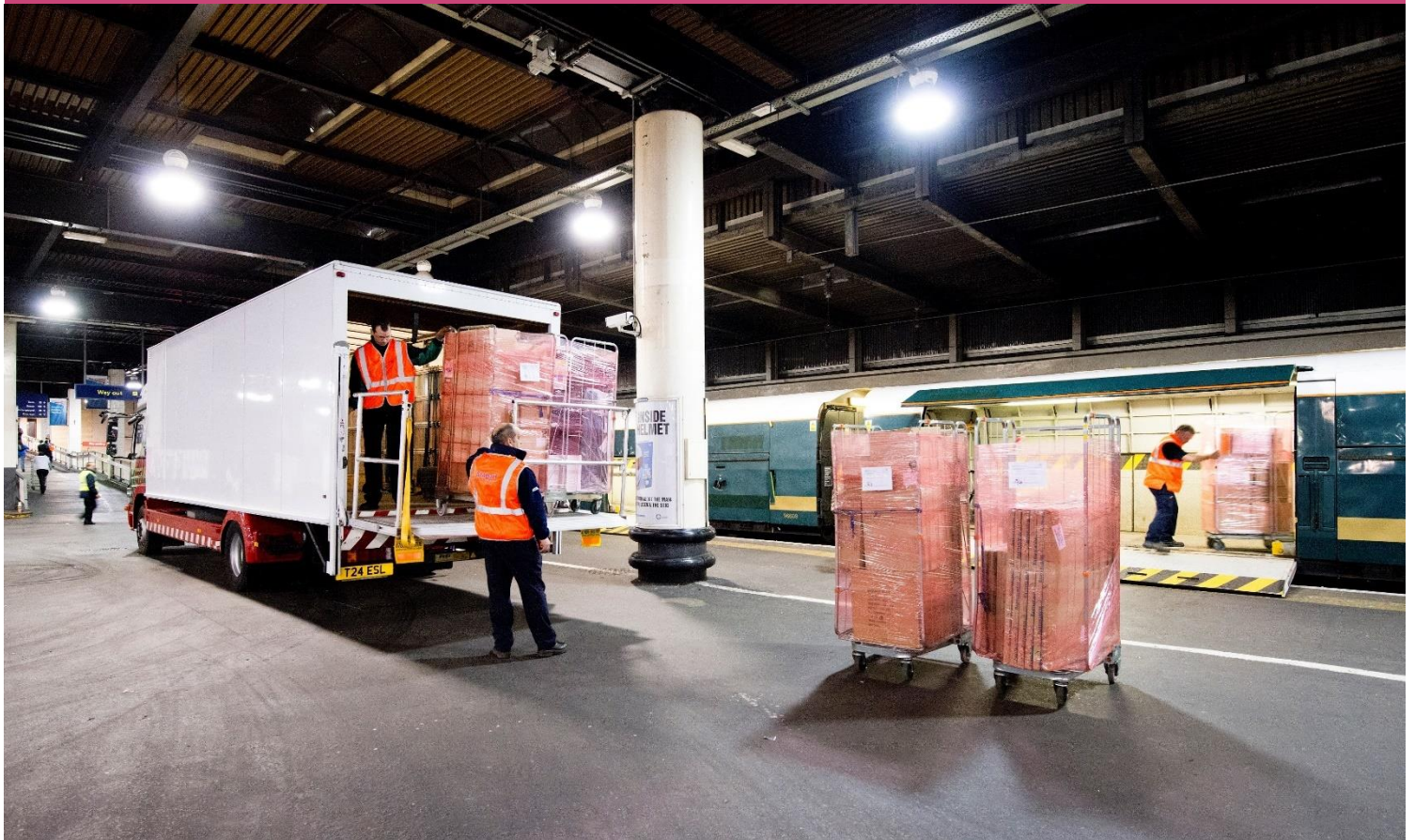


# Major Stations Group

Capability review for express freight and urban logistics



Initial Findings

September 2021

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# 1. Introduction



*Figure 1 Royal Mail Class 325 4-car unit alongside the M1 motorway*

## 1.1 Background

- 1.1.1 Rail freight plays a major role in the UK economy, each year carrying over £30bn in goods, from the construction materials needed to build key infrastructure and homes, the fuels to provide heat and light, through to the consumer goods which line our supermarket shelves. A network of trainload freight services removes the equivalent of 2.9 million lorry journeys from the road network every year, integrated into supply chains for major manufacturers, retailers and logistics companies.
- 1.1.2 The Royal Mail has been using the network for over 190 years to move mail and parcels. Their current fleet of zero-emission electric trains operates at speeds almost double that permitted for heavy goods vehicles. As the economy moves towards greater use of ecommerce with next-day and same-day delivery, the unique ability of the rail network to provide more of these low-carbon, high-speed distribution services is becoming ever more relevant – as much for improving same-day delivery options to end customers, as for helping clean up urban air quality.
- 1.1.3 Over recent years, Network Rail has been working with industry to promote greater use of rail for express freight and urban logistics services. This includes facilitating access to our network of over 2,500 stations, reinstating their capability for handling parcels and other fast-moving goods. Our approach responds both to emerging industry interest from train operators and end users, as well as a Government and corporate policy framework as set out in the following documents:

***Network Rail Freight Market Study 2013, page 87:***

*Interurban Logistics. The rail freight sector has recently operated a number of trial flows to explore the opportunity of using central London railway stations as hubs to serve urban retail centres. These have centred on using facilities available at these stations remaining from previous motorail, newspaper and letter traffic which has led to a potential opportunity. It may be the case that these trial flows develop into more permanent operations over time.*

*Express Parcels. There are currently a number of parcels companies using spare capacity on the passenger rail network as high speed parcel distributors between specific origins and destinations, as well as a recent increase of use of rail by Royal Mail. In addition, a trial has taken place to*



*operate a high speed parcel service from France into London St Pancras International. It may be that rail can win traffic from the existing Air Freight market in the future. Should these two markets develop, then it may be the case that additional capacity may be required at railway stations, airport interchanges and on the lines leading from them to nearby cities to carry such high value but low weight goods. Alternatively, it is possible that capacity may be available in periods of the day when passenger travel is lighter.*

**Network Rail Freight Network Study 2016, page 27:**

*In addition to the above established rail freight commodity sectors, operators are exploring new markets; a key example being the express rail freight sector. Operationally similar to existing Royal Mail services and utilising traction and rolling stock with passenger running characteristics, conceptually this sector will exploit the superior transit speed offered by rail over road to affect faster and more carbon efficient movements of parcels and retail/consumer goods.*

*Such express services would typically operate between rail served hubs but could also involve the servicing of key population centres where there is an opportunity to use existing city centre passenger stations outside peak hours. More generally, higher speed rail freight operations has a potentially significant role to play in achieving a lower carbon solution for retail and commercial logistics into congested urban centres, with electric last mile delivery thereon.*

*With two successful concept-proving trials of express freight services in the last five years utilising London Euston station, Network Rail are positively engaged with the key proponents in this emerging market.*

*Another potential new market for rail freight is airborne freight traffic. There exist opportunities for rail to replace, or support, airborne traffic. In addition to city centre passenger stations and nodal yards, airports could become potential origins/ destinations for rail freight.*

**Department for Transport Rail Freight Strategy 2016, page 27**

*...as the growth in intermodal traffic begins to shift freight demand to those areas of the network where passenger demand is also growing, it will be important to find new and creative ways to maximise the use of existing network capacity and offer new services to customers, if rail freight is to continue to grow. In particular, where there is spare capacity on passenger trains there is a potential opportunity at relatively low additional cost, as this capacity largely goes to waste each time a train runs without it being used. There are opportunities for the wider freight and logistics industry, working with the rail industry, to make more innovative use of this capacity.*

*This could include new models such as parcels carried directly between and into city centres using the spare capacity on off-peak passenger services, or old rolling stock fully converted to carry freight into cities. These new models offer the opportunity to reduce the number of vehicles in city centres, reducing carbon emissions and improving air quality by supporting final mile delivery through zero-emission technology such as electric vans.*

**Freight & National Passenger Operators Route Strategy, 2019**

*Network Rail now holds a market-relevant portfolio of sites with genuine potential freight utility that can now be actively promoted for freight-tenure and traffic development. The process of site list review remains ongoing in the light of emerging market trends and needs. Going forward, the FNPO and Network Rail property team will begin to consider the portfolio strategically on a regional basis, focused on the nations principle population centres. This approach will seek to ensure that NR has the freight estate availability to accommodate emerging rail freight demands – from bulk construction sites today to urban logistics hubs tomorrow.*



- 1.1.4 The recent Williams-Shapps Plan for Rail has endorsed this approach, noting (page 68):

*Stations can also play a bigger role in their local communities by providing opportunities for new, innovative services for passengers and residents alike. This could include on-demand shopping collection, small-scale freight, and public services such as education, training and health and wellbeing services to modernise the role of stations in local places.*

- 1.1.5 This document sets out the review of our Major Stations portfolio, a set of city-centre stations managed directly by Network Rail on behalf of our Train Operating Company partners, to map their capabilities for handling these “premium” freight services, to help shift more traffic off the roads and further enhance the role of stations at the heart of our towns and cities.

## 1.2 Service developments since 2010

- 1.2.1 Historically, most stations across the rail network acted as interchanges for both passengers and freight, the goods being carried either on dedicated freight trains or on (or attached to) passenger trains. Growth in the motorways and road haulage and a corresponding decline in rail freight services led to most of this traffic being lost.
- 1.2.2 The Royal Mail has maintained a virtually unbroken track record in using rail, its fleet of purpose-built 160km/h (100mph) electric trains running daily high-speed services for bulk mail between dedicated facilities in London, Warrington, Glasgow and Newcastle. This will extend to the Daventry International Rail Freight Terminal (DIRFT) where a new facility is currently under construction.

*Figure 2 Clockwise from top left: Colas Rail (2012/14), InterCity RailFreight (2011 to date),*

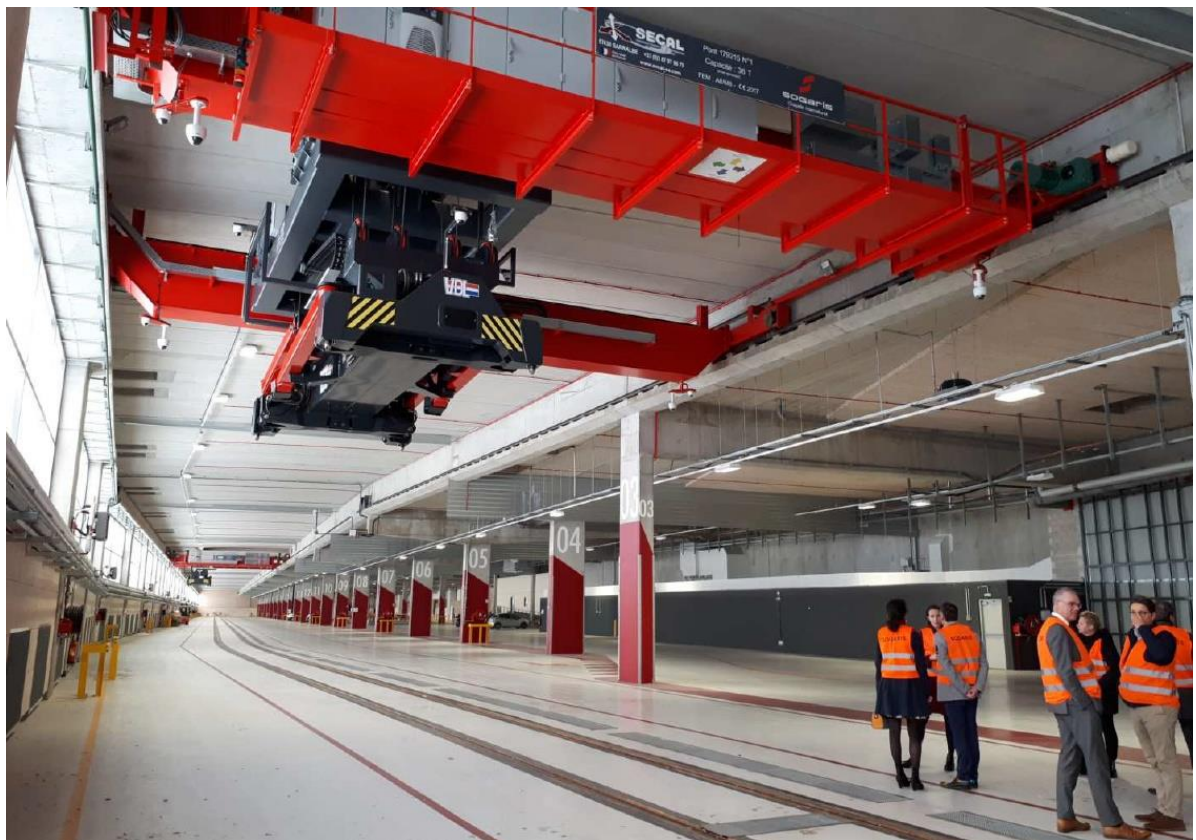


*Porterbrook Class 319 in Orion livery, Eversholt Rail Class 321 SWIFT*

- 1.2.3 In recent years, a growing number of operators and customers have shown interest in running similar services, Network Rail assisting with trials for Colas Rail and customers Sainsbury's, Eddie Stobart and TNT/Fedex, demonstrating how rail could link distribution centres in the Midlands with central London.

- 1.2.4 For the last 10 years, Network Rail has also worked with InterCity RailFreight (ICRF) and its train operator partners East Midlands Railway, Great Western Railway and CrossCountry, to carry time-sensitive shipments at speeds of up to 200km/h (125mph) across a growing network of stations, the services averaging 110km/h (70mph) between city centres and achieving in excess of 97% on-time reliability.
- 1.2.5 More recently, Network Rail has provided support to established and new train operators (GB Railfreight, Orion and Varamis) and leasing companies (Eversholt Rail and Porterbrook) to develop their plans for 160km/h domestic trainload freight services. Using redundant passenger vehicles repurposed for freight use (a common practice in the aviation industry), services can carry up to 1,000 roll cages or equivalent, each train removing around 12 single-deck articulated HGVs from the road network. Beyond this, there is also the prospect of 300km/h (186mph) cross-Channel services via High Speed 1, developing links to the continent and other emerging high-speed freight operators such as Mercitalia Fast in Italy.
- 1.2.6 Network Rail is also aware of interest in developing multimodal distribution facilities in urban areas, similar in concept to the “Logistics hotel” pilot project in the La Chappelle district of Paris (see Figure below). In this case a mixed-use development has been created, combining rail-linked urban logistics facilities in the lower levels with other retail, office, data centre and residential / amenity uses above. The rail facilities include overhead gantry cranes for handling containers, but these have yet to be used.

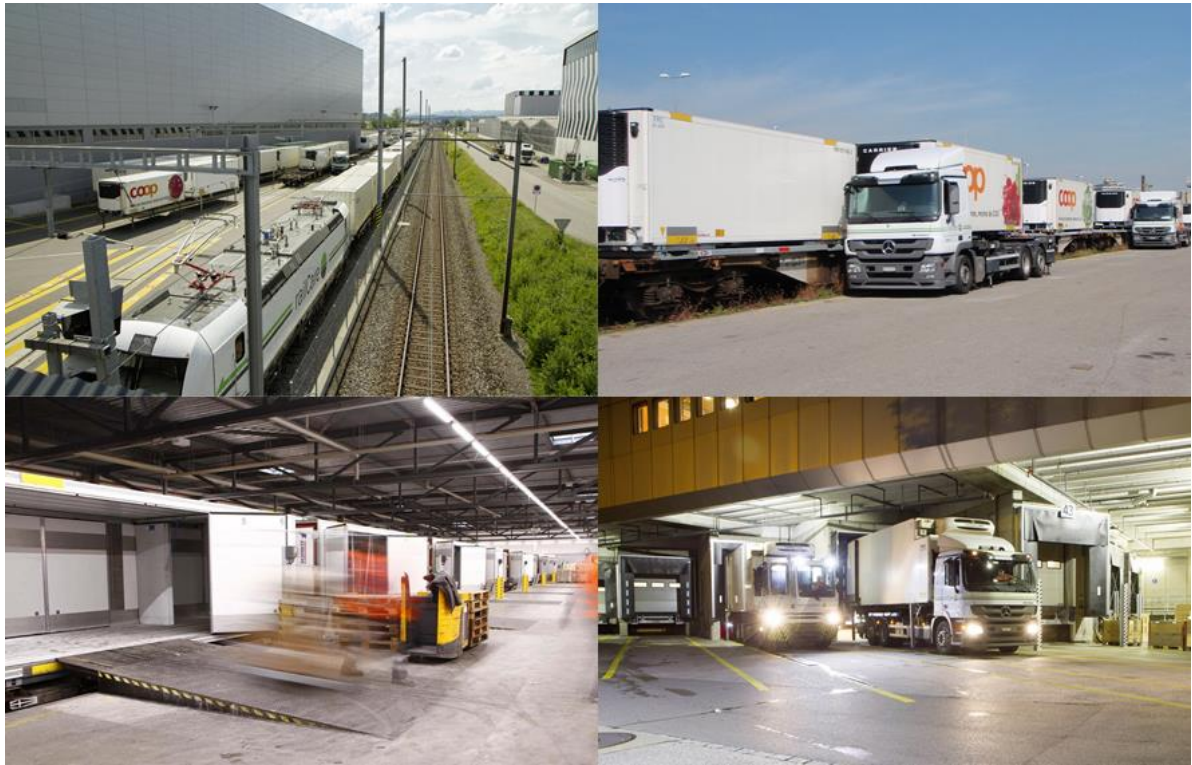
*Figure 3 Paris La Chappelle Logistics Hotel*



- 1.2.7 By comparison, an intermodal service operated by the Co-Operative supermarket chain in Switzerland uses small swap bodies on trains linking national and urban distribution centres, the smaller delivery vehicles able to transfer ambient and temperature-controlled swap bodies direct to and from the trains without any intermediate handling equipment. Alternatively, the swap bodies can remain on the train and be unloaded from the side (see Figure below).











Figure 4 Co-op intermodal urban distribution service, Switzerland



### 1.3 Service types and facility requirements

1.3.1 The potential reinstatement of freight activity at stations could arise from any of the following types of activity, analogous to operations within the aviation sector:

Figure 5 Types of express / urban logistics traffic

Type	Volume	Rail vehicles	Road vehicles	Handling	Frequency
"Carry on"	Groups of Parcels	Non-passenger spaces on scheduled TOC services			<b>High</b> (Up to hourly on TOC services)
"Bellyhold"	Groups of roll cages	Locked-out coach(s) on scheduled TOC services			<b>Medium</b> (first, intra-peak and last TOC services)
"Charter"	Trainload roll cages, mail sacks, pallets	TOC rolling stock using all available space (no passengers carried)			<b>Low</b> (overnight, possibly intrapeak)
"Freighter"	Trainload roll cages, mail sacks, pallets	Dedicated freight trains (Royal Mail 325 or converted passenger stock)			<b>Low</b> (overnight, possibly intrapeak)



- 
- 1.3.2 The area required to accommodate such operations ranges from a single parking space for a courier van or cargobike (“Carry on” option), up to multiple parking spaces for waves of delivery vehicles, with each 12-coach trainload representing the equivalent of 600 square metres (6,500 square feet) of floorspace in roll cages, pallets or mail sacks, 12 articulated HGVs or 50 rigid HGVs.
  - 1.3.3 Whilst it is unlikely that a customer or operator would wish to unload multiple trainloads at any single station, consideration will need to be given to achieving a balance between the amount of space available at platform level and across the rest of the station area, against the length of time that a train can occupy a platform, or a vehicle can occupy a parking space or loading bay. The longer the occupation, the more the road and rail vehicles can act as the storage “buffer”, whilst groups of loaded and empty cages / pallets / sacks are transferred to and from the train. Correspondingly, the shorter the occupation, the greater the amount of storage area required on the station to act as a buffer between road and rail vehicles.
  - 1.3.4 As well as space to hold vehicles and goods on a temporary basis or for longer periods (eg delivering bulk supplies into a station for periodic call-off deliveries across the rest of the day), consideration would also need to be given to provision of staff amenities, along with the means to control road vehicles in and out of the station (ie a Vehicle Booking System or VBS).
  - 1.3.5 In terms of security, the former Royal Mail services which used station platforms, along with more recent services operated on stations by ICRF (parcel-load) and Colas Rail (trainload), have not been required to screen goods before loading onto trains. This reflects the current security regime for domestic passenger luggage where no screening takes place. Where screening may be required by end users or train operators, the presence on some stations of “Left Luggage” facilities may offer synergies, as most of these operate screening equipment.

## 1.4 The Major Stations Group

- 1.4.1 The network of over 2,500 stations brings over 85% of the population within 5 kilometres of the railway, well within the range of electric delivery vehicles and cargo bikes. Given the growing interest in using the rail network for express freight and urban logistics, this network of stations, integrated with other railheads and Strategic Rail Freight Interchanges (SRFI), provide the means to best deploy rail within an overall high-speed door-to-door service. The rail industry can provide fast and frequent rail services, combining secure spaces on passenger trains with dedicated express freight trains. Stations then allow these rail services to connect with last-mile delivery vehicles, much better suited to the urban environment than articulated lorries.
- 1.4.2 The Major Stations each provide multiple platforms capable of accommodating trains with between 8 and 12 vehicles. Using much of the same infrastructure already used for resupply of passenger trains, access routes then link the platforms to road vehicle loading areas using ramps, lifts and docks. The means of moving roll cages of goods (and mobile waste bins) to and from road vehicles by store / delivery drivers, provide a precedent and template for movement of other goods between trains and road vehicles.
- 1.4.3 In addition, some stations retain space on, above or below platform level for secure short-term storage of goods. This space would then allow overnight deliveries by rail being taken out for final delivery during the day, bringing back outbound goods, returned items and empty equipment / packaging for the next outbound overnight rail service.

- 1.4.4 Stations typically close to passengers between 01:00 and 05:00, providing up to 4 hours overnight access for trainload freight services, supplemented by access for individual shipments to passenger services at other times of the day and night. Subject to agreement with Station Managers and passenger train operators, there may also be limited opportunities for freight services to access selected parts of the station during the daytime intra-peak period, typically between 10:00 and 15:00.
- 1.4.5 The network of major and other stations is also home to a diverse range of retailers and other service providers, from major supermarkets to artisan coffee shops. Together with replenishment of on-train catering, stations already generate a considerable demand for delivery and servicing activity, all of which is currently undertaken by road vehicles. There is considerable potential in future for some of these operations to be transferred to rail. This would not only help in further reducing road traffic in the local area around stations, but could also potentially help facilitate a wider range of uses on the stations themselves, to the benefit of local communities, passenger train operators and the wider travelling public.
- 1.4.6 As an example, integrating rail services into a network of local road-based collection and delivery services would create opportunities for better handling of luggage, allowing this to be shipped separately to the passengers, facilitating a more pleasant, safe and secure environment for passengers, station staff and traincrew. The original railway companies pioneered the integration of parcels and luggage into their own “first mile / last mile” road delivery services (see below). Attracting more passenger custom from the leisure sector and competing modes in coach and airline sectors may depend in part on offering a similar proposition for customers.

*Figure 6 Lancashire & Yorkshire Railway local delivery van for parcels and luggage*



## 2. Major Stations Capability Review

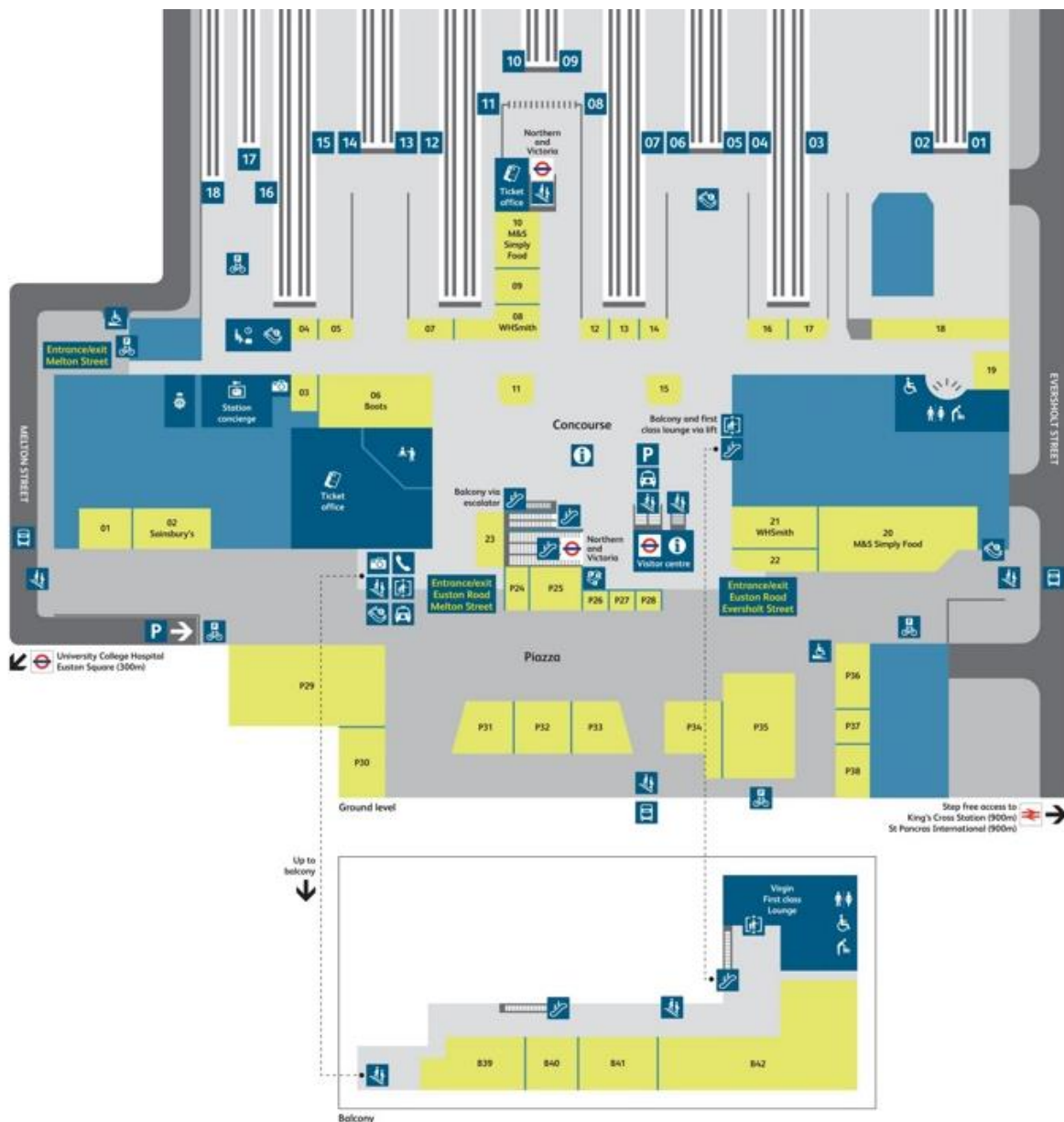
### 2.1 Introduction

- 2.1.1 The review commenced in April 2021, following briefings given by the Freight & National Passenger and Customer Experience team (FNPC) to the Major Stations Group (MSG). In all but four of the stations (London Victoria, Guildford, Birmingham Moor Street and Cardiff Central) surveys were undertaken with local station staff present.
- 2.1.2 The objectives of the survey were to map the following capabilities as far as possible:
- General overview from station management regarding the existing operations and how far additional logistics services, activities and facilities might be accommodated;
  - Hours of operation, identifying potential overnight windows when no passenger services operate and/or the station is closed to the general public;
  - Current pattern of delivery and servicing activity by road to and from the station, eg replenishment of passenger trains and on-station retail outlets and any existing rail-based logistics services using the stations (eg ICRF);
  - Existing or future enhancement programmes which might impact on access for rail and road vehicle traffic and/or might offer synergies with future logistics operations;
  - Number of operational platforms, with a focus on those able to offer direct access to road vehicles, lifts or ramps suitable for movement of mail bags, roll cages or pallet trucks;
  - Access routes from platforms to road vehicle docks and other parking facilities;
  - Potential storage areas for short-term holding of goods on the station before or after movement by rail, including at platform level, in basements or upper floors;
  - Any instances of complaints or concerns from the local community related to road, rail and on-station operations which might impact on future logistics operations;
  - Adjacent third-party land which could offer synergies or conflicts for development of logistics services.
- 2.1.3 At the time of writing, the survey has highlighted the challenge of obtaining up-to-date mapping of each station to confirm the total quantum of floorspace and the percentage which is (or could be) made available for logistics use. The narrative on each station set out below therefore uses mapping as available at the time of writing to assist with orientation of the available facilities and access points.
- 2.1.4 From the outset of this exercise it is recognised that use of stations for freight traffic presents both opportunities and challenges. A combination of rationalisation and repurposing of station facilities over the last 50 years means that their capacity to accommodate additional traffic, whether by rail or road, is finite. Space on tracks, platforms, buildings and highway access will be limited across much of the day and night, such that the emphasis in the short to medium term will be on the art of the possible and making capacity available on a first-come, first-served basis. Future enhancement of station capabilities and capacity will, as with the rest of Network Rail's infrastructure asset base, be dependent on availability of resources and a demonstration of a robust business case.



## 2.2 London Euston

Figure 7 Platform / concourse area plan



### Overview

- 2.2.1 Euston is the fifth busiest on the network with 44 million gateline entries and exits in 2017-18<sup>1</sup>. The station best demonstrates the scale of the opportunities and challenges in retro-fitting a logistics capability into an established major passenger station.
- 2.2.2 Located at the base of the West Coast Main Line, with direct access to the SRFl in the Midlands, North and Scotland (eg 1 hour by express freight service from DIRFT), Euston currently offers 16 electrified platform faces (2 with additional DC third rail capability), a purpose-built Parcel Deck and onward access to Central London via the Euston Road.

<sup>1</sup> Source ORR, excludes Tube traffic – Network Rail data suggests the station serves over 71 million people per annum

2.2.3 The station previously accommodated Royal Mail services through to 2004, road vehicles travelling onto the platforms via entry points at the southern end of the station from Melton Street and the A4200 Eversholt Street, departing via Cardington Street/A400 Hampstead Road or Eversholt Street at the northern end of the station. The Royal Mail retains a local Delivery Office adjacent to the station at Barnby Street. Colas Rail undertook trials into Euston in 2012 and 2014 (see earlier) using the same access points.

2.2.4 A comprehensive survey of the station was undertaken in 2020, indicating total floorspace of nearly 1 million ft<sup>2</sup> (90,000 m<sup>2</sup>), the majority currently accounted for by Network Rail, TOCs, retailers and contractors.

#### *Opening hours*

2.2.5 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 3-hour overnight window for freight services:

- Monday to Saturday: 04:30 – 01:34;
- Saturday: 04:30 – 02:00;
- Sunday: 05:15 – 01:34.

#### *Delivery & servicing activity*

2.2.6 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by DHL) has latterly accessed the station via Eversholt Street, Gate M at the southern end for DHL, Gate L for the waste compactors, Gate J at the northern end of the station and the Parcel Deck from Barnby Street. Vehicle access is controlled by station management via intercoms.

#### *Planned works on the station*

2.2.7 Operations on the station are overshadowed by the HS2 Phase 1a construction works taking place immediately to the west and north. The new HS2 station at Euston will impact the conventional station by reducing the footprint and number of platforms available for services on LNW Route. Some of the changes of relevance to future logistics opportunities and road access include:

- Removal of the Melton Street access to the western platforms, undercroft and Parcel Deck;
- Rail Gourmet facilities in the undercroft south of the buffer stops (accessed from Gate M) relocated onto the Parcel Deck alongside the existing tray washing / replenishment facilities already in place;
- Waste compactors relocated from Gate M to Gate J;
- The former underground taxi rank area is proposed to be infilled.

2.2.8 This situation will continue until 2026 at the earliest, limiting to an extent the capability to accommodate extra rail and road traffic. Station management have highlighted the operational challenges of trying to replenish on-station retail tenants around the HS2 construction activity, but outside of HS2 works have not reported any issues with local residents or the local authorities regarding current operations. The Colas Rail trials in 2012 and 2014 generated no reported complaints from residents, Camden Council being briefed beforehand on both occasions.

2.2.9 In parallel with the HS2 works at Euston, Network Rail has created the Redevelopment of Euston Conventional Station (RECS) project to explore options for Euston station following the completion of HS2 Phase 1, and to set out a clear plan for any temporary works in the shorter term (see later in this section).

#### *Platform availability*

2.2.10 In the short term (5-year horizon) the easternmost platforms (1-3) are likely to be most suitable for interfacing trains with road vehicles, overnight occupancy within the current midweek Working Timetable (WTT) being as follows:

- Platform 1: clear between departure of 5A75 Empty Coaching Stock (ECS) at 00:45 and arrival of 5H06 ECS at 05:17;
- Platform 2: occupied between arrival of 5M72 ECS at 00:15 and 5M79 ECS at 00:25 and departure of 5L56 ECS at 05:06 and 5N99 ECS at 05:17;
- Platform 3: clear between departure of 5M17 ECS at 22:33 and arrival of 1R01 at 07:16.

2.2.11 The Engineering Access Statement for 2022 states the following, suggesting that for 17% of the year any express freight trains would have to use alternative platforms;

- Platforms 1-7 & Lines A&X blocked for 9 weeks of the year, 00:10 to 05:50 Tuesday to Fridays. Trains to travel over lines B,C,D & E and to be replatformed;
- Platforms 12-16 & Lines D&E blocked for 9 weeks of the year, 00:10 to 05:50 Tuesday to Fridays. Trains to travel over lines B,C,D & E and to be replatformed.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include the Parcel Deck during station opening hours, and the taxi rank area outside of station opening hours;

*All types from “Carry on” to “freighter”*

- Use of platforms 1 (398m), 2 (376m) and 3 (325m), all of which are capable of accommodating a 12-coach train (typically 240m length plus 20m stopping allowance) and have a level access route available to Eversholt Street or to the Parcel Deck. Availability based on WTT/EAS:
  - Platform 1: available 00:45 to 05:17, 43 weeks of the year;
  - Platform 3: available 22:33 to 07:16, 43 weeks of the year;
- Potential use of other platforms, accessed via the ramps to/from the Parcel Deck;
- Vehicle access using Eversholt Street, access to platforms as follows:
  - Parking vehicles on Eversholt Street (subject to local authority agreement) with goods moved manually to and from trains using Gates K or J (or L subject to installing suitable security measures)
  - Sequencing vehicles in a one-way flow along platform 1 or 2/3, entering through Gate L (again subject to installing suitable security measures) and exiting through Gate K or L (platform 1) or the northern exit ramp onto Barnby Street (platform 2/3);
  - Sequencing vehicles in a one-way flow via Barnby Street, circulating clockwise round the Parcel Deck with goods moved to/from platform level by tugs and trolleys as per the existing Rail Gourmet operation;

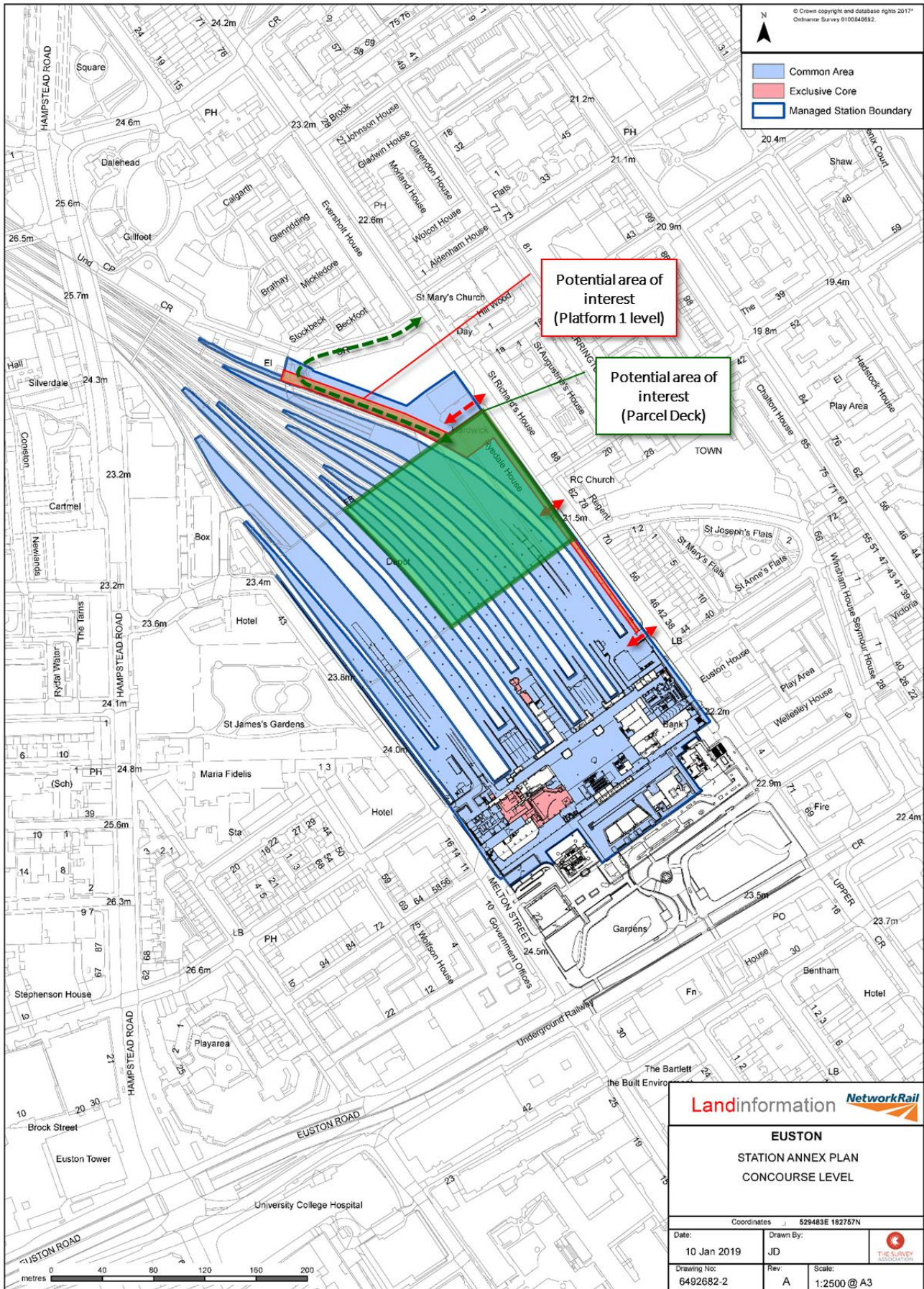


- Potential floorspace for short-term holding of inbound / outbound products, typically in secure cages located in the following areas (see Figure overleaf, subject to availability and agreement):
  - Along the length of Platform 1 on the Eversholt Street side of the platform;
  - At the northern end of Platform 1 beneath the Parcel Deck access ramp (formerly used as a cold store for TOC catering replenishment);
  - Inside Gate L in the former workshop space opposite the relocated waste compactors;
  - At the northern end of Platform 2/3;
  - Parcel Deck and Hardwick House Mezzanine (c.175,000 sq ft outside of HS2 works area) – this would require relocation of existing Network Rail facilities and staff currently housed in Hardwick House or in portable modular buildings within the Parcel Deck forming Ryedale House, Bridgeway and the Maintenance Delivery Unit.

#### *Potential development opportunities*

- 2.2.12 HS2 will reduce the platforms and area of the conventional station by approximately one third. The HS2 station will also increase the demand for interchange capability at Euston. The RECS project is addressing current issues at the station, including insufficient passenger capacity, ageing assets and poor user experience, as well as planning for future drivers such as passenger growth, interchange requirements and continuing operations. Additionally, the RECS project provides opportunities to support regeneration of the wider Euston area.
- 2.2.13 The RECS project is developing the business case for Euston using the HM Treasury Green Book 5 Case Model. Development and design will continue in Control Period 6 (CP6) and major works are expected to commence in CP7 following the completion of HS2 Phase One. In connection with this, Network Rail and HS2 have appointed third-party developer Lendlease to help manage the redesign of Euston Station. The £1.65bn project will see the 54 hectares of the station site redesigned for more accessibility to the station, greener space surrounding it, and increasing seating for greater capacity. The construction could lead to entry to 4.8 million sq ft that could be utilised to build 1,700 new homes. The RECS team has been engaged in the Major Station review process, the positive dialogue discussing the emerging requirements and future aspirations for express freight and urban logistics, to determine potential synergies with the overall strategy for delivery and servicing of the station and associated TOC, on-station retail and other mixed uses.

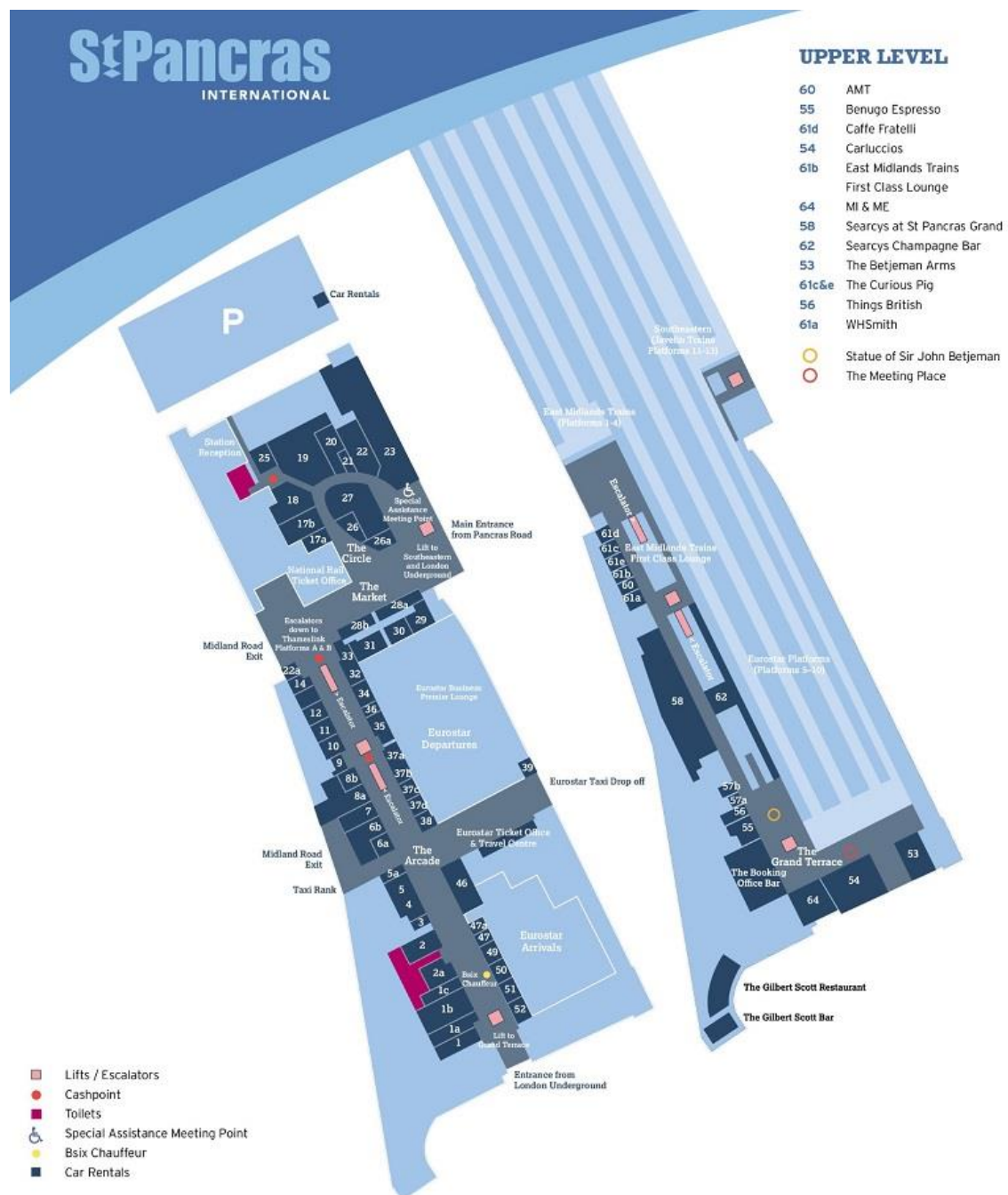
Figure 8 Euston concourse / parcel deck levels (dotted lines denote highway access points)





## 2.3 London St Pancras

Figure 9 Platform / concourse area plan



### Overview

- 2.3.1 St Pancras is the ninth busiest on the network with 35 million gateline entries and exits in 2017-18.<sup>2</sup> Located at the base of the Midland Main Line, with access to the SRFin the Midlands, North and Scotland via Cricklewood (reversal at Acton or via Clapham Junction for access to WCML, ECML and GEML) or Leicester. The station platforms are grouped as follows from west to east:

<sup>2</sup> Source ORR, excludes Tube traffic

- Domestic (Thameslink): two low-level platform faces A & B for 12-coach formations, linking south London with the MML and ECML;
- Domestic (East Midlands): 4 high-level platform faces 1 to 4 for 12-coach formations for MML services;
- International (HS1 / Eurostar): 6 high-level platform faces 5 to 10 for Eurostar (400m) sets – *outside the scope of this study*;
- Domestic (HS1/SouthEastern): 3 high-level level platform faces 11 to 13 for SouthEastern Javelin services.

2.3.2 The station has a number of road vehicle access points, including:

- Midland Road south, opposite the British Library;
- A5202 Midland Road north, opposite the junction with Chenies Place;
- St Pancras Road, opposite the YouTube building;
- Passenger drop-off point on Pancras Road;
- St Pancras Terrace at the front of the station, accessed from A501 Euston Road.

#### *Opening hours*

2.3.3 The station is advertised as open 24 hours a day. This has implications for any intended use of the concourse area for movement of goods at scale between rail and road vehicles.

#### *Delivery and servicing activity*

2.3.4 Delivery and servicing activity is currently divided as follows:

- Midland Road south – dedicated delivery & servicing bay with Hostile Vehicle Mitigation barriers (used by hotel / station tenants);
- A5202 Midland Road north - dedicated delivery & servicing bays with main and secondary road access gates (the latter manned), used by Rail Gourmet for East Midlands Railway / Eurostar on-board replenishment, and for access to waste compactors. Onward internal access routes through to all high-level platforms at the country (northern) end, using lifts to access domestic platforms and ramps for tugs and trolleys to access international platforms. Note that Channel Tunnel Security / Border Force / Customs controls apply to much of this area;
- St Pancras Road – delivery & servicing bays with Hostile Vehicle Mitigation barriers, used by on-station retail / catering tenants, shared with coach parking and former Eurostar parcels operations;
- St Pancras Terrace at the front of the station accessed from A501 Euston Road – it is unknown whether this is used on any regular basis for retail / catering.

#### *Planned works on the station*

2.3.5 No additional major enhancement projects are currently planned for the station.

#### *Platform availability*

2.3.6 The high-level platforms are all connected to the ground-floor delivery and servicing bay at the northern end of the station, with ramps and lifts down to concourse level beyond the gateline. The low-level platforms have lifts to concourse level inside the gateline. All platforms can accommodate 12-coach formations. The track layout immediately north of the station would allow trains from the WCML and MML to access the international platforms 5-10, via Cedar Junction and the Maintenance Siding respectively, but these routes would require activation before attempting any operations over them.



2.3.7 The midweek WTT shows 955 arrivals or departures across the 9 domestic platforms, the 2 low-level through platforms averaging 12 calls per platform per hour, the 7 high-level terminating platforms averaging around 1 return train arrival/departure per platform per hour. The current overnight occupancy in the WTT is as follows (noting that the station is open around the clock):

*Low-level (GTR)*

- Platforms A & B: limited availability overnight as trains continue to operate at half-hour frequencies between 00:00 and 04:00, with the exception of platform A southbound (01:32 – 02:31) and platform B northbound (hourly slots following departures at 01:44, 02:44, 03:44, 04:44);

*High-level (EMR)*

- Platform 1: occupied;
- Platform 2: occupied;
- Platform 3: available between 5C89 departing 22:28 and 5D06 ECS arriving 05:56;
- Platform 4: available between 1D86 departing 22:35 and 1B01 arriving 06:10;

*High-level (SET)*

- Platform 11: available between 1F74 departing 23:25 and 1F05 arriving 06:06;
- Platform 12: available between 1J78 departing 00:12 and 1J03 arriving 05:51.

2.3.8 The Engineering Access Statement for 2022 provides for the following:

- Low-level (GTR): overnight possessions would constrain the above hourly slots to provide:
  - 1 x 47-minute no train period (provisionally 0143 to 0230);
  - 1 x 15-minute no train period (provisionally 0245 to 0300);
  - 1 x 15-minute no train period (provisionally 0315 to 0330);
  - 1 x 15-minute no train period (provisionally 0345 to 0400);
- High-level (EMR): platforms 1-4 blocked 00:35 to 05:25 weekdays and 23:40/30 to 05:25/06:05 on weekends, such that any freight trains using platforms 3 or 4 would need to arrive and depart beforehand, or be locked in for the duration;
- High-level (HS1/SET): platforms 5-7 and 11-13 OR platforms 8-10 blocked 00:25 to 05:15 Tuesday to Saturday, 00:25 to 07:00 Sundays, such that any freight trains would need to arrive and depart beforehand, or be locked in for the duration.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations. Courier vehicle parking would need to be agreed with station management, but could include Midland Road, St Pancras Road or St Pancras Terrace;

*All types from “Carry on” to “freighter”*

- The high-level platforms offer better opportunities to achieve a suitable loading window, subject to achieving a sufficiently flexible plan to work within the EAS regime. These platforms also have the advantage of segregated goods lifts / ramps at the northern end of the station to access the Midland Road (north) delivery and servicing bays, subject to agreement with NR/HS1, and any Channel Tunnel Security / Customs / Border Force requirements – otherwise agreement would need to be reached on a Safe System of Working to move goods across the concourse to/from other goods vehicle access points, noting that the station remains open throughout the day and night.

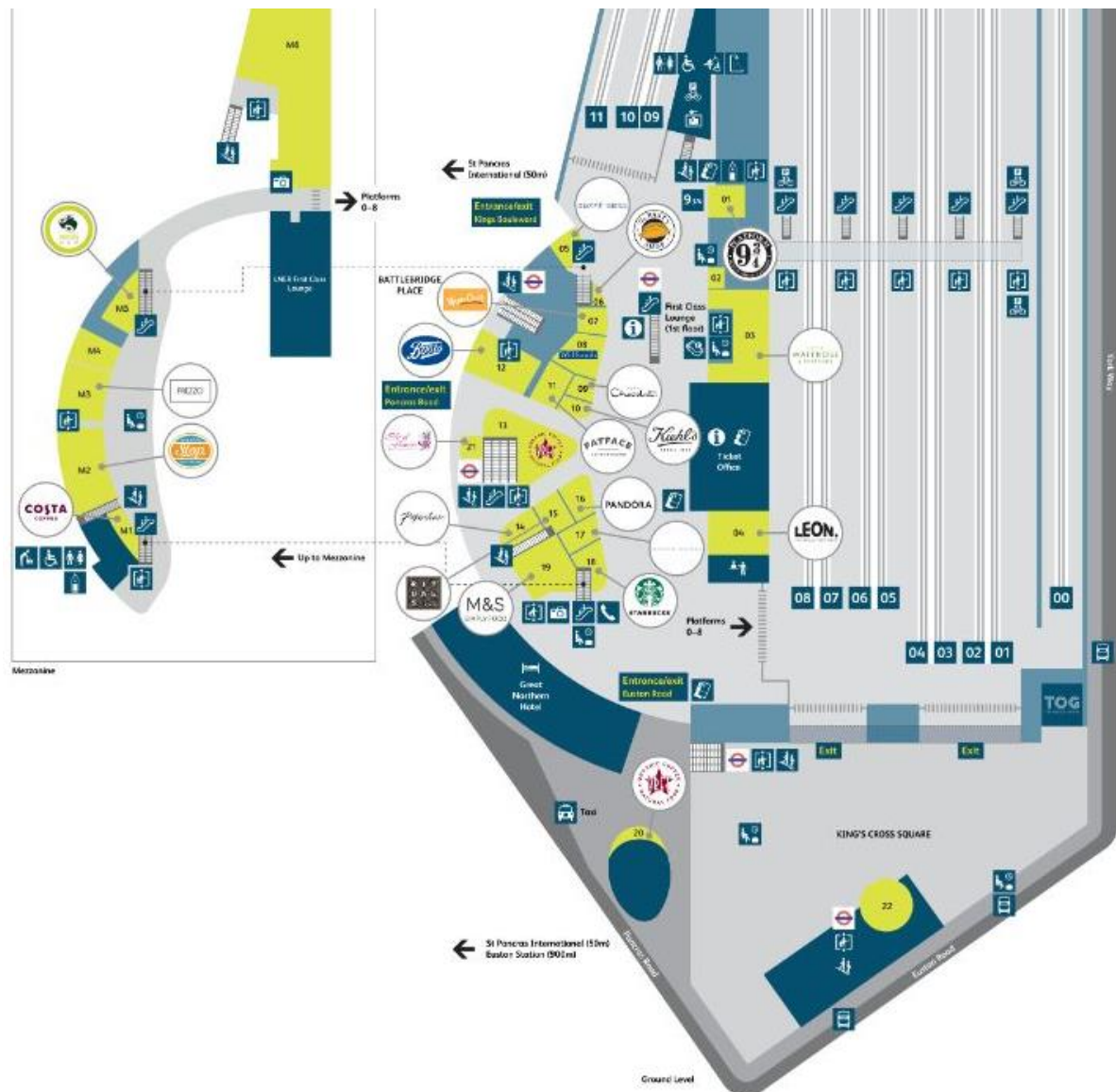
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*Potential development opportunities*

- 2.3.9 There would appear to be only limited opportunities for any additional development on the main St Pancras station footprint. Decking over the area north of the station might yield up to 160,000 sq ft per floor, subject to planning / heritage considerations and overall engineering / commercial feasibility. Most of the station has Listed status, making any additional development more challenging.

## 2.4 London King's Cross

Figure 10 Platform / concourse area plan



### Overview

- 2.4.1 Kings Cross is the tenth busiest on the network with 34 million gateline entries and exits in 2017-18.<sup>3</sup> Located at the base of the East Coast Main Line, with direct access to the SRFlin the Midlands, North and Scotland, the station now has 11 electrified platform faces, a central underground goods vehicle dock and onward road access via the A5200 York Way to the east, the A5202 Pancras Road to the west and Goods Way to the north.

### Opening hours

- 2.4.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 3-hour overnight window for freight services:

- Monday to Saturday: 05:00 – 01:40;
- Saturday: 04:30 – 01:11;
- Sunday: 05:30 – 01:36.

<sup>3</sup> Source ORR, excludes Tube traffic

### *Delivery and servicing activity*

- 2.4.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) is routed via a basement loading dock accessed from Goods Way to the north, with access controlled by Google. The basement has two loading docks and space for goods vehicles to manoeuvre in and out of the docks, the remainder of the space currently occupied by mobile commercial waste bins. From the dock a passageway leads to two cargo lifts up to the centre of the concourse, close to platforms 9-10. Maximum dimensions for each lift are 1100mm wide x 1950mm high x 1800kg payload.

### *Planned works on the station*

- 2.4.4 A programme to remodel the trackwork on the approaches has recently been completed.

### *Platform availability*

- 2.4.5 All platforms are connected at the same level via the concourse and via the goods lifts to the underground goods vehicle dock. The midweek WTT shows 426 arrivals or departures across the 10 platforms, ie 43 movements per platform between 05:00 and 01:30, around 1 return train arrival/departure per platform per hour. The current overnight occupancy in the WTT is as follows (noting that other platforms may be handling passengers up to 01:11 and again from 04:30):

- **Platform 0: occupied** – given the platform's proximity to York Way it would be helpful if the existing berthing of stock could be replatformed if possible;
- Platform 1: available between 5Y88 ECS departing 01:26 and 5H01 ECS arriving 06:39;
- Platform 2: available between 5E59 ECS departing 01:28 and 5C80 ECS arriving 05:17;
- Platform 3: available between 5Y27 ECS departing 01:16 and 2Y90 arriving 04:47;
- Platform 4: available between 2Y98 departing 01:40 and 5R00 ECS arriving 04:02;
- Platform 5: available between 1P00 departing 01:36 and 1P79 arriving 04:52;
- **Platform 6: occupied;**
- Platform 7: available between 1C74 departing 23:42 and 1P83 arriving 07:14;
- Platform 8: available between 2C60 departing 21:22 and 5S91 ECS arriving 05:22;
- Platform 9: available between 5E38 ECS departing 23:58 and 2Y03 arriving 05:37;
- Platform 10: available between 2C70 departing 23:52 and 5T01 ECS arriving 05:31.

- 2.4.6 The Engineering Access Statement for 2022 provides for between 4 and 6 platforms to be blocked 00:05 to 05:20 weekdays and 23:50 Saturday to 07:50 Sunday on weekends.

### *Parcel-load traffic "Carry on" or "bellyhold"*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include the southern vehicle access entrance to platform 0/1 off York Way, the drop off area on Pancras Road, and the taxi rank area outside of station opening hours;

### *All types from "Carry on" to "freighter"*

- Road access via the A5200 York Way to the east, the A5202 Pancras Road to the west (groups of vehicles in the drop off area and taxi rank) or the central goods lifts by platforms 9-10 accessing Goods Way to the north;
- Limited floorspace for short-term holding of inbound / outbound products around the base of the goods lifts (would require relocation / consolidation of existing waste bins storage area).



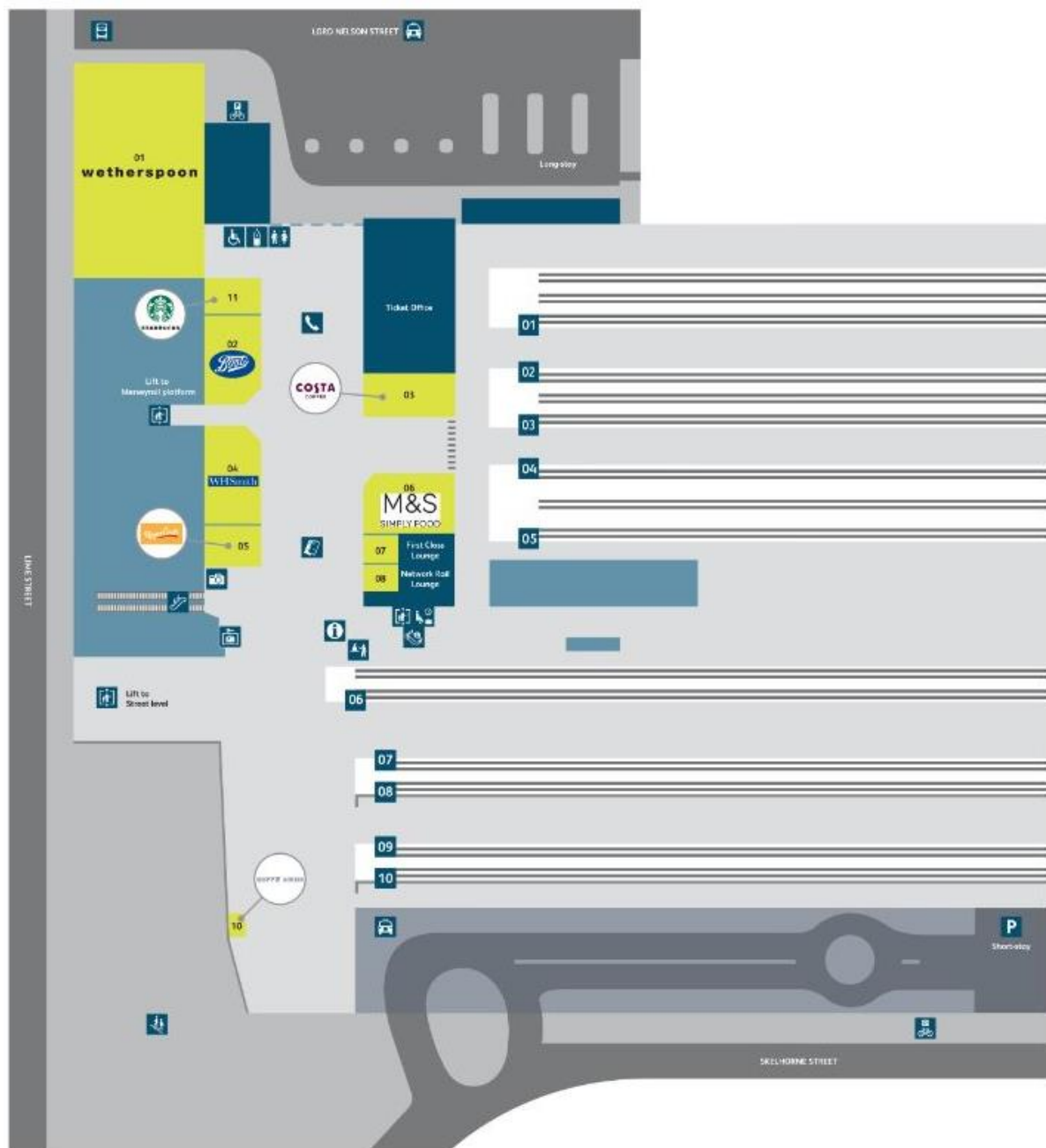
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*Potential development opportunities*

- 2.4.7 There would appear to be only limited opportunities for any additional development on the main Kings Cross station footprint. Decking over the area north of the station might yield up to 150,000 sq ft, subject to planning / heritage considerations and overall engineering / commercial feasibility.
- 2.4.8 South of the station, the former Kings Cross Thameslink station retains its platforms, such that in combination with decking over the station a separate logistics facility (possibly as part of a mixed-use scheme) could be developed. Note that as there is no scope for passing loops at this point, any freight service wishing to stop here would invariably be limited to short dwell times overnight. Another important consideration would be road vehicle access / parking on and around the site.

## 2.5 London Liverpool Street

Figure 11 Platform / concourse area plan



### Overview

- 2.5.1 Liverpool Street is the third busiest on the network with 67 million gateline entries and exits in 2017-18.<sup>4</sup> Located at the base of the Great Eastern Main Line within the City of London, with access via the North London Line to the SRFlin the Midlands, North and Scotland. The station has 17 electrified platform faces and a central platform-level goods vehicle access between platforms 10 and 11.

<sup>4</sup> Source ORR, excludes Tube traffic

### *Opening hours*

2.5.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 2-3 hour overnight window for freight services:

- Monday: 03:10 – 01:03;
- Tuesday – Thursday: 04:00 – 01:03;
- Friday – Saturday: 03:10 – 01:03;
- Sunday: 03:40 – 01:03.

### *Delivery and servicing activity*

2.5.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) has latterly accessed the station via the road access between platforms 10 and 11, as well as a dedicated access for Rail Gourmet via Appold Street. Vehicle access is controlled by station management via intercoms.

### *Planned works on the station*

2.5.4 A programme to refurbish the station canopy will require a contractor compound and temporary scaffold protection deck to be in place until 2024, limiting available space alongside platform 10.

### *Platform availability*

2.5.5 All platforms are connected at the same level via the concourse, during the limited overnight window to the concourse area when the station is closed. Most platforms can accommodate 12-coach formations, with the exception of 16-18 (8-coach only). The midweek WTT shows 1,353 arrivals or departures across the 18 platforms, ie 75 movements per platform between 03:00/04:00 and 01:00, or around 1 return train arrival/departure per platform per hour.

2.5.6 Platforms 10 and 11 would be best suited to trainload operations based on their length and proximity to the central road access. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers up to 01:00 and again from 03:00):

- Platform 1: available between 2T44 departing 00:03 and 5O04 ECS arriving 05:24;
- Platform 2: available between 2T46 departing 00:18 and 5B08 ECS arriving 05:19;
- Platform 3: available between 2H68 departing 22:28 and 2T07 arriving 06:22;
- Platform 4: available between 5M60 ECS departing 00:37 and 5U02 ECS arriving 05:20;
- Platform 5: available between 2T42 departing 23:48 and 5H00 ECS arriving 05:04;
- Platform 6: available between a maintenance service departing 00:39 and 5O60 ECS arriving 05:36;
- Platform 7: available between 2T48 departing 00:33 and 5B12 ECS arriving 05:55;
- Platform 8: available between 5M62 ECS departing 00:31 and 5U00 ECS arriving 04:59;
- Platform 9: available between 5M56 ECS departing 00:24 and 5P04 ECS arriving 05:49;
- **Platform 10: available between 2K26 departing 00:15 and 2F01 arriving 05:53;**
- **Platform 11: occupied – would be useful if this could be replatformed;**
- Platform 12: available between 2T52 departing 01:03 and 1K01 arriving 05:07;
- **Platform 13: occupied;**
- **Platform 14: occupied;**
- Platform 15: available between 2K28 departing 00:50 and 2W03 arriving 05:27;
- Platform 16: available between 5M76 ECS departing 01:00 and 2C09 arriving 05:57;
- **Platform 17: occupied.**

- 2.5.7 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include the central road access off Primrose Street, the Rail Gourmet access off Appold Street, and the taxi rank area outside of station opening hours;

*All types from “Carry on” to “freighter”*

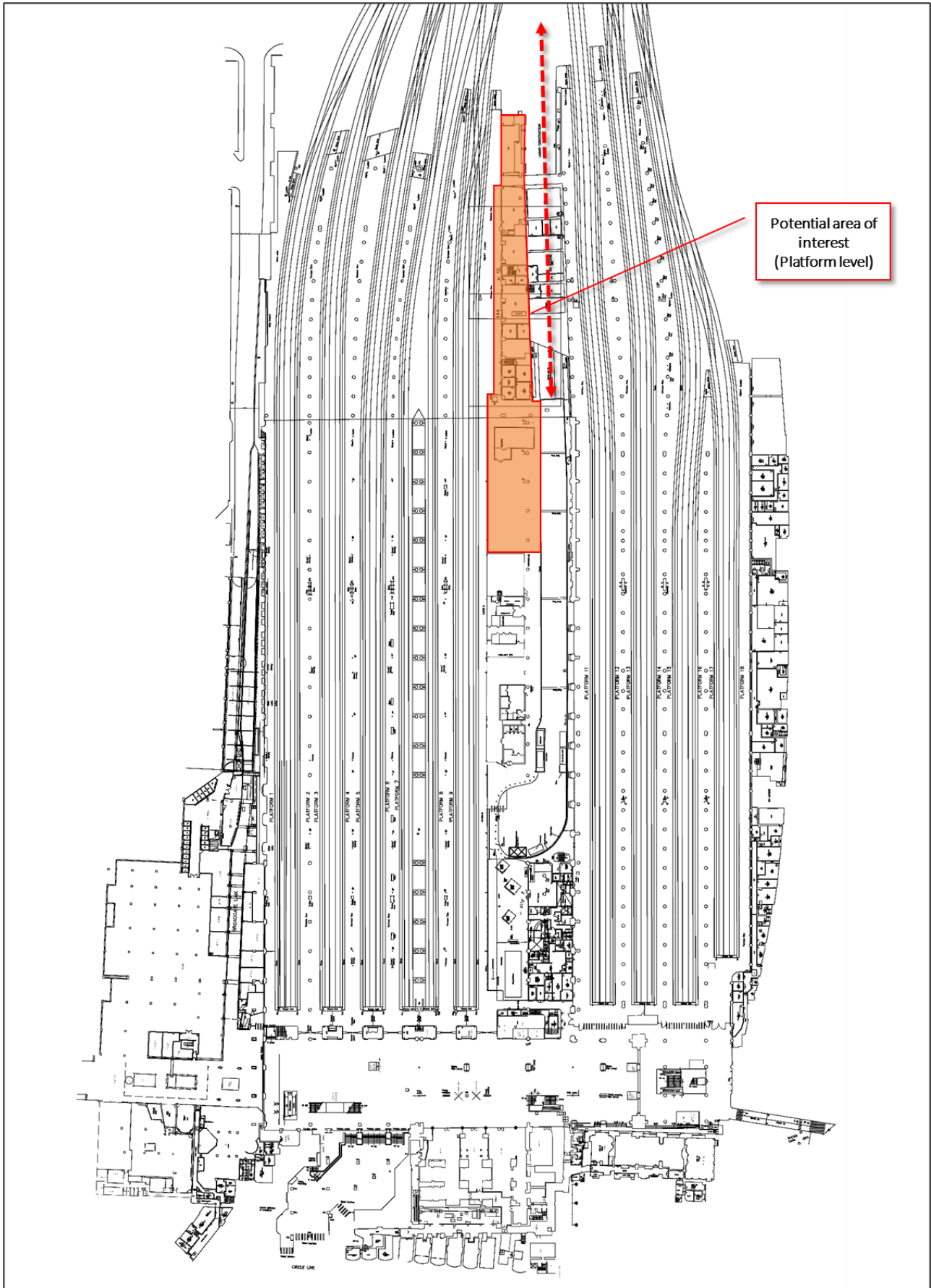
- Platform 10 and 11 would be the preferred choice (subject to resolving platform 11 occupancy) for overnight access on the basis of the adjacent central road access and platform space;
- Otherwise the remainder of the platforms could be considered, using the road access route as above and agreement on a Safe System of Work for moving goods across the concourse;
- Limited floorspace for short-term holding of inbound / outbound products between Platform 10 and the adjacent road access off Primrose Street (see Figure overleaf).

*Potential development opportunities*

- 2.5.8 The station currently houses a mezzanine spanning the gateline, which if expanded to the north over the platforms and/or south over the concourse could provide for additional retail uses, as well as supporting delivery and servicing infrastructure for on- and off-station uses. Combined with lifts linking platform and mezzanine levels, the extra space could either be used to free up space alongside platform 10 and/or allow for goods to be held on the station for call-off during the day.



Figure 12 Liverpool Street platform area (dotted line denotes highway access points)





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*Delivery and servicing activity*

- 2.6.3 Delivery and servicing activity by road for on-station retail tenants is from the front of the station using Cab Road or the undercroft access from Waterloo Road. Additional facilities exist below the station (including 33,000 sq ft in arches 228 to 232 adjacent to the Leake Street underpass<sup>6</sup>) but are not available at present.

*Planned works on the station*

- 2.6.4 [To be advised]

*Platform availability*

- 2.6.5 All platforms (main station only, excluding the separate platforms at Waterloo East) are connected at the same level via the concourse, during the limited overnight window to the concourse area when the station is closed. Most platforms can accommodate 12-coach formations, with the exception of 1-6 (10-coach only). The midweek WTT shows 1418 arrivals or departures across the 24 platforms, ie 59 movements per platform between 04:30 and 01:45, or around 1.4 return train arrival/departures per platform per hour. Platforms 7 to 19 would be best suited to trainload operations based on their length and level access to Cab Road at the front of the station. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers up to 01:45 and again from 04:30):

- Platform 1: available between 2H77 departing 23:57 and 2001 arriving 05:35;
- Platform 2: available between 2D77 departing 23:42 and 5D04 ECS arriving 05:48;
- Platform 3: available between 2J75 departing 23:36 and 5F81 ECS arriving 05:26;
- Platform 4: available between 2J73 departing 23:06 and 5P07 ECS arriving 05:11;
- Platform 5: available between 2G77 departing 23:50 and 5K02 ECS arriving 05:49;
- Platform 6: available between 5Y62 ECS departing 23:55 and 5H07 ECS arriving 06:09;
- Platform 7: available between 2P77 departing 23:15 and 5K05 ECS arriving 05:26;
- Platform 8: available between 2F73 departing 23:20 and 2F02 arriving 05:18;
- Platform 9: available between 2L79 ECS departing 23:48 and 5W53 ECS arriving 06:00;
- Platform 10: available between 1A75 departing 22:53 and 5H90 ECS arriving 05:56;
- Platform 11: occupied;
- Platform 12: occupied;
- Platform 13: occupied;
- Platform 14: available between 1P71 departing 21:30 and 5V03 ECS arriving 04:59;
- Platform 15: occupied;
- Platform 16: occupied;
- Platform 17: occupied;
- Platform 18: occupied;
- Platform 19: occupied;
- Platform 20: occupied;
- Platform 21: occupied;
- Platform 22: occupied;
- Platform 23: occupied;
- Platform 24: occupied.

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<sup>6</sup> 2019 planning application to Lambeth Council, para 8.5 ([link](#))

- 2.6.6 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include Station Approach and Cab Road, including the taxi rank area outside of station opening hours;

*All types from “Carry on” to “freighter”*

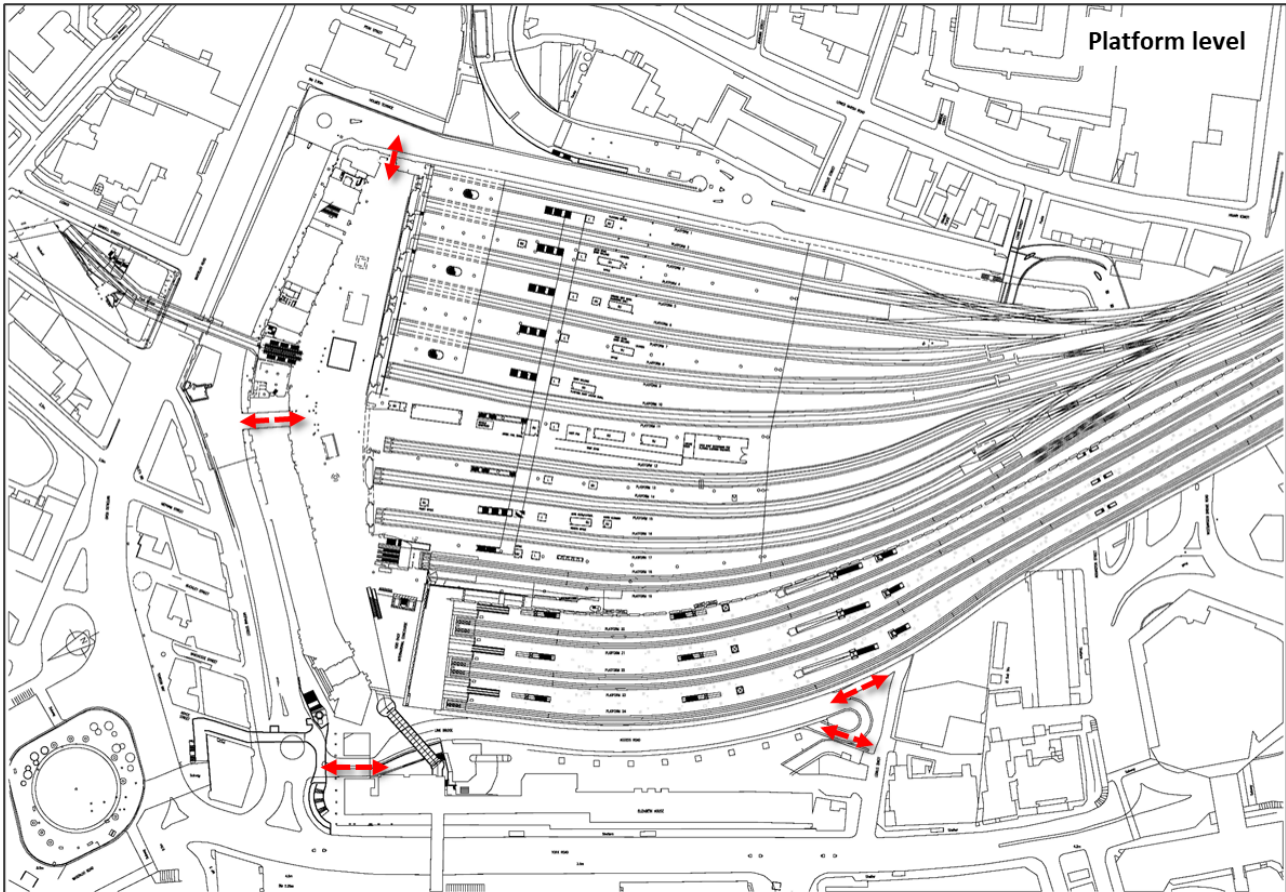
- Most of the platforms could be considered, using the road access routes as above and agreement on a Safe System of Work for moving goods across the concourse;
- Storage areas may be available beneath the station in the medium to long term (see Figure overleaf).

*Potential development opportunities*

- 2.6.7 The basement area (see Figure overleaf) covers an extensive area and further work is required to ascertain how much of this could be made available. Otherwise, the station currently houses a mezzanine facing the gateline, which if expanded over the concourse and platforms could provide for additional retail uses, as well as supporting delivery and servicing infrastructure for on- and off-station uses. Combined with lifts linking platform, below-platform and mezzanine levels, the extra space could either be used to free up space at platform level and/or allow for goods to be held on the station for call-off during the day.

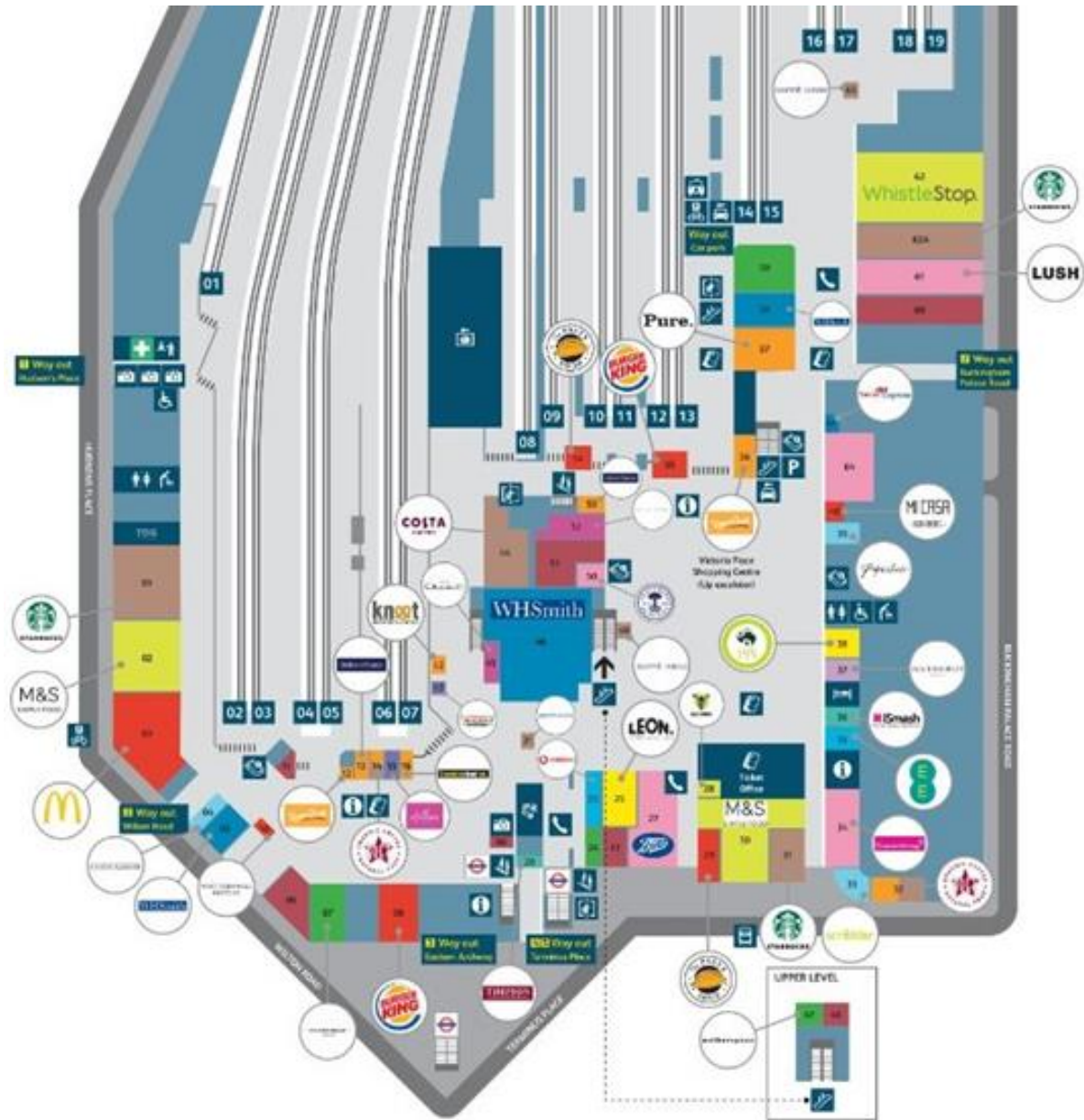


Figure 14 Waterloo main station platform / undercroft areas (dotted lines denote highway access points)



## 2.7 London Victoria

Figure 15 Platform / concourse area plan



### Overview

- 2.7.1 Victoria is the second busiest on the network with 75 million gateline entries and exits in 2017-18.<sup>7</sup> Located at the start of the Brighton Main Line, with access via Kensington Olympia and Kew to the SRFlin the Midlands, North and Scotland. The station has 19 electrified platform faces and goods vehicle access at concourse level to the front, eastern and western side of the station, as well as to first floor level for the Victoria Plaza mezzanine development.

<sup>7</sup> Source ORR, excludes Tube traffic

### *Opening hours*

2.7.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 3 hour overnight window for freight services:

- Monday to Sunday: 04:00 – 00:45;
- On Fridays and Saturdays there have been (pre-COVID) passenger services departing at 01:10, 02:10 and 03:10, the station opening for 15 mins before each train departs and closing again after departure.

### *Delivery and servicing activity*

- 2.7.3 Delivery and servicing activity by road for on-station retail tenants is via a loading bay accessed from Buckingham Palace Road (close to the Lush retail outlet). Able to accommodate a single vehicle, the loading bay operates as a virtual “air lock” with doors at either end facing the highway and (protected by a movable barrier) platform 14-19 concourse area respectively. The loading bay provides access to the mezzanine area and concourse area. Additional facilities are available at mezzanine level accessed off Bulleid Way.
- 2.7.4 Train catering replenishment services (operated by Rail Gourmet) access the station via a dedicated compound adjacent to platform 1 with road access off Bridge Place Road.

### *Planned works on the station*

2.7.5 [To be advised]

### *Platform availability*

- 2.7.6 All platforms are connected at the same level via the concourse, during the limited overnight window to the concourse area when the station is closed. Most platforms can accommodate 12-coach formations, with the exception of 3-4 (8-coach only), 5/6/8 (10-coach depending on type).
- 2.7.7 The midweek WTT shows 1272 arrivals or departures across the 19 platforms, ie 79 movements per platform between 04:30 and 01:45, or around 1.8 return train arrival/departures per platform per hour. The higher-numbered platforms would be best suited to trainload operations based on their length and level access to the delivery bay on the Buckingham Palace Road. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers up to 00:45 and again from 04:00):
- Platform 1 (also used for passenger charter services eg the Belmond Pullman): occupied;
  - Platform 2: occupied;
  - Platform 3: occupied;
  - Platform 4: occupied;
  - Platform 5: available between 2S88 departing 00:40 and 5K04 ECS arriving 05:26;
  - Platform 6: occupied;
  - Platform 7: occupied;
  - Platform 8: available between 5Y44 ECS departing 01:47 and 5Y65 ECS arriving 09:33;
  - Platform 9: available between 1T00 departing 00:08 and 5A15 ECS arriving 04:33;
  - Platform 10: occupied;
  - Platform 11: occupied;
  - Platform 12: occupied;
  - Platform 13: available between 5Y77 ECS departing 00:29 and 5Y07 ECS arriving 02:06;
  - Platform 14: occupied;
  - Platform 15: available between 5B54 ECS departing 00:25 and 5V02 ECS arriving 05:27;

- Platform 16: available between 1R72 departing 23:09 and 5L02 ECS arriving 04:47;
- Platform 17: occupied;
- Platform 18: occupied;
- Platform 19: available between 5V72 ECS departing 00:20 and 5V01 ECS arriving 04:39.

2.7.8 The Engineering Access Statement for 2022 provides for platforms 1-8 to be blocked 01:40 to 03:50/04:45 weekdays and 00:50/01:20 to 06:20/06:55 on Sundays. The remaining platforms 9 to 19 can also be blocked 00:45 to 04:15 Sundays to Fridays. Any freight trains would need to arrive and depart beforehand, or be locked in for the duration.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include parking bays on Bridge Place Road / Hudson’s Place (closest for lower-numbered platforms), Buckingham Palace Road (closest for higher-numbered platforms), or at mezzanine level accessed off Bulleid Way.

*All types from “Carry on” to “freighter”*

- Most of the platforms could be considered, using the road access routes as above and agreement on a Safe System of Work for moving goods across the concourse;
- Storage areas may be available above the station in the medium to long term.

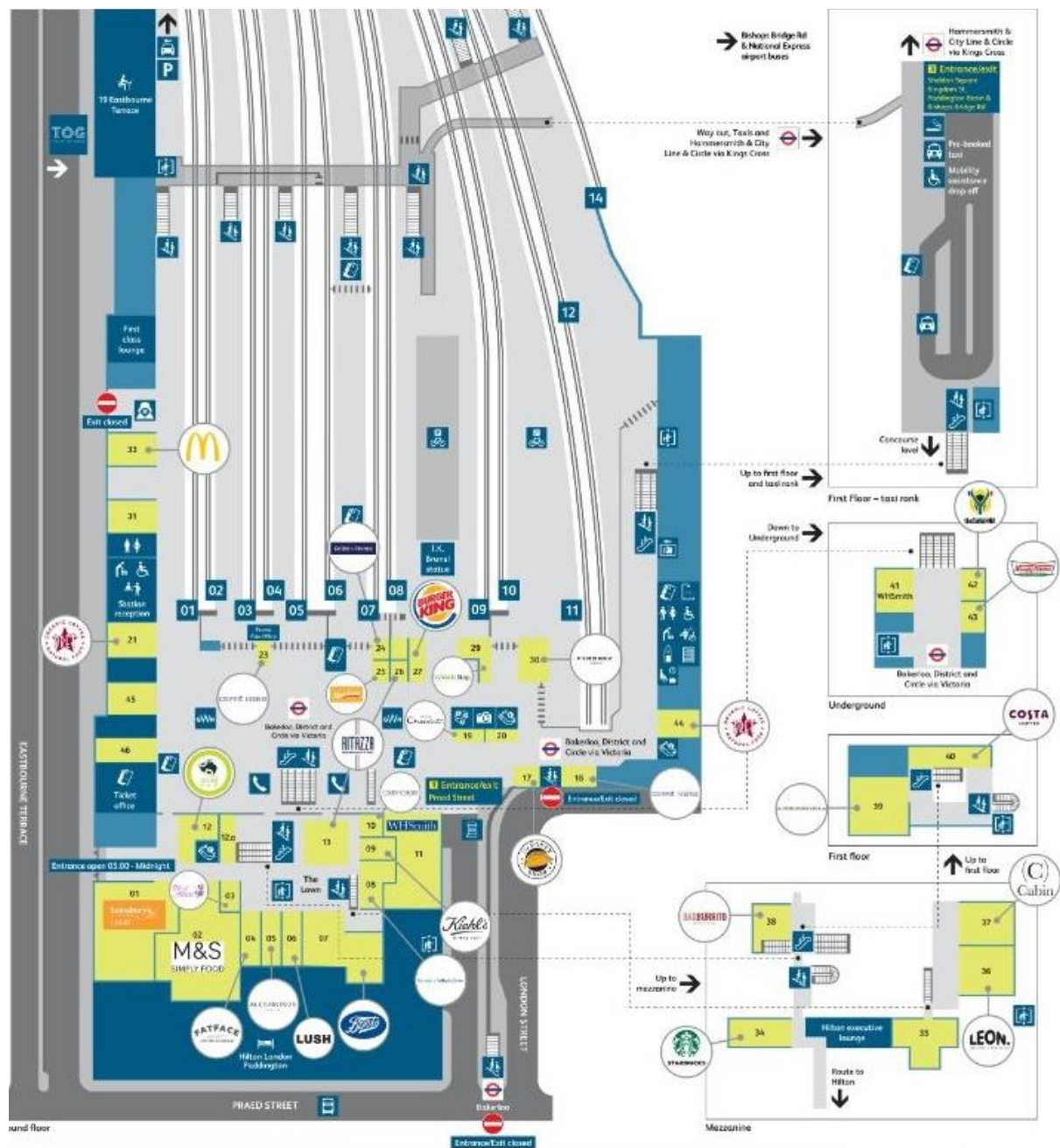
*Potential development opportunities*

2.7.9 The area in and around the car park at mezzanine level to the east of Victoria Plaza could be used to create up to 60,000 sq ft of floorspace with scope for multiple levels / uses. Otherwise, decking over of part of the main line formation between the station and Grosvenor Bridge over the Thames (eg the 200,000 sq ft footprint over Grosvenor Sidings depot) could be considered, subject to planning / heritage considerations and overall engineering / commercial feasibility.



## 2.8 London Paddington

Figure 16 Platform / concourse area plan



### Overview

- 2.8.1 Paddington is the eight busiest on the network with 37 million gateline entries and exits in 2017-18.<sup>8</sup> Located at the base of the Great Western Main Line within the West End of London, with access to the SRFlin the Midlands, North and Scotland via Acton (reverse for access to north of London routes) or Didcot. The station has 13 electrified platform faces, a standalone goods vehicle access dock to the west of platform 1, and a small number of additional road access points around the station.

<sup>8</sup> Source ORR, excludes Tube traffic

### *Opening hours*

- 2.8.2 The station is advertised as open 24 hours a day, but in practice station management close for a short period overnight to help manage anti-social behaviour. This has implications for any intended use of the concourse area for movement of goods at scale between rail and road vehicles.

### *Delivery and servicing activity*

- 2.8.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) has latterly accessed the station via the goods vehicle dock to the west of platform 1. This is accessible by vans and smaller rigid goods vehicles, with a one-way access via the entrance off Bishops Bridge Road (near the junction with Eastbourne Terrace) through to an exit into Orsett Terrace. The road surface sits around 1.2m below platform level, with 2 loading bays allowing rigid vehicles to dock with the platform and achieve level access between the vehicle load bed and the platform. In addition, the southern side of the station facing Eastbourne Terrace has been designed to provide an overnight road access for delivery vehicles serving retail and catering tenants at the south-eastern corner, including M&S and Sainsbury's.

### *Planned works on the station*

- 2.8.4 No additional major enhancement projects are currently planned for the station. Adjacent to the north east corner of the station, Paddington Square is a new mixed-use development at the former Royal Mail sorting office site, incorporating 360,000 sq ft of office space, 75,220 sq ft of retail and dining space, a 13,650 sq ft rooftop restaurant and a new 1.35 acre public square. The development by Great Western Developments Ltd will also provide a new Bakerloo Line ticket hall in Paddington Station. Completion is expected in 2022.

### *Platform availability*

- 2.8.5 All platforms are connected at the same level via the concourse, all can accommodate 12-coach formations with the exception of platform 14 (171m / 8-car). Of these, platform 1 would be best suited to trainload operations, based on proximity to the goods vehicle dock immediately to the west, albeit noting that the GWR Night Riviera sleeper service also uses this platform late evenings and early mornings.
- 2.8.6 The midweek WTT shows 883 arrivals or departures across the 13 platforms, ie 68 movements per platform, or around 1.5 return train arrival/departures per platform per hour. The current overnight occupancy in the WTT is as follows (noting that the station is open around the clock):

- Platform 1: available between 5A39 ECS departing 00:06 and 1A50 arriving 05:03;
- Platform 2: occupied;
- Platform 3: occupied;
- Platform 4: available between 1D48 departing 00:30 and 5C00 ECS arriving 04:39;
- Platform 5: occupied;
- Platform 6: occupied;
- Platform 7: available between 1T97 departing 23:25 and 3T25 ECS arriving 05:15;
- Platform 8: available between 5P46 ECS departing 23:54 and 3U44 ECS arriving 05:51;
- Platform 9: available between 5Y28 ECS departing 23:48 and 1K01 arriving 06:39;
- Platform 10: available between 5G66 ECS departing 23:45 and 5T05 ECS arriving 05:10;
- Platform 11: available between 2R78 departing 23:50 and 5R04 ECS arriving 05:04;
- Platform 12: available between 9N52 departing 23:43 and 5R08 ECS arriving 05:24;
- Platform 14: available between 1D96 departing 23:30 and 2P14 arriving 06:34.

- 2.8.7 The central operating section of Crossrail (the Elizabeth Line) is due to open later next year, which will significantly alter the overnight platforming requirements at Paddington. It is assumed that most overnight stabling will be removed and this will free up platform capacity. For express freight traffic, Platforms 1 to 4 would be the best options to manage the movement of freight, while keeping any late-night passengers away from this activity. Paddington is also due to be converted to being signalled by axle counters, and current rules do not allow platforms to be occupied (ie trains locked in) during possessions.
- 2.8.8 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include the goods vehicle dock west of platform 1, the drop off point near the Bishops Bridge Road / Eastbourne Terrace junction and the taxi rank area off Bishops Bridge Road;

*All types from “Carry on” to “freighter”*

- Platform 1 would be most suitable on the basis of a 5-hour overnight window and access to and from the goods vehicle dock to the west, within which space could be provided through rationalisation and consolidation of various existing uses and spare space;
- Platforms 7 to 14 also offer a 5-6 hour overnight window, subject to agreement on a Safe System of Working to move goods across the concourse to/from the goods vehicle access points.

*Potential development opportunities*

- 2.8.9 Use of the goods vehicle dock area off platform 1 has evolved on an *ad hoc* basis for vehicle parking, waste compactors, general storage and contractor compounds, resulting in an inefficient use of the area. The overall footprint of the basement / platform area is around 100,000 sq ft, including the former Motorail vehicle loading facility. Whilst track and electrification changes since the end of Motorail operations in 2005 have moved the main line trackwork away from the former platform 1a, it is conceivable that a dedicated urban consolidation / distribution facility could be created here, restoring direct rail access off Line 1 / Link Line by extending the former platform face out to meet the realigned formation.
- 2.8.10 Subject to achieving the necessary consents, there may also be scope to create a multi-storey / mixed-use development on the site footprint either side of Westbourne Terrace, providing enhanced delivery and servicing facilities for the station and hinterland.

## 2.9 Guildford

- 2.9.1 The station is currently the subject of major redevelopment, which will ultimately create 37,000 sq ft of retail floorspace, 20,000 sq ft of offices, 438 new homes and a multi-storey car park. The redevelopment (see Figure below) will only provide limited opportunities for logistics, mainly the parcel-load “Carry on” model of operation.

*Figure 17 Redevelopment proposals for Guildford station*







### *Opening hours*

- 2.10.2 The station is advertised as open 24 hours a day, but in practice station management close for a short period overnight to help manage anti-social behaviour. This has implications for any intended use of the concourse area for movement of goods at scale between rail and road vehicles.

### *Delivery and servicing activity*

- 2.10.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) can be achieved through a number of road access points, including:

- Lower Approach Road access off Temple Gate, NR having rights over third-party land for vehicles to reach the undercroft access / storage area and goods lifts to reach platform level;
- Station Approach access off Temple Gate, with a small parking area adjacent to the British Transport Police facility, or via the Long Stay Car Park access (smaller goods vehicles only);
- Friary access off Temple Way / Temple Gate;
- Temple Gate access opposite the junction with Redcliffe Way.

### *Planned works on the station*

- 2.10.4 The station canopy is currently being reglazed, the project expected to finish during 2023. A temporary scaffolding protection deck has been installed along with a contractor compound. The Eastern Entrance is a major project which is now under way (see Figure below).

### *Platform availability*

- 2.10.5 All platforms are connected via goods lifts to the undercroft, as well as by passenger lifts via the concourse and separate passenger underpass. Most platform faces can accommodate 12-coach formations, with the exception of platform 1 (4-coach only) and 2 (stabling purposes only). The track curvature at the northern end of the station produces significant gaps between platform and trains, which may affect loading operations. The High Level Siding has no platform face and only limited potential for freight use due to the presence of trackside signalling equipment and width constraints alongside the siding. The sidings serving platform 2, the Motorail Dock and Fish Dock may also have future potential for freight use.
- 2.10.6 The midweek WTT shows 375 arrivals or departures across the 14 platform sections, ie 27 movements per platform, or around 1.3 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers throughout the day and night):
- Platform 1: available;
  - Platform 2: available;
  - Platform 3 to 7 – WTT shows no entries for these platforms at time of writing [possibly due to Bristol East Junction / Temple Meads roof works];
  - Platform 8: available between 5T40 ECS departing 00:08 and 2M02 arriving 06:20;
  - Platform 9: available between 5M77 ECS departing 00:18 and 3A09 arriving 05:32;
  - Platform 10: available between 5V70 ECS departing 22:59 and 5F01 ECS arriving 04:28;
  - Platform 11: available between 1A39 departing 22:00 and 5F03 ECS arriving 05:38;
  - Platform 12: available between 5C37 ECS departing 00:42 and 3U04 arriving 04:48;
  - Platform 13: available between 5M95 ECS departing 00:45 and 5A01 ECS arriving 05:04;
  - Platform 15: available between 5C39 ECS departing 01:39 and 5C61 ECS arriving 04:36.

2.10.7 The Engineering Access Statement possession strategy works on a six week cycle. Week 1 is the Up Side possession (Platforms 1 to 6 plus the Up Through and Motorail.) Week 2 is the Island Possession (Platforms 7 to 10). Week 3 is the Down Side Possession ( Platforms 9 to 15 including the Down Through). Weeks 4, 5 and 6 are clear. Timings vary, but tend to average out as 23:00 to 04:45. Due to Temple Meads being signalled by axle counters, current rules do not allow platforms to be occupied (trains locked in) during possessions. The only exception is Platform 2 and the Motorail siding, which are not covered by the signalling system.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include Lower Approach Road (for undercroft and goods lifts to platforms), Station Approach access off Temple Gate, via the Long Stay Car Park access (smaller goods vehicles only), or the Friary access off Temple Way / Temple Gate;

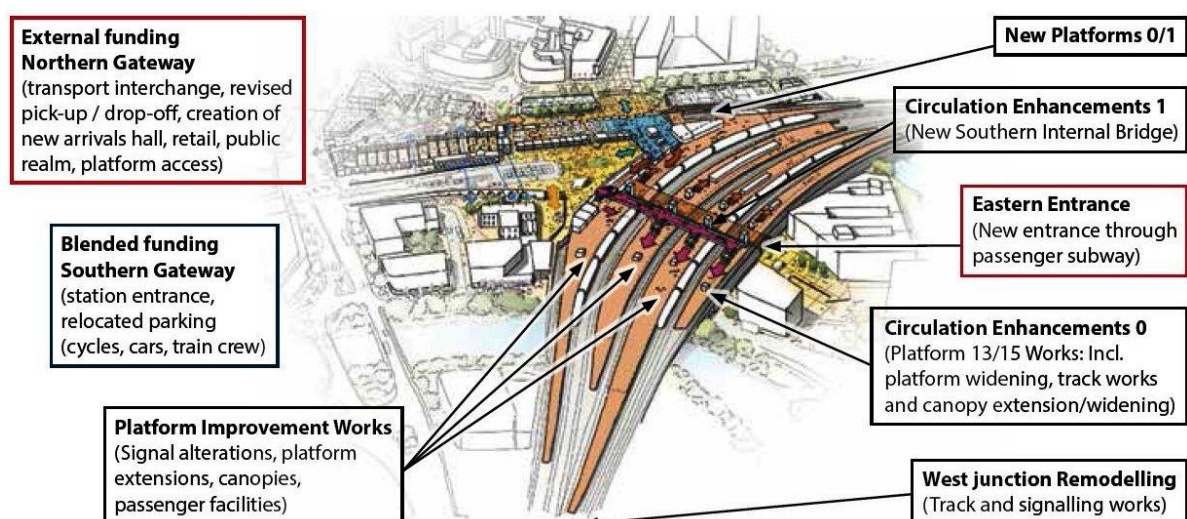
*All types from “Carry on” to “freighter”*

- Most of the platforms could be considered, using the road access routes as above and agreement on a Safe System of Work for moving goods across the concourse;
- Limited storage space available within the undercroft area.

*Potential development opportunities*

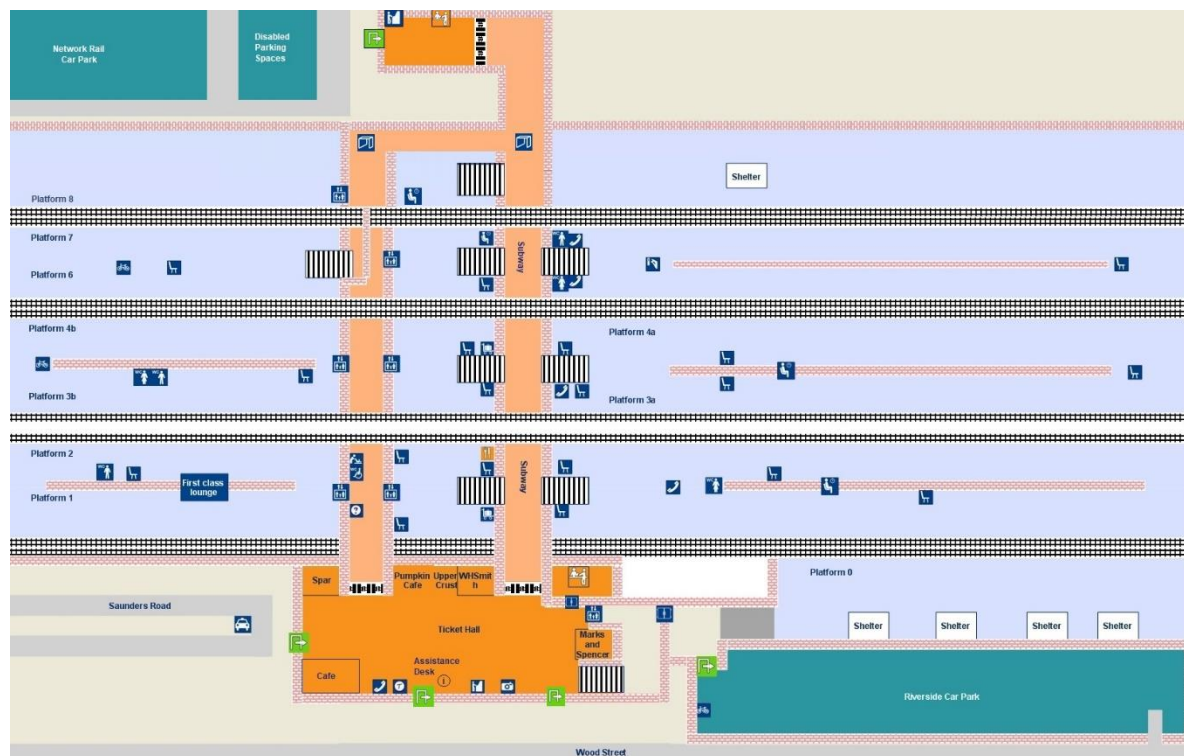
- 2.10.8 The area around Collett House on the south-western side of the station facing onto the Dock siding, including arches under the access ramp to the station, may provide limited opportunities for storage and parking for local delivery vehicles. Future opportunities may exist on surrounding railway / third-party land, including the Fish Dock area to the south west.
- 2.10.9 In the medium to long term, Network Rail, Bristol City Council, Homes England and central government departments are working to create an integrated regional transport hub. The redevelopment (see Figure below) will include the opening up of Temple Meads East through a public street between the station and land to the east, including the former Royal Mail sorting office on Cattle Market Road (due to become the University of Bristol’s new Temple Quarter Enterprise Campus). The latter previously accessed the platforms via an underpass and goods lifts to the northern end of the station, the underpass and lift shafts remaining in place.

*Figure 19 Temple Meads area development proposals*



## 2.11 Cardiff Central

Figure 20 Platform / concourse area plan



### Overview

- 2.11.1 Cardiff Central is the 33<sup>rd</sup> busiest on the network with 13 million gateline entries and exits in 2017-18.<sup>10</sup> Located on the Great Western Main Line route linking South Wales with the Midlands, London and the South East, the station has access to the SRFl in the Midlands, North and Scotland via Hereford, Didcot and Gloucester. The station has 7 electrified platform faces (0,1-4, 6-7), linked by lifts to an underpass running at right angles to the platforms.

### Opening hours

- 2.11.2 The station usually opens just before the first train of the day leaves (currently 04:35) and closes after the last train departs (currently 01:22).

### Delivery and servicing activity

- 2.11.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) can be achieved through two main road access points:
- Central Square Plaza / Saunders Road on the northern side of the station;
  - Southern station entrance off Penarth Road.

### Planned works on the station

- 2.11.4 Design work is in hand for enhancement works to the station, which may start in 2022.

### Platform availability

- 2.11.5 All platforms are connected via passenger lifts to the underpass. Most platform faces can accommodate 12-coach formations, with the exception of platform 0 (7-coach only). The midweek

<sup>10</sup> Source ORR, excludes Tube traffic



WTT shows 750 arrivals or departures (including freight trains) across the 7 platform sections, ie 107 movements per platform, or around 5 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 04:30 and 01:20):

- Platform 0: available between 5G75 ECS departing 00:47 and 5A04 ECS arriving 04:49;
- Platform 1: available between 2C98 departing 23:30 and 5W42 ECS arriving 04:17;
- Platform 2: available between 5V99 ECS departing 01:34 and 1L01 arriving 05:05;
- Platform 3: available between freight trains passing at 01:27 and 04:56;
- Platform 4: available between 5P99 ECS departing 23:30 and a freight train passing at 04:22;
- Platform 6: available between a freight train passing at 01:58 and 5D06 ECS arriving 05:25;
- Platform 7: available between 5F84 departing 23:22 and 5F55 ECS arriving 05:20;
- Platform 8: available between 5F76 ECS departing 23:36 and 5M06 ECS arriving 05:27.

- 2.11.6 The Engineering Access Statement for 2022 provides for weekday blocks of all lines between 00:35 to 04:50 Tuesdays to Saturdays, 00:40 – 08:10 on Sundays and 22:45 – 04:40 on Sundays/Mondays. Any freight trains would need to arrive and depart beforehand, or be locked in for the duration.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include Central Square Plaza / Saunders Road on the northern side of the station and/or the southern station entrance off Penarth Road.

*All types from “Carry on” to “freighter”*

- Most of the platforms could be considered, using the road access routes as above and agreement on a Safe System of Work for moving goods across the concourse, noting that the lifts are designed for passenger rather than freight use.

*Potential development opportunities*

- 2.11.7 Subject to further progress with the proposals to expand the station (see Figure below), there may be scope to incorporate urban logistics facilities as part of the overall delivery & servicing strategy.

*Figure 21 Cardiff Central redevelopment proposals*



## 2.12 Birmingham New Street

Figure 22 Platform / concourse area plan



### Overview

- 2.12.1 New Street is the 6<sup>th</sup> busiest on the network with 44 million gateline entries and exits in 2017-18.<sup>11</sup> Located on the West Coast Main Line route linking London with the Midlands, North West and Scotland, the station has access to the SRFl in the Midlands, North and Scotland via the WCML and connecting routes. The station has 12 platform faces (0,1-4, 6-7), linked by goods lifts to a basement delivery and servicing bay, and by passenger lifts to concourse level.

<sup>11</sup> Source ORR, excludes Tube traffic

### *Opening hours*

2.12.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 2 hour overnight window for freight services:

- Monday – Friday: 04:15 – 02:00;
- Saturday: 04:15 – 00:15;
- Sunday: 08:00 – 02:00.

### *Delivery and servicing activity*

2.12.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) are via a purpose-built basement level facility accessed off Station Street through two wide access gates fitted with sliding gates and any Hostile Vehicle Mitigation barriers beyond (see Figure later in this section). Three bays were provided for the former John Lewis retail outlet and three bays for other users, all linked by goods lifts through to roof level (where the Grand Central owner Hammerson permits use of the roof area for retail storage). The facility also provides storage space for Rail Gourmet with onward access routes to the platform goods lifts. Note the facility also retains the former access tunnel for mail traffic to and from the Mailbox site.

### *Planned works on the station*

2.12.4 Resignalling works in and around the station will involve a series of 4 week (and 1 x 9-week) possessions between June 2021 and February 2022.

### *Platform availability*

2.12.5 All platforms are connected via goods lifts to the delivery bay and by passenger lifts to concourse level. All platforms can accommodate 12-coach formations.

2.12.6 The midweek WTT shows 1042 arrivals or departures across the 12 platform sections, ie 87 movements per platform, or around 4 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 04:00 and 02:00):

- Platform 1: available between 5D92 ECS departing 23:58 and 5V82 ECS arriving 04:51;
- Platform 2: available between 5T33 ECS departing 01:30 and 5U04 ECS arriving 05:37;
- Platform 3: available between 5H71 ECS departing 00:08 and 5Z20 ECS arriving 02:52, and between 5Z20 ECS departing 02:57 and 5O02 ECS arriving 05:26;
- Platform 4: available between 5C91 ECS departing 00:17 and 5P38 ECS arriving at 05:10;
- Platform 5: available between 5T43 ECS departing at 02:27 and 5V01 ECS arriving 04:47;
- Platform 6: available between 5G50 ECS departing at 00:07 and 5W00 ECS arriving 05:29;
- **Platform 7: occupied;**
- Platform 8: available between 5J21 ECS departing 04:55 and a freight service passing at 09:19;
- **Platform 9: occupied;**
- Platform 10: available between freight services passing at 00:36 and 02:30, 5Z21 ECS arriving 03:02 and departing 03:20, and 5D04 ECS arriving 05:20;
- Platform 11: available between 2W72 departing 23:56 and 5V02 ECS arriving 05:24;
- Platform 12: available between 2N02 departing 23:33 and 5R02 ECS arriving 05:20.

2.12.7 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

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*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but could include the delivery bay off Station Street (currently handling only 2-3 vehicles per day) or the drop-off facility off Hill Street (subject to agreement with APCOA);

*All types from “Carry on” to “freighter”*

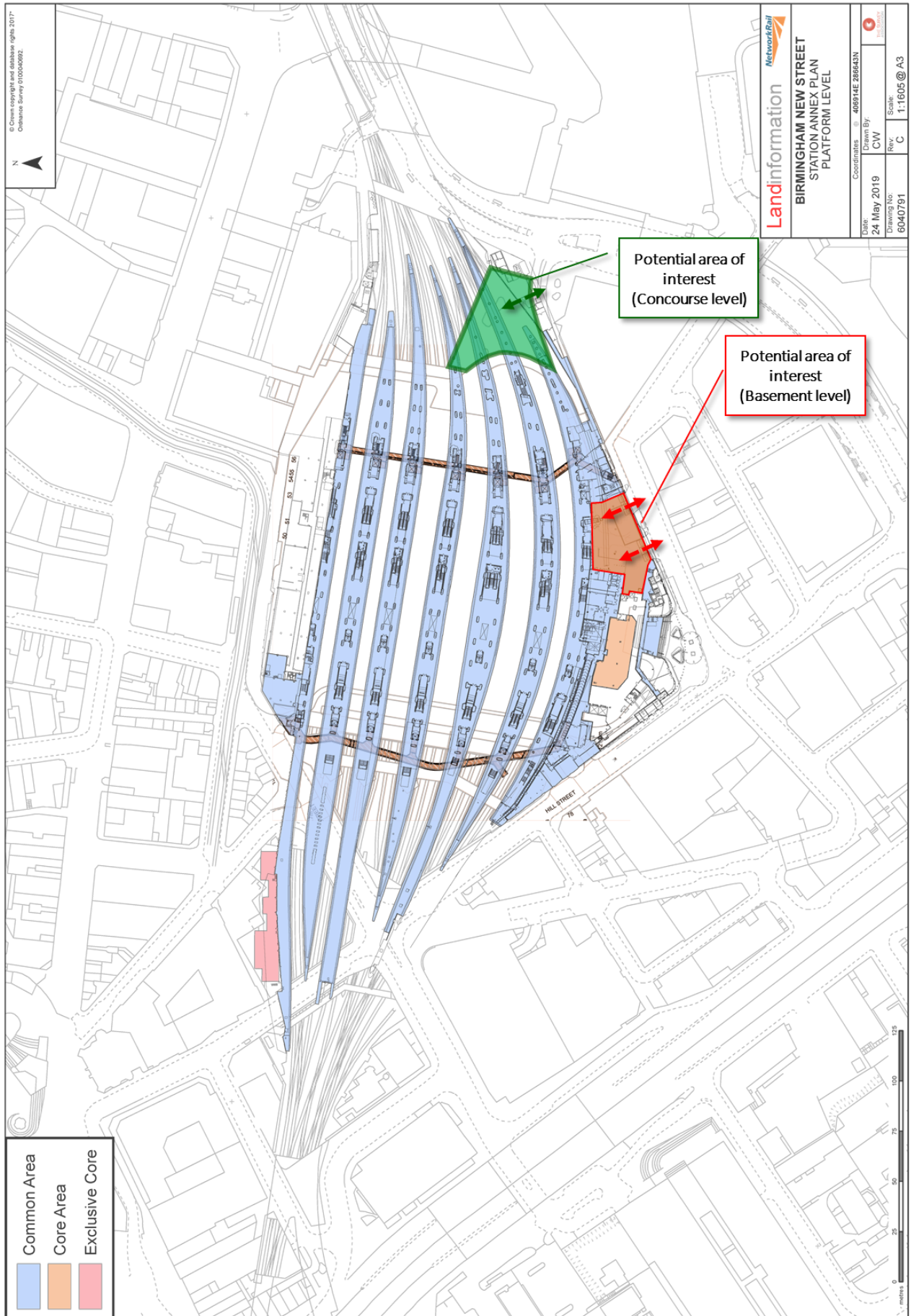
- As above plus overnight access for light goods vehicles onto the station plaza area off Smallbrook Queensway via an existing access gate, with agreement as required on a Safe System of Work for moving goods across the concourse, noting that the lifts are designed for passenger rather than freight use;
- Storage space may be available in the basement, in the former West Midlands Travel office facing onto Stephenson Street, on the roof of the Grand Central development (third-party site) or in the Mailbox (third-party site).

*Potential development opportunities*

- 2.12.8 The changes in retail use above the station at Grand Central (eg the loss of the John Lewis store) may create opportunities with Hammerson to repurpose vacant space at basement, concourse or upper levels, including for logistics consolidation and distribution.

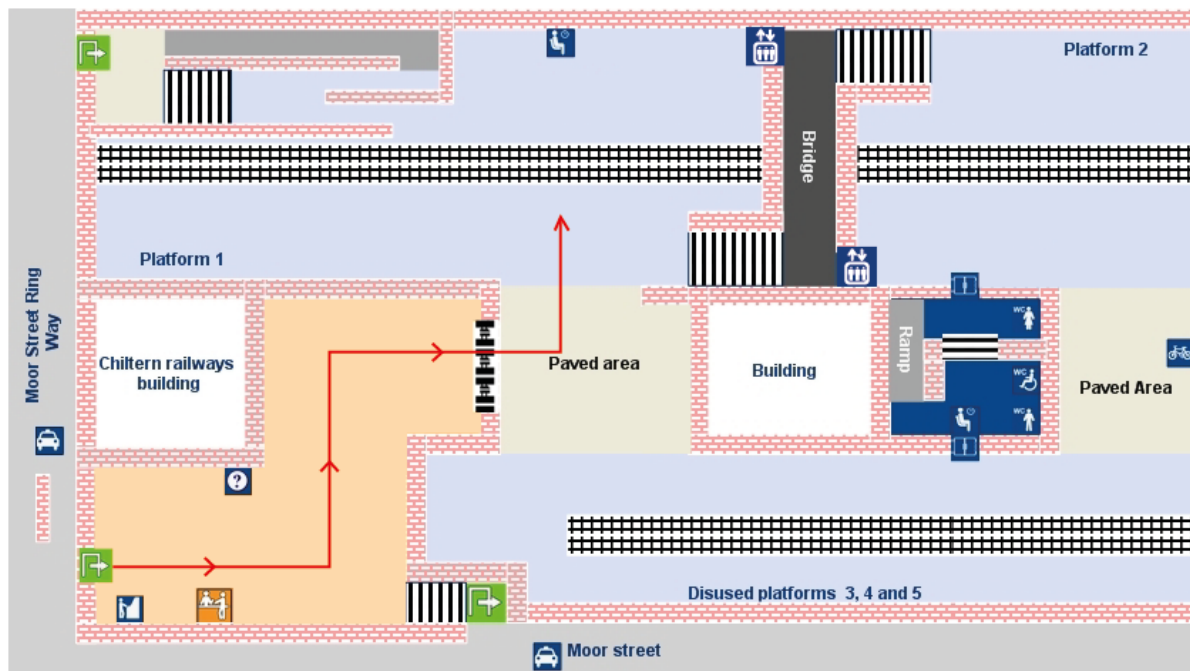


Figure 23 New Street concourse / basement areas (dotted lines denote highway access points)



## 2.13 Birmingham Moor Street

Figure 24 Platform / concourse area plan



### Overview

- 2.13.1 Moor Street is the 73<sup>rd</sup> busiest on the network with 6.6 million gateline entries and exits in 2017-18.<sup>12</sup> Located on the Chiltern Lines route from London to Snow Hill, the station has direct access to London, the South East, South West and South Wales but no direct access to SRFI in the Midlands, North of England and Scotland. The station has 5 platform faces (1-4 in use), with platforms accessible by ramps or lifts from concourse level.

### Opening hours

- 2.13.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 5-6 hour overnight window for freight services:
- Monday to Friday: 05:40 - 00:10;
  - Saturday: 05:55 - 23:55;
  - Sunday: 08:40 - 00:10.

### Delivery and servicing activity

- 2.13.3 There are limited catering facilities on the station, with deliveries made using the adjacent highway access and loading bay on Moor Street.

### Planned works on the station

- 2.13.4 [To be confirmed].

### Platform availability

- 2.13.5 All platforms are connected via passenger lifts to the delivery bay and by passenger lifts to concourse level. All platforms can accommodate 10-coach formations.

<sup>12</sup> Source ORR, excludes Tube traffic

2.13.6 The midweek WTT shows 257 arrivals or departures across the 4 platforms, ie 64 movements per platform, or around 3.3 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 05:40 and 00:10):

- Platform 1: available between 5S00 ECS departing 00:28 and 2C50 arriving 05:57;
- Platform 2: available between 5S94 ECS departing 00:17 and 5U04 ECS arriving 05:37;
- Platform 3: occupied;
- Platform 3: occupied.

2.13.7 The Engineering Access Statement for 2022 provides for blocks of all lines between 00:50 – 05:15 Tuesdays to Saturdays, 00:50 – 08:15 on Sundays and 00:25 – 05:15 on Mondays. Any freight trains would need to arrive and depart beforehand, or be locked in for the duration.

*Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but would be limited to the loading bay on Moor Street or the taxi rank area on Moor Street Ring Way outside of station opening hours.

*All types from “Carry on” to “freighter”*

- As above, noting that the lifts are designed for passenger rather than freight use. A small building (3,800 sq ft) facing onto the taxi rank was vacant at the time of the survey.

*Potential development opportunities*

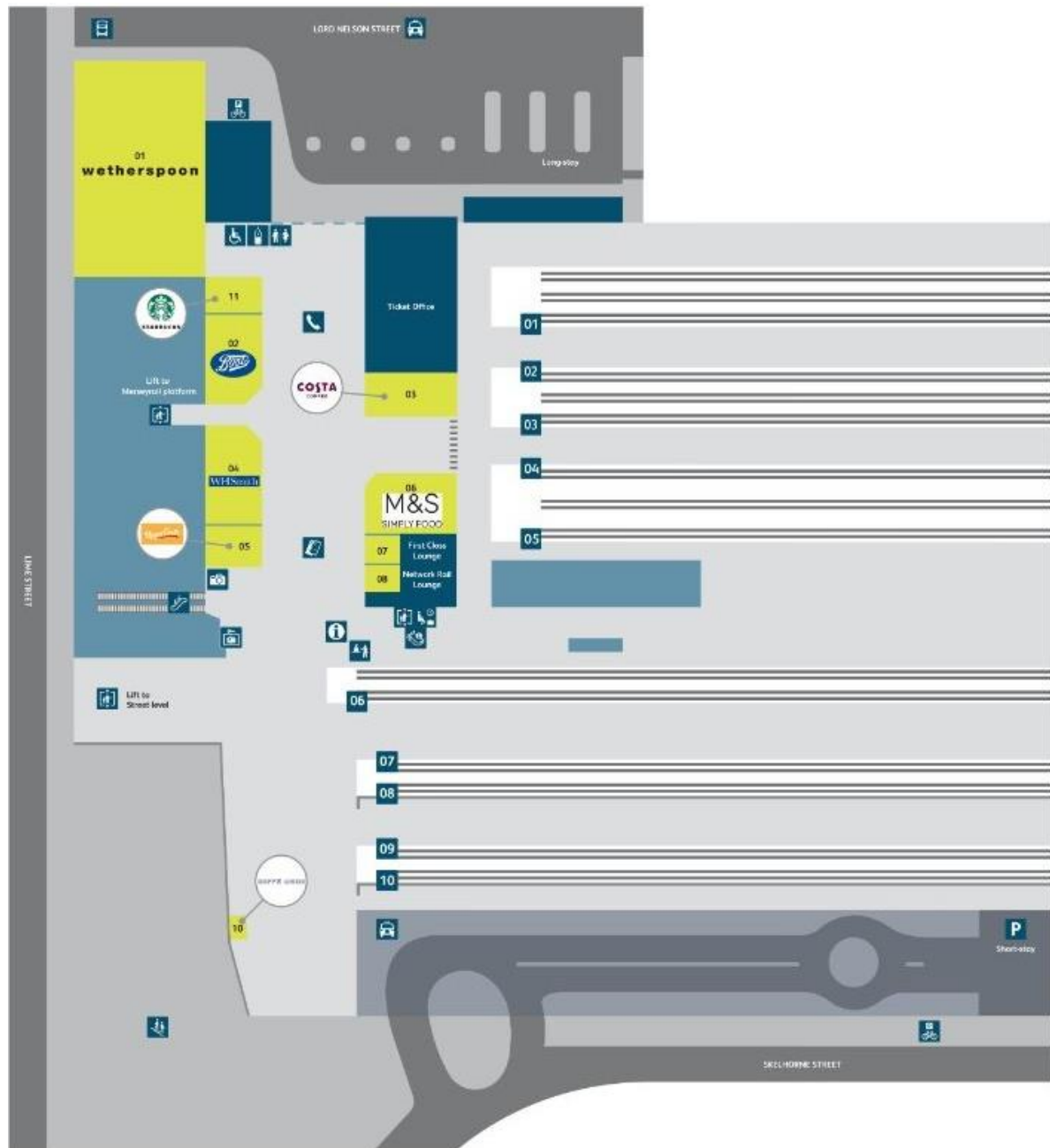
2.13.8 Proposals exist to double the size of Moor Street station, adding two new platforms, a new footbridge taking passengers directly to HS2 services from Curzon Street via a new public square, and a new transfer deck with access to every platform. A second entrance to the south of the station has been proposed and several options to improve pedestrian access between Moor Street and New Street including new routes, ramps, and steps. Subject to further progress with the proposals (see picture below), there may be scope to incorporate urban logistics facilities as part of the overall delivery and servicing strategy.

*Figure 25 Moor Street redevelopment proposals*



## 2.14 Liverpool Lime Street

Figure 26 Platform / concourse area plan



### Overview

- 2.14.1 Lime Street is the 30<sup>th</sup> busiest on the network with 16 million gateline entries and exits in 2017-18.<sup>13</sup> Located on the West Coast Main Line and Trans-Pennine routes, the station has direct access to SRFI over the rest of the network. The main station has 10 electrified platform faces, with platforms level with the concourse and road access to the north and south.

<sup>13</sup> Source ORR, excludes Tube traffic



### *Opening hours*

2.14.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 2½ hour overnight window for freight services:

- Monday – Friday: 03:15 to 00:40:
- Saturday: 03:15 to 00:35:
- Sunday: 07:00 to 00:30.

### *Delivery and servicing activity*

2.14.3 Delivery and servicing activity by road for on-station retail tenants and train catering replenishment services (operated by Rail Gourmet) are via delivery bays accessed from Lord Nelson Street along the northern side of the station.

### *Planned works on the station*

2.14.4 [To be confirmed].

### *Platform availability*

2.14.5 All platforms are connected via the concourse to the delivery bay. Platforms 1 & 2 can accommodate 10-coach formations, platforms 3,4,7 & 8 can accommodate 8 coach formations, platforms 6, 9 and 10 can accommodate 12-coach formations.

2.14.6 The midweek WTT shows 408 arrivals or departures across the 10 platforms, ie 41 movements per platform, or around 1.8 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 05:40 and 00:10):

- Platform 1: available between 5F32 ECS departing 23:19 and 5F66 ECS arriving 05:37;
- **Platform 2: occupied;**
- Platform 3: available between 5C33 ECS departing 23:58 and a freight service arriving 02:21 and departing 02:31, and 5P13 ECS arriving 05:44;
- Platform 4: available between 1N87 departing 23:15 and 5F68 ECS arriving 05:40;
- Platform 5: available between 1H40 departing 03:37 and a freight service arriving 07:22;
- Platform 6: available between 2K99 departing 23:35 and 5F90 ECS arriving 05:09;
- Platform 7: available between 5F80 ECS departing 23:43 and 5H99 ECS arriving 06:04;
- Platform 8: available between 1L21 departing 21:37 and 5F00 ECS arriving 05:21;
- Platform 9: available between 5F28 ECS departing 23:55 and 5R11 ECS arriving 05:15;
- **Platform 10: occupied.**

2.14.7 The Engineering Access Statement for 2022 provides for blocks of all lines between 00:45 – 07:45 on Sundays, and 01:00 to 03:35 on Mondays. Any freight trains would need to arrive and depart beforehand, or be locked in for the duration.

### *Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but would be limited to the delivery bays accessed from Lord Nelson Street along the northern side of the station, or the taxi rank / engineering access off Skelthorne Street outside of station opening hours.

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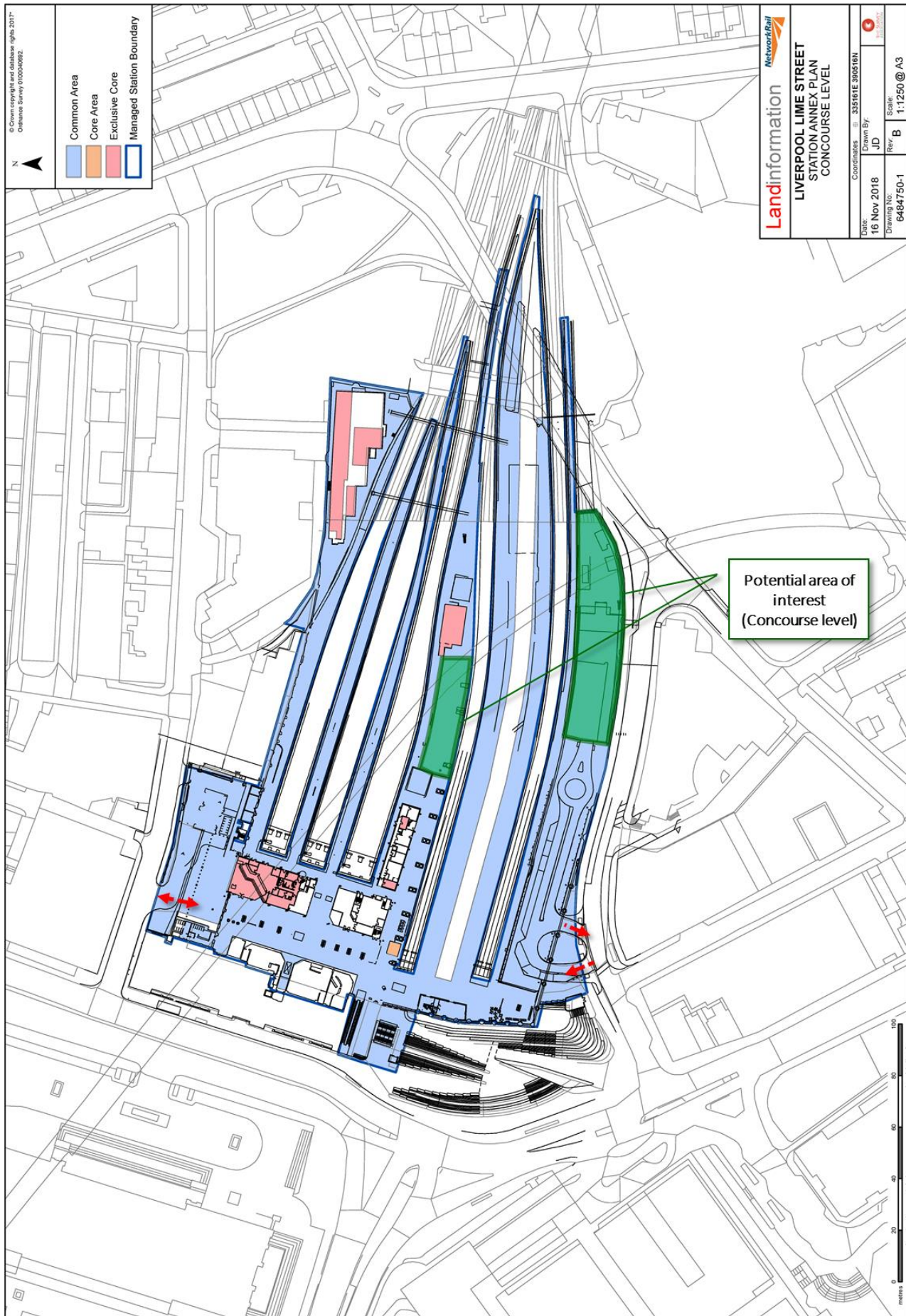
*All types from “Carry on” to “freighter”*

- As above – there is little space available on the concourse and platforms for storage during normal station opening hours, but areas towards the centre of platform 5 and at the eastern end of platform 10 may offer temporary storage out of hours.

*Potential development opportunities*

- 2.14.8 Areas of land in and around the station could provide future opportunities to strengthen express freight and urban logistics facilities. Subject to finding a suitable alternative location for existing facilities / users, the areas include a maintenance compound at the eastern end of platform 10 (12,000 sq ft footprint), the north-western corner of the site adjacent to platform 1 (13,000 sq ft footprint) and/or Copperas Hill Car Park (37,000 sq ft footprint). There may also be opportunities in future to link operations at concourse level with the low-level station platforms (6-coach formations).

Figure 27 Lime Street concourse area (dotted lines denote highway access points)



## 2.15 Manchester Piccadilly

Figure 28 Platform / concourse area plan



### Overview

- 2.15.1 Piccadilly is the 16<sup>th</sup> busiest on the network with 28 million gateline entries and exits in 2017-18.<sup>14</sup> Located on the West Coast Main Line and Trans-Pennine routes, the station has direct access to SRFI over the rest of the network. The main station has 12 electrified terminating platform faces (1-12) and 2 through platform faces (13-14), with the terminating platforms level with the concourse and the through platforms connected by lifts and travelators to the concourse. Road access points are available at ground level off Sheffield Street (loading bays) and the B6469 Fairfield Street (taxi rank and drop off point), and at concourse level off Store Street (near to platform 1).

### Opening hours

- 2.15.2 Until further notice, Manchester Piccadilly is closed from 0100 until 0315, subject to the arrival of the last train and the departure of the first train in the morning.

<sup>14</sup> Source ORR, excludes Tube traffic



### *Delivery and servicing activity*

- 2.15.3 Delivery and servicing activity by road for on-station retail tenants is based within the ground level loading bays accessed off Sheffield Street, protected by a sliding palisade gate and security fencing. A substantial area inside the gate allows goods vehicles to reverse onto the two bays, one fixed and one with a dock leveller, a telephone point allowing drivers to contact the retail units at concourse level. Beyond the bays, doors provide access to a series of lockable storage rooms and a lift up to concourse level. Train catering replenishment services (operated by Rail Gourmet) are accessed via a shorebase facility located north of platform 1 with road access off Store Street.

### *Planned works on the station*

- 2.15.4 [To be confirmed].

### *Platform availability*

- 2.15.5 Platforms 1-12 are connected via the concourse to the delivery bay using the goods lift. Platforms 1-9 and 13-14 can accommodate 12-coach formations, platform 10 can accommodate 9-coach formations, platforms 3,4,7 & 8 can accommodate 8 coach formations, platforms 11-12 can accommodate 5-coach formations.
- 2.15.6 The midweek WTT shows 1,083 arrivals or departures across the 14 platforms, ie 77 movements per platform, or around 3.5 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 03:15 and 01:00):
- Platform 1: available between 2E97 departing 23:35 and 5K05 ECS arriving 04:57;
  - Platform 2: available between 5H19 ECS departing 23:46 and 5G40 ECS arriving 05:07;
  - Platform 3: available between 5W19 ECS departing 23:55 and 5A90 ECS arriving 04:45;
  - Platform 4: available between 5H39 ECS arriving 23:58 and 5F48 ECS arriving 05:08;
  - Platform 5: available between 5J30 ECS departing 00:52 and 5K12 ECS arriving 05:24;
  - Platform 6: available between 5H42 ECS departing 01:00 and 5R02 ECS arriving 04:33;
  - Platform 7: available between 1P03 departing 01:18 and 5S32 ECS arriving 05:33;
  - **Platform 8: occupied;**
  - **Platform 9: occupied;**
  - Platform 10: available between 5W49 ECS departing 01:40 and 5B00 ECS arriving 06:06;
  - **Platform 11: occupied;**
  - Platform 12: available between 2B52 departing 21:24 and 2B03 arriving 07:35;
  - **Platform 13: limited availability between passenger and freight services;**
  - **Platform 14: limited availability between passenger and freight services.**
- 2.15.7 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

### *Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but options could include at ground level off Sheffield Street (loading bays) and the B6469 Fairfield Street (taxi rank and drop off point), and at concourse level off Station Approach or Store Street (near to platform 1).

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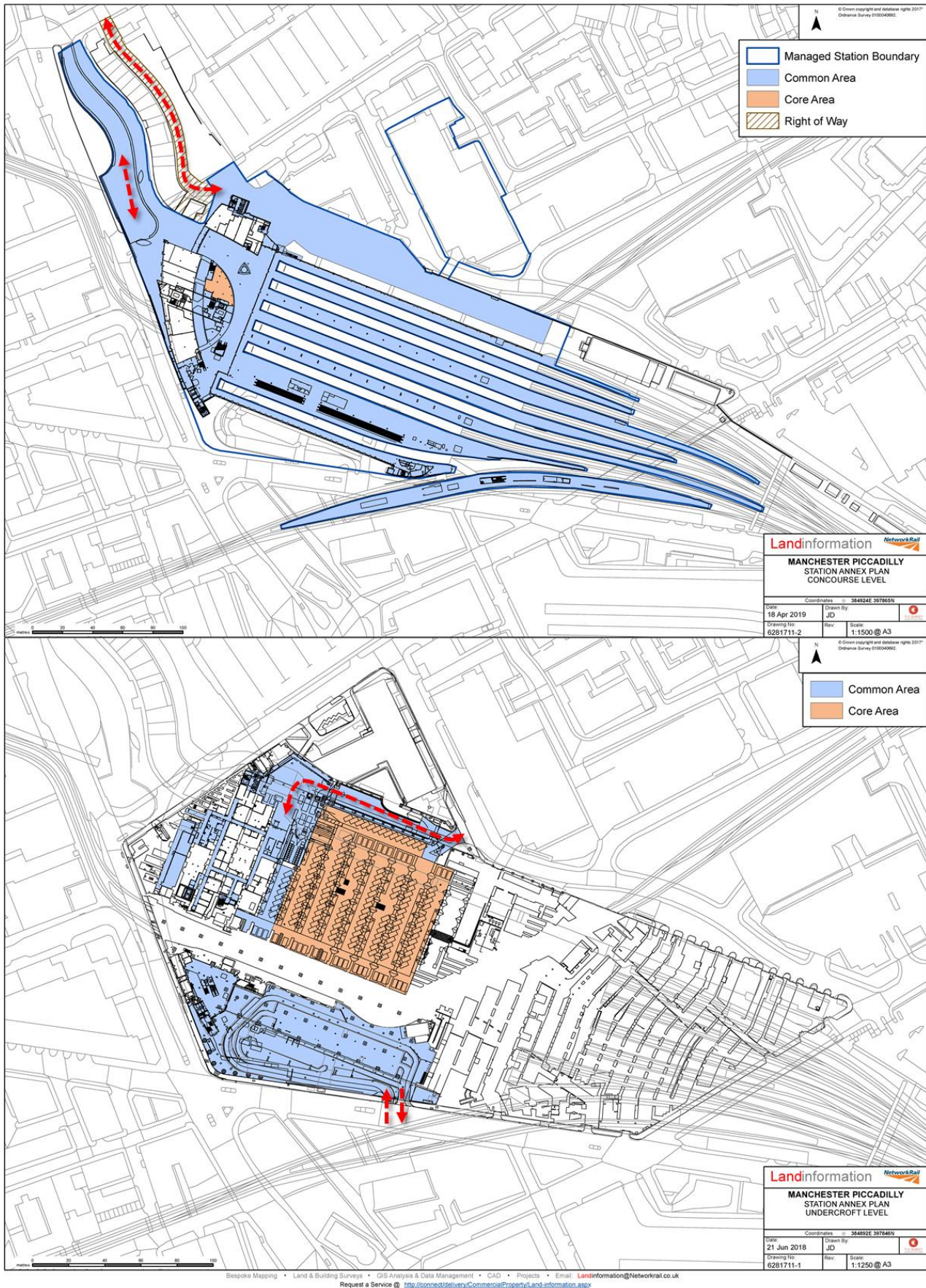
*All types from “Carry on” to “freighter”*

- As above – the full extent of available undercroft storage space has yet to be determined (see Figure overleaf), but in combination with the existing Sheffield Street loading bays could provide a significant opportunity.

*Potential development opportunities*

- 2.15.8 A Strategic Regeneration Framework is in place for Manchester Piccadilly and the surrounding area, integrating the proposed HS2 station which would run parallel to the north of the existing station. The HS2 station works and final construction would be likely to impact on the existing Sheffield Street and Store Street road access points to the station.
- 2.15.9 To the south, the derelict former Mayfield station site previously provided additional platform faces at the same level as Piccadilly. Subject to further progress with current redevelopment proposals, there may be scope to retain or replicate the former rail facilities within a mixed-use development, incorporating urban logistics facilities as part of the overall delivery and servicing strategy.

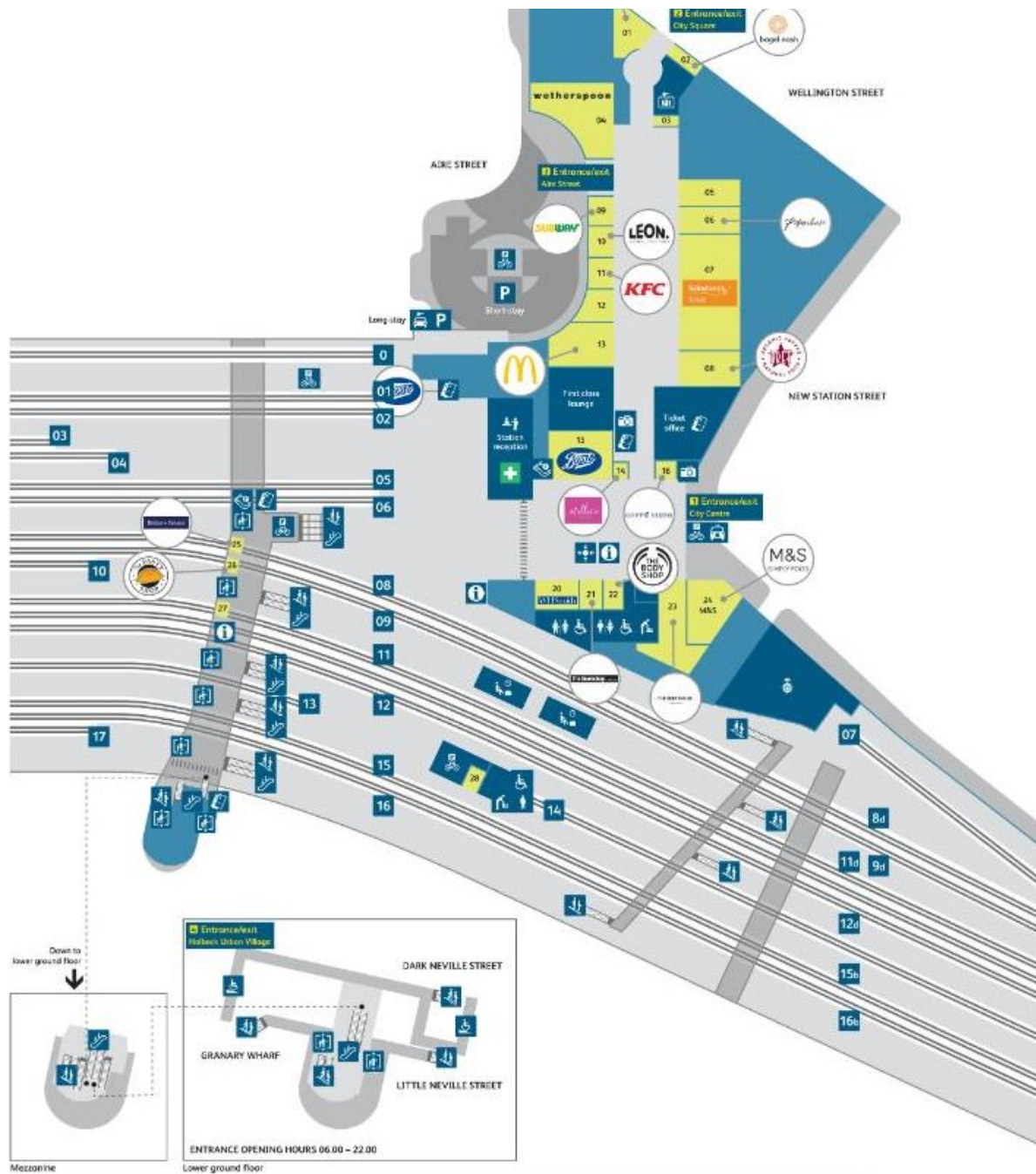
Figure 29 Lime Street concourse / undercroft areas (dotted lines denote highway access points)





## 2.16 Leeds

Figure 30 Platform / concourse area plan



### Overview

- 2.16.1 Leeds is the 12<sup>th</sup> busiest on the network with 31 million gateline entries and exits in 2017-18.<sup>15</sup> Located on the East Coast Main Line and Trans-Pennine routes, the station has direct access to SRFI over the rest of the network. The main station has 12 electrified terminating platform faces and 6 electrified through platform faces, with access to the concourse either at grade or using lifts. Road access points are available at ground level off Little Neville Street (undercroft), Neville Street (undercroft) and at concourse level off Princes Square (onto platform 0) and New Station Street (concourse frontage).

<sup>15</sup> Source ORR, excludes Tube traffic



### *Opening hours*

- 2.16.2 The station is advertised as open 24 hours a day. This has implications for any intended use of the concourse area for movement of goods at scale between rail and road vehicles.

### *Delivery and servicing activity*

- 2.16.3 Delivery and servicing activity by road for on-station retail tenants is based within the ground level loading bays accessed off Neville Street, linked to a series of lockable storage rooms and a lift up to concourse level. A further access point off Princes Square links directly onto platform 0 (former access for Royal Mail traffic). Train catering replenishment services (operated by Rail Gourmet) are operated via a dedicated shorebase facility located north of platform 1 with road access off New Station Street.

### *Planned works on the station*

- 2.16.4 [To be confirmed].

### *Platform availability*

- 2.16.5 The lower-numbered platforms 0 to 8 provide access to the Princes Square road access, whilst the higher numbered platforms 7 to 17 have access to goods and passenger lifts connecting with the concourse and the goods lift to the undercroft off platform 8.
- 2.16.6 The midweek WTT shows 1083 arrivals or departures across the 14 platforms, ie 77 movements per platform, or around 3.5 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 03:15 and 01:00):
- Platform 0: available between 2E70 departing 22:39 and 2E55 arriving 07:28;
  - Platform 1: occupied;
  - Platform 2: occupied;
  - Platform 3: available between 2V74 departing 23:36 and 2V01 arriving 06:31;
  - Platform 4: occupied;
  - Platform 5: occupied;
  - Platform 6: available between a freight service departing 22:03 and 5C00 ECS arriving 05:39;
  - Platform 7: available between 2T33 departing 21:17 and 2T95 arriving 08:42;
  - Platform 8: available between 5D33 ECS departing 00:26 and 5A01 ECS arriving 04:36;
  - Platform 9: available between 5H04 ECS departing 23:24 and a freight service arriving 04:50;
  - Platform 10: occupied;
  - Platform 11: available between 5T36 ECS departing 00:40 and 5W00 ECS arriving 04:54;
  - Platform 12: occupied;
  - Platform 13: occupied;
  - Platform 14: available between 2T31 departing 20:18 and 2T91 arriving 07:39;
  - Platform 15: occupied;
  - Platform 16: limited availability between passenger and freight services;
  - Platform 17: available between 5W39 ECS departing 23:43 and 5L53 ECS arriving 06:22.
- 2.16.7 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

### *Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but options could include at ground level off Little Neville Street (undercroft), Neville Street (undercroft) and at concourse level off Princes Square (onto platform 0) and New Station Street (concourse frontage). See Figure overleaf.

### *All types from “Carry on” to “freighter”*

- As above – the full extent of available undercroft storage space has yet to be determined (some of the space is currently being remediated), but in combination with the existing Neville Street and Princes Square delivery facilities provide a significant opportunity.

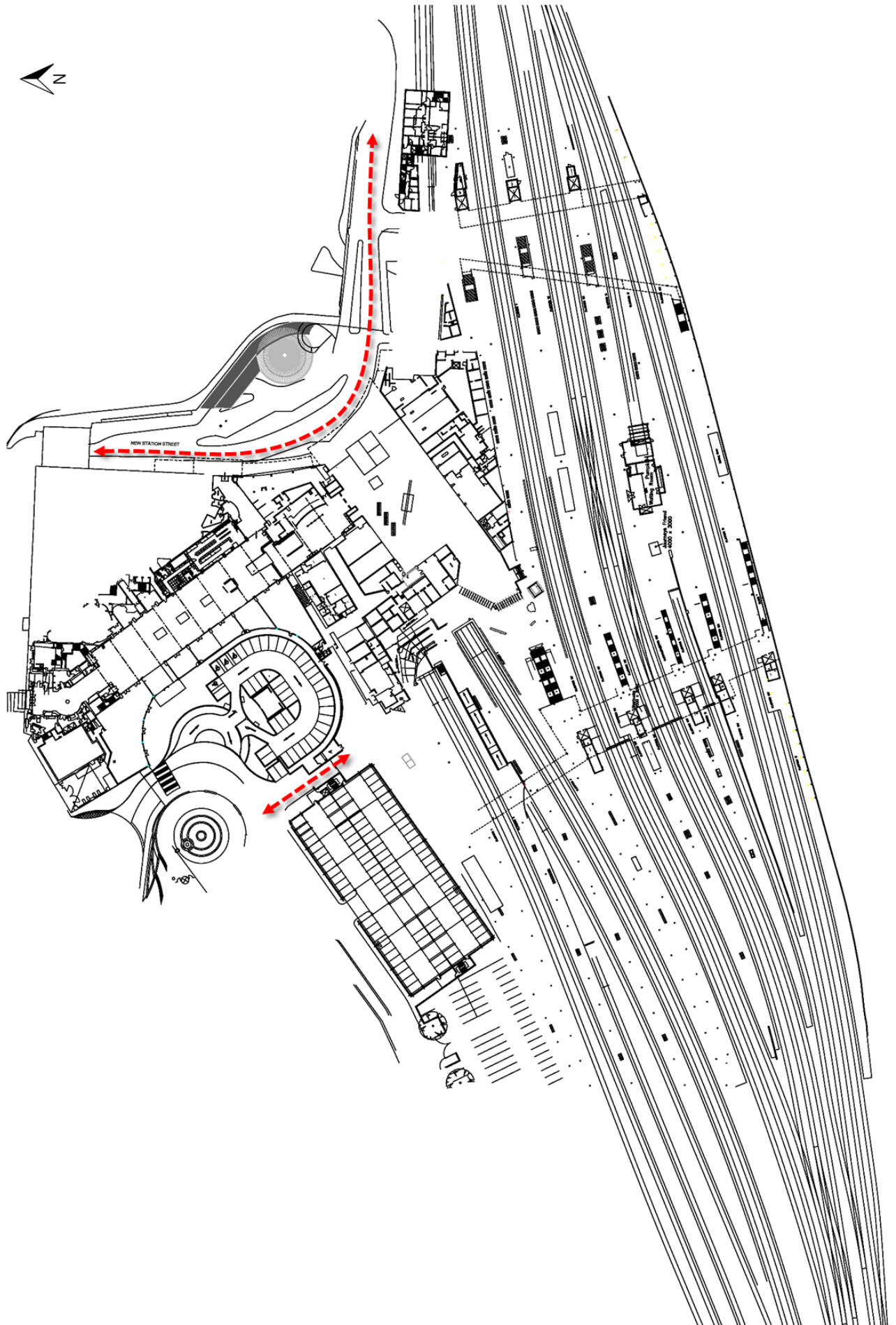
### *Potential development opportunities*

- 2.16.8 Leeds City Council has applied for planning permission to redevelop and pedestrianise the New Station Street entrance, and build a public square connecting the station entrance and Bishopgate Street (picture below). The plans include "grand sweeping steps" and two large passenger lifts in Bishopgate Street, relocating the taxi rank (currently on New Station Street) to Bishopsgate Street, a cycle hub for 700 bikes and new pedestrian and cycle friendly routes through Neville Street, Dark Neville Street and Victoria Road.
- 2.16.9 Subject to further progress with longer term redevelopment proposals (related to HS2), there may be scope to incorporate urban logistics facilities as part of the overall delivery and servicing strategy.



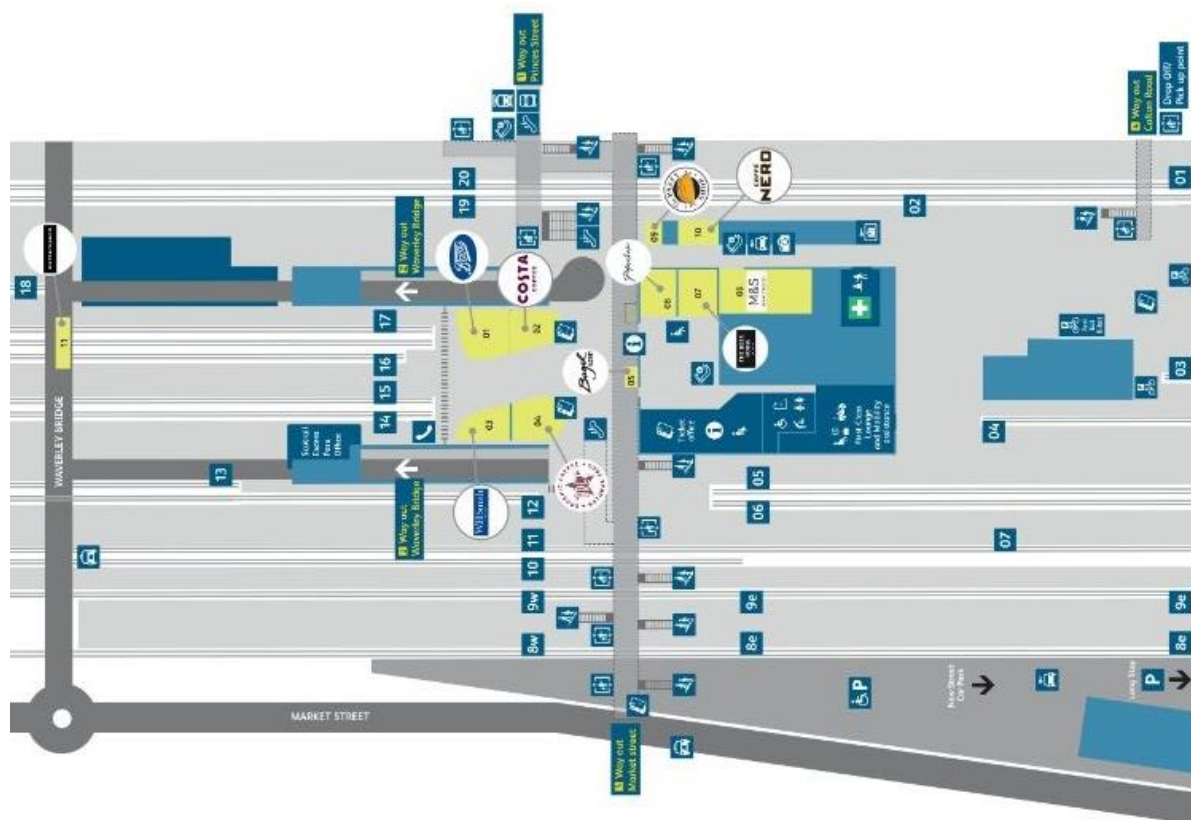


Figure 31 Leeds concourse areas (dotted lines denote highway access points, undercroft area not shown)



## 2.17 Edinburgh Waverley

Figure 32 Platform / concourse area plan



### Overview

- 2.17.1 Edinburgh is the 20<sup>th</sup> busiest on the network with 23 million gateline entries and exits in 2017-18.<sup>16</sup> Located on the East Coast Main Line and Scotrail route networks, the station has direct access to SRFI over the rest of the network. The main station has 12 electrified terminating platform faces and 6 electrified through platform faces (arranged as platforms 0 to 17), with access to the concourse either at grade or using lifts. Road access points are available to concourse level off Waverley Bridge (two access points, the northernmost for delivery vehicles), Calton Road (drop-off point) and Market Street (taxi rank and car park).

### Opening hours

- 2.17.2 The advertised station opening hours align with passenger services and are as follows, suggesting a potential 3 hour overnight window for freight services:
- Monday – Saturday: 04:00 to 00:45;
  - Sunday: 06:00 to 00:45.

### Delivery and servicing activity

- 2.17.3 Delivery and servicing activity by road for on-station retail tenants is achieved through a dedicated ramp down from Waverley Bridge protected by an access barrier, leading down to a turning circle for smaller goods vehicles used throughout the day. At night when the station is closed to passengers, bollards around the turning circle area are removed to create a bigger space for delivery vehicles to manoeuvre on the concourse.

<sup>16</sup> Source ORR, excludes Tube traffic



2.17.4 Train catering replenishment services (operated by Rail Gourmet) are operated via a dedicated shorebase facility located on platform 2 with lifts and road access off Calton Road.

*Planned works on the station*

2.17.5 [To be confirmed].

*Platform availability*

2.17.6 Platforms 2-7 and 11-19 have level access across the concourse to the Waverley Bridge ramp, whilst platforms 1,8-10 and 20 have access to goods and passenger lifts connecting with the concourse.

2.17.7 The midweek WTT shows 924 arrivals or departures across the 20 platforms, ie 46 movements per platform, or around 2.2 movements per platform per hour. The current overnight occupancy in the WTT is as follows (noting that adjacent or intermediate platforms may be handling passengers between 04:00 and 00:45):

- Platform 1: available between a freight service passing at 22:42 and 5T56 ECS arriving 05:29;
- Platform 2: limited availability between passenger services;
- Platform 3: occupied;
- Platform 4: occupied;
- Platform 5: limited availability between passenger services;
- Platform 6: occupied;
- Platform 7: available between 5S55 ECS departing 23:29 and 5A01 arriving 05:24;
- Platform 8: available between 5S30 ECS departing 23:37 and a freight service arriving 04:23;
- Platform 9: available between 5S93 ECS departing 22:28 and 5P09 ECS arriving 05:39;
- Platform 10: available between 5P74 ECS departing 00:27 and 0D25 ECS arriving 04:13;
- Platform 11: available between 5R46 ECS departing 00:11 and 3E03 arriving 04:08;
- Platform 12: occupied;
- Platform 13: occupied;
- Platform 14: available between 1R49 departing 23:45 and 5J57 ECS arriving 05:25;
- Platform 15: occupied;
- Platform 16: occupied;
- Platform 17: occupied;
- Platform 18: occupied;
- Platform 19: occupied;
- Platform 20: available between 5T73 ECS departing 00:46 and 0S25 arriving 03:49.

2.17.8 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

*Parcel-load traffic "Carry on" or "bellyhold"*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but options could include off Waverley Bridge (two access points), Calton Road (drop-off point) and Market Street (taxi rank and car park).

*All types from “Carry on” to “freighter”*

- As above, road access for larger goods vehicles currently limited to Waverley Bridge (northern ramp). The availability of space at basement level (see Figure overleaf) has yet to be determined.

*Potential development opportunities*

- 2.17.9 The proposed masterplan for the redevelopment of the station (see below) would include new underground facilities for delivery and servicing, as well as creating a mixed-use development on the car park area in the south east corner of the station, either of which could be designed to accommodate express freight and urban logistics.

*Figure 33 Edinburgh Waverley redevelopment proposals*

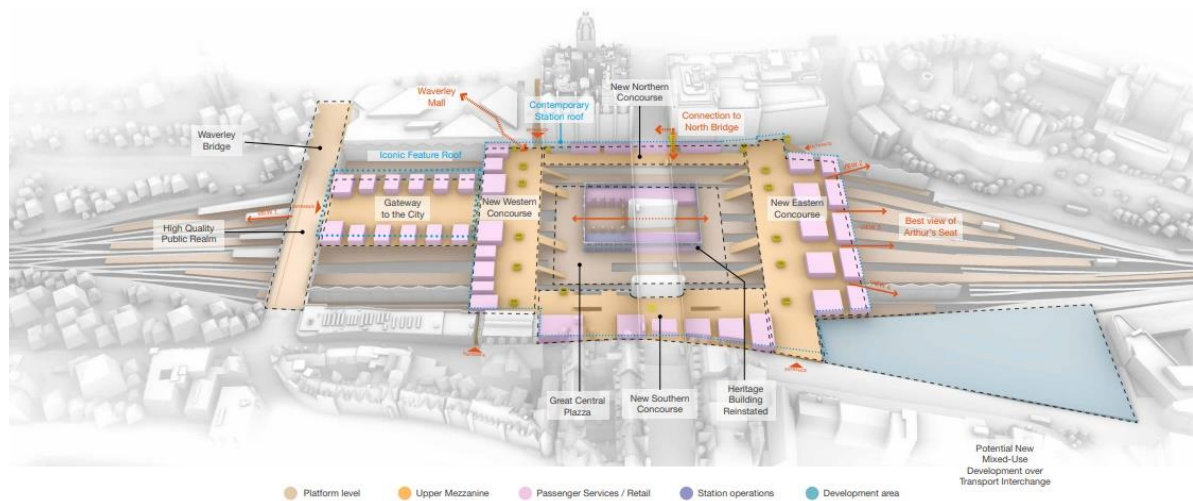
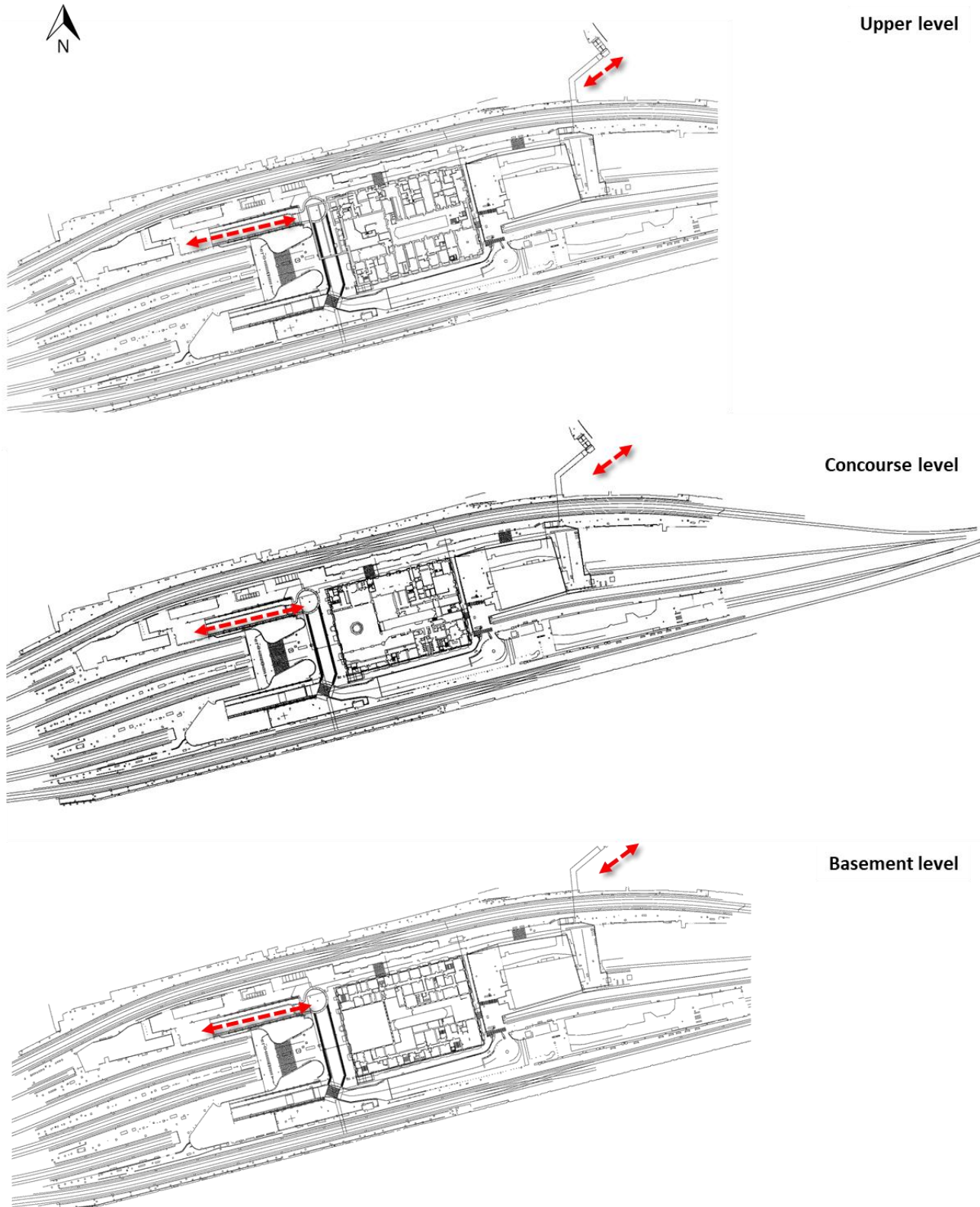


Figure 34 Waverley first floor / concourse / undercroft areas (dotted lines denote highway access points)







### *Delivery and servicing activity*

- 2.18.3 Delivery and servicing activity by road for on-station retail tenants is based within the ground level loading bays accessed off Hope Street (3.2m height restriction, rigid vehicles only) via gates and a barrier, linked to a series of lockable storage rooms and a lift up to concourse level. The same facilities are used for train catering replenishment services (operated by Rail Gourmet).

### *Planned works on the station*

- 2.18.4 [To be confirmed].

### *Platform availability*

- 2.18.5 The midweek WTT shows 1,181 arrivals or departures across the 15 platforms, ie 79 movements per platform, or around 3.3 movements per platform per hour. The higher-numbered platforms would be preferable for their proximity to the highway access points. The current overnight occupancy in the WTT is as follows (provisional information, noting that adjacent or intermediate platforms may be handling passengers between 04:00 and 00:30):

- Platform 1: available between a maintenance service at 00:43 and 5R20 ECS arriving 04:05;
- Platform 2: available between 5M90 ECS departing 00:35 and 5M91 ECS arriving 04:34;
- **Platform 3: occupied;**
- Platform 4: available between 2N26 departing 22:05 and 2B71 arriving 06:40;
- Platform 5: available between 5B87 ECS departing 23:01 and 2N02 arriving 06:17;
- Platform 6: available between 2M87 departing 22:52 and 1A03 arriving 07:34;
- **Platform 7: occupied;**
- **Platform 8: occupied;**
- Platform 9: available between 5G96 ECS departing 00:24 and a maintenance service arriving 04:00;
- **Platform 10: occupied;**
- Platform 11: available between 5Y69 ECS departing 00:32 and 5N01 ECS arriving 05:35;
- Platform 12: available between 5M91 ECS departing 00:02 and 5D03 ECS arriving 05:04;
- Platform 13: available between 5J11 ECS departing 00:38 and 5D01 ECS arriving 05:20;
- Platform 14: available between 1K75 departing 00:15 and 5K01 ECS arriving 05:39;
- Platform 15: available between 5D21 ECS departing 00:13 and 5W43 ECS arriving 05:42.

- 2.18.6 The Engineering Access Statement for 2022 sets out various possessions restricting / blocking access to the station, rather than regular blockades. Train operators will need to familiarise themselves with the EAS and determine the extent to which this might impact on services.

### *Parcel-load traffic “Carry on” or “bellyhold”*

- Use of TOC services on all platforms, subject to authorisation of couriers accessing trains via gatelines (as per existing ICRF operations). Courier vehicle parking would need to be agreed with station management, but options could include off Hope Street (on-street parking spaces and underground delivery bays), Gordon Street (taxi rank), Union Street (taxi rank, on-street parking spaces for delivery vehicles) and Argyle Street (on-street parking spaces for delivery vehicles).

### *All types from “Carry on” to “freighter”*

- As above, road access for goods vehicles limited to the Hope Street delivery bays (noting the height / length restriction) and on-street parking. A further access point exists off Hope Street onto the concourse which could be used to provide access to platform level for smaller vans or

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cargobikes. The full extent of available undercroft storage space has yet to be determined, but in combination with the existing Hope Street delivery facilities could provide a significant opportunity.

*Potential development opportunities*

- 2.18.7 Network Rail controls a considerable amount of land at Glasgow Central with various means of achieving rail and road access and intermediate storage to accommodate express freight and urban logistics.

## 3. Conclusions

### 3.1 Fast forward to future opportunities

- 3.1.1 Urban logistics within Great Britain currently relies almost exclusively on direct deliveries in road vehicles of various sizes, the majority of these operated with internal combustion engines. Space within cities for standalone storage and distribution of goods is limited due to development pressures from other uses (ie residential, office, retail), reflected in the high rental values charged for use of such facilities. The former extensive network of railway goods yards and depots in towns and cities has been virtually eliminated by successive post-war rationalisation, as the freight traffic was lost to road haulage. Going forward, if the delivery of goods and services to and from highly-populated areas is to be decarbonised through greater use of rail transport in the short to medium term, the dual challenges of lack of rail access and high land values will need to be addressed.
- 3.1.2 Britain's railway stations are an important element of the nation's infrastructure and transport system. They represent an investment by taxpayers past and present and an important legacy to be nurtured and utilised. Railway stations offer the opportunity to contribute to the attractiveness of using rail and have the potential to support the development of ever more vibrant, growing and attractive local communities.
- 3.1.3 The reinstatement of freight traffic to these stations would further enhance their role in the local community, allowing goods to moved to and from city centres in varying quantities from individual parcels up to trainload quantities. Combining electric trains with electric delivery vehicles and cargo bikes offers the prospect of zero-emission supply chains feeding town and city centres. Creating a network of local "first-mile / last-mile" delivery services to and from stations also opens up further synergies with passenger services, using the same assets and operations to improve the handling of passenger luggage, and the fulfilment of at-seat catering and other retail opportunities.
- 3.1.4 It is acknowledged that the latent potential of the network of stations for freight traffic needs to be considered in the context of the stations' primary role in serving passengers, as well as the various constraints on expanding use for freight traffic across platform / concourse / main line / highway capacity. Network Rail also needs to develop an overall proposition for opening up access to stations for freight, including operating and security protocols and a commercial offer that can help facilitate these new opportunities, whilst ensuring a commensurate level of cost recovery for use of assets and staff resources as appropriate.
- 3.1.5 Beyond use of the stations in their current form, usage and occupancy, other opportunities existing on or near the stations to create a greater capacity and capability for rail-served urban logistics. The hierarchy of interventions available include:
- A review of existing station activities to determine scope to improve utilisation of the floorspace and release space for (or combine with) delivery & servicing activities. Functions such as office space, contractor compounds and waste management may be capable of rationalisation or consolidation;
  - A review of empty space within stations (eg the extensive undercrofts at London Waterloo, Manchester Piccadilly, Leeds and Glasgow) to determine the scope for refurbishment and reinstatement and associated business cases;
  - A greater awareness of opportunities for third-party logistics use within the delivery & servicing element of major station redevelopment plans and/or adjacent city centre sites, working with local planning authorities and other stakeholders.

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- 3.1.6 This review of the opportunities at our Major Stations will now be extended out to the wider network of stations, working with local Station Managers, passenger and freight train operators and their customers. Reinstating the capability of stations to handle parcels and other light freight traffic will further enhance their role as community hubs, helping further decarbonise the supply chain, whilst creating new opportunities for delivering products to customers.

## 3.2 Recommended next steps

- 3.2.1 The immediate next steps are recommended as follows

- Complete the sourcing of accurate maps of station facilities and unused space;
- Disseminate the report findings across internal Network Rail stakeholders to identify further synergies and ensure station redevelopment plans make suitable provision for freight within delivery and servicing plans;
- Promote the opportunities to industry (train operators, logistics companies, retailers, developers);
- Encourage the wider station portfolio to consider opportunities for passenger and freight arising from improved delivery and servicing facilities and services.



