualities of local identity with design guidelines for existing and new developments
- → Upgrade stations retail and strengthen the cultural relevance

Establish Design Standards in line with the overall vision

- → Cohesive retail unit design at all, not just some, stations
- → Focus on accessibility and inclusivity so all users can access and participate the full range of station services

Operation and Management

- → Coordinate the management of retail assets with station operations and aspirations
- → Facilitate the seamless delivery of new and upgraded retail infrastructure

Image 2.2 Destination Ideogram

2.2 Aspirations

Network Rail aspires to have a retail portfolio across our stations which is responsive to the needs of passengers and customers.

Adaptability

- → Customer oriented Flexibility and Diversity – to accommodate changing requirements and expectations over time
- → Maintaining a high quality customer experience, including immersive and unique experiences (personalisation)

Economic

- → Support local business and community enterprises
- → Support the funding of the national railway

Engagement

- → Cohesive and omnichannel customer journeys that blend elements of the digital and the physical world
- → Stations provide a retail mix which meets the needs of relevant passenger and customer types

Inclusive retail for all

- → Maintain a principle of clear, simple access into visible units
- → Design proposals which are highly visible from main footfall area and main concourse
- → Provide aisles of an adequate width for mobility devices and suitcases

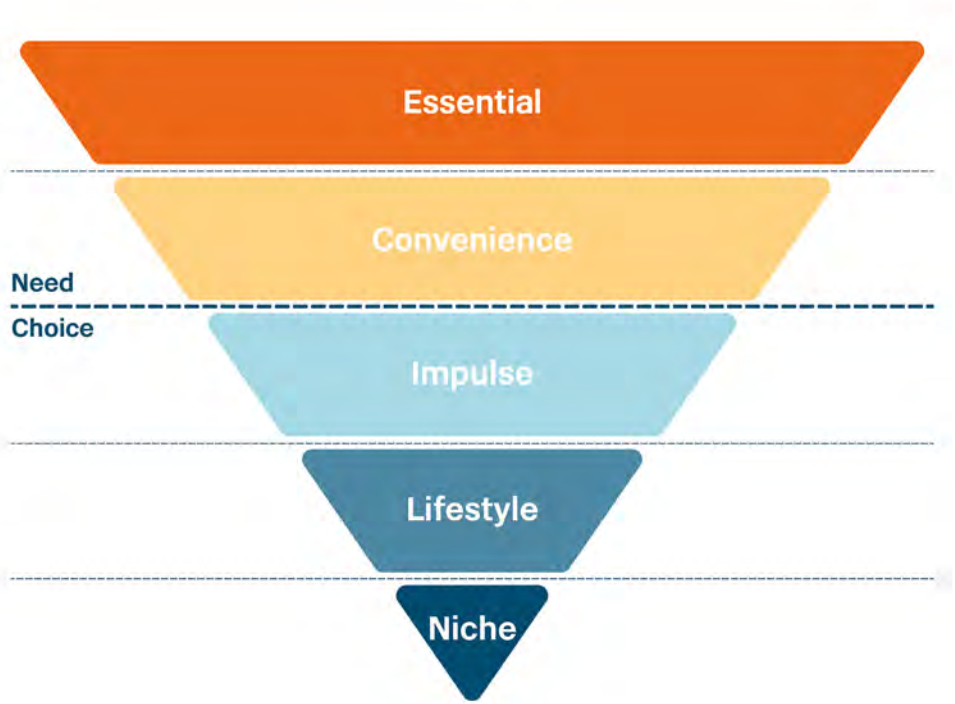


Image 2.3 The pyramid above highlights the Retail Category Hierarchy of Needs. This determines the retail categories that will be present in a station by priority order. With increased space and units there will be increased retail categories at a station (determined by this descending list).

Network Rail document
Network Rail Property Retail Client Requirements

2.3 Balance

Retail environments balance the needs of tenants to maximise their brand prominence and their landlord to curate a holistic identity:

- → Station environments have a primary purpose as a publicly accessible transport hub; the needs of passengers should take priority
- → In addition to this, many stations are listed; this requires any interventions to therefore be appropriately respectful to the original structure
- → Retail operations should dovetail with station management operations
- → The range and scale of retail offer should be adaptable to the size and location of the station, from large to small
- → There should be a diversity of occupiers to complement station user profiles

To integrate these requirements the development of retail and food and beverage (F&B) units should take a balanced approach. In a successful development these are complimentary, not conflicting, factors.

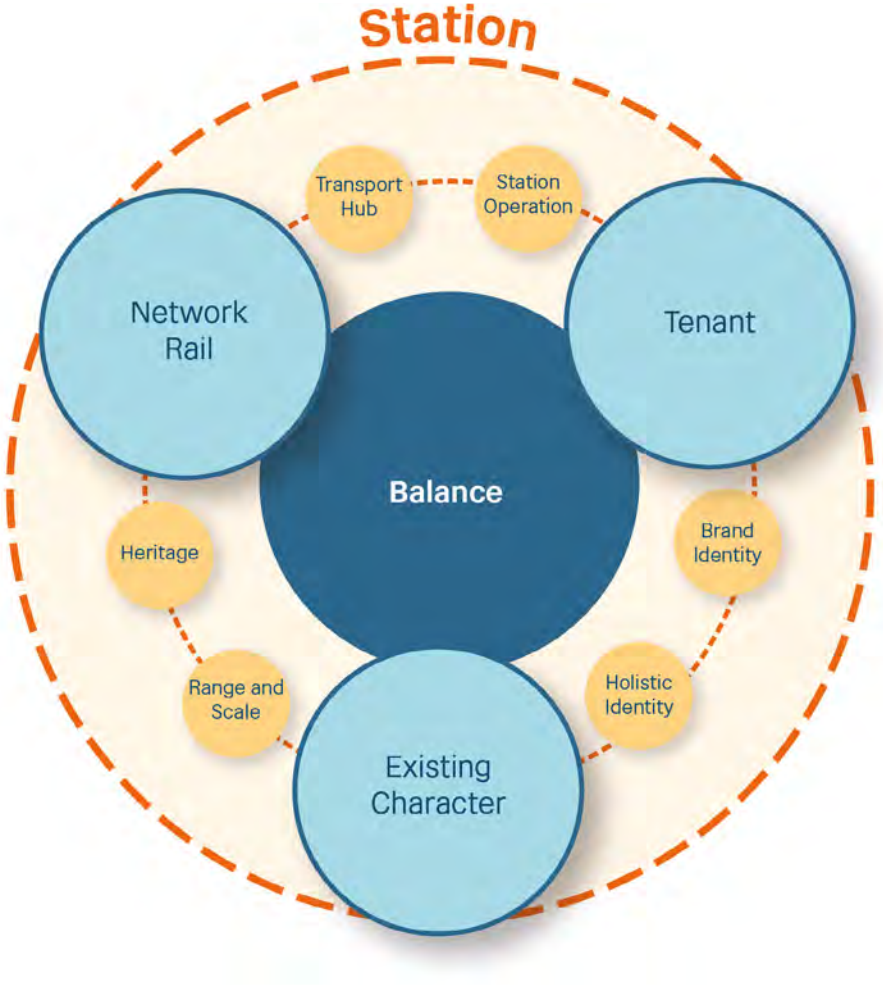


Image 2.4 Balanced Approach Ideogram

2.4 Sustainability

2.4.1 Overarching Vision

Sustainability is a key priority for Network Rail. The overarching sustainability vision is to serve the nation with the cleanest, greenest mass transport, putting passengers first, helping passengers to make green choices, support local communities, and be a good neighbour. To deliver this vision there are four core priorities:

2.4.2 A low-emission railway

Carbon emissions will be cut so that the railway is carbon neutral by 2045 in Scotland and by 2050 in the rest of Britain. This also means cleaner air for passengers, colleagues, and neighbours.

2.4.3 A reliable railway service that is resilient to climate change

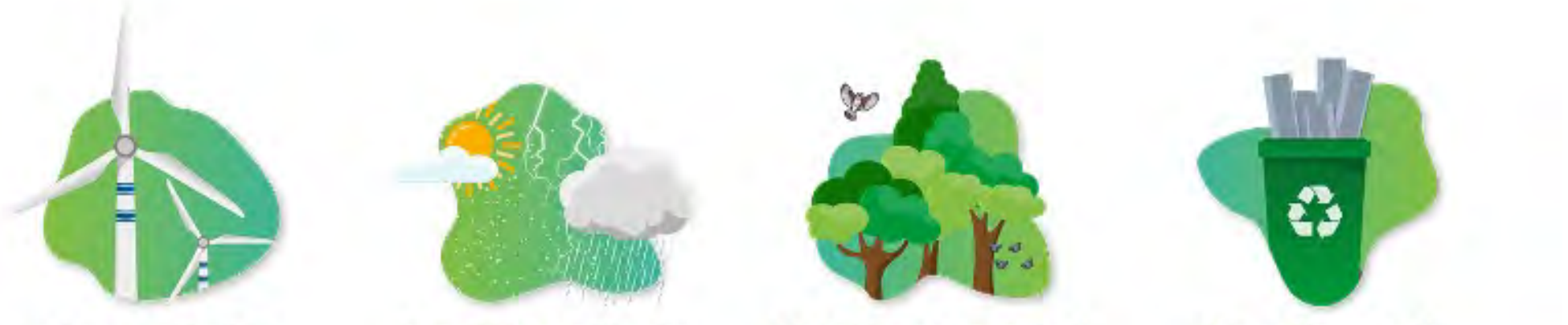
Network Rail will continue to look after nature around the railway and help it flourish. By protecting and maintaining habitats, biodiversity across the rail's landscape will be enhanced by 2035.

2.4.4 Helping plants and wildlife flourish

The railway will be more reliably resilient to climate change and severe weather by 2050. Network Rail is already the first railway in the world to have set ambitious, science-based targets to achieve this.

2.4.5 Recycling and reusing everything

Waste less and recycle more; materials should be re-used, repurposed or redeployed. By 2035, it will be 'business as usual' to only use materials that are made sustainably, don't pollute, last longer, and can be re-used and recycled.



A low-emission railway

A reliable railway service that is resilient to climate change

Helping plants and wildlife flourish

Recycling and re-using everything

Image 2.5 Sustainability Core Priorities

2.4 Sustainability

2.4.6 Network Rail Environmental Sustainability Strategy

The Network Rail Environmental Sustainability Strategy 2020 – 2050 sets out specific ambitions, roadmaps and milestones. Included within these elements are numerous instances where retail and green development will support the delivery of the overall strategy, namely with regards to the "greener assets, healthier air", "climate change adaptation" and "circular economy" roadmaps.

The strategy document identifies that infrastructure related emissions of Network Rail are largely generated by our supply chain. This includes the embodied carbon in products, for example, from energy required to extract raw materials, manufacture and transport the product, and staff using buildings and equipment.

Focusing specifically on retail, the British Rail Consortium reports that the UK retail industry contributes approximately 215 metric tonnes of carbon dioxide equivalent ($MtCO_2e$) through the lifecycle footprint of goods sold annually in the UK, with additional emissions from vehicle fuel use by retailers of ~50 $MtCO_2e$. This places the sector among the most important contributors to greenhouse gas emissions, contributing approximately 80% more emissions each year than all road transport in the UK.

The ephemeral nature of retail fit-outs, resulting from limitations on leases and high tenant turnover, creates challenges in this particular construction sector.

In addition to the procurement, transport and sale of goods, it is also critical that retail tenants and landlords work closely together to understand and improve building performance and to undertake design that incorporates net zero carbon goals, including using low-carbon materials strategically, employing circularity when changing displays and addressing overall energy use.

A number of sustainability measures have been identified for incorporation into this design manual. These are categorised as:

1. Operational carbon and energy efficiency
2. Embodied carbon and responsible sourcing of construction products
3. Waste and circular economy
4. Water
5. Health and wellbeing

The sustainability measures and implementation requirements are based on the environmental assessment methodologies and guidance listed below. If BREEAM, Ska, WELL or Fitwel were to be pursued, implementation of these measures would support the route to certification.

- → BREEAM (New Construction 2018 and Refurbishment and Fit Out 2014 manuals)
- → RICS Ska
- → LETI Embodied Carbon Primer
- → WELL Building Standard version 2
- → Fitwel

To allow an element of flexibility, at least 80% of applicable measures should be implemented. Where criteria cannot be achieved, robust justification should be provided, and project teams should continue to implement the requirements as far as possible to support Network Rail's wider Environmental Sustainability Strategy for 2020 – 2050

NR Guidance Suite Reference

Station Design Guidance **NR/GN/CIV/100/02**
Climate Action Design Manual for Buildings and Architecture **NR/GN/CIV/100/04**

Network Rail document

Our Ambition for low-emission Railway 2020-2050
NR Environmental Sustainability Strategy 2020-2050

National Standard

NR/L2/ENV/015 Environment and Social Minimum Requirements for Projects – Design and Construction.

2.5 Heritage

Britain has 2,566 railway stations of which 380 (including 16 of the managed stations) are listed. This makes the relationship of modern retail to historic fabric a key issue to be addressed at many stations:

- → The design of shopfronts should respect and preserve the distinctive qualities of specific architectural details
- → The consistent, long-term application of design guidelines should deliver retail area whose appearance is strengthened, rather than diluted, by the passing of time
- → Designs of a modern idiom should both complement and contrast with historic fabric
- → Where original shopfronts and materials are intact, or where there is sufficient archive information available, designs which follow a historic aesthetic should be used
- → However, pastiche designs (not rooted in the original architectural design) should not be used

The best stations celebrate their unique history and benefit from the character of the original fabric. This can strengthen the retail value and identity of a station.

NR Guidance Suite Reference

Heritage: Care and Development **NR/GN/CIV/100/05**

Image 2.6 North Concourse, Leeds Station, with shopfronts which respect the character of the original 1931 design

2.6 Inclusion and Accessibility

Retail Design Manual
200 series
NR/GN/CIV/200/06
Issued: June 2023

2.6.1 Access for All

More than one in five adults in the UK identify as having a disability and three quarters of these, or their families, have reported deciding not to use a business due to poor accessibility or customer service.

Inclusive design considerations in the retail context include the layout of furniture and aisles, the design of service counters and terminals, the management of sensory inputs such as light, sound, and smell, and the use of colour and materials. Incorporating inclusive design from the outset can create better outcomes for all customers.

Inclusion and accessibility should not begin at the station; it starts with the information available to customers at the trip-planning stage. Tenants are encouraged to have accessibility guides which, at a minimum: identify accessible routes to the retail unit from blue badge parking, drop-offs, and platforms; describe services provided by the tenant; and list likely barriers or sensory considerations. Guides identify, remove and prevent potential barriers to accessibility may also include maps, photos, or measurements to enable decision-making by prospective customers.

2.6.2 Comfort and Reassurance

Providing for customer comfort requires retail units that are easy to navigate, managing the sensory environment, and creating displays that can be used by all.

Entrance areas, including counters, bars, terminals, and kiosks, should have adequate clearance to allow all users to approach, interact, and exit freely. Dual height counters or bars are recommended, while counters with knee and toe clearance for a front approach are generally preferable. Providing seating or rest areas within retail units can benefit customers of a variety of abilities.

Retail units should provide space for mobility device and guide dog- users to move and turn around comfortably. Freestanding signs and displays should be monitored or, ideally, avoided to prevent creep into paths of travel over time. Where they are considered to be essential, they should form an uninterrupted tap rail for partially sighted customers and should be of a design which does not create the risk of a trip hazard.

Station buildings exhibit stimuli including informational screens and signage, announcements, advertisements, and smells of food, drink, and other products. Retail tenants should not add unnecessarily to this sensory environment.

Image 2.7 Principles of Inclusion

2.6 Inclusion and Accessibility

2.6.3 Interaction and Communication

Facilitating interaction and communication for all means retail staff should be properly trained and familiar with best practice and store-provided accommodations, providing information in accessible formats, protecting lines of sight between customers and retail staff, and accommodating assistive technology where possible.

Tenants should have accessibility guides which, at a minimum, should be available in more than one format. Printed menus, for example, may be provided in a digital format suitable for a screen reader.

- → Interaction and communication can be facilitated by design and fixture choices
- → Obstructions at eye level should be limited to enable visual communication and lip-reading
- → Customer engagement terminals and displays should be adjustable or located such that they are visible and usable regardless of a customer's stature

Assistive technologies, including app-based services, provide a variety of feedback and support to users. Retail tenants are encouraged to familiarise themselves with popular services and standards for accessibility data as they are adopted.

2.6.4 Engagement

While research over several decades has made spatial requirements relatively certain, just as important is committing to ongoing improvement in response to feedback. The human-centred approach to design considers the perspectives and feelings of real people to inform design solutions. In this light, tenants are encouraged to engage with customers and potential customers with disabilities to inform the design of their premises and services. Tenants should take an iterative approach to addressing barriers, identifying, removing, and preventing barriers to accessibility.

Tenants are additionally encouraged to accept feedback on inclusion and accessibility from organisations such as the Network Rail Built Environment Accessibility Panel and the Network Rail Disability and Inclusion Team. The Network Rail Built Environment Accessibility Panel (BEAP) which is an interdependent panel of experts that work with NR to help plan inclusive and accessible spaces and places. To make sure that major building works, station design and other amenities across Britain are accessible and inclusive as possible.

NR Guidance Suite Reference
Inclusive Design **NR/GN/CIV/300/04** Parking and Mobility in Stations **NR/GN/CIV/200/11**

National Standard
Design Standards for Accessible Railway. Department for Transport

Code of Practice Guidance
Barriers in and about buildings **BS 6180**

2.7 Visitor Experience

The needs and aspirations of visitors to stations, be they rail passengers or retail customers, have undertaken significant change in recent times.

Various events have shown that an altered landscape of retail was not temporary but has undergone a permanent shift to more fluid expectations. Buildings are no longer expected to be a fixed asset. The façade and interiors can be flexible to address change of season, commercial offer or events. Adaptability to user groups, built environment and commercial offerings enable the retailers to catch up and cater for the latest trends.

- → Within this context, a station should provide an atmosphere of reassurance and comfort
- → Stations often have cultural and local resonance; these can include characters from fiction, or notable local community figures
- → Stations also form a key role in their surroundings as civic or commercial hubs, utilised by local residents as a place to meet, shop and dine
- → Stations provide facilities and functions to people from across the social spectrum accessible in a safe and secure manner
- → The original architectural character of the station creates an identity with which modern interventions should not conflict
- → Retail design can follow historic design if original structures are evident or archive information is available (however, pastiche or insensitive detailing should be avoided)
- → Passengers and customers appreciate understanding the history of the railway station environment

Image 2.8 Diagram indicating typical passengers' journeys through a station and the pace at which they move. Their retail and F&B choices are influenced by their particular dwell times

2.8 Emerging Trends

The nature of retail has undergone major upheavals in recent times, which have affected the retail offer expected by passengers. Whilst some uses may now be obsolete, others have come to fore as technology (in particular) has influenced our expectations of, and aspirations for, station environments.

This has accelerated the use of contactless payment, mobile shopping, and autonomous shopping. Brick-and-mortar retail needs to transform to deliver cohesive omnichannel customer journeys and deliver unique, memorable shopping experiences that blend elements of both the digital and the physical worlds.

A seamless, hybrid online-in-store customer experience is key to engage an increasing percentage of digital conscious contemporary customers.

Image 2.9 Metro Farm, Seoul, South Korea, an example of innovative, alternative uses for retail units

2.8 Emerging Trends

The following technologies and techniques are currently being used in station environments around the world:

- → 2D Virtual Grocery Stores along station platforms
- → Sensor Operated Autonomous Stores
- → Automated Click and Collect Stores
- → Fully Autonomous Robot Baristas (with Grab & Go)
- → Pre-arrival apps for F&B bookings, retail ordering, and special offers
- → Online shopping collection
- → Digital supermarkets with groceries for later pickup
- → Touch-down workspaces
- → Small to Medium Enterprise business opportunities

78% of millennials / digital natives would prefer to spend their money on a desirable experience or event over buying something desirable. Future retail experiences will provide users with immersive and unique experiences, in addition to subtle advertisement of products. There will be an increasing need to consider every aspect of the customers journey and experience from retail offerings to retail environment to customer service. Personalisation is already becoming key to engaging customers.

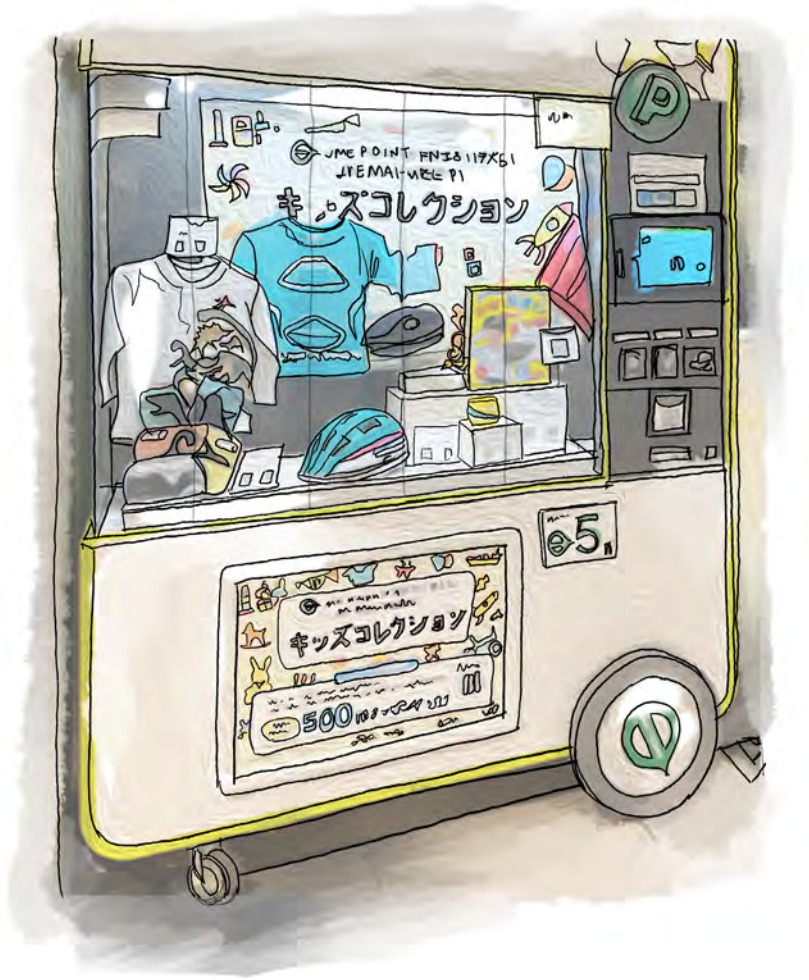


Image 2.10 'JRE Mall' booth / Online mall on physical showcase

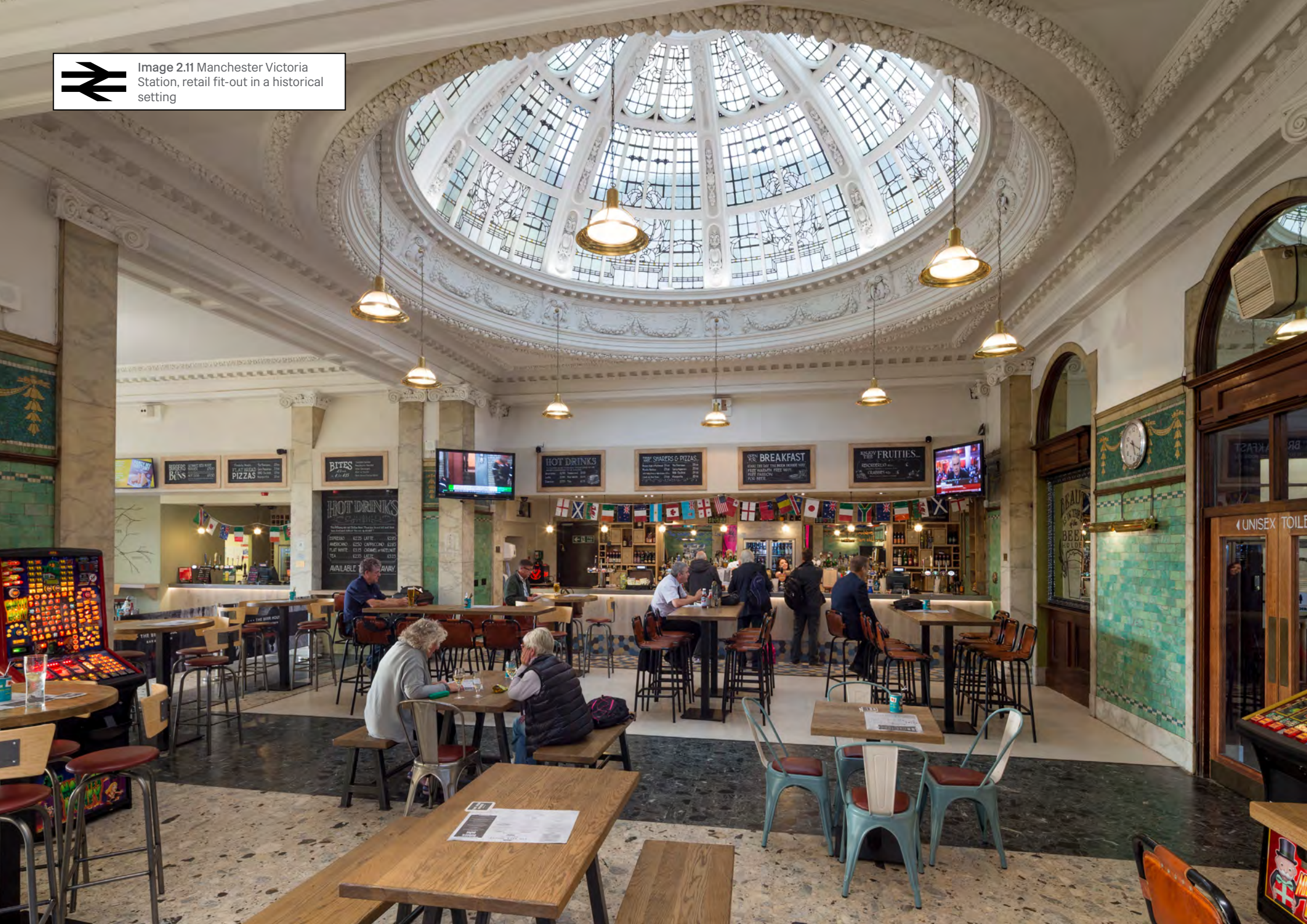


Image 2.11 Manchester Victoria Station, retail fit-out in a historical setting

3

Retail Design Manual for Stations

Section 3: Retail Master Planning Strategies

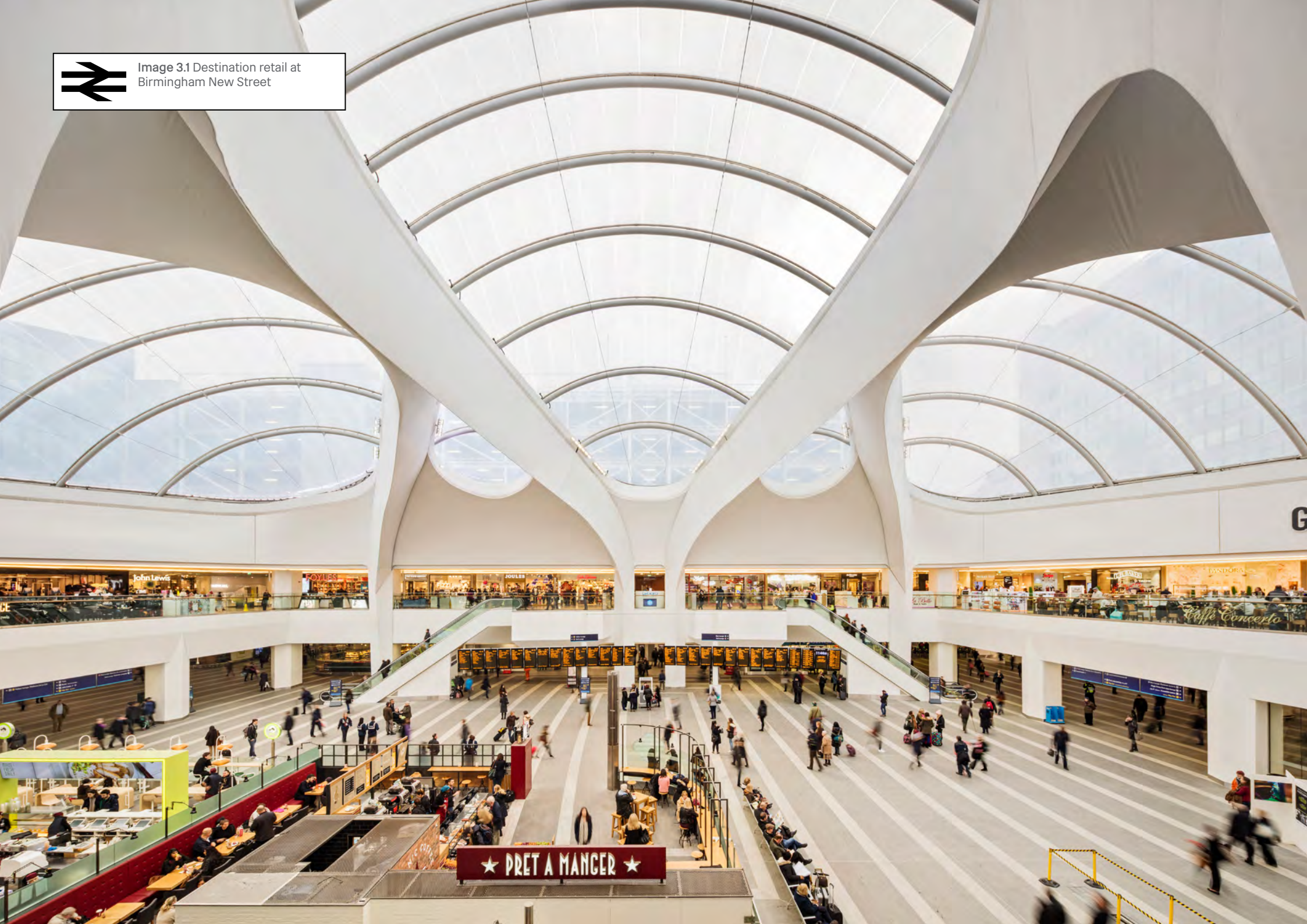


Image 3.1 Destination retail at Birmingham New Street

3.1 Masterplanning Strategies

Developing a masterplan for the redevelopment of a station has various benefits:

- → It enables a station to accommodate forecast levels of increased passenger demand
- → It can provide an enhanced image for the railway on a local, regional or national level
- → It enables the civic importance of a station to be improved or reasserted
- → It creates a visitor experience which meets the need of contemporary passengers and customers

This Design Manual should be used during the design stage of station masterplan projects so that the retail facilities at a redeveloped station align with the wider vision for retail across the country.

This Design Manual should also be used as part of the design process for individual retail units as and when they are replaced or refurbished in isolation to a wider project.

NR Guidance Suite Reference

Masterplanning at Stations **NR/GN/CIV/100/07**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**

Image 3.2 Transit- Oriented Retail and Hyperlocal Community

3.2 Passenger Movement

The design of retail shopfronts and demised areas around units should consider:

- → An individual passenger's journey from entrance to exit point, including all aspects of rail journey (including planning ahead)
- → The customer journey and experience including the retail offer, retail environment and personal service
- → The utilisation of pedestrian flow analysis where conflicts might arise
- → The inclusive design principles as applied to the needs of different groups of passengers and customers from the local community
- → The requirement for staff regardless of mobility to work in a safe, secure and accessible environment

NR Guidance Suite Reference

Station Design Guidance **NR/GN/CIV/100/02**
Station Capacity Planning Design Manual **NR/GN/CIV/100/03**
Vertical Circulation **NR/GN/CIV/200/05**
Station Footbridges and Subways **NR/GN/CIV/200/07**

Image 3.3 The creation of a clear and distinct retail environment at a station can be influenced by parties other than the tenants themselves. The application of elements such as building services and advertising onto a façade should take place in a considered manner to remove the risk of visual clutter which detracts from the identity of the station overall and the individual retail units themselves.

3.2 Passenger Movement

Image 3.4 To create a successful retail environment at a station, there should be consistency in the font, size, colour of signage. The level of the underside of the signage above floor level should not vary and instead be continuous across a run of neighbouring retail unit facades. Shopfront glazing should have automatically operated doors to a design which is the same or visually similar with others built with reference to this Manual at the same station. This application of the principles established in this Design Manual should create cohesive retail environments across the rail network.

Image 3.5 Where retail and F&B tenants occupy a space outside their enclosed unit the associated area immediately in front of the facade should be appropriately controlled and managed. Areas of cafe tables and chairs should be clearly defined as being separate from the main circulation space, and their visual appearance should be coordinated with neighbouring tenants. The design and support of hanging banners should be coordinated in a similar manner, and their support frames and bases should not obstruct passenger flows or present a trip hazard to partially sighted customers. The width of the space at the entrance to the area occupied by the tenant should be suitable for a wheelchair to manoeuvre, and freestanding A-frame signage should not be used.

3.3 Decision Making

Several factors should be considered in terms of how the hierarchy of customers' movements through the station is coordinated with the design of retail environments:

- → Decision points (at the intersections of paths or at an entrance point) should provide clear sightlines to information to pinpoint further destinations; customers go through multiple decision points throughout their journey
- → Differences in user flows, and the pace of movement should be taken into account
- → As is defined in the Wayfinding Design Manual, customer information signage (wayfinding, CIS screens) should be perpendicular to pedestrian flow, and other information (retail, advertisement) should be parallel to the pedestrian flow
- → Signage should only give as much information as necessary; there should be a progressive disclosure of information

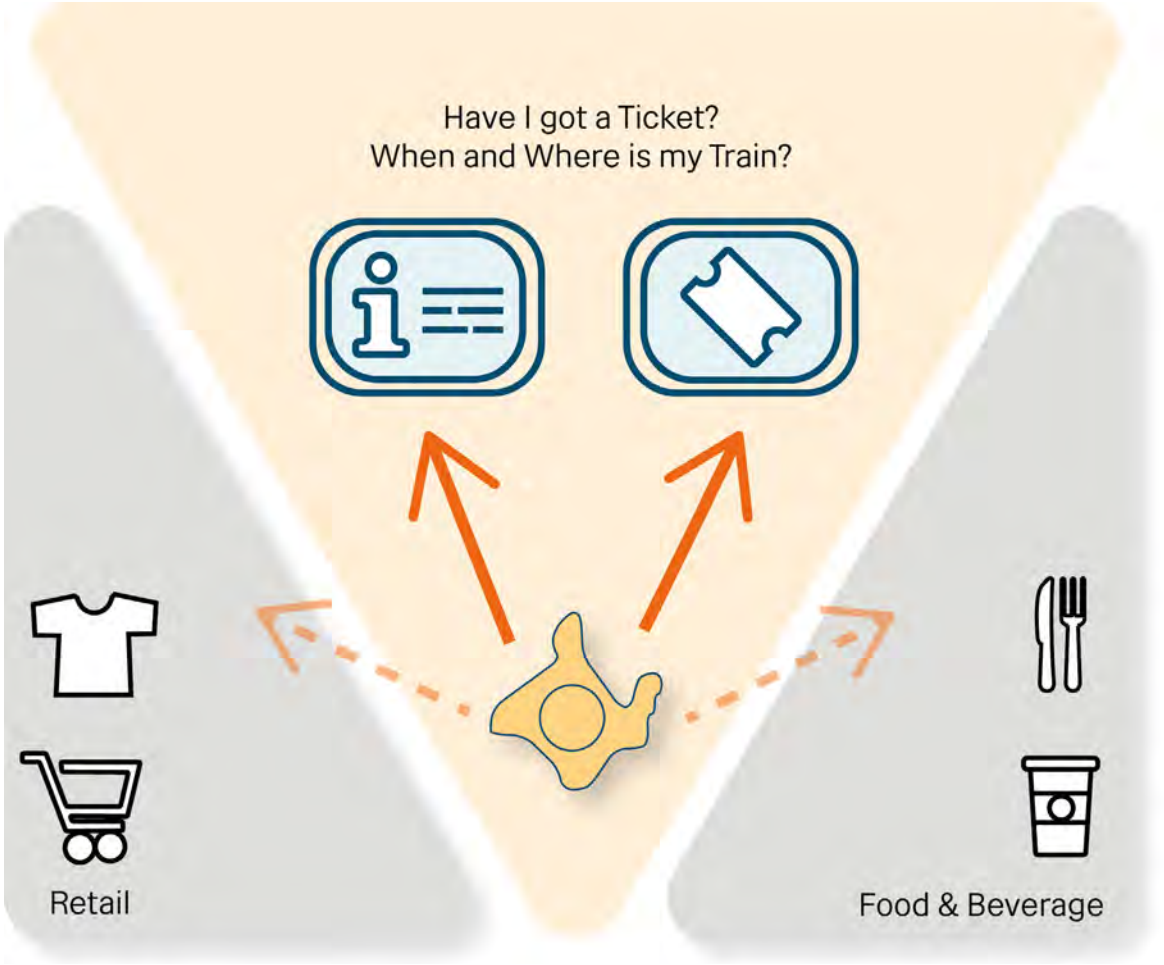


Image 3.6 Hierarchy of decision making and information gathering. Passengers seek reassurance of the time and location of their trains prior to seeking retail / F&B choices

3.4 Wayfinding

The creation of retail facilities at a station should:

- → Promote intuitive wayfinding (lighting, finishes and landmarks) where possible
- → Provide clear sightlines between decision making points and the signage providing information for that decision, as well as consistency of placement and spacing between signage for different tenants
- → Coordinate with wayfinding signage to facilitate operation of a station, including the relative heights for associated signs and displays
- → Understand pedestrian flow and how it can be affected by layout
- → Create a clear pattern of moves and hierarchy of routes
- → Avoid the creation of visual clutter
- → Provide consistency despite different ownership / management

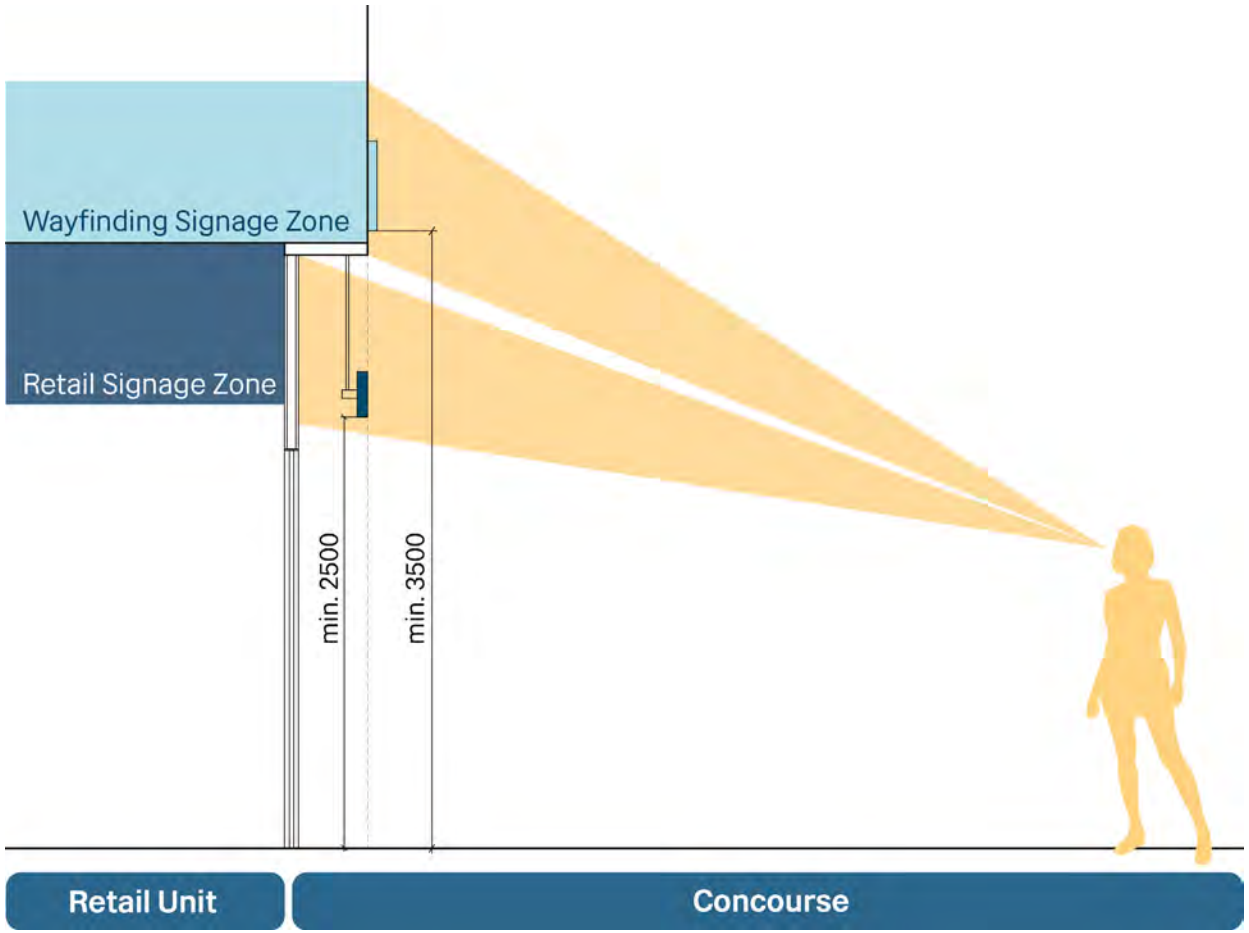


Image 3.7 Different Levels of Signage Zones

NR Guidance Suite Reference
Wayfinding **NR/GN/CIV/300/01**

3.5 Anchors and Destinations

A typical retail mall plan is developed to have pedestrian footfall which is encouraged by the creation of large 'anchor units' at the ends of, and key locations within, a retail environment:

- → However, a railway station rarely provides this scenario in its traditional form, the consideration of these principles can be useful to the design of station concourses and individual units
- → Anchor units should be strategically located within the wider retail masterplan to encourage pedestrian movement through the full extent of the station footprint. They are also important to other retailers as they benefit from passing trade
- → Consideration should also be given to how other elements of a station environment can be positioned and treated as anchors; these can include artwork and landmarks, as well as functional areas such as customer information displays and the platforms themselves

NR Guidance Suite Reference

Masterplanning at Stations **NR/GN/CIV/100/07**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**

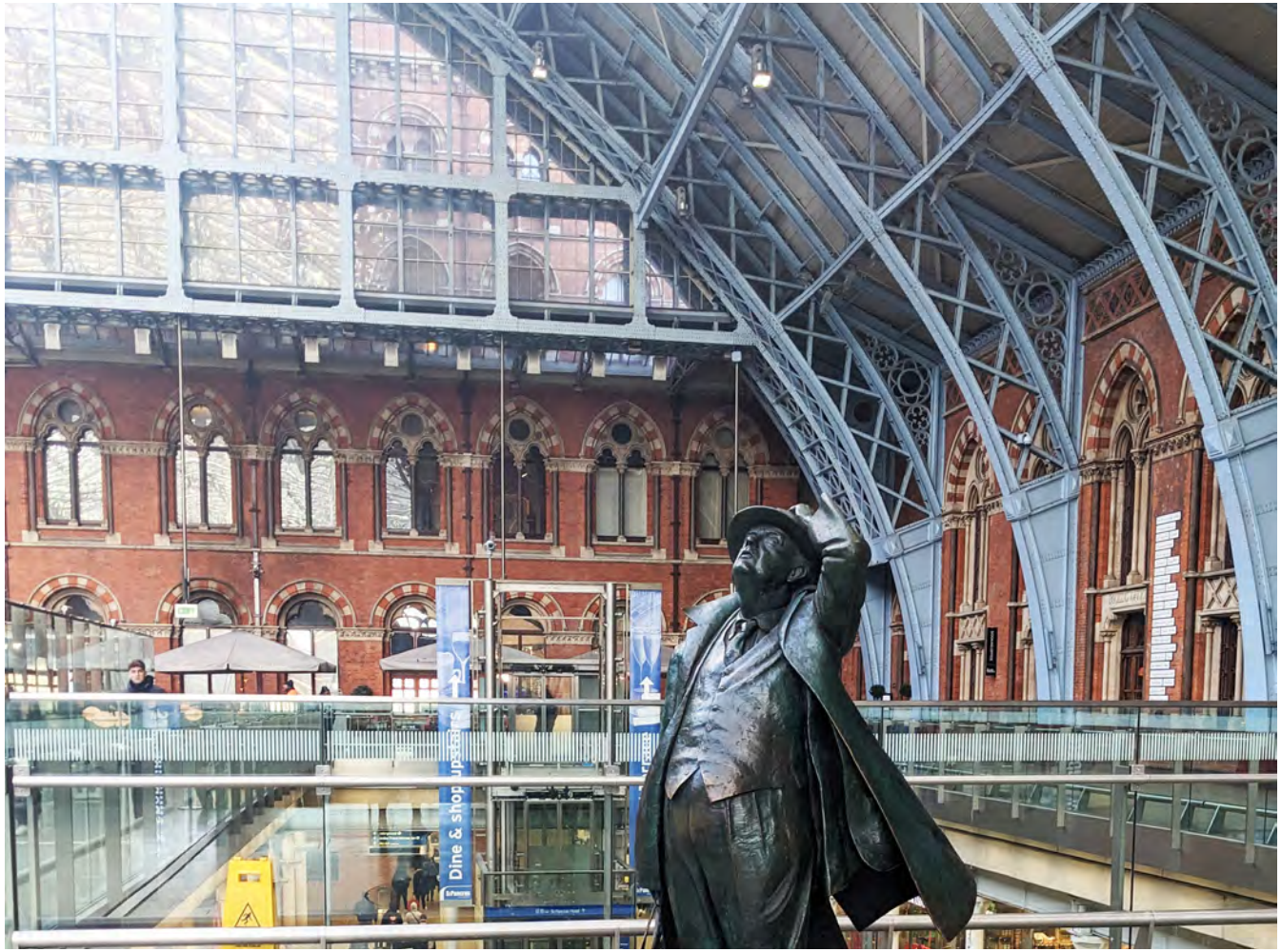


Image 3.8 St Pancras Station

3.6 Transit Oriented Development

3.6.1 Urban Integration

Stations and transport interchange are increasingly being considered from a perspective of the role they perform as part of hyper-local communities providing a diverse range of mixed-use programmes. Proposals for new communities, or the growth of existing neighbourhoods, are identified as Transit Oriented Development.

Improving the station retail experience can therefore encourage more rail use and enhance the synergies between stations and surrounding commercial establishments. This can extend beyond a typical station retail offer to provide healthcare, community and flexible work environments.

Programmes are not limited to convenience stores, but nurseries, co-working spaces, sports clubs and automated luggage lockers. Developing non-commercial services in multifunctional spaces in stations as the support of the retail units helps to retain the footfall on site while keeping the circulation moving.

Image 3.9 Tokyo Station Underground Networks / A self-contained shopping district

3.6.2 Developer Collaboration

Development opportunities should be explored around the fringes of stations to enhance the passenger experience and strengthen integration with the local urban realm. This will in turn drive local regeneration, economic growth and social benefits for the station.

A recent example of this is Boxpark Croydon. Boxpark is a meanwhile use venue which is part of the mixed use Ruskin Square development next to East Croydon Station. It consists of 96 modified shipping containers and provides a home for over 40 food and beverage units to create a dining experience that focuses on small independent traders. The design creates a semi-enclosed market hall and event space, so there is a central focus to the scheme with F&B units arranged around it, as well outdoor terrace spaces. Its success results from the direct connections into the transport interchange formed by the railway station, tram stops and bus station.

Developments such as Boxpark, Vinegar Yard and commercial arches around station make a positive contribution to the local area, providing jobs, community benefits and has enhanced the activity of the local street scene.

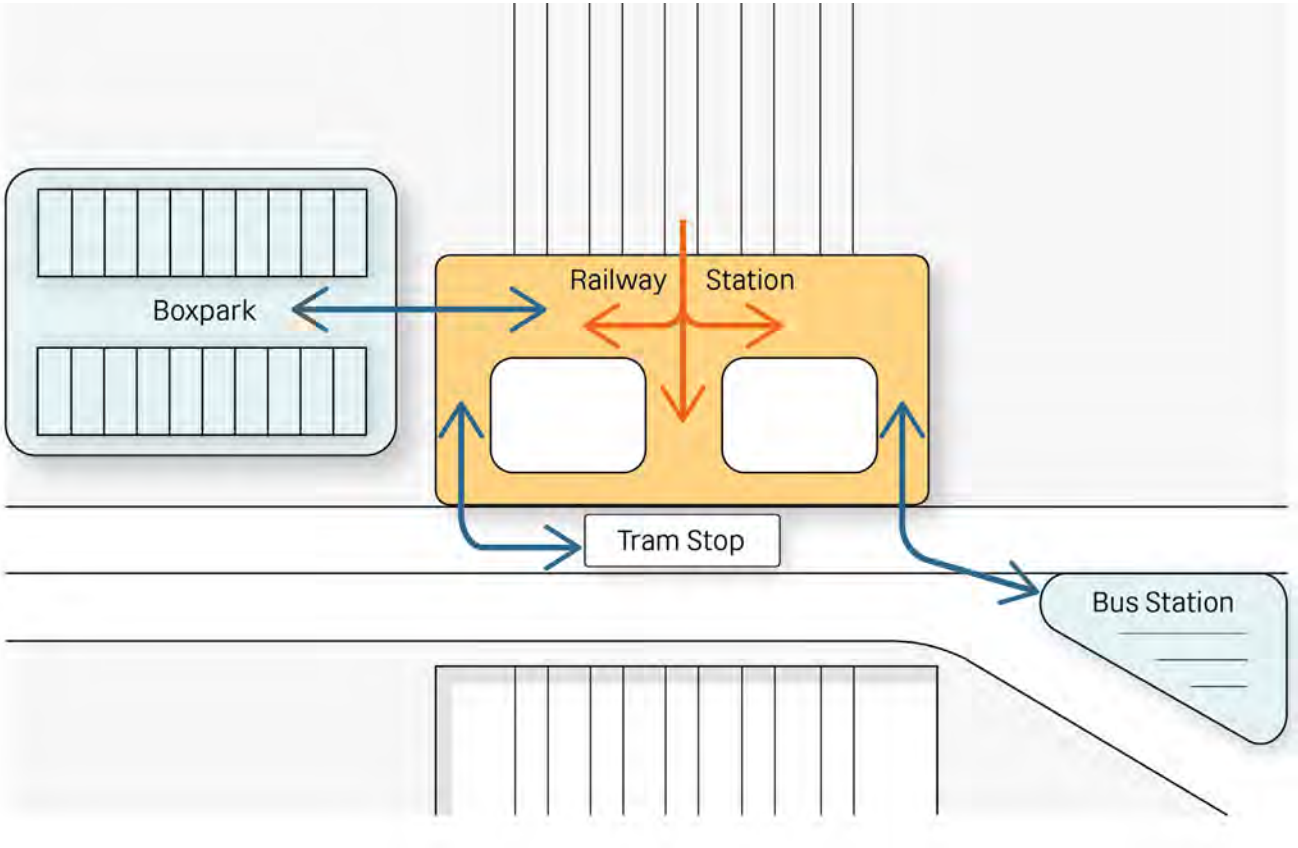


Image 3.10 Boxpark Croydon

Image 3.11 Development Opportunity adjacent to East Croydon Station

Image 3.12 London Bridge, retail design with character inspired by historic forms

4

Retail Design Manual for Stations

Section 4: Relationships to Station Facilities

Image 4.1 Glasgow Central Station, contemporary retail integrated into historic station

4.1 Entrances and Concourses

As an environment with various overlapping activities and functions, a station should provide clarity which facilitates a calm and reassuring character for all users:

- → The natural focal point for station users is the concourse, with passenger journeys flowing through the space between entry points from platforms, pedestrian entrances, and multi-modal transfer
- → The concourse should accommodate the priorities of rail users' sensory functions, regardless of their age, mobility, or background
- → It should enable people to interpret and use the space at their own pace, be they a commuter rushing along the shortest path between two point or leisure users taking a slower pace
- → Decision points for these different users can be mapped onto pedestrian flows to inform the placing of way-finding and transport information provision
- → The range and location of retail units should also be navigable from these decision points, enabling users to make decisions based on their dwell time within the station
- → The retail offer should be considered in terms of its proximity to primary circulation routes, which in turn can inform shopfront design and the treatment of demised areas

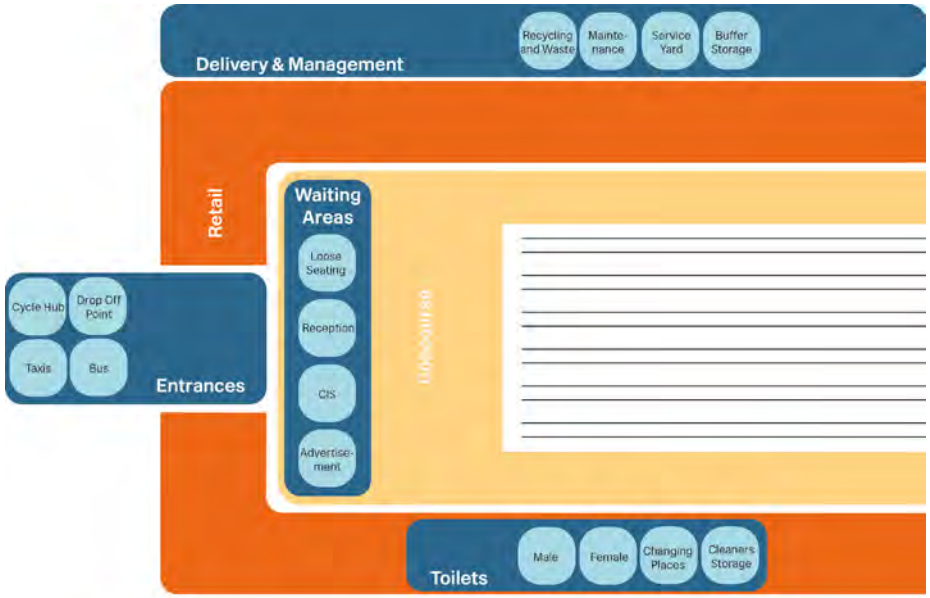


Image 4.2 Relationships of retail and F&B to Station Facilities

NR Guidance Suite Reference

Station Design Guidance **NR/GN/CIV/100/02**
Masterplanning at Stations **NR/GN/CIV/100/07**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**
Public Realm Design Guidance for Stations **NR/GN/CIV/200/10**

4.2 Toilets, Waiting Areas & Information Provision

Various factors should be considered when retail units are being designed so that key passenger services are best utilised by the users of the retail units:

- → Public facing signage plays an important role in customers' needs, and toilet identification is part of the key wayfinding signage and therefore higher in the information hierarchy than other types of signage such as retail or advertisement
- → Toilets should be clearly signed on wayfinding and have a single entrance to avoid confusion
- → Accessible paths of travel for vertical circulation such as elevators should be clearly signed
- → All routes to facilities should be step free and fully accessible; they can be of particular importance to disabled station users
- → F&B tenants should consider how their units relate to passenger toilets if the units do not provide independent facilities
- → Dwelling areas such as waiting shelters, waiting rooms and assisted travel lounges should also be considered as part of retail tenant designs as they can act as an overspill from demised areas
- → Waiting areas within the concourse can be more flexible – organised around information points and other facilities or retail pop-up units; in a similar way the locations of station seating can interface with retail offerings
- → Where platform areas are remote from a retail unit, tenants should consider the integration of clear sightlines to adjacent information screens or the provision of displays within their unit

Image 4.3 Seating, Liverpool Street Station

Image 4.4 Toilets, Liverpool Street Station

NR Guidance Suite Reference

Station Facilities and Amenities **NR/GN/CIV/200/03**
Public Toilets in Managed Stations **NR/GN/CIV/200/04**
Wayfinding **NR/GN/CIV/300/01**

Code of Practice Guidance

Sanitary Installations **BS 6465**

4.3 Deliveries and Management

The design of retail units, from the shopfront to back of house storage should consider various factors relating to deliveries, services and refuse collection:

- → The ideal scenario is for servicing from the rear of a unit, however this is not possible at many stations. Where this is not possible, deliveries and recycling from the front should be carefully controlled. This can include fixed delivery times and restrictions on size of vehicles / cages
- → Opportunities for shared storage away from retail units (for example at London Bridge) can provide additional sales areas for tenants as storage does not need to be incorporated within the unit footprint
- → Consolidation facilities should be away from the main station area (for example at St. Pancras) can also maximise retail areas inside a unit in a similar manner
- → In both the previous examples, the design of the retail unit should consider how the ad-hoc requirements for service access to a unit is best accommodated without compromising the use of the adjacent concourse areas or the unit itself

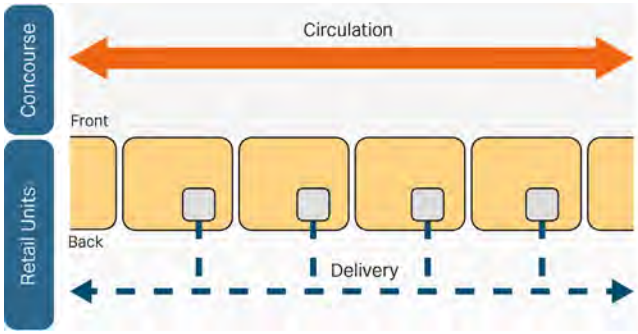


Image 4.5 Rear serviced (integrated storage)

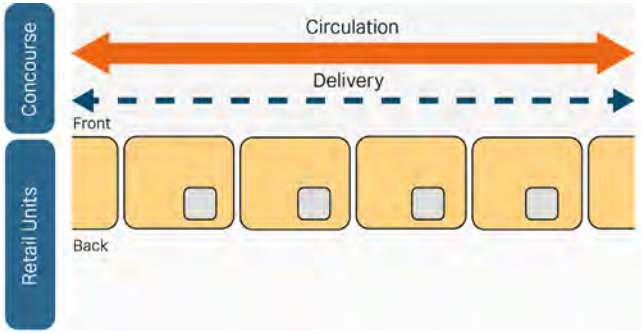


Image 4.6 Front Serviced (integrated storage)

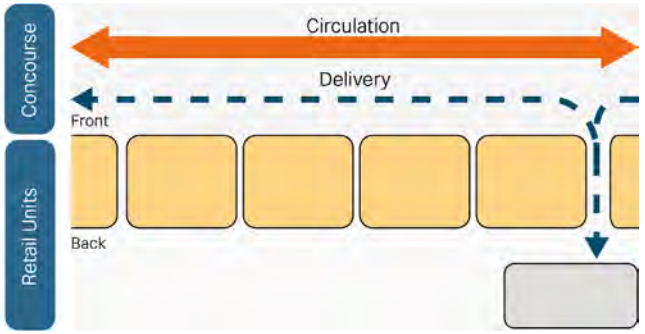


Image 4.7 Centralised Servicing (non-integrated storage)

NR Guidance Suite Reference

Station Design Guidance **NR/GN/CIV/100/02**
Masterplanning at Stations **NR/GN/CIV/100/07**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**
Station Facilities and Amenities **NR/GN/CIV/200/03**

Image 4.8 Nottingham Station, historic Porte Cochere converted to food court and station entrance

Retail Design Manual for Stations

Section 5: Retail and Commercial Typologies

5

Image 5.1 Modern shopfronts integrated with historic fabric at the Lawn, Paddington

5.1 Categories

To facilitate Network Rail's vision of creating clear and distinctive image of its retail offering, the look and feel of the retail spaces should be curated based on location of the retail units within the station, the relevant needs of passengers, and the nature of the surrounding catchment area around the station. The type of station informs the extent of design intervention and retail scale, from within the station gate (Type 1), through to adjacent site developments (Type 4). The zone of influence of the retail offer will be greater in larger stations, or those where the specific nature of neighbouring developments dovetails neatly into the station entrances and concourses.

Station Category	Station Type	Station Retail Types			
		1	2	3	4
A	National Hub	●	●	●	●
B	Regional Interchange	●	●	●	●
C	Important Feeder	●	●	●	●
D	Medium Staffed	●	●		
E	Small Staffed	●	●		
F	Small Unstaffed	●	●		

Paid Zone ● Unpaid Zone ●

Table 5.1 Retail Positioning by station categories

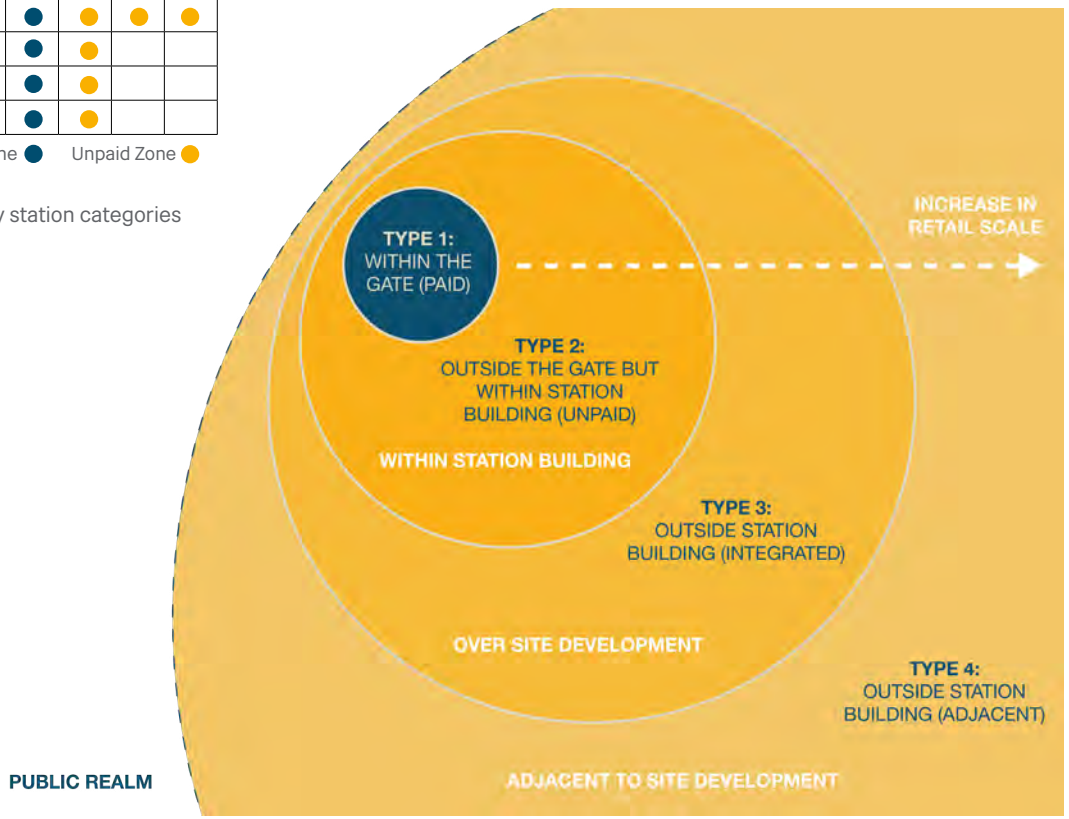


Image 5.2 Areas of interest for retail positioning

NR Guidance Suite Reference

Station Design Guidance **NR/GN/CIV/100/02**
Masterplanning at Stations **NR/GN/CIV/100/07**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**

Network Rail Document

Network Rail Property
Retail Client Requirements

5.1 Categories

Retail Design Manual
200 series
NR/GN/CIV/200/06
Issued: June 2023

	TYPE 1: WITHIN THE GATE (PAID)	TYPE 2: OUTSIDE THE GATE BUT WITHIN STATION BUILDING (UNPAID)	TYPE 3: OUTSIDE STATION BUILDING (INTEGRATED)	TYPE 4: OUTSIDE STATION BUILDING (ADJACENT)
	Small → Large			
SCALE OF RETAIL	Small single shops to a cluster of small shops	Small single shops to cluster or rows of shops	Clusters of Shops to large-scale retail complexes	Large scale retail complexes or a series of large scale retail buildings
EXAMPLES OF PROGRAMME	Convenience store, Take-away F&B	Post office, convenience store, F&B, retail	Can range from retail, F&B to entertainment	Can range from retail, F&B to entertainment
TYPE OF RETAIL DEMOGRAPHICS	 Travel orientated consumer	 Travel orientated consumer	 Destination orientated consumer	 Destination orientated consumer
OPERATIONAL HOURS OF RETAIL	As per station operating hours	Likely to be dependent on station operating hours	Not dependent on station operating hours	Not dependent on station operating hours
TYPOLOGY	Portable mobile units, permanent kiosks	Portable mobile units, permanent kiosks, pop-up, retail mall	Portable mobile units, permanent kiosks, retail mall, TOD	Retail mall, TOD
DWELLING TIME	Low → High			

Table 5.2 Summary of retail typologies within specific areas of a station environment

5.1 Categories

External Facing Standalone
Permanent Kiosks

Programme
- → Convenience store or small café/bakery catering to takeaway food items

Proposed Location
- → Type 1 Paid area – Between station platforms
- → Type 2 Areas with high visibility such as waiting areas

Frontage
- → Products can be accessed via adjacent circulation paths
- → Showcases unique brand identity

Advantages
- → Space saving
- → High visibility between buyers and incoming trains

Disadvantages
- → More security issues such as theft
- → May cause congestion if there is a crowd at the kiosk

Autonomous Mobile Units

Programme
- → Mobile workstations, vending machines, autonomous F&B, logistics locker stations, plug and play concept

Proposed Location
- → Type 1 Paid area – Between station platforms
- → Type 2 Unpaid areas – underutilised/ leftover spaces

Frontage
- → Showcases unique brand identity
- → Clear and visible signage to guide consumer to location of mobile units

Advantages
- → Autonomous, no need to be manned
- → Makes use of underutilised spaces
- → 24/7 operation

Disadvantages
- → Vandalism or misuse

Pop Ups / Showcase
Mobile Units

Programme
- → Showcases for various retail offerings

Proposed Location
- → Type 2, Type 3 and Type 4 Unpaid areas – at main circulation routes, middle of main plazas, at entrances to train station

Frontage
- → Maximised frontage
- → Porous design that attracts passers-by to activities/ exhibits within pop up stores/
- → Bright, unique brand identity

Advantages
- → Generates interest and variety to the commuting and retail experience.
- → Great platform for retail promotions

Disadvantages
- → May cause crowds and congestion
- → Staff side likely not accessible especially for mobility device users due to limited available space

5.1 Categories

Standalone
Retail Units

Programme

→ Convenience store or small café/bakery catering to takeaway food items, showcases stores

Proposed Location

→ Type 1 Paid area – along circulation routes, or connecting paths at interchange
→ Type 2 Unpaid area – areas fronting gantries
→ At areas with high visibility

Frontage

→ Singular shop
→ Showcases unique brand identity or unique programme

Mall
Retail Units

Programme

→ Convenience store, F&B, specialty stores

Proposed Location

→ Type 1 Paid area – along circulation routes, or connecting paths at interchange
→ Type 2 Unpaid area – areas fronting gantries
→ Type 3 and 4 integrated with TOD

Frontage

→ Rows of retail facing main circulation routes
→ Cohesive design of shop frontage through materiality or signage

Characteristics

→ Highly dependent on footfall generated by directional travel
→ Cater to travel – orientated consumer

External facing
Retail Units

Programme

→ Convenience store, F&B, specialty stores

Proposed Location

→ Type 2, Type 3 & Type 4 Unpaid area – along façade of station building, outward facing

Frontage

→ To keep with overall façade vision for station building
→ Signage should not overpower station building signage or key directional signs
→ Display windows to face public realm or main circulation routes, appearance of back of house should be mitigated with screens and landscaping

5.2 Retail Need (Convenience / Essential)

A significant majority of customers using station retail are fulfilling a specific need for convenience or essential purchases. As illustrated in the diagram opposite (extracted from the Retail category hierachy of needs pyramid on page 18) these include retail services such as:

- → Newsagent
- → Pharmacy
- → Supermarket
- → Food and beverage

With high levels of footfall through a station the essential consideration for the retail offer is to deliver clarity and ease of use. It is also important for a holistic offer to be provided so that users know that they can rely upon the station to fulfil their needs. The design of retail units should therefore provide clear messages about the content and offer of specific tenants.

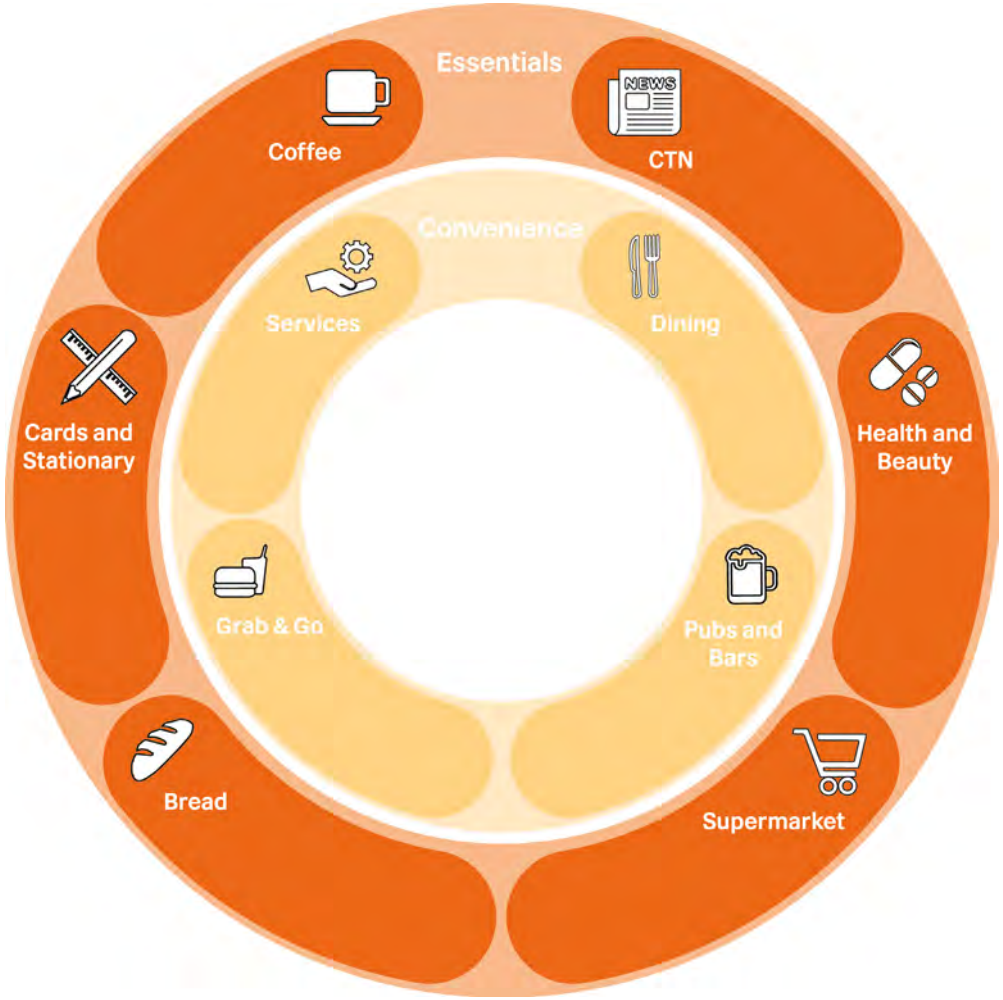


Image 5.3 Retail Need Ideogram

5.3 Retail Choice (Leisure / Destination)

A smaller proportion of visitors are attracted to the station for specific choice-based retail, as illustrated in the diagram opposite (extracted from the Retail category hierachy of needs pyramid on page 18). This focusses on predominantly leisure uses and the concept of the station as a destination in its own right. As the nature of high street retail changes, and the world emerges from the Covid pandemic, an increasingly diverse range of activities is becoming viable, including:

- → Business Centres / Meeting Spaces (e.g., The Office Group at various stations)
- → Tourist Attractions (e.g., Harry Potter at Kings Cross)
- → Social F&B – restaurants and bars (examples such as at Paddington Lawn and St Pancras)
- → Health Centres – GP / dental services (e.g. London Victoria)
- → Community Use – play centres, rentable space for community gatherings and events (various examples at smaller stations such as Irlam)
- → Museum / Specialist Interest Groups (e.g., Locomotive Society at Stockport)
- → High Street Retail Hub – (e.g., Birmingham New St or London Waterloo)
- → F&B destination and event spaces (such as Boxpark, connected to East Croydon Station)

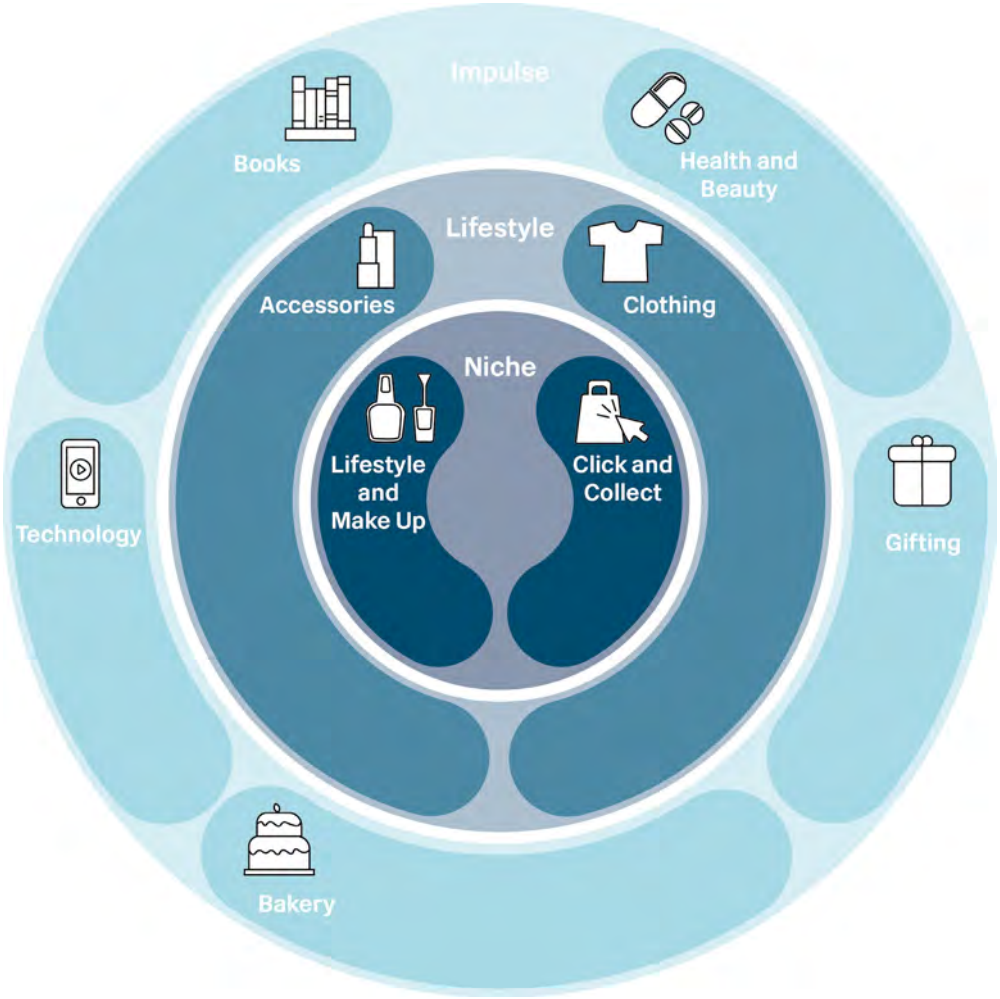


Image 5.4 Retail Choice Ideogram

5.4 Pop-up / Meanwhile

Underutilised concourses or temporarily vacant retail units can offer a wide range of opportunities, noting that constraints should be placed on their configuration such that essential station way-finding and circulation is not compromised:

- → Pop-Ups and meanwhile uses can generate interest and be used for advertisement or charitable work, or provide a sense of community and supporting the local SME economy
- → Areas with high footfall are suited for pop-up uses, or areas that aren't as busy on certain days; various locations can be identified with multiple uses possible
- → Flexible spaces need to be supplied with pop-up power and water to allow temporary uses
- → Accessibility should be a key consideration, as peripheral areas can sometime have physical constraints such as uneven floor surfaces and level changes
- → Non-fixed furniture placement can sometimes be placed in unpredictable locations, create risk of trip hazard and reduce accessible route clear width

The photos and diagrams opposite illustrate appropriate and less appropriate examples of pop-up unit positioning within concourse spaces.

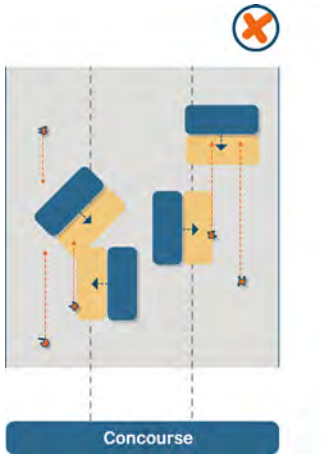


Image 5.5
Marylebone Station

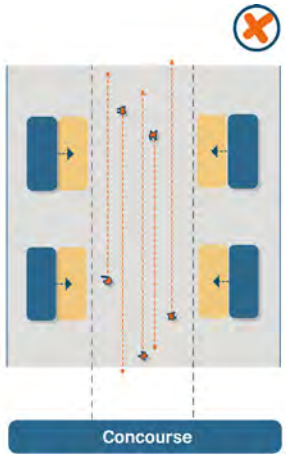


Image 5.6
Waterloo Station

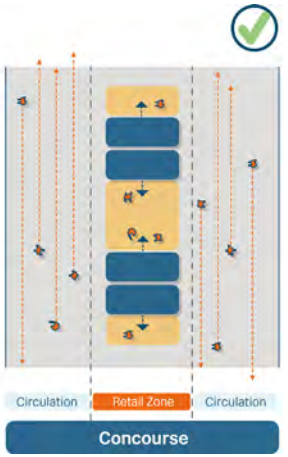


Image 5.7
Bikini, Berlin, Germany

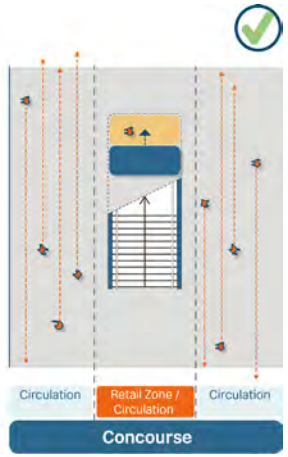


Image 5.8
London Underground

Table 5.4 Use of concourse space for Pop-Up/ Meanwhile use.

5.5 Smaller Stations

Whilst the Managed Stations Portfolio provides a significant total retail footprint across a small number of stations, when considered in their totality there are a wide range of retail opportunities across the large number of Franchised Stations across Great Britain.

Much of the guidance contained in this Design Manual is relevant to a wide range of stations, from large to small, regardless of whether they are Managed or Franchised. However, for stations in categories C, D, and E there will be situations where greater flexibility in the design of retail units will be appropriate. Various factors should influence the design strategies, including the nature of the existing buildings, which can have smaller internal spaces and tighter or constrained opportunities for the creation of shopfronts and signage.

To enable a diverse range of units to work together different strategies should be considered. (For example the use of a uniform signage detail or materials to create a collective identity within a specific station). This should enable national chains to sit alongside local businesses and avoid clashes in scale, proportion, and identity.

NR Guidance Suite Reference
Small to Medium Station Design Manual **NR/GN/CIV/200/02**

Image 5.10 Swansea Station, where retail units and station facilities share a singular signage and materials strategy to create a cohesive station environment

5.6 Mezzanines and Undercrofts

Many stations feature tall, open spaces which result from the traditional form and scale of entrance halls, concourse and train shed environments. These create opportunities for mezzanine levels which often focus on food and beverage units arranged in a food court arrangement and / or open balcony tables and chairs:

- → They can provide attractive spaces to eat and drink, with an animated character informed by the bustle and activity of the concourse below
- → However, these units can often present a series of challenges in terms of visibility and viability; drawing customers up to a mezzanine can be difficult
- → The benefits of an open balcony can become a drawback, as the unit and its signage can be recessed back from the floor edge, reducing the prominence of the tenant offer
- → To address this, controls on the size and type of signage and branding are sometimes relaxed, with tenant brands prominent and large scale signage used to advertise the unit
- → Designers should therefore develop creative design solutions to maximise the benefits of mezzanine level units

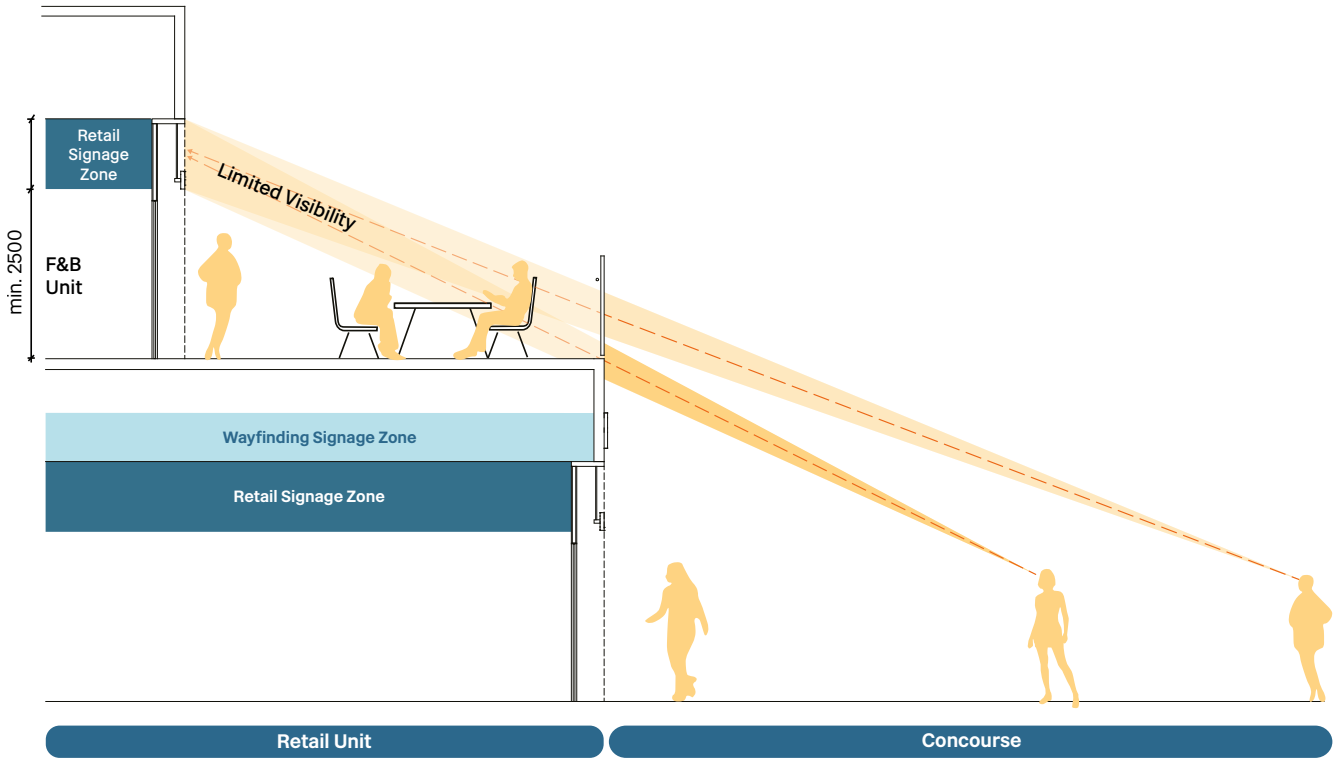


Image 5.11 Mezzanine – limited visibility caused by setback of units at mezzanine level and visual obstruction caused by tables and chairs

5.7 Marginal Areas

Station forecourts or under-utilised station buildings can all offer opportunities for imaginative activities, albeit with the need for coordination with the primary purposes of the station; these can work by:

- → Exploiting under used areas
- → Finding flexible uses for concourse areas
- → Activating external public realm and station approaches (markets, pop up uses)
- → Viaduct arches (when within station leases)
- → TOD and links to adjacent retail complexes
- → Temporary / third party events

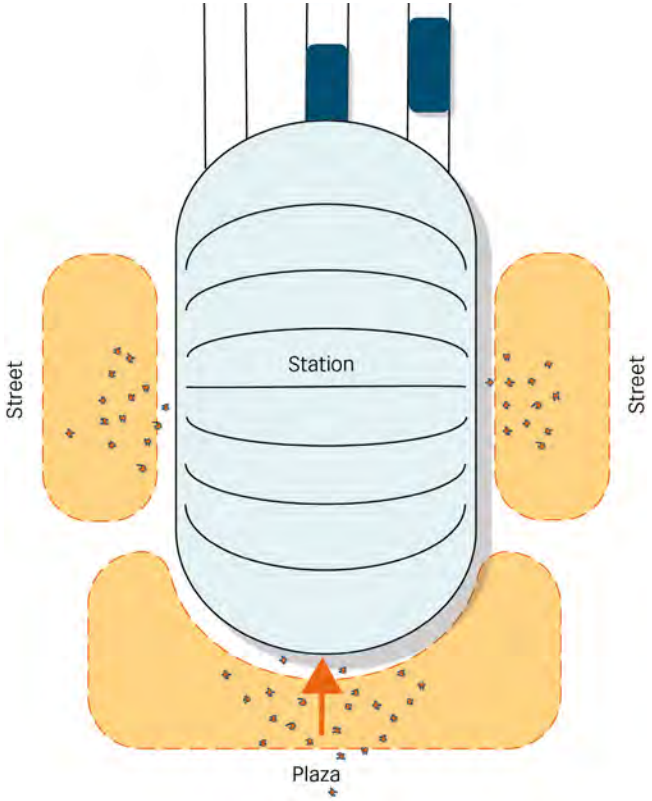


Image 5.12 Marginal Areas in the public realm

The large footprint of a station produces long façades facing onto surrounding streets and squares, which can accommodate non-station related commercial opportunities. In many locations such areas are in the ownership of Arch Co, but at certain stations they are the responsibility of the station landlord. There are also stations where a forecourt area can provide opportunities for free-standing kiosks on a temporary or permanent basis.

Image 5.13 Retail Arch, London Bridge Station

Image 5.14 Kings Cross Station

5.7 Marginal Areas

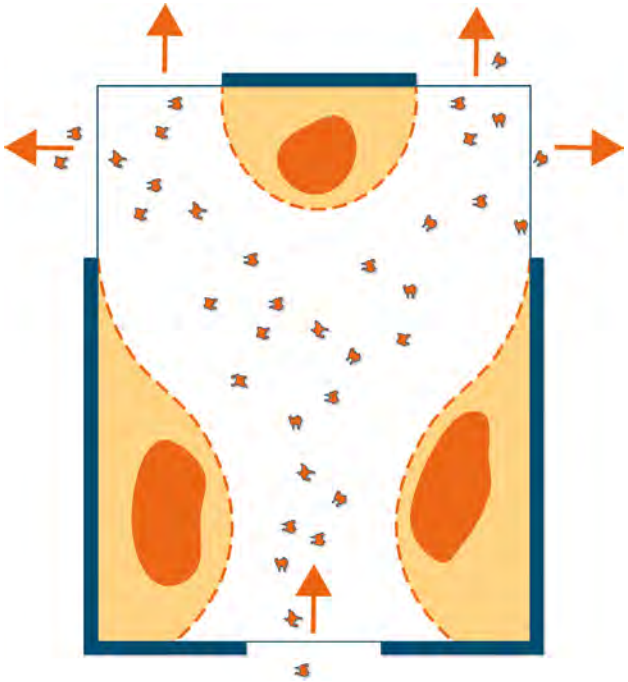


Image 5.15
Marginal Areas on Concourse Level

Concourse areas have an obvious primary focus on circulation purposes, but they can also have quieter areas away from the main passenger flows. Where retail activities can be introduced these areas can be utilised, noting that the definition of these areas is critical to avoid 'sprawl' which interferes with core station functions.

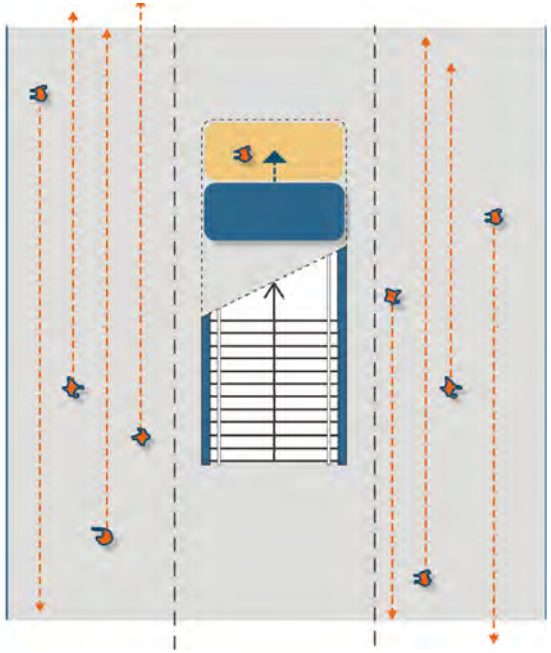


Image 5.16
Use of Marginal Areas independent from circulation Zones

There are natural locations presented by spaces beneath escalators and stairs to accommodate kiosks and vending machines. In key circulation areas such as concourses and platforms, the orientation of small retail units, kiosks and vending machines should be controlled such that queuing areas do not obstruct primary passenger flows.

Image 5.17 St Pancras Station

Image 5.18 London Bridge

NR Guidance Suite Reference

Masterplanning at Stations **NR/GN/CIV/100/07**
Public Realm Design Guidance for Stations **NR/GN/CIV/200/10**
Station Facilities & Amenities **NR/GN/CIV/200/03**

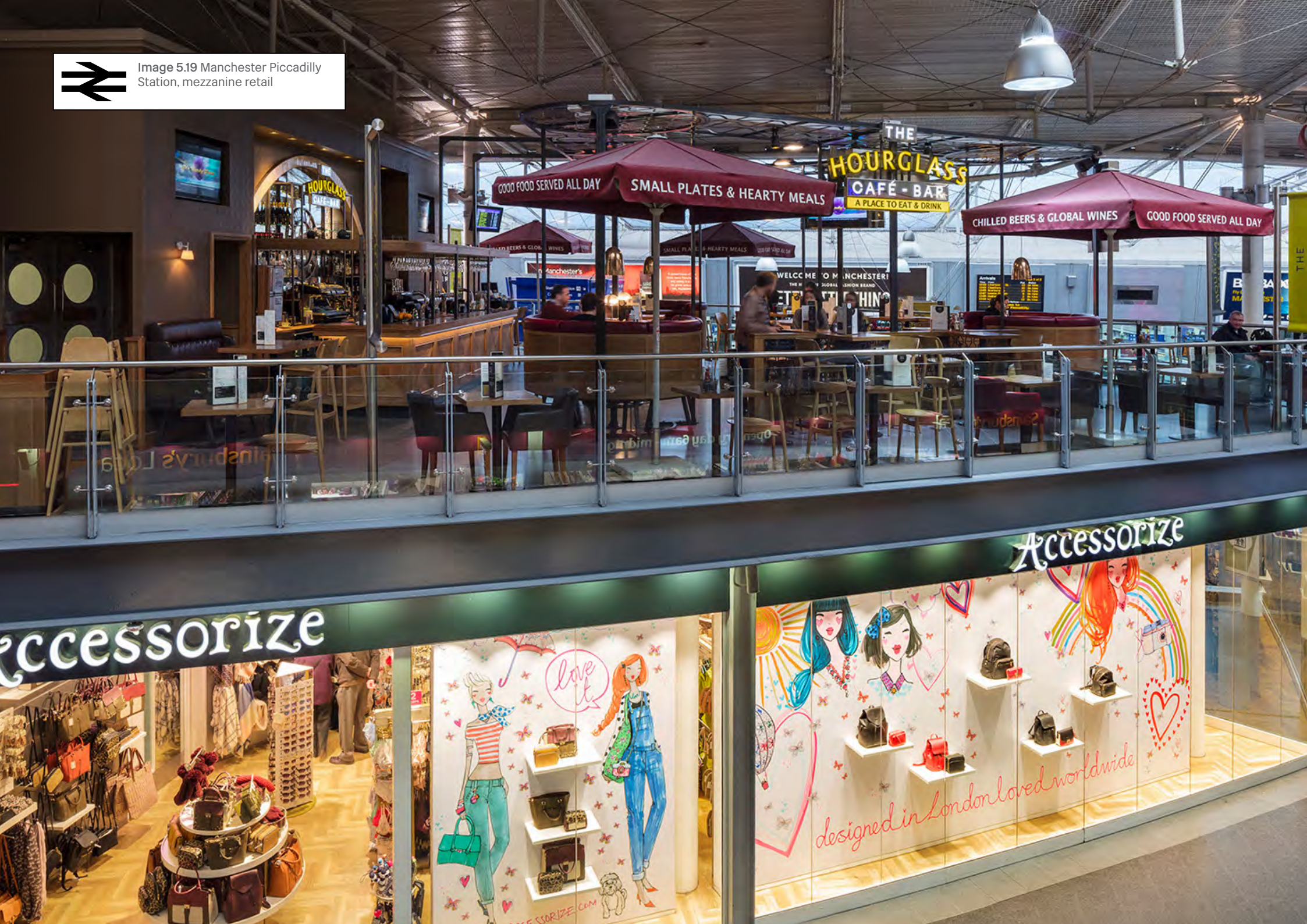


Image 5.19 Manchester Piccadilly Station, mezzanine retail

6

Retail Design Manual for Stations

Section 6: Retail Design and Detail

Image 6.1 Manchester Victoria Station, historic signage serving contemporary retail

6.1 Design Principles

Image 6.2 Heritage Façade Option 1

Image 6.3 Heritage Façade Option 2

Image 6.4 Modern Façade Option 1

Image 6.5 Modern Façade Option 2

With station buildings dating from nearly 200 years of railway history, the context and setting of the retail units can vary considerably. Creating a standard that can be applied across this variety of buildings requires the consideration of a wide range of constraints and opportunities.

However, it should be remembered that a successful retail unit can have its viability and identity strengthened by a design for the frontage and fit out which has been developed with reference to the specific character of the existing or proposed station building.

This section of the design manual concentrates in turn on the key elements that make up the design of a retail unit, which are explored on the following pages:

- → Retail Unit Concept
- → Shopfronts
- → Signage
- → Thresholds
- → Materials and Finishes
- → Banners and elevated signage

6.2 Retail Unit Concept

Details for the shopfront, signage, threshold, materials and colours on a retail unit should be brought together into a consistent design package which simultaneously defines the brand of the retailer and produce a holistic aesthetic for the individual station and the corporate identify of Network Rail or the relevant Train Operating Company. The following pages provide an explanation of how various design elements should be considered to create a successful retail unit.

The threshold, vertical and horizontal edges of a shopfront are particularly important in the definition of a retail unit within its surroundings. The design should create a clear demarcation between the retail unit and the concourse floor surface. There should be a similarly delineation of the separation of the fit-out and the fabric of the building around the opening within which the retail unit is to be inserted.

To achieve this, a frame around the shopfront is proposed as a continuous band, using a colour and material which is consistent for all units at a station. This material should have a neutral colour and consistent texture to create a distinct 'picture frame' around the opening.

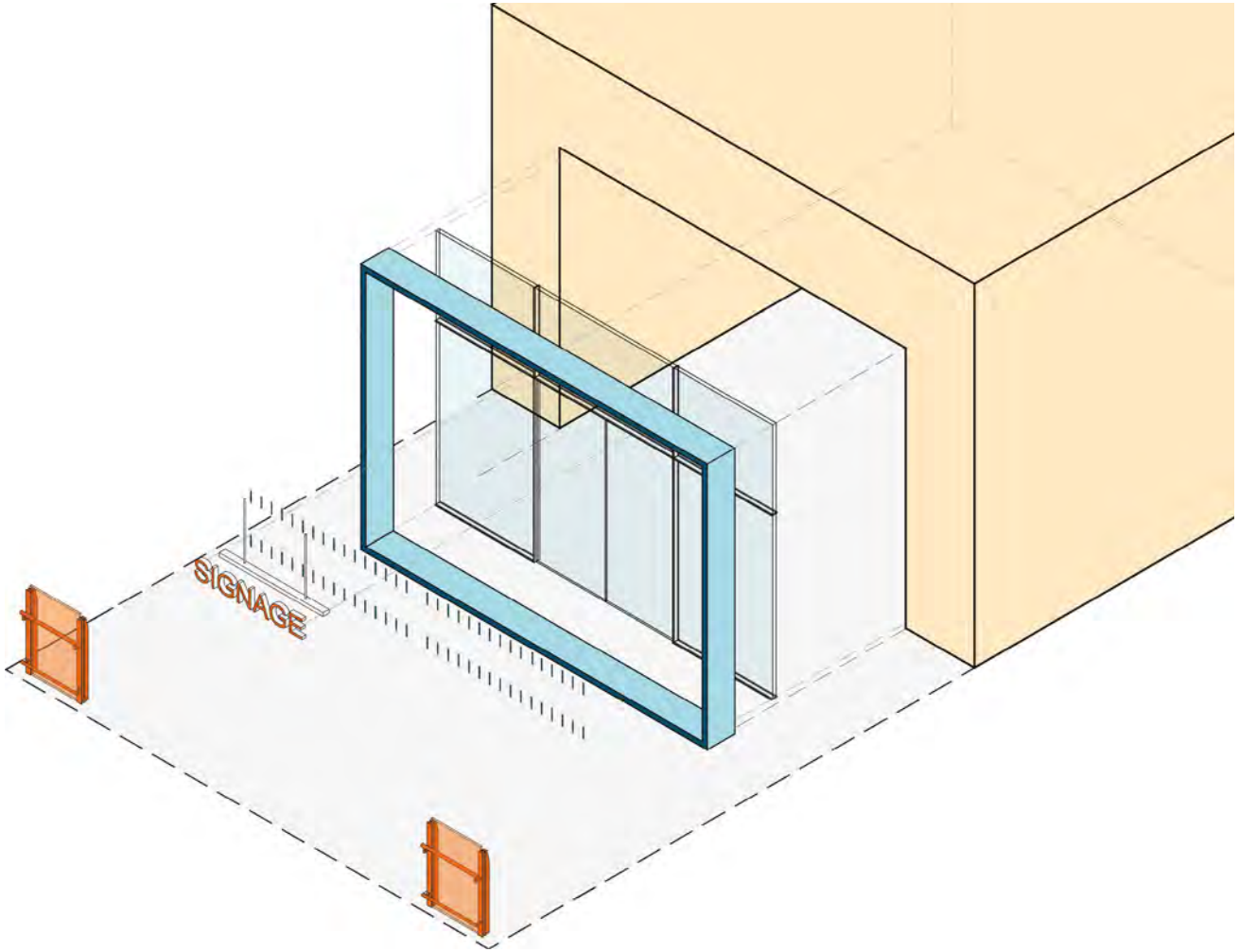


Image 6.6 Axonometry – Elements of the Retail Unit

6.2 Retail Unit Concept

The framing around a shopfront should be detailed in a manner which creates a clean and crisp distinction between the retail unit and the existing station fabric, which can be, as illustrated elsewhere in this manual, a variety of different materials and structures. The framing should be a solid material, of a suitable width and depth to create a clear separation between the identity of the retailer and the wider context. Options for this material included extruded metal box sections or other solid, hard-wearing materials.

The continuation of the frame from vertical sides to the floor plane should be of a similar width and ideally colour. The threshold portion at the entrance door position can be formed with a profiled surface to provide a slip-resistant surface if needed.

When considered holistically, the frame will provide a controlled, defined space for the tenant identity and also create a strong and positive architectural detail where a glazed shopfront meets an existing wall or partition whose nature could vary considerably as a result of the age and materials of the existing building.

Image 6.7 Visual – Victoria Station, London

6.3 Shopfronts

The initial impressions of a retail unit are formed by the shopfront design; in most cases it is the most prominent aspect of the content of the unit from longer distances. To maximise the benefits of this prominence to both the landlord and tenant the following should apply:

- → All facades to be transparent with visibility into the unit as well as out to the concourse
- → Shopfronts should be fully glazed and have no vinyl backings applied (no blind facades)
- → Secondary information (apart from opening times, payment information etc) should not be applied to the glazing
- → Visibility markings on glass (manifestation) should be to Network Rail design, spacing, and height
- → Shopfronts should be designed as a 'picture frame' containing and defining their content and identity
- → The first metre of shopfront (horizontally) subject to control of Network Rail
- → Shop-fit items including gondolas adjacent to the inner face of the shopfront should allow for visibility into the unit beyond (maximum height 1.1m)
- → A stainless steel skirting should be used along the bottom of the shopfront glazing

Image 6.8 Shop frontage – Plan view

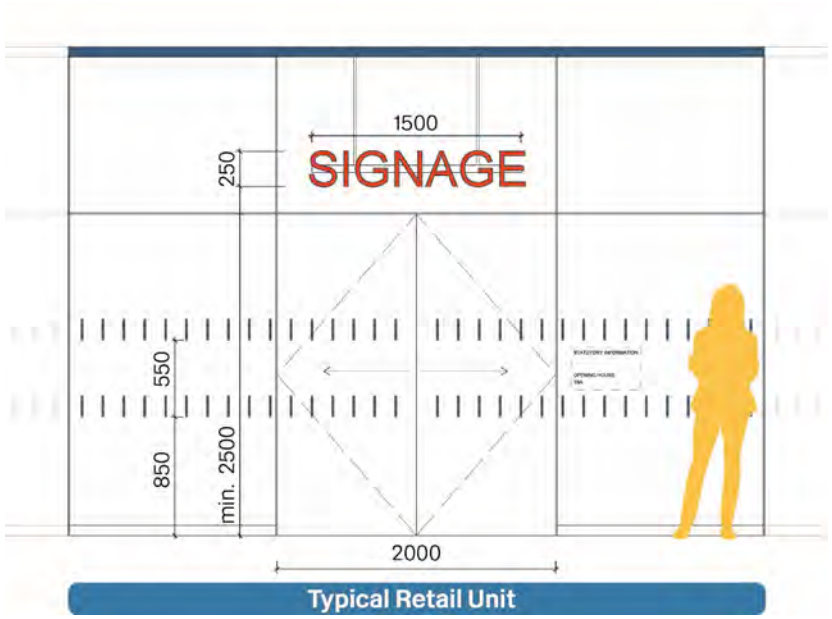


Image 6.9 Shop frontage – Elevation View

Image 6.10 Secondary information to retail frontage, Paddington Lawn

6.3 Shopfronts

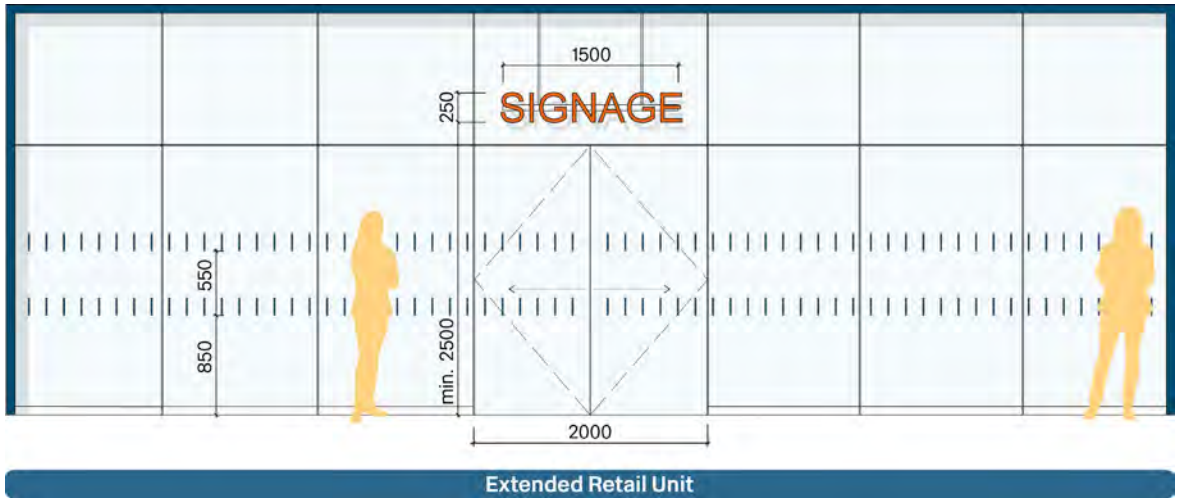


Image 6.11
Shop frontage – Extended retail Unit

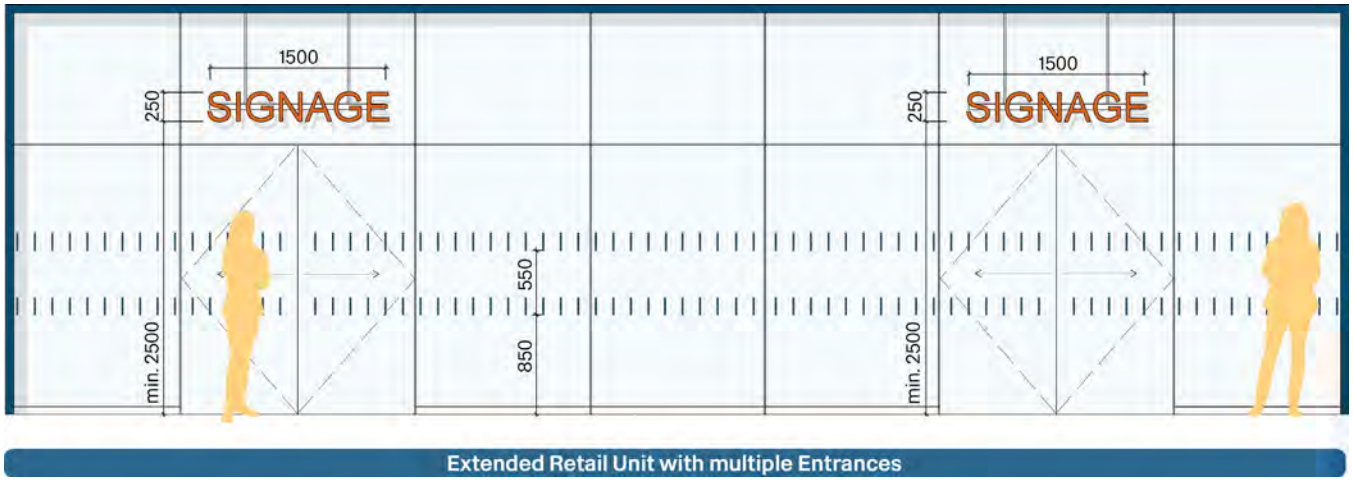


Image 6.12
Shop frontage – Extended Retail Unit with multiple entrances

6.4 Signage

The design of signage also has significant importance in customers' impressions and understanding of the retail identity of tenants at a station. A balance has to be struck between the expression of individual corporate branding and the creation of a harmonious aesthetic for the station. This design manual therefore proposes that:

- → Signage should be limited to certain positions; most important part of the shopfront it should be of high quality and clean lines to provide consistency and similar quality, retaining tenant identity
- → Signs should be centrally mounted in each façade opening up to 8m wide; wider units should have signs at 3m centres, symmetrically arranged
- → There should be a designated zone on a distinct level to wayfinding information, consider viewing angles and eye-level
- → The height from finished floor level should be consistent

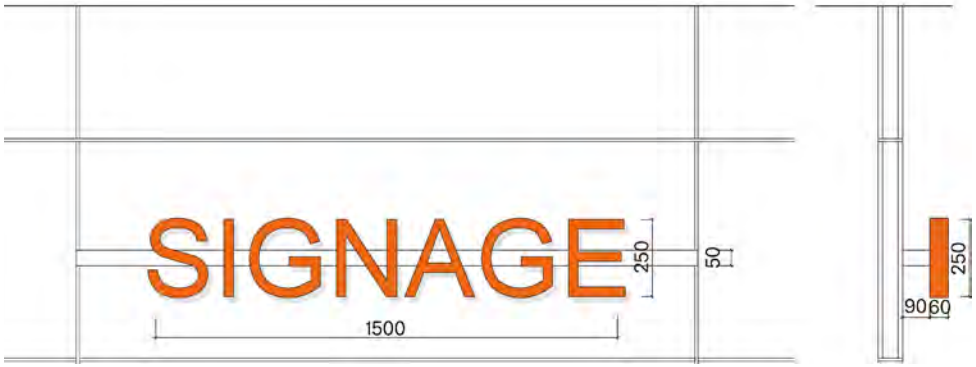


Image 6.13 Signage Type 1 – Fixed to Frontage

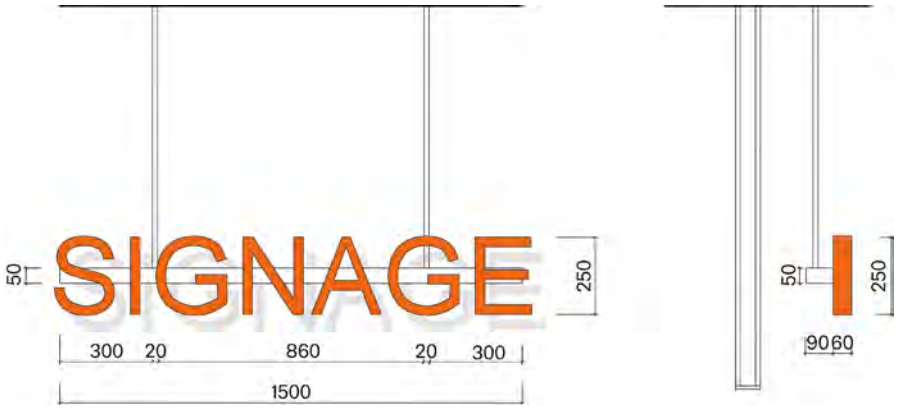


Image 6.14 Signage Type 2 – Suspended

6.4 Signage

- → The vertical dimension of the sign should be consistent; the horizontal dimension will vary according to the proportions of the tenant branding
- → Internally-lit signage should not be brighter than adjacent Customer Information Screens or information displays
- → Signage should be suspended on rigid metal structure to match colour of frame around
- → All signage should be easy to replace and exchange (i.e. non-permanent solution)
- → The outer face of the signage should not project beyond the plane of the surrounding walls of the unit
- → If projecting signage (usually not preferred) is being considered, it should be designed in coordination with the Wayfinding Design Manual and to a common specification with adjacent units

NR Guidance Suite Reference
Wayfinding **NR/GN/CIV/300/01**

National Standard
Station Wayfinding Design and Assurance **NR/L2/CIV/150**

Image 6.15 Fixed Signage – St Pancras International

6.5 Thresholds

At a closer scale, the definition of the retail unit is also influenced by the floor detail or threshold between a concourse or passenger circulation area and the areas included in the tenant's lease. This can be the junction with a glazed frontage or the line defining a demised area in an open concourse. This is important in terms of the branding of the individual retail unit but also in terms of accessibility as the visual contrast between areas with different uses is important for customers with low to no vision.

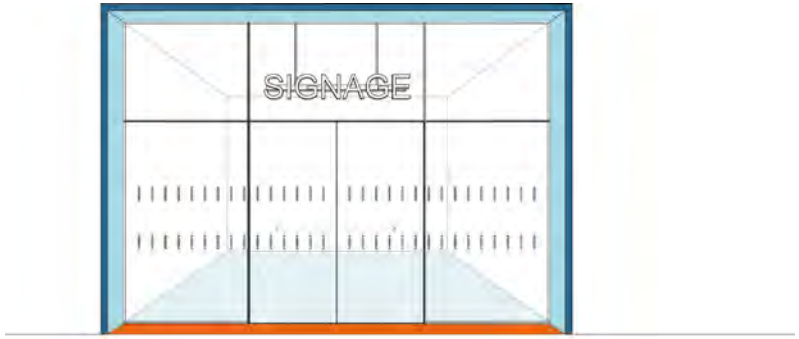


Image 6.16 Retail Unit – Defined Threshold Strip

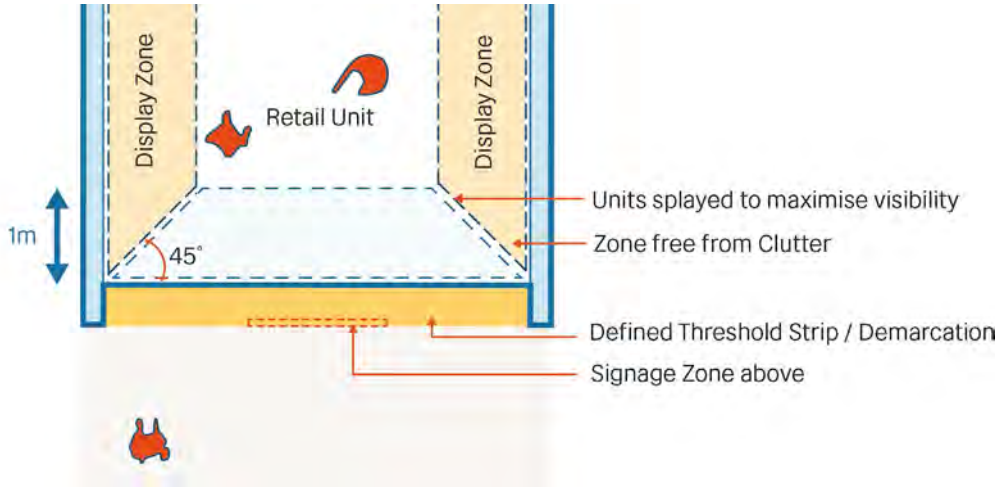


Image 6.17 Retail Unit – Defined Threshold Strip / Plan View

6.5 Thresholds

The following details should be considered in the design of the retail unit:

- → To create a cohesive identity, a consistent approach to entrance threshold appearance (glazing system, floor threshold and bulkhead details) should be used for the individual station
- → Thresholds between modern and heritage units should be carefully considered to give a detail which both complements and contrasts between the old and new (refer to Heritage section 2.5)
- → Thresholds into units should be level and accessible for all station users (refer to Inclusion and Accessibility section 2.6)
- → Demised areas outside a retail unit (within the station concourse) should be defined with a fixed glass screen 1100mm high. A handrail at 900mm aids customers with limited mobility, and the kick-rail also acts a tap-rail (for persons with low to no vision.) Handrail, kick-rail, and supports should contrast with field behind for visibility

Image 6.18 Retail Unit – Demised area barrier / Flexible Seating Zone

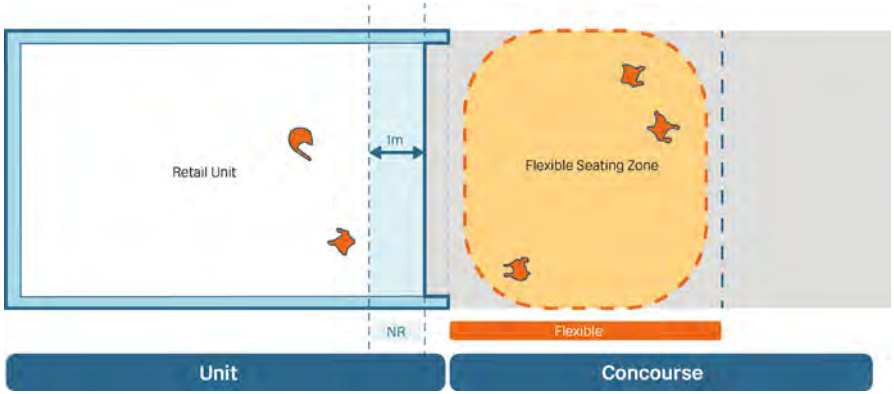


Image 6.19 Retail Unit – Flexible Seating Zone / Plan View

6.6 Materials and Finishes

The choice of materials and colours for the shopfront, signage and thresholds is important to the creation of a holistic identity for the retail environment at a station.

The emphasis should be on quality, durable natural materials; they can be recycled from other sources if quality is suitable. Finishes should be easy to maintain and easy to remove / replace, with a long commercial warranty and neutral aesthetic. The tenant is responsible for selecting sustainably sourced materials (refer to the sustainability appendix of this manual).

Image 6.20 Example of materials sample / mood board

The tenant will be responsible for providing the following in relation to design and selection of appropriate materials as part of the Landlord approvals process (see section 7):

- → Materials board
- → Schedule of finishes
- → Finishes Drawings
- → Physical Samples.
- → Material Specification / Data sheets and declaration of performance (fire certification, etc)

The performance standards of certain materials should also be considered by the tenant:

- → Fire ratings of materials and finishes
- → Floor finishes to have appropriate slip resistance ratings
- → Application of materials/finishes to have specific light reflectance values (LRV)
- → Shop front glazing specification including heat soaked, toughened laminated glass
- → Bomb Blast Criteria for Glazing and Cladding Systems. Refer to NR/GN/CIV/300/02 and Security in the Design of Stations SIDOS 2018 Guidance.

NR Guidance Suite Reference

Security In Stations **NR/GN/CIV/300/02**
Fire Safety In Stations (In preparation) **NR/GN/CIV/300/03**

National Standard

Design Standards for Accessible Railway. Department for Transport

BS 8300-1: Design of an accessible and inclusive built environment – External environment. Code of practice.

BS 8300-2: Design of an accessible and inclusive built environment – Buildings. Code of practice.

BS EN 13501-1: Fire classification of construction products and building elements – Classification using data from reaction to fire tests.

BS EN 13501-2: Fire classification of construction products and building elements – Classification using data from fire resistance tests, excluding ventilation services.

BS 9999: Fire safety in the design, management and use of buildings. Code of practice.

BS 476-7: Fire tests on building materials and structures – Method of test to determine the classification of the surface spread of flame of products.

Other Reference document

Security in design of stations **(SIDOS) 2018 Guidance.**
British Transport Police (BTP) **A Guide to Reducing Retail Crime at Railway Stations.**

6.7 Banners and Elevated Signage

Different priorities come to prominence away from main circulation and concourses. With slower flows and greater dwell times, units take on a different character, and the design challenges are different. These areas can be distant from the station's main concourse and can be on a separate level (a mezzanine or undercroft); catching the attention of customers is a clear priority of tenants. Different guidelines for the design of signage are therefore appropriate.

To provide a consistent strategy for units on a mezzanine or upper level above the primary concourse areas, directions of approach should be considered. Footfall at main concourse level can be broadly grouped into flows which are perpendicular or parallel to the façade. For the former larger signage, further up a façade set back from the balcony edge should be considered. For the latter banner branding at 90 degrees to the façade should be considered on a standard fixing detail incorporated into the supports of a balustrade or structural element. In both situations there should be a degree of consistency in terms of the height and size of signage.

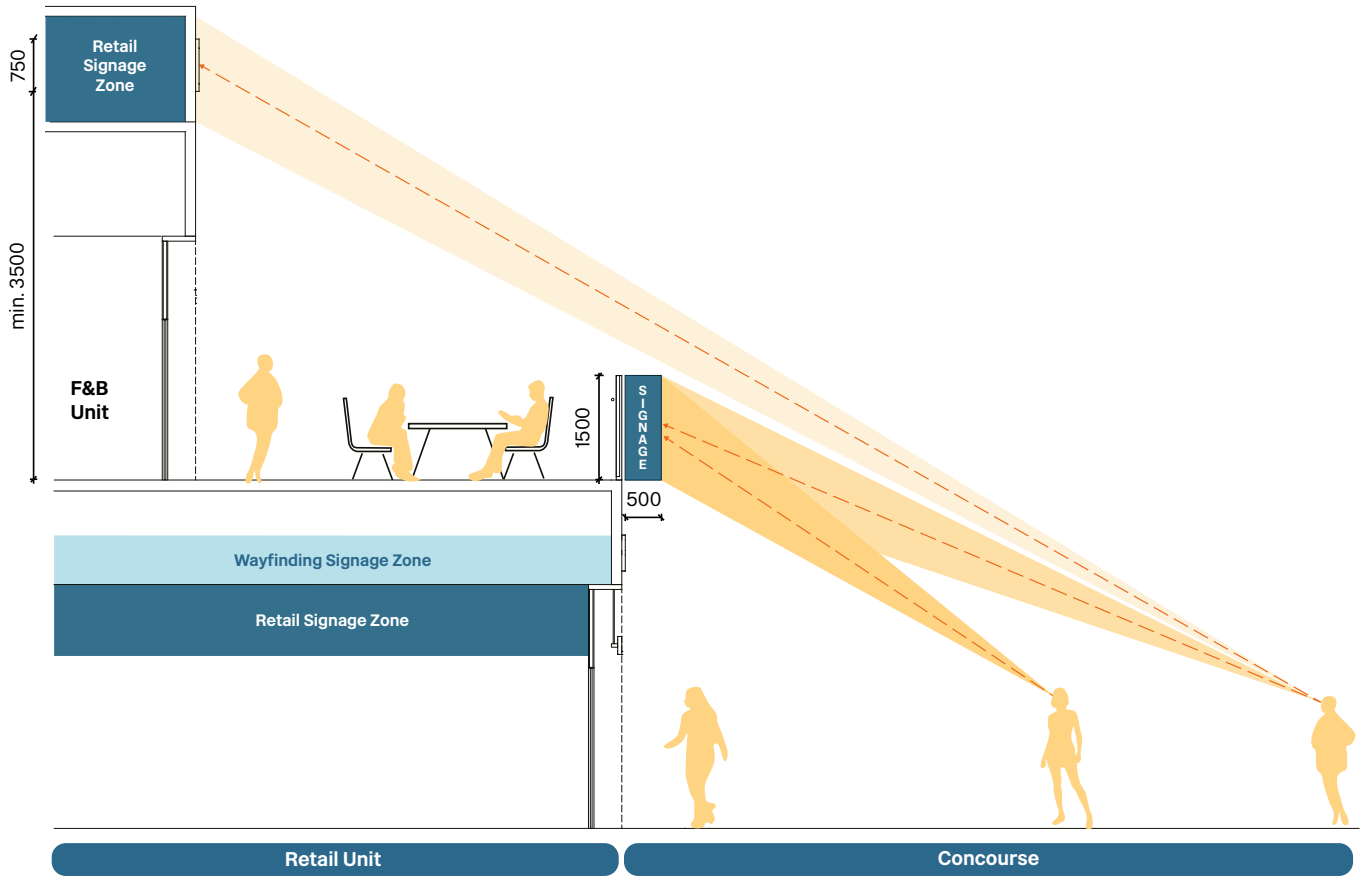


Image 6.21 Mezzanine – good visibility of retail units resulting from relaxation of signage guidance away from main circulation areas and concourses

Image 6.22 Kings Cross Station, example of elevated signage for mezzanine retail

Retail Design Manual for Stations

Section 7: Design Control and Approval Processes

7

Image 7.1 Design Control and Approval Processes

7.1 Approach

7.1.1 Introduction

The process for design development and approval should be applied to stations regardless of scale, although some of the following guidance will not be applicable in all cases (in particular when considered for smaller stations). The landlord for the retail tenant will be either Network Rail (for a Managed Station) or the relevant Train Operating Company (for a Franchised Station). Tenants should prepare the information described in this section for submission to the relevant landlord.

The guiding principles outlined within this chapter are aimed to assist Designers, Tenants and Project Sponsors in understanding and negotiating the following:

1. Functional and Technical requirements related to design of retail fit-outs
2. Design control and approval procedures related to concept design, detailed design, fit-out and consents

This section outlines the process for obtaining landlord approval for new retail fit-out or amendments to existing fit-out, as well as procedures required for strip out of a unit. The diagram opposite illustrates the Landlord Approval Process that should be undertaken from inception to completion.

Where stations have heritage protected status a Listed Building Consent submission may also be required. Consultation with the relevant Network Rail Consents team should be undertaken at any listed station to seek advice on the required approvals process.

7.1.2 Landlord Approval Process

Table 7.1 illustrates the Landlord Approval Process that needs to be undertaken to achieve handover and licence to trade.

7.1.3 Approval process for amendments to existing fit out.

Table 7.2 on the next page provides guidance for when a tenant wishes to undertake changes within the existing unit or changes constitute restyling of the unit internal fit out and changes to the presentation of the design, but do not require a full refurbishment of the existing unit. (Based on the *Liverpool Street Station Retail Tenant Design Guide*).

7.1.4 Procedure to Strip Out

Table 7.3 on the next page outlines the procedures to strip out a retail unit back to the original shell and core. (Based on the *Liverpool Street Station Retail Tenant Design Guide*).

7.1.5 Other consents

In stations which have listed status a Listed Building Consent submission is also required and approval received prior to commencement of any works. There will also be situations where planning consent will be required.

01 Pre-design Meeting	A meeting between the tenant and relevant parties from the Landlord.
02 Design Review	The Landlord Consent Approval Process passes through the Design Review that consists of two steps: 1: Concept Design Submission, 2: Detailed Design Submission.
03 Pre-start Meeting	All works to be carried out within a NR Managed Station must have a Works Permit which is issued after submitting a set of Risk Assessments and Method Statements to the station.
04 Risk Assessment	RAMS application and approval procedure.
05 Fit-out	Whilst your Contractors are fitting out is very important that they do so in such a way that puts safety first.
06 Completion	To ensure the work on site has been completed in accordance with the agreed plans, services have been commissioned and interfaced with the Landlord's systems.
07 Handover and License to trade	A formal handover between all relevant parties.

Table 7.1 Landlord Approval Process

NR Guidance Suite Reference
National Operating Procedures Management Of Retail Activities **NR/L3/OPS/045/5.08** System Definition for Station Retail Unit Refit **NR/L3/OHS/005/13** Station Retail Unit Refit (Not on Platform) **NR/L3/OHS/005/13/F01** **NR/L3/OHS/005/13/F02**

Network Rail document
Liverpool Street Station Retail Tenant Design Guide.

7.1 Approach

Table 7.2 Approval Process for Amendments to existing fit out

A Early Consultation with Landlord				
B Proposals for Change				
C Submission to Landlord	Written background information	Drawings	Photography	
D Landlord Response	Approved	Approved with comments	Rejected	Requires external approval
E Action	Tenant may start working on site	Tenant may start working on site but should provide acceptable replies to the comments prior to start (repeat steps 2&3)	Tenant should re-submit in line with the guideline requirements (repeat steps 2&3)	Preparation of application. Tenant may start working on site once consent is granted and agreed with Landlord
F Inspection and sign-off	Tenant to organise site meeting with Landlord for inspection and sign-off procedure	Tenant to organise site meeting with Landlord for inspection and sign-off procedure	Tenant to organise site meeting with Landlord for inspection and sign-off procedure	Tenant to organise site meeting with Landlord for inspection and sign-off procedure

Table 7.3 Procedure for Strip Out

Prior to commence of STRIP OUT works, tenant should obtain the relevant consent from the Landlord for the scope of work
A SCHEDULE OF CONDITION and STRIP OUT CHECK LIST are to be completed prior to any STRIP OUT works and signed off by Landlord.
All relevant risk assessments and method statements should be provided including CDM documentation where applicable prior to commencing STRIP OUT.
A pre-start meeting will be held with contractors to discuss the access and management procedures for completing the STRIP OUT.
During STRIP OUT the tenant will frost vinyl internal partitions and should full height frost vinyl the windows (unless pre-agreed with incoming tenants to allow their branding). The frost vinyl should be removed in prior to the handover to the new tenant.
A handover meeting will take place on completion of works.

** Re-use of fit-out by future tenants*
In line with the environmental policy and to reduce waste, existing tenants and future tenants are strongly encouraged to agree assets that can be re-used by future tenants. This is dependent on age, condition and past regime of maintenance for these assets. It is essential that this agreement is approved by the NR Project Management. To note, NR do not carry future liability for any asset inherited from the previous tenants.

7.2 Fire and Security

7.2.1 Fire Summary

Fire Safety is central to the design process and fit-out of retail environments within Stations. A Fire Strategy, Fire Risk assessment and Fire Escape strategy is developed specific to each station and agreed with Network Rail and the Local Fire Authority might be consulted by NR Fire Officer as required.

A Station Capacity Assessment should also be undertaken as part of the design process and approval sought from Network Rail in relation to capacity and evacuation requirements.

Reference to other Network Rail Station Fire guidance should be made in the design, as well as other relevant statutory guidance.

Approval is required from Network Rail fire safety engineers.

7.2.2 Materials

All materials should be non-combustible. Refer to fire regulations and guidance for detailed requirements. Specifications of retail unit walls, internal linings and finishes, doors and floors should comply with the wider station fire strategy.

NR Guidance Suite Reference
Security In Stations **NR/GN/CIV/300/02**

7.2.3 Security Summary

Creating safe and secure retail environments within the wider station is a fundamental requirement for station users.

Retail fit-out design proposals should be developed to take cognisance of the following:

- → Security measures should align with the wider Station Security Strategy and infrastructure
- → Design proposals should align with SIDOS 2018 guidance (which contains security recommendations on how to design effective security for stations environments)
- → Where relevant, the completion of a Threat, Vulnerability and Risk Assessment (TVRA) for the station in relation to counter terrorism requirements
- → Proposals should be assessed against the Network Rail Security Assessment Framework (SAF)

7.2.4 Personal Security

Retail spaces should be designed to provide a high feeling of personal security for customers. Consideration should be given to the following in the development of the design:

- → Avoid blank facades, blind corners and dead ends
- → Maximise active retail frontages along circulation routes
- → Locate F&B seating areas in visible areas with high activity without disrupting wider station pedestrian flows
- → Provide transparent facades to retail units offering clear lines of sight.
- → Retail units and retail frontages should be well lit
- → Clearly visible CCTV and other security devices to act as a deterrent

7.2.5 Vandalism

Retail spaces should be designed to consider risk of vandalism as a result of anti-social behaviour. Consideration should be given to the following in the development of the design:

- → Robust materials should be proposed to shopfronts and internal fit-out
- → Materials should be easily cleanable
- → Impact rails should be provided where appropriate to reduce risk of damage from moving objects
- → Critical services and infrastructure should be mounted at a height out of direct reach

7.2 Fire and Security

7.2.6 Terrorism Risk

Retail spaces should be design to consider the risk of terrorism. Consideration should be given to the following in the development of the design:

- → Requirements identified in the TVRA
- → Retail fronting the street should consider locations of bollards and other vehicle control measures at a safe distance from the station buildings
- → Waste strategy related to requirement, type and location of bins
- → Material selection in relation to bomb blast criteria requirements
- → Positioning of Retail Lockers such as Amazon Parcel Drop Off an Collection Services
- → Pop up retail units should comply with the security requirements of NRSP, they need to be constructed of suitable materials and need to be tethered to the ground anchors to prevent them becoming projectiles in a blast event

7.2.7 Security Measures

There are a number of key security interventions that tenants should adopt to provide a consistent and robust approach to security measures, such as:

- → Roller shutters (solid or semi-transparent, concealed in linings where possible, etc)
- → Tills – integrated built in
- → CCTV – Local to unit and/or integrated into station wide CCTV
- → Panic alarms
- → Clear sight lines throughout unit layout (no blind spots or hidden areas behind fixtures and fittings)
- → Security Tagging Detection Systems

7.2.8 List of what should be allowed and should not be allowed.

Should be allowed:

- → CCTV cameras located within the demise of the leased area
- → Pre-agreed security tagging detection systems type and specification
- → Pre-agreed security camera types and specification
- → Concealed infrastructure serving security systems (i.e.: wiring, fixing methodology, etc)
- → Pre-agreed concealed mounting roller shutter system
- → Bins are allowed inside or near retail units as long as the comply with NRSP mandated bin requirements

Should not be allowed:

- → CCTV cameras outside leased area
- → Security Gates that would obstruct entry or exit from store
- → Surface fixed, ‘on show’ cabling for security devices
- → Mobile security systems (i.e.: not anchored to fixed surface)
- → Externally mounted roller shutter systems (visible roller head)

NR Guidance Suite Reference

Masterplanning at Stations **NR/GN/CIV/100/07**
Station Design Guidance **NR/GN/CIV/100/02**
Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**
Security In Stations **NR/GN/CIV/300/02**
Station Capacity Planning Design Manual **NR/GN/CIV/100/03**

Other Reference document

Security in design of stations **(SIDOS) 2018 Guidance.**
British Transport Police (BTP) **A Guide to Reducing Retail Crime at Railway Stations.**

7.3 Maintenance and Flexibility

7.3.1 Maintenance

Maintenance of retail units should be considered in the context of the wider station masterplan.

Proposals should consider operational requirements such as;

- → Proximity of retail units to existing service yard
- → Servicing routes and level access
- → Location of services distribution
- → Wider station operational constraints

Fit-out of retail units should consider Network Rail / TOC minimum maintenance regimes requirements for materials, fixtures and fittings.

Tenants are to provide a maintenance strategy as part of the design submittals process for approval by Network Rail / TOC.

On completion of works Tenants are to provide information for inclusion in the Operational and Maintenance (O&M) manual, including but not limited to design data, commissioning records, certificates, technical guides and details outlining lifecycle and maintenance of systems and fittings.

Tenants are responsible for maintenance of leased premises and contents and tenants should be responsible for putting maintenance contracts and regimes in place, including aftercare support.

Flexibility of retail spaces within stations is important to strengthen commercial viability of retail.

Retail spaces are often constrained by fixed physical features such as below ground services, structural features or long lease tenancy agreements.

Whilst it may not be possible to overcome constraints within the existing estate, future retail interventions should seek to improve flexibility where practically possible.

7.3.2 Flexibility

Flexibility in tenant fit-out proposals should be encouraged, with free standing retail fixtures and fittings which make it simpler to change and adapt internal retail spaces to suit merchandising requirements. This provides other benefits such as waste reduction and disruption to the wider station.

'White boxing' fit-out where appropriate and practical should also be adopted to increase the flexibility of spaces with short term leases. The 'White boxing' fit-out includes flooring, internal linings, a back of house area where possible, lighting, ventilation, power and data and life safety systems. Additional services that retailers, such as food and beverage traders require, are not provided.

Benefits of this flexibility include;

- → Tenants can start trading in a shorter period of time
- → Offers a financially more attractive opportunity
- → Appeals to a broader range of retailers
- → Provides essential services already in place

Flexibility in what Tenants are permitted and not permitted to provide under retail fit-out is defined under each tenancy agreement.

Network Rail document
White Boxing Design Guidelines

7.4: Access and Inclusion Checklist

7.4.1 Network Rail's Commitment

Under the Everyone Matters Strategy, Network Rail has committed to "[making its] passenger services more accessible and inclusive, especially for disabled people" with the following outcomes:

- → Improved passenger experience
- → Better collaboration with industry stakeholders
- → Deliver inclusive design

In keeping with this commitment, prospective tenants should submit an Access and Inclusion Checklist to NR.

7.4.2 Access and Inclusion in Retail

In 2020-21 approximately 14.6 million UK residents identified as having a disability. On average, disabled adults made 28% fewer trips than non-disabled adults. People with disabilities are most frequently unable to access, or have extreme difficulty accessing retail premises.

Creating accessible customer experiences means meeting or exceeding best practice with respect to inclusive design as outlined by Network Rail's guidance documents, standards set by the Department for Transport, and broader industry trends.

7.4.3 The Access and Inclusion Checklist template is presented in a question-and-answer format.

Access and Inclusion Checklist Template

How do you intend to meet NR's commitment to access and inclusion?

Provide a general statement of your business's commitment to access and inclusion and considerations specific to the goods, services, or facilities your business provides. Consider a range of disability types.

What are your accessibility and inclusion policies and training practices?

Provide existing accessibility and inclusion policies and any you intend to implement.

Provide accessibility plans

Provide drawings or diagrams of proposed accessible features or fixtures. Attach additional documents as necessary.

How do you intend to provide access and inclusion with consideration for the following?

Information and communications:

Consider pre-visit information, alternate formats, electronic communication, signage, and in-store infrastructure (e.g. hearing loops).

Employment:

Consider policies, language and accommodations in the hiring process, accessibility of staff areas, and training.

Built environment:

Consider store layout, furniture and fittings, displays and product placement, counter and till design, and fitting rooms.

Customer service:

Consider interaction training, experience at the till, online experience (if applicable), and self-service kiosk or terminal design (if applicable).

Compliance:

Consider processes for auditing and maintaining access and service quality.

What is your process for feedback and improvement?

Table 7.4 Access and Inclusion Checklist Template

NR Guidance Suite Reference

Inclusive Design **NR/GN/CIV/300/04**
Parking and Mobility in Stations **NR/GN/CIV/200/11**
Retail Design **NR/GN/CIV/200/06**

7.5: Sustainability Checklist

7.5.1 Sustainability Summary

Enhancing the sustainable performance of retail units within stations is crucial with regards to supporting the delivery of Network Rail's Environmental Sustainability Strategy. Tenants are encouraged to describe how they intend to support this through design, construction, and operation. This should be communicated via a sustainability statement to be submitted with the package of information relating to the design and review process. A template for the sustainability statement is presented below, in a question and answer format.

7.5.2 Sustainability Checklist

The following questions are intended to be answered by the tenant. Answers may be drawn from existing policies or require the consideration of new policies.

NR Guidance Suite Reference

Inclusive Design **NR/GN/CIV/300/04**
Parking and Mobility in Stations **NR/GN/CIV/200/11**
Retail Design **NR/GN/CIV/200/06**

Sustainability Checklist Template

What are your environment and sustainability policies, and how do these align with Network Rail's sustainability strategy?

Provide existing policies and a general statement of your business's commitment to sustainability, and the alignment with Network Rail's own ambitions.

What actions will you undertake to support Network Rail's sustainability ambitions and net zero carbon aspirations?

How will sustainability be embedded into the design, construction and operation of the space? What processes will be put in place to achieve the successful delivery of sustainability targets?

What specific processes will be undertaken in the construction and use of the retail unit, relevant to operation carbon and energy, materials and embodied carbon, waste and circular economy, water, and health and wellbeing?

What targets relevant to operational carbon and energy, materials and embodied carbon, waste and circular economy, water, and health and wellbeing will be set as part of design, construction and operation. If different from above, how will these be met?

What is your process for feedback and improvement of sustainable performance?

Is sustainable performance relevant to design, construction, and operation monitored and reported? If so, how is this managed? Are sustainability targets or KPIs set for new developments?

What equipment will be used within the retail unit when it is in operation, and how does it support the targets and aspirations identified above?

Please provide details of the energy efficiency performance of equipment which is relevant to the activities provided in the unit, and how these have been chosen. This should include (amongst others) ventilation, heating and extract systems; storage and refrigeration; small power equipment; vertical circulation (lifts and escalators); lighting.

What materials, furniture, fixtures and equipment will be used in the retail unit, and how do they support the targets and aspirations identified above?

Please provide details of the materials to be used in the construction of the unit, and the furniture, fixtures and equipment forming the fit-out. Details should be provided on how these have been chosen when considering embodied carbon and responsible sourcing.

What will be the strategy towards waste reduction, conservation of water supplies and the implementation of a circular economy in the construction and operation of the retail unit?

This should incorporate an audit of the current status of the retail unit to identify opportunities for material re-use and hence reducing the amount of waste sent to landfill. It should also incorporate a design strategy for adaptability, flexibility, and disassembly.

Table 7.5 Sustainability Checklist Template

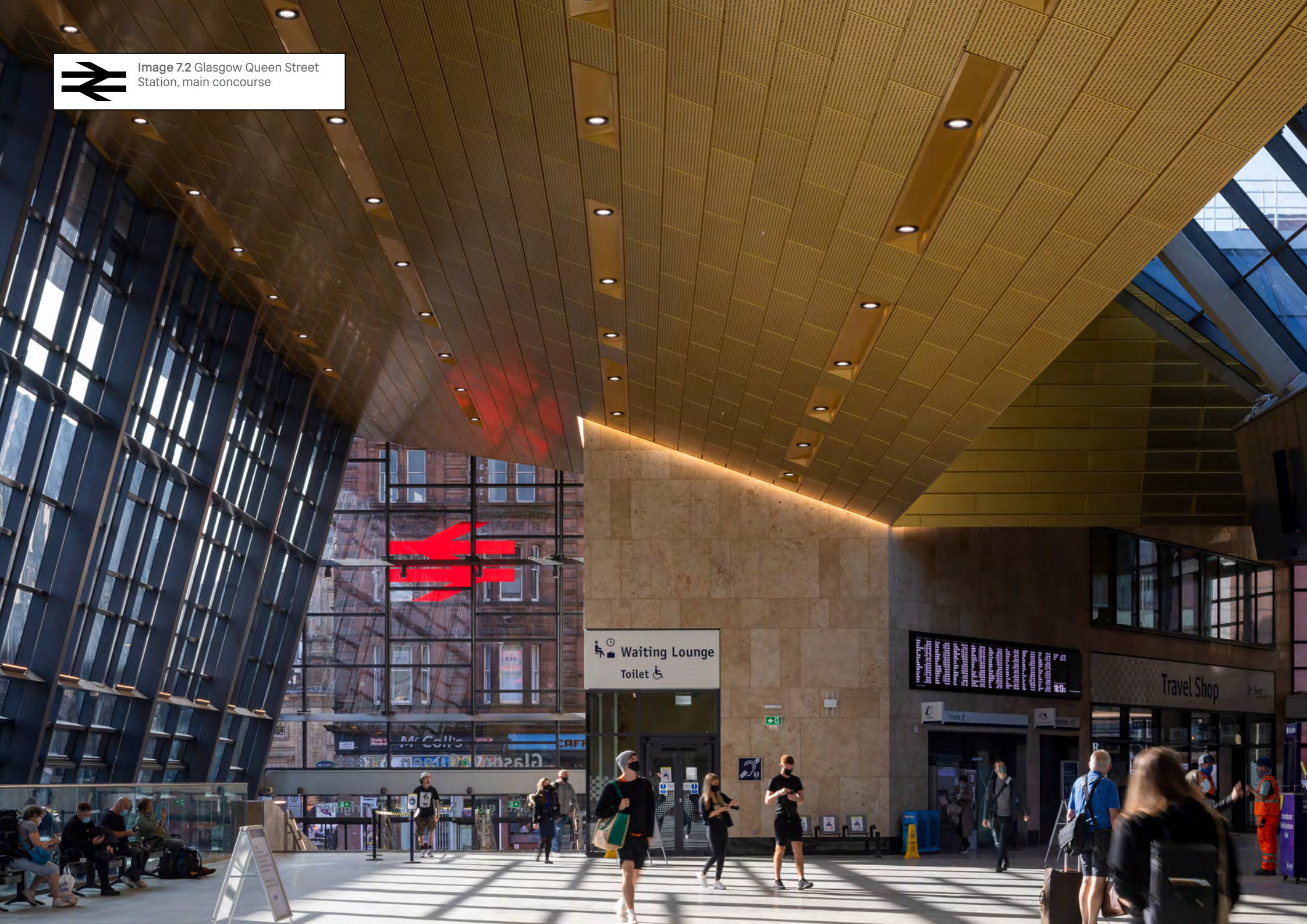


Image 7.2 Glasgow Queen Street Station, main concourse

Retail Design Manual for Stations

Appendix A: Case Studies

A

Appendix A: Case Studies

National Hub (heritage and retail)

London St Pancras

Footfall: 35m passengers / annum
Context: Major urban conurbation
Key dates: Original station in 1868, followed by major refurbishment in 2007

Overview:
With a character defined by some of the finest Victorian railway architecture in the UK, St Pancras is a major station and architectural icon. The station provides national rail connections running to the north of London along the eastern side of England, and is an interchange with the Underground International Eurostar services to Europe.

London Victoria

Footfall: 74m passengers / annum
Context: Major urban conurbation
Key dates: Original train services in 1850s, with subsequent additions and modifications

Overview:
The station is a major London terminus, interchange with the Underground network and also provides a express rail link to Gatwick Airport. The expansive concourse spaces are enclosed by a series of station buildings constructed through the Victorian and Edwardian eras. There is a direct connection into the adjacent Victoria Place shopping centre.

Opportunities

Since its redevelopment in the early years of this century St Pancras has become an exemplar in the sympathetic redevelopment and extension of a historic station. The success of the redevelopment is reflected in the situation that the station also acts as a destination in its own right, with a retail and F&B offer distinct from the rail station functions.

Victoria Station has not benefitted from a major investment in its concourse and surrounding buildings and has therefore undergone the gradual and uncoordinated process of additions and modification seen on many other stations across the country. The absence of a development programme should not allow a continuation of this process, and the application of this design manual (and other guidance) can gradually bring the station round to a holistic identity and appearance.

National Hub (urban integration)

Tokyo, Japan

Footfall: 450,000 passengers / annum
Context: Major urban conurbation
Key dates: original structure (1914), major redevelopment (2012)

Overview:
Tokyo Station is a notable example of Japanese architecture, combining elements of traditional Japanese design with early 20th century European architecture. The station has undergone several renovations and restorations, the most recent of which restored the original facades and entrance hall. The blend of traditional and modern design elements has made it a popular tourist destination.

Redhill Singapore

Footfall: unknown
Context: High-rise residential district
Key dates: Opened 1988

Overview:
Redhill MRT is an overground station in Bukit Merah district of Singapore. Located on the East-West line, it is a key transportation hub that connects the residents in the Redhill neighbourhood to and from the business districts (central and west) and the airport.

Opportunities

Both stations have strong links to their surrounding areas through the provision of complementary retail offers and a strong street presence for commercial activities.

Tokyo Station is a unique and vibrant shopping and dining destination woven into the surrounding urban context to the extent that in places it creates a continuous retail environment. One of the resultant challenges is the blending of different corporate branding styles for the different landlords.

Redhill displays the potential for stations to provide outward-facing facilities for local communities who are not necessarily rail users. The station has primary frontages for retail units that are independent from station entrances, with secondary access from the passenger areas. Retail signage and shop frontage are standardised with other locations on the same MRT line, but greater flexibility is given to the application of the line-wide guidance.

Regional Interchange / Important Feeder

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Nottingham

Footfall: 8m passengers / annum
Context: Major urban conurbation
Key dates: Original station 1848, major expansion 1904, redevelopment 2014

Overview:
Nottingham is the surviving station from a number which served the city in Victorian times and as such is now the primary gateway to and from the city. It provides connections around the country and is managed by East Midlands Railway.

Manchester Oxford Road

Footfall: 9m passengers / annum
Context: Major urban conurbation
Key dates: Original station opened in 1849 before being rebuilt in 1960

Overview:
As the third-largest station in Manchester, the station is focussed on commuter and student users. It has five platforms and is managed by Northern Trains. It serves all trains running on the east-west alignment of the Castlefield Viaduct, from where routes peel off to the north and south of the city.

Opportunities

Both stations are heritage-protected listed buildings, albeit of very different eras and architectural styles relating to the time of their construction (early 20th century for Nottingham, mid-20th century for Oxford Road). The characteristics and scale of the stations define the approach for the development of retail at each station.

A major redevelopment of Nottingham between 2011 – 14 refocussed the station around the Porte Cochere, which was glazed-in to become the primary circulation area of the station. Retail units are sited inside this pedestrian concourse in locations where there were originally no structures. They are therefore designed in a contemporary style as free-standing buildings.

At Oxford Road, the station concourse and buildings are much smaller, and retail is incorporated into existing structures with a strong architectural presence. In this case, new interventions to create and fit-out retail units should have minimal impacts and respect the original architectural style.

Medium Staffed (C 20th development)

Neath

Footfall: 0.8m passengers / annum
Context: Town centre / high street setting
Key dates: Original station (1886 demolished and replaced in 1974

Overview:
Located close to the centre of the town, the station has the potential to play a more significant role in the civic character and commercial offer of the surrounding area. The station footbridge provides an unpaid route across the rail line which would otherwise sever adjacent communities.

Stockport

Footfall: 4.2m passengers / annum
Context: Town centre regeneration area
Key dates: Original station (1843); demolished and replaced in 2003

Overview:
The station concourse provides limited space for conventional retail units, with pop-ups and kiosks in the entrance hall and within the subway connecting the platforms (which also connects town centre with Edgeley to the west). The platform buildings have greater opportunities, within under-utilised rooms and spaces.

Opportunities

Both stations have a footfall through the station of non-rail users which can influence retail opportunities. As with other franchised stations, the wider commercial agreements of Train Operating Companies can provide typical nationwide retailers' units. These can be complemented by opportunities for local businesses to diversify the offer at the station, an approach often appreciated by passengers and local residents. In both cases, there is the potential for the external aspect of the station to animate public space outside the station. At Stockport the concourse building fronts onto a recently created high-quality public square but the building lacks activities which can spill out into the space. At Neath there is a pair of commercial units which could animate the space outside the station, however area is currently dominated by taxi and private car pick up and drop off.

Small Stations

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NR Modular Station Concept
Footfall: N/A
Context: Modular design intended for application to a variety of settings
Key dates: Design proposals published 2021

Overview:
The modular station concept is aimed at small to medium category D, E and F stations which are approximately 80% of British railway stations. The hub concept utilises modern methods of construction comprising of modular off site construction techniques to provide an efficient and sustainable approach to station development.

Irlam

Footfall: 340,00 passengers / annum
Context: Suburban – Low Rise residential
Key dates: Opened 1873

Overview:
Irlam Station is a DfT Category F1 Station located in Salford, England. This station is unstaffed, but has undergone significant refurbishment in recent years providing new facilities that include a railway themed Café Bar with toilets and a cycle hub which are used extensively by the local community.

Opportunities

Both stations display the opportunities for stations of the future to become local hubs which provide a wider offer to local residents of commercial and community uses over and above their primary transport infrastructure roles.

The Modular Hub Station concept provides an adaptable kit of parts that can be tailored to align with the requirements of the local community which can be adapted and expanded over time. Enhancing the setting and frontage of the station and making a positive contribution to the wider station context.

The refurbishment of Irlam Station has not only provided benefit to the rail network but also the local community. The station has been enhanced to provide facilities that are shaped by engagement with the local community.

NR Guidance Suite Reference

Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**
Implementation Strategy for Medium to Small Stations **NR/GN/CIV/100/09**

Small Stations

Tsubama Sanjo, Japan

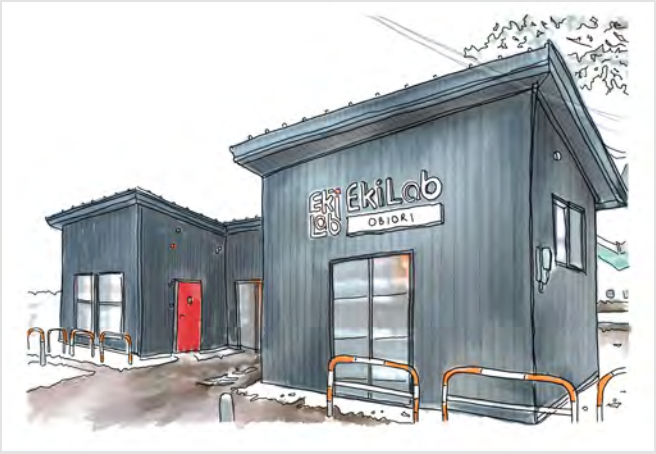
Footfall: 2,285 passengers / annum
Context: Suburban high and mid-rise residential district
Key dates: Opened 1982

Overview:
This station is served by both high-speed Shinkansen and local commuter services, and hence has a wide range of different passenger types. Japan Rail East and the city government decided to utilise the station as a focal point for local SME activity.

Obiori, Japan

Footfall: Unknown
Context: Suburban low-rise residential district
Key dates: Original station opened 1898, redeveloped in 1992 and 2020

Overview:
The station was facing issues of declining ridership due to population decrease in the local area, known as a town of craftsmanship, with many SME manufacturers. However many local companies had to close down in recent years due to lack of young successors.



Opportunities

Both stations display the benefits of locally based engagement and investment in stations.

In the case of Tsubame Sanjo the impetus for expanding the offer at the station was created by a public sector collaboration between the rail operator and local government. They saw an opportunity for local SME businesses to produce shared marketing to potential customers who would otherwise not be aware of their services; having this on display to the regular footfall of passengers through the station provides stimulus to the local economy.

At Obiori, the Ekilab aims to support manufacturers to support one another, to connect the local companies to the wider network, and to share skills and knowledge of craftsmanship in Obiori. It was funded by cloud funding in 2018 and the building was completed in 2020.

NR Guidance Suite Reference

Design Manual For Medium to Small Stations **NR/GN/CIV/200/02**
Implementation Strategy for Medium to Small Stations **NR/GN/CIV/100/09**

Image A1
Retail Arch

B

Retail Design Manual for Stations

Appendix B: Sustainability Measures

Sustainability

Introduction

The sustainability measures and implementation requirements are based on the following environmental assessment methodologies and guidance, and, as such, would support compliance with these schemes, if pursued: BREEAM (New Construction 2018 and Refurbishment and Fit Out 2014 manuals); RICS Ska; LETI Embodied Carbon Primer; WELL Building Standard version 2; and Fitwel.

A. Operational Carbon And Energy Efficiency

Measure A1: Reduce space heating demand.

- → Investigate and report on opportunities to reduce space heating demand through layout, air tightness, insulation, materials and efficient heating systems
- → In line with the current LETI guidance, aim to reduce the space heating demand to 15kWh/m²/yr

Measure A2: Reduce the energy consumption associated with customer entrances.

Customer entrances should meet one of the following criteria:

- → Implement a closed door policy
- → Use overdoor heaters / air curtains that only use heat from a VRF system or rejected heat and automatically controlled to switch off out-of-hours
- → Use sensor-controlled automatic rapid-opening / closing doors

Measure A3: Reduce unregulated energy demand through careful selection and specification of small power plug-in equipment, kitchen and catering facilities, internal display lighting.

- → Office equipment and small powered equipment should have an Energy Star rating
- → Where kitchen and catering facilities are provided, incorporate at least two-thirds of the energy efficiency measures outlined in the 'section summary' boxes of each of the following sections of CIBSE Guide TM50 (except as specified):
  - → *Section 8*
  - → *Section 9*
  - → *Section 11*
  - → *Section 12*
  - → *Section 13*
  - → *Section 14*
  - → *Section 15*
- → Display lighting should have a minimum luminaire efficacy of 60 lumens per circuit Watt and should be controlled by a time switch to prevent operation out of business hours
- → If overhead warm air heaters are used, they should be controlled using automatic temperature control

Measure A4: All commercial scale storage and refrigeration is energy efficient.

- → Design, install and commission refrigeration systems in accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector and BS EN 378-2:2016
- → Use robust and tested refrigeration systems which are, ideally, included on the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL)
- → It should be demonstrated that refrigeration systems achieve a saving in indirect greenhouse gas emissions (CO_2-eq)

Measure A5: Install front-of-house lighting controls to reduce energy consumption.

- → Install time controls which have the capability to:
  - → Switch off display lighting after main trading hours for cleaning, restocking, etc
  - → Reduce lighting levels after main trading hours where there is no separate display lighting
  - → Switch to display lighting only out-of-hours

- → For window displays, install time controls which have the capability to:
  - → Switch off window display and exterior lighting when there is no longer significant pedestrian traffic outside (e.g. late evening); or
  - → Allow window display lights to always be turned off during daylight hours
- → Alternatively, install daylight controls with the capability to automatically alter lighting in accordance with daylight levels for all window areas including displays

Measure A6: Install back-of-house lighting controls to reduce energy consumption.

- → Back-of-house lighting should be automatically controlled for occupancy or daylight
- → Lights should also be provided with manual on / off switches and absence detectors for toilets, storerooms, etc.
- → Specify time controls to turn off lighting out-of-hours, where appropriate

Measure A7: Carry out seasonal commissioning.

- → Seasonal commissioning of all major systems to check they continue to operate efficiently

Measure A8: Allow for the monitoring of energy consumption during operation through the provision of sub-meters to areas of high consumption.

Install automatic monitoring and targeting (AMT) equipment comprising meters, an automatic meter reading device and analytical software. The meter component should be installed for each electricity energy use:

- → Lighting and small power
- → Small power
- → Humidification
- → Major fans
- → Escalators
- → Chiller cabinets
- → Cooling
- → Space heating (if powered by electricity)
- → Domestic hot water (if powered by electricity)
- → Any other major energy consuming items

Measure A9: Reduce the energy consumption associated with the fit-out/construction stage of the development.

- → Meter and record all energy use on site. Set targets for energy use / energy reduction for the fit-out

B. Embodied Carbon and Responsible Sourcing of Construction Materials

Measure B1: Design out waste and the need for materials.

- → At each stage of design, hold a material efficiencies workshop to optimise material use
- → The design team should use the following to inform opportunities and solutions:
  - → WRAPs “Designing out Waste: A design team guide for Buildings”
  - → Wraps “Designing out Waste Tool for Buildings” (DoWT-B)
  - → BS 8895 Designing for material efficiency in building projects
- → Opportunities and design solutions to design out waste in the fit-out should be recorded

Measure B2: Select materials that are low in embodied carbon.

Where appropriate and of value, carry out an appraisal of different material specifications. In addition to this, embodied carbon can be reduced by the use of:

- → Locally sourced natural materials
- → Materials with a high percentage of recycled content

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- → Comparing material options by assessing maintenance requirements
- → Provide sockets with on/off switch for appliances and avoid leaving electrical goods in standby mode
- → Choose materials with a long life cycle

Measure B3: Reduce the embodied carbon associated with finishes and furniture, fixtures and equipment (FF&E)

- → Consider eliminating materials where not needed
- → Utilise self-finishing internal surfaces like timber
- → Consider the cleaning and maintenance regime
- → Compare products based on energy data, recycled material and avoidance of harmful chemicals
- → Consider the replacement cycle and specify for longevity
- → Choose products that do not rely on adhesives
- → Be wary of trends that are likely to date

Measure B4: Select materials and products from suppliers with demonstrable responsible sourcing credentials.

- → Demonstrate that 100% of timber used in the fit-out and within construction is responsibly sourced
- → Demonstrate that at least 80% (by weight or volume) of materials used in the fit out are responsibly sourced from suppliers with the relevant certifications, as per the latest BREEAM New Construction guidance manual

C. Waste Reduction And Circular Economy

Measure C1: Undertake a pre-strip out audit to identify opportunities for material re-use.

Undertake an audit of the fit-out zone prior to strip-out works to guide the design, consideration of materials that can be re-used, and to set targets for waste management and check all contractors are engaged in the process of re-use and recycling opportunities. The audit should cover the following, as a minimum:

- → Identification and quantification of the key materials where present on the project
- → Potential applications and any related issues for the re-use and recycling of the materials
- → Identification of local reprocessors or recyclers
- → Identification of overall recycling rate for all key materials
- → Identification of re-use targets where appropriate
- → Identification of overall landfill diversion rate for

Measure C2: Design for adaptability, flexibility, and disassembly.

- → The tenant should explore the ease of disassembly and the functional adaptation of different fit-out scenarios
- → Consideration should be given to the use of materials which themselves are easy to re-use, or recycle, following future strip out

Measure C3: Reduce waste in construction.

- → Develop a fit-out waste management plan in line with the waste hierarchy (“prevent – re-use – recycle – energy recovery – disposal”) to identify options for re-use and recycling to reduce waste to landfill
- → Demonstrate that at least 80% of construction and demolition waste is either re-used or recycled

Note: Disposal through recovery is not acceptable for compliance with this issue.

Measure C4: Reduce packaging waste.

Consider including packaging requirements in contract documents and material specifications

Where packaging cannot be avoided:

- → Prefer 'reusable' packaging where practical
- → Use packaging with lower environmental impact
- → Check any timber-based packaging is certified to Forest Stewardship Council (FSC) standards
- → Choose packaging which maximises space utilisation and therefore transport efficiency
- → Reduce the weight of packaging materials

Measure C5: Consider leasing products / services.

- → Consideration should be giving to leasing lighting or furniture as a service

D. Water

Measure D1: Provide water efficient taps, toilets, urinals, showers and dishwashers.

Where applicable, the following water consumption benchmarks should be met:

- → Showers: Limit flow rate to 9 litres/min up to a pressure of 5 bar +/- 0.2 bar
- → WCs: Limit the effective flush volume to 4.5 litres or less
- → Taps (washroom areas and ancillary spaces for hand washing): Limit flow rate to 6 litres/min up to a pressure of 5 bar +/- 0.2 bar

Measure D2: Prevent water leakages.

- → Provide water leak detection in appropriate spaces

Measure D3: Allow tenants to monitor operational water consumption, with a view to allowing them to reduce consumption, accordingly.

- → Separately sub-meter each unit. All meters should have an open protocol communication output to utility monitoring and management systems

Measure D4: Reduce the water consumption associated with fit-out and construction.

- → All water use on site is metered and regularly reviewed

E. Health And Wellbeing

Measure E1: Protect internal air quality.

- → Fit mechanical ventilation units with secondary filters. The filter class should be between F6 and F9, with an efficiency of 70–98%

Measure E2: Encourage staff to consume water.

- → Provide at least 1 drinking water dispenser for retail staff

Measure E3: Provide quality lighting.

- → Provide indoor lighting in line with at least one of the following standards:
  - → IES Illuminating Engineering Society Lighting Handbook 10th Edition
  - → EN 12464:2011
  - → EN 12464:2021
  - → CIBSE SLL Code for Lighting
- → All luminaires in occupied spaces (except decorative fixtures, emergency lights and

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other lighting for signage) meet at least one of the following colour rendering requirements. If tunable white lighting is used, the requirements are met at 1,000K intervals from the lower end (with a minimum of 2,700K) to the higher end (with a maximum of 5,000K):

- → CRI (Ra) ≥ 90
- → CRI (Ra) ≥ 80 with R9 ≥ 50
- → IES Rf ≥ 78, IES Rg ≥ 100, -1% ≤ IES Rcs,h1 ≤ 15

Measure E4: Manage glare from electric lighting.

For lighting in regularly occupied spaces meet at least one of the following conditions:

- → 100% of light is emitted above the horizontal plane
- → Achieve a unified glare rating (UGR) of 16 or lower
- → Luminance does not exceed 6000cd/m² at any angles between 45°-95° from nadir

Measure E5: Enhance natural light ingress, glare control and views out.

- → Where possible, enhance natural light ingress
- → Where appropriate, situate staff spaces (e.g. tills) to benefit from natural light ingress and a view out
- → Check that glare is not an issue

Measure E6: Incorporate biophilic design elements.

- → Where appropriate, incorporate natural materials, patterns, colours and images
- → Consider indoor plants and green walls

Measure E7: Specify low VOC paints, varnishes, and finishing products.

- → Aim to meet the emissions criteria set in the latest available version of the BREEAM New Construction guidance manual, and issue “Emissions from Construction Products”

Measure E8: Construction pollution is managed and reduced.

- → Seal ducts during construction or clean ducts prior to installing registers, grills and diffusers
- → Clean all existing air supply ductwork
- → If permanently installed ventilation systems are in operation during construction, either replace filters prior to occupancy, or use media filters with an average removal efficiency of ≥70% for particles 3-10µm in size to filter return air
- → Store absorptive materials such as acoustic ceiling panels, insulation and furnishings in areas which are protected from moisture
- → Isolate active construction spaces from other areas through temporary barriers or sealed doorways and windows
- → Use walk-off mats at entryways
- → Use dust guards or collectors on saws and similar tools.

C

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Appendix C: Glossary

Glossary

AMT – Automatic Monitoring and Targeting (equipment)

BREEAM – Building Research Establishment Environmental Assessment Method

BTP – British Transport Police

CCTV – Closed Circuit Television

CDM – Construction Design and Management (Regulations)

CIBSE – Chartered Institution of Building Services Engineers

CIS – Customer Information System

DfT – Department for Transport

DoWT –Designing out waste tool

ECA – Enhanced Capital Allowance

ETPL – Energy Technology Product List

F&B – Food and Beverage

FF&E – Fixtures Fittings and Equipment

Fitwel – Health and wellbeing assessment scheme

FSC – Forest Stewardship Council

GBR – Great British Railways

GP – General Practitioner

IES – Illuminating Engineering Society

KPI – Key performance indicator

LETI – London Energy Transformative initiative

LRV – Light Reflectance Value

MRT – Mass Rapid Transit

NR – Network Rail

NRSP – National Rail Security programme

O&M – Operational and Maintenance

PRM– Persons With Reduced Mobility.

RAMS – Risk Assessment Method Statement

RICS – Royal Institute of Chartered Surveyors

SAF – Security Assessment Framework

SIDOS – Security in the Design of Stations

SKA – Environmental sustainability assessment scheme

SME – Small to Medium Enterprise

TfL – Transport for London

TOC – Train Operating Company

TOD – Transit Oriented Development

TVRA – Threat, Vulnerability and Risk Assessment

UGR – Unified Glare Rating

VOC – Volatile Organic Compounds

VRF – Variable Refrigerant Flow

WELL Building Standard – Health and wellbeing assessment scheme

White boxing – White boxing fit-out seeks to incentivise prospective tenants by eliminating significant upfront costs through the provision of a limited fit-out of a unit by Network Rail

WRAP – Waste and Resources Action Programme

Retail Design Manual for Stations

Appendix D: Reference Documents

D

Reference Documents

A wide range of Network Rail and industry–wide documents and guidance notes were used in compiling this Guide. Below is a list of the most relevant standards and guidance documents referenced within this Guide. These documents are drawn from a range of sources and have been used in the development of this Guide. The list is not intended to be exhaustive but provide the user of this Guide with a sound basis upon which to develop any station scheme.

Relevant Network Rail Standards and Guidance documents:

- Network Rail Climate Action Design Manual for Buildings and Architecture – **NR/GN/CIV/100/04**
- Network Rail Design Manual for Medium to Small Stations – **NR/GN/CIV/200/02**
- Network Rail Fire Safety in Stations – **NR/GN/CIV/300/03**
- Network Rail Heritage: Carer and Development – **NR/GN/CIV/100/05**
- Network Rail Inclusive Design – **NR/GN/CIV/300/04**
- Network Rail Masterplanning at Stations – **NR/GN/CIV/100/07**
- Network Rail Parking and Mobility at Stations – **NR/GN/CIV/300/04**
- Network Rail Public Realm Design Guidance for Stations – **NR/GN/CIV/200/10**
- Network Rail Public Toilets in Managed Stations – **NR/GN/CIV/200/04**
- Network Rail Security in Stations – **NR/GN/CIV/300/02**
- Network Rail Station Capacity Planning Design Manual – **NR/GN/CIV/100/03**
- Network Rail Station Design Guidance – **NR/GN/CIV/100/02**
- Network Rail Station Facilities and Amenities – **NR/GN/CIV/200/03**
- Network Rail Station Footbridges and Subways – **NR/GN/CIV/200/07**
- Network Rail Vertical Circulation – **NR/GN/CIV/200/05**
- Network Rail Wayfinding – **NR/GN/CIV/300/01**
- Network Rail Environment and Social Minimum Requirements for Projects – Design and Construction – **NR/L2/ENV/015**
- Station Wayfinding Design and Assurance – **NR/L2/CIV/150**
- National Operating Procedures Management of Retail Activities – **NR/L3/OPS/045/5.08**
- System Definition for Station Retail Unit Refit – **NR/L3/OHS/005/13**
- Station Retail Unit Refit (Not on Platform) – **NR/L3/OHS/005/13/F01**
- **NR/L3/OHS/005/13/F02**

Reference Documents

- → Network Rail Design Advice Panel
- → Network Rail Design Think Station Summary Report
- → Network Rail Environmental Sustainability Strategy 2020–2050
- → Network Rail Glasgow Queen Street Station Redevelopment
- → Network Rail Liverpool Street Station Retail Tenant Design Guide
- → Network Rail – Our Ambition for low–emission Railway 2020–2050
- → Network Rail – Our Principles of Good Design
- → Network Rail Property – Retail Client Requirements
- → Network Rail Retail Kiosk Design Guide
- → Network Rail Station Design Principles
- → Network Rail Station Toolkit – Retail
- → Network Rail Waterloo Retail Signage Design Guidelines
- → Network Rail Whiteboxing Design Guidelines

Other useful documents:

- → **BS 6180:** Barriers in and about Buildings
- → **BS 6465:** Sanitary Installations
- → **BS 8300–1:** Design of an accessible and inclusive built environment – External environment.
- → **BS 8300–2:** Design of an accessible and inclusive built environment – Buildings.
- → **BS EN 13501–1:** Fire classification of construction products and building elements
- → **BS EN 13501–2:** Fire classification of construction products and building elements
- → **BS 9999:** Fire safety in the design, management, and use of buildings.
- → **BS 476–7:1997:** Fire tests on building materials and structures
- → Great British Railways: The Williams–Shapps Plan for Rail
- → **CIBSE: TM50** Energy efficiency in commercial kitchens (2021)
- → TfL Retail Design Guidance
- → Security in the Design of Stations (SIDOS)
- → British Transport Police – A Guide to Reducing Retail Crime at Railway Stations
- → DfT Design Standards for Accessible Railway
- → The Equality Act
- → PRM NTSN

NR Liverpool Street Station Retail Tenant Design Guide and NR Waterloo Retail Signage Design Guidelines

Image A2
London Bridge

Retail Design Manual for Stations

Appendix E: Acknowledgements

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human_space

Image A3 Glasgow Central Station, main concourse

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