Luton Rising
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Our community.
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February 2023

London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 7 Other Documents

7.02 Transport Assessment - Part 2 of 4 (Chapters 5-8)

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7.02 TRANSPORT ASSESSMENT – PART 2 OF 4 (CHAPTERS 5-8)

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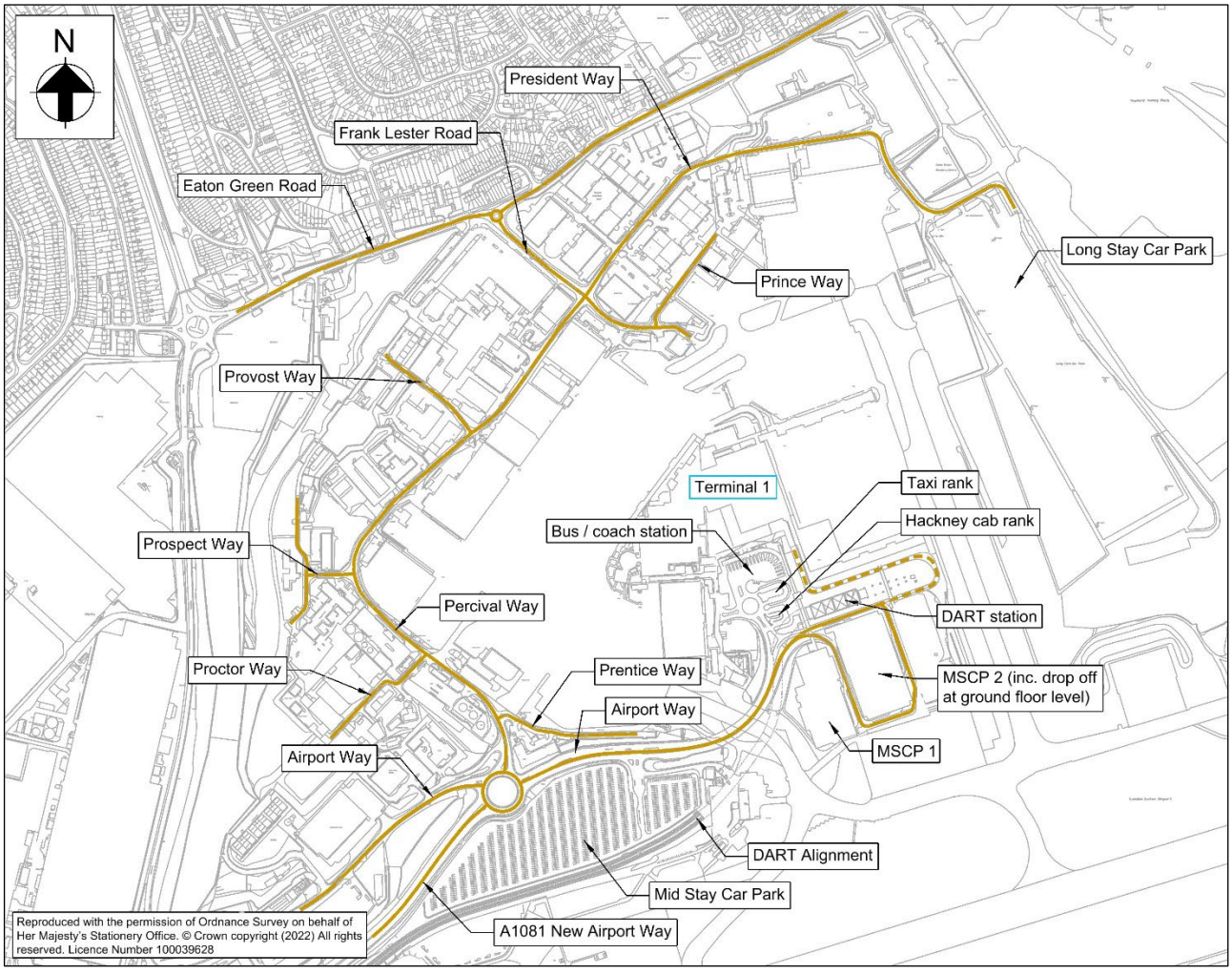
5 HIGHWAY NETWORK

5.1 Site access

5.1.1 The airport is located on the eastern side of Luton, four kilometres from the town centre. Access to the terminal is along Airport Way, which at its western end connects with the A1081, Kimpton Road and Percival Way via a 4-arm roundabout. From the roundabout, Airport Way heads east providing access to the Mid stay car park before passing beneath a taxiway and providing links to a public transport hub, drop off zone, taxi bays, Short stay car park, and some staff car parking near the terminal building. Airport Way is a dual two-lane carriageway.

5.1.2 Access to other parts of the airport, including the Long stay car park, and three general aviation terminals, is along Percival Way/President Way which passes to the west and north of the airport. Percival Way is a two-lane single carriageway that provides a connection between the A1081 and via Frank Lester Way, Eaton Green Road to the north of the airport. Vehicular access to the airport facilities is shown in **Figure 5.1**.

Figure 5.1: Airport vehicular access



5.2 Wider road network

5.2.1 The airport has excellent highway links with access from the A1081 which connects to M1 Junction 10, approximately 4.5km to the west of the airport. The M1 links London directly with the East Midlands and the north east, and via the M6, the West Midlands and north west.

5.2.2 M1 Junction 10 is a 3-arm part signalised grade separated roundabout. Traffic signals are provided at the M1 northbound off-slip entry. There are also segregated left turn lanes from the M1 southbound off-slip to the A1081 and from the A1081 to the M1 southbound on-slip.

5.2.3 The section of the M1 between Junction 10 and the M25 at Junction 6A to the south has four lanes in each direction. South of Junction 6A the M1 is a dual three lane carriageway. To the north of Junction 10, the M1 has three lanes in each direction with SMART motorway incorporating hard shoulder running when additional capacity is needed.

5.2.4 The A1081 is a dual two-lane carriageway between Airport Way and Capability Green Business Park. From Capability Green Business Park, the A1081 generally has three lanes in each direction. In addition to providing a link to M1 Junction 10, the A1081 also provides access to the A505 Vauxhall Way (4-arm roundabout), the B653 Gipsy Lane/Lower Harpenden Road (signalised T junction), Capability Green Business Park (grade separated dumbbell roundabout) and London Road/Luton Road (A1081) (grade separated dumbbell roundabout).

5.2.5 The A505 provides a link between the A1081 and the A1 in Hertfordshire. In the vicinity of the airport, the A505 Vauxhall Way runs in a north-south orientation and is connected to the airport via Airport Way. The A505 Vauxhall Way is a two-lane single carriageway connecting with Eaton Green Road and Crawley Green Road via roundabouts. At the northern end of Vauxhall Way, near Round Green, the A505 turns towards the north east, at a signal-controlled T junction. The western arm of the signalised junction heads south as Hitchin Road intersecting with the A5228 and Ramridge Road at a 3-arm roundabout.

5.2.6 The eastern section of the A505 is a dual two-lane carriageway which continues for approximately 9km before narrowing to a two-lane single carriageway just before entering Hitchin. The A505 connects with Upper Tilehouse Street/Pirton Road at a mini-roundabout before intersecting with the A602 Park Way at a 4-arm roundabout on the western side of Hitchin. The A505 continues through Hitchin to Letchworth Garden City and Baldock and also enables access to A1(M) Junction 9.

5.2.7 The A602 is a two-lane single carriageway in the Hitchin area passing through a 5-arm roundabout with the B656 and Gosmore Road. Continuing east, the road widens to a dual two-lane carriageway near Little Wymondley and connects with the A1(M) Junction 8, Stevenage and beyond.

5.2.8 The A1081 Luton Road connects with Harpenden, St Albans and the A414 to the south of Luton. The B653 Lower Harpenden Road leads to Harpenden and Wheathampstead and continues south towards A1(M) Junction 4. To the north of

the A1081, London Road and the B653 Gipsy Lane provide routes to Luton town centre.

5.2.9 Eaton Green Road is a two-lane single carriageway with an east-west orientation providing access to the airport via Frank Lester Way (roundabout), residential areas to the north of the airport via roads including Lalleford Road (mini-roundabout), Wigmore Lane (roundabout) and Colwell Rise (roundabout), and rural areas to the east including Breachwood Green, Tea Green, Whitwell and Great Offley.

5.2.10 Crawley Green Road is a two-lane single carriageway with a south west-north east orientation connecting the town centre to residential areas via roads including Ashcroft Road (mini-roundabout), Lalleford Road (mini-roundabout) and Wigmore Lane (roundabout), and rural areas to the east of Luton. Ashcroft Road and Wigmore Lane provide routes to the A505 Hitchin Road.

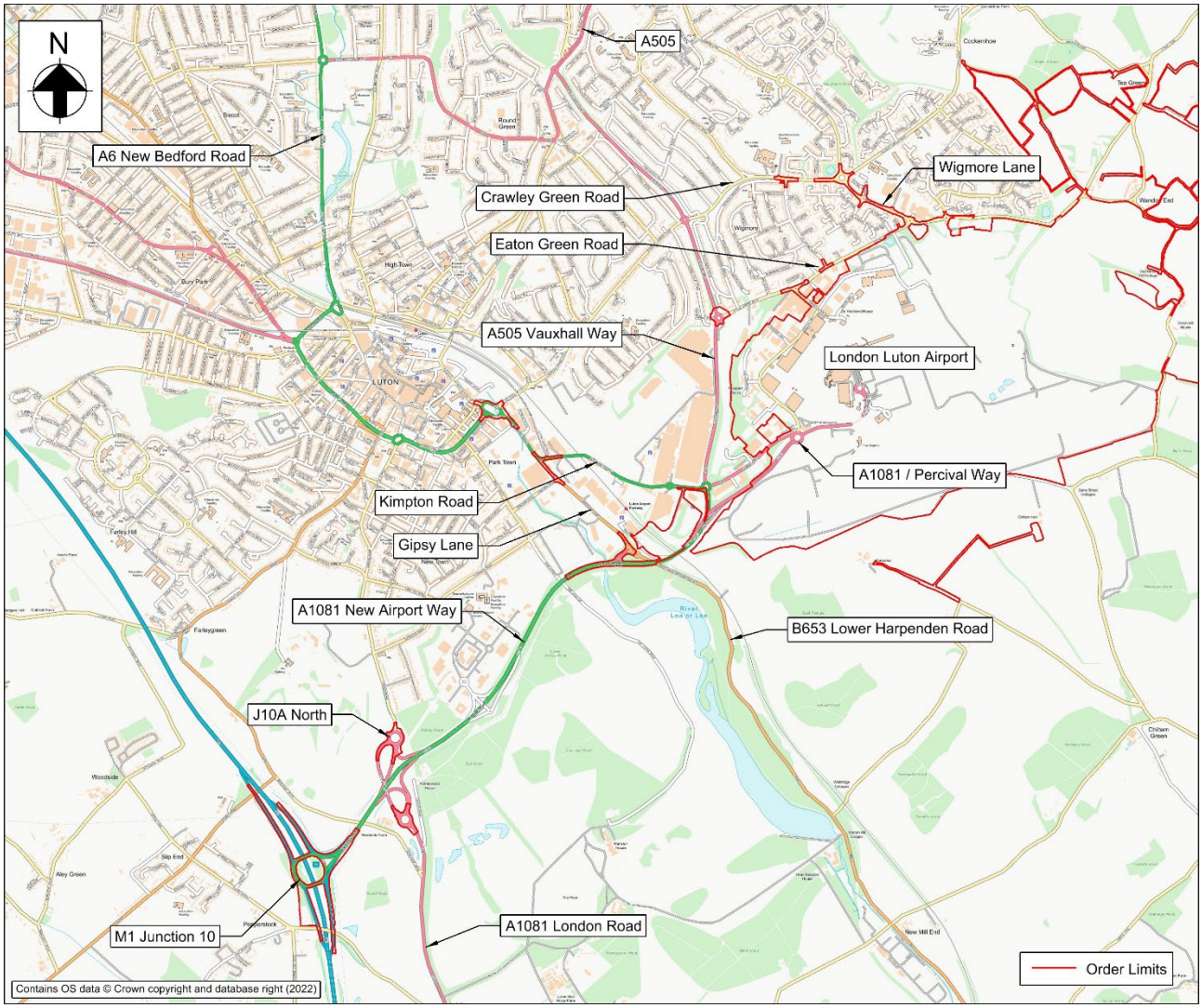
5.2.11 The area of Luton to the north of the airport is predominantly residential with many of the streets having a 20mph speed limit. This includes Lalleford Road and a short length of Crawley Green Road near the junction with Ashcroft Road.

5.2.12 Kimpton Road connects the A1081/Kimpton Road/Percival Way roundabout to the town centre intersecting with the B653 Gipsy Lane via a mini-roundabout and the A505/Crawley Green Road/St Mary's Road at a signalised roundabout.

5.2.13 The rural roads to the east of the airport are narrow in places and require use of passing bays to enable two-way movements.

5.2.14 The local road network is shown on **Figure 5.2**.

Figure 5.2: Local road network



5.3 Public transport network

5.3.1 The airport is well served by public transport with bus access direct to the airport terminal and rail access via Luton Airport Parkway station and a shuttle bus to the airport. The recently constructed Luton DART will provide a direct light rail connection between Luton Airport Parkway station and the airport, and an announcement of an official opening date will be made in early 2023.

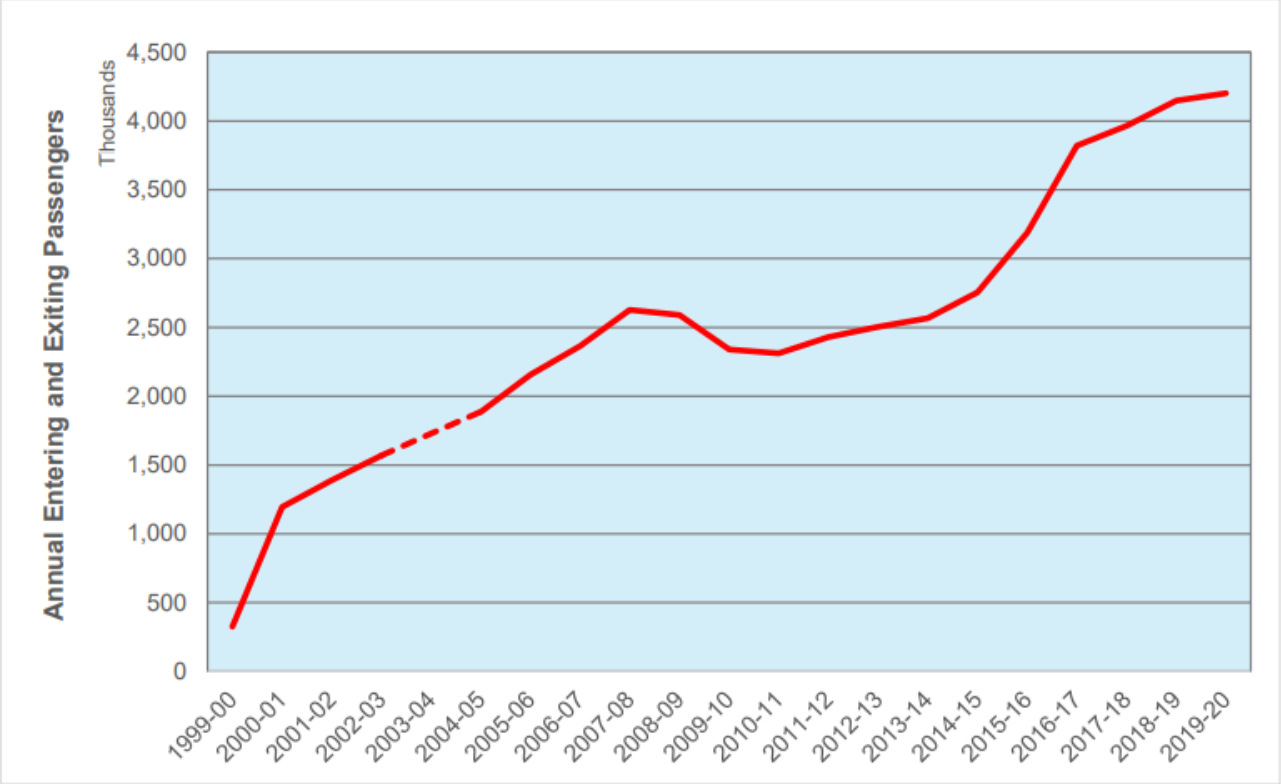
5.3.2 The rail and bus services are described below. Bus service data is based on 2018/2019 timetables to reflect more clearly the typical level of bus services prior to the impact of the pandemic, when the airport was handling up to18 mppa. The rail timetables are based on 2021 data to reflect the significant improvement in services at Luton Airport Parkway station as a result of Thameslink 20/20 which was introduced in phases across 2019/2020. The rail analysis also includes capacity comparisons to pre-pandemic data.

Rail

Luton Airport Parkway/Midland Main Line

5.3.3 Luton Airport Parkway station is located 2.1km from the airport on the Midland Mainline and is served by trains operated by Thameslink and East Midlands Railway (EMR). The annual throughput of passengers entering and leaving Luton Airport Parkway station between 1999 and 2020 is shown in **Figure 5.3**. The data was obtained from the estimates of station usage prepared for the Office of Rail and Road (ORR) and published on its website.

Figure 5.3: Passenger throughput at Luton Airport Parkway station



* Note: There was no data for the station in the year 2003/04 (represented by dashed line)

5.3.4 Since 2004 the change in throughput at the station reflects closely the pattern of passenger throughput at the airport, showing the substantial increase in rail users over the period.

5.3.5 Information on the number of trains stopping at Luton Airport Parkway station each hour on a weekday has been taken from the Thameslink timetables for the period 19 May to 10 December 2021 and from the EMR timetable for services to and from St Pancras International station for the period 16 May to 11 December 2021. This is set out in **Table 5.1**.

Table 5.1: Weekday hourly arrivals/departures at Luton Airport Parkway station

Time (Hour beginning)	Southbound				Northbound			
	Thameslink		EMR		Thameslink		EMR	
	Regional	Suburban	Connect	Intercity	Regional	Suburban	Connect	Intercity
00:00	2	0	0	0	1	3	1	1
01:00	1	0	0	0	2	1	0	0
02:00	2	0	0	0	2	1	0	0
03:00	2	0	0	0	1	0	0	0
04:00	2	2	0	0	1	0	0	0
05:00	2	2	1	0	2	0	0	0
06:00	2	4	2	1	2	3	2	0
07:00	4	3	2	0	3	3	2	0
08:00	3	4	2	0	5	3	2	0
09:00	4	2	2	0	4	3	2	0
10:00	3	3	2	0	4	2	2	0
11:00	4	2	2	0	4	2	2	0
12:00	4	2	2	0	4	2	2	0
13:00	4	2	2	0	4	2	2	0
14:00	4	2	2	0	4	2	2	0
15:00	4	2	2	0	4	2	2	0
16:00	4	2	1	0	4	1	2	0
17:00	4	3	2	0	4	4	2	0
18:00	4	2	3	0	4	3	2	0
19:00	4	2	2	0	4	3	2	0
20:00	4	2	2	0	4	3	2	0
21:00	4	2	1	0	4	1	2	0
22:00	4	2	1	0	4	2	2	0
23:00	2	0	1	1	3	3	1	1

Time (Hour beginning)	Southbound				Northbound			
	Thameslink		EMR		Thameslink		EMR	
	Regional	Suburban	Connect	Intercity	Regional	Suburban	Connect	Intercity
Total services	77	45	34	2	78	49	36	2

5.3.6 **Table 5.1** shows that the regional Thameslink services operate 24 hours a day with around four trains per hour in each direction between 07:00 and 24:00. The Thameslink suburban service generally provides around two or three services per hour in each direction but does not operate in the early hours of the morning. There are two Intercity services per day that stop at Luton Airport Parkway station in each direction, an early morning and late evening service.

5.3.7 Following electrification of the line between Bedford and Corby, EMR introduced a new half-hourly service named EMR Connect. The EMR Connect service generally provides two trains per hour in each direction between 06:00 and 24:00. The trains run non-stop between Luton Airport Parkway and St Pancras International stations. The average travel time is around 24 minutes. To the north, the trains call at Luton, Bedford, Wellingborough and Corby. Any passenger wishing to travel towards the East Midlands can change at Kettering.

5.3.8 The core of the Thameslink service is a combination of trains operating a regional service between Bedford and Brighton (2 trains per hour) and Bedford and Gatwick Airport (2 trains per hour). Between Luton Airport Parkway station and St Pancras International station the trains additionally call at Harpenden and St Albans with some trains also calling at West Hampstead station. The journey time for trains travelling towards Luton is on average 30 or 33 minutes depending on whether the service stops at West Hampstead station. In the opposite direction the corresponding average times are 33 and 35 minutes. At St Pancras International and other stations in London served by Thameslink services there is the opportunity to connect with the London Underground and services on the Southeastern network that provides commuter and regional services in South East London and Kent, and also serves parts of East Sussex. The available connections are listed below:

a. **St Pancras International** - Metropolitan, Circle, Hammersmith and City, Northern (Bank branch), Piccadilly, and Victoria lines;

b. **Farringdon** - Metropolitan, Circle, Hammersmith and City and Crossrail lines;

c. **Blackfriars** - Circle and District lines; and

d. **London Bridge** - Northern (Bank branch) and Jubilee lines, Southeastern rail services terminating at Canon Street and Charing Cross, and Southern services terminating at London Bridge.

5.3.9 With the incorporation of the services from Peterborough and Cambridge into the Thameslink network in 2018, the area which is served by Thameslink services with a single change of train and without a change of platform has expanded;

consequently, the area within which public transport is a realistic option for journeys to and from the airport has increased. The Class 700 electric multiple unit (EMU) trains that provide all services on the Thameslink service have been designed to be able to provide a metro-style service of up to 24 trains per hour running across Central London, between Blackfriars and St Pancras. In order to do this the number of seats per carriage has been reduced, corridors widened, and more standing room provided which help to reduce the dwell time needed for passengers to board and alight.

5.3.10 **Figure 5.4** and **Figure 5.5** show the capacity of the train services that pass through Luton Airport Parkway station for both directions. Four levels of capacity are shown. The first is the number of seats provided on the EMR services and the Thameslink regional service which provide the most attractive service to the great majority of air passengers travelling towards or from London ('Fast Seat'). The second capacity shows all seats available which includes the Thameslink metro service ('All Seat'). The third and fourth are the corresponding capacities with standing passengers included ('Fast' + Stand' and 'All + Stand').

Figure 5.4: Capacity of northbound rail services by hour of day

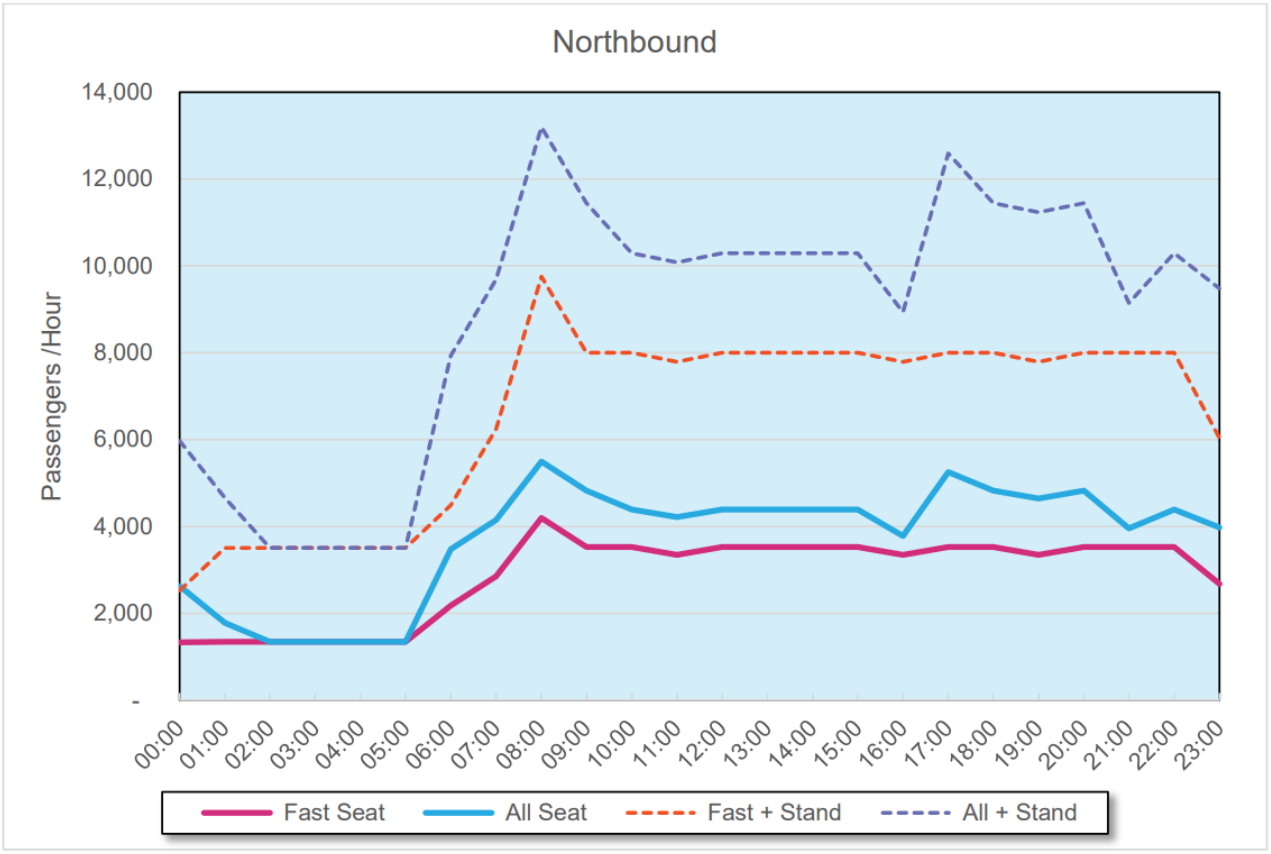
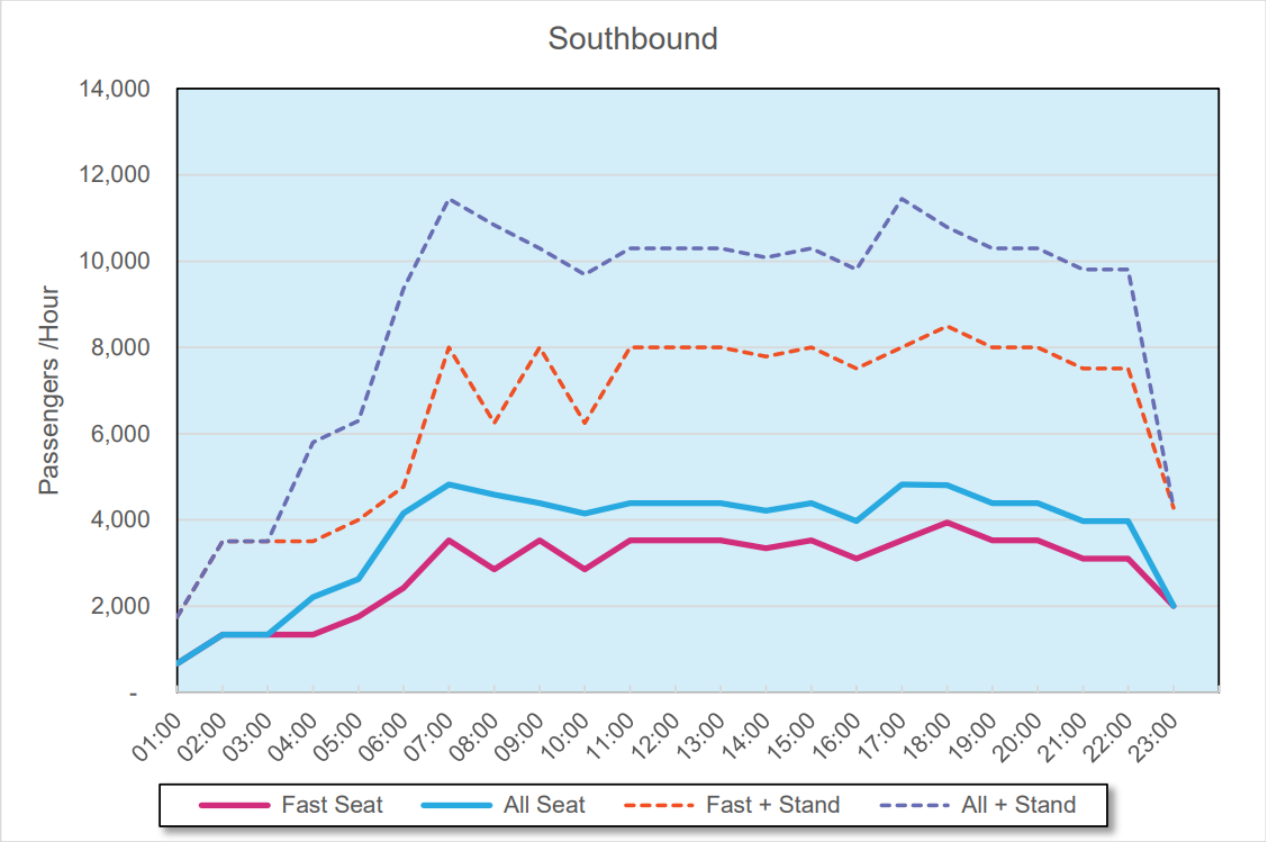


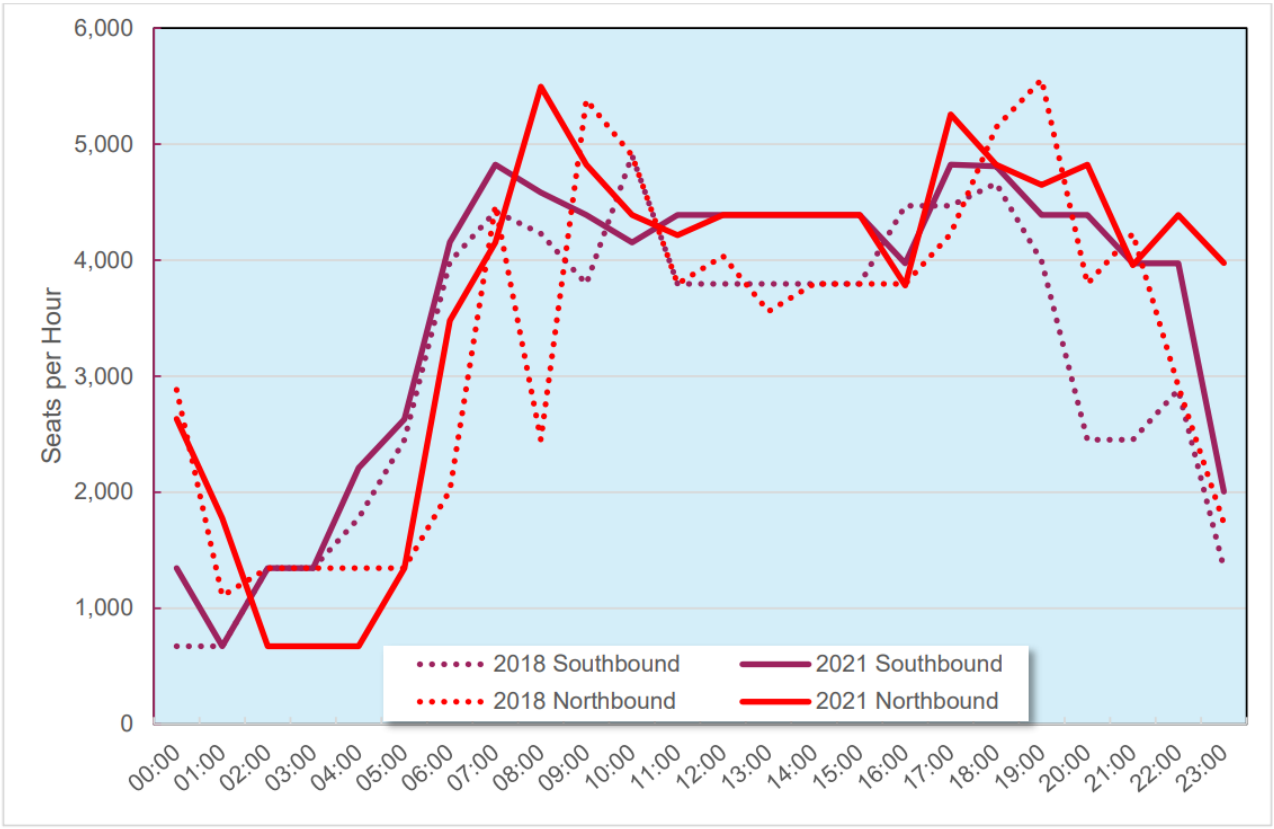
Figure 5.5: Capacity of southbound rail services by hour of day



5.3.11 Although the EMR Connect service provides the shortest journey time to and from St Pancras International, a significant proportion of these passengers are travelling by train south of St Pancras International and for those passengers it is likely to be more convenient to travel on the Thameslink regional service rather than change trains. Following the opening of the Elizabeth line, overall journey times are likely to be shorter if travelling on Thameslink trains when also using the Elizabeth line.

5.3.12 The revisions to the rail timetable that have taken place since 2018 have resulted in the provision of an additional 19,000 seats on the route between Luton Airport Parkway and St Pancras International station (both directions combined) which is an increase of 12%. The profile of all seat provision over the course of a weekday is shown on **Figure 5.6** for both the 2018 and 2021 timetables to demonstrate the differences.

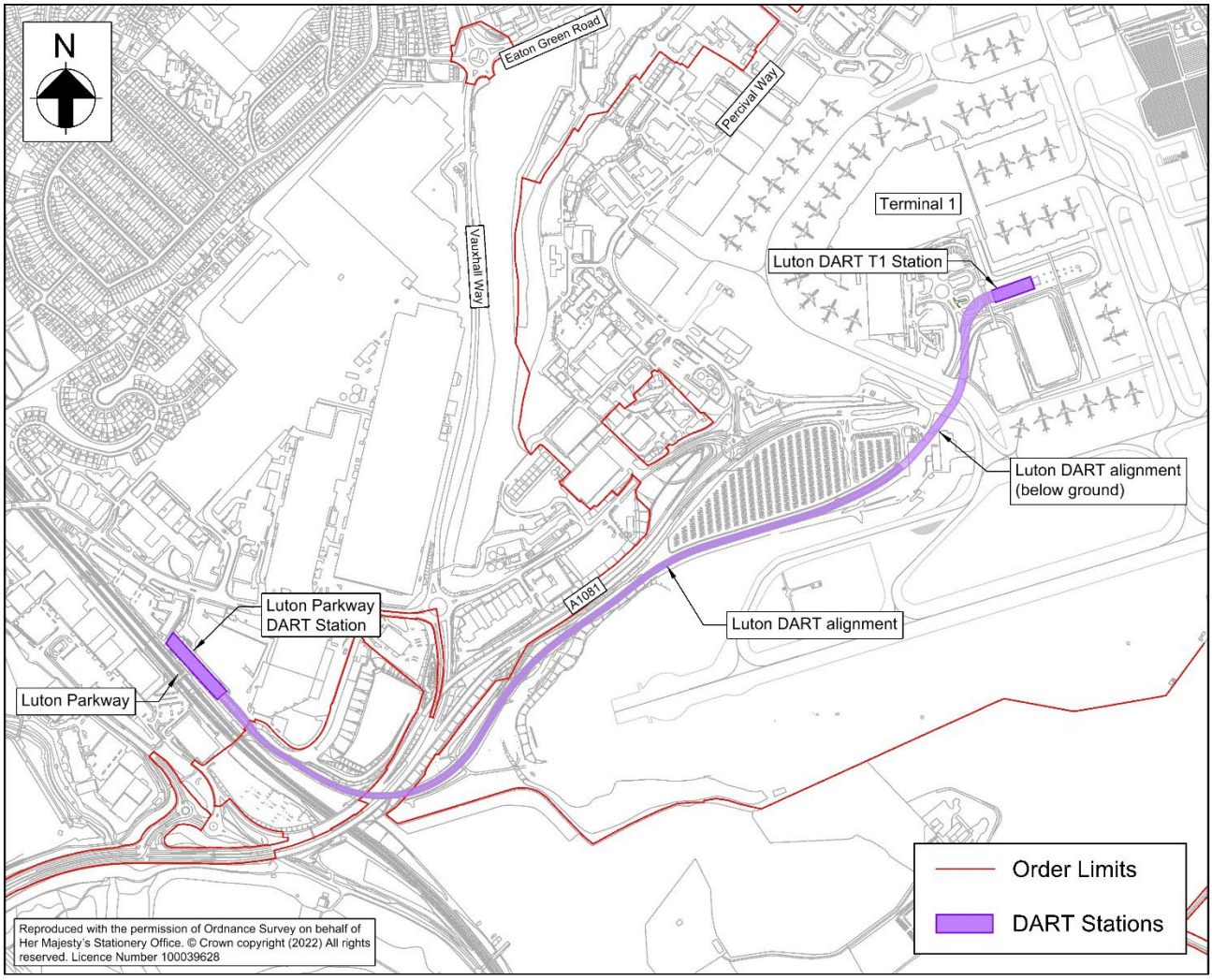
Figure 5.6: Seating capacity of trains serving Luton Airport Parkway station (2018 and 2021)



Luton DART

5.3.13 A shuttle bus service is currently the primary way of transferring passengers between Luton Airport Parkway station and the airport terminal. This bus service operates on a 10-minute frequency, with a typical journey time of under ten minutes. The Luton DART, which is a new cable-hauled fast passenger transit connecting Luton Airport Parkway station to the airport has recently been constructed - the announcement of an official opening date will be made in early 2023. This is likely to replace the shuttle bus service. The route of the Luton DART is shown in **Figure 5.7**.

Figure 5.7: Luton DART route



5.3.14 Luton DART will run continuously to and from the airport, 24 hours a day with a journey time of just over three minutes. This will make for a more attractive, reliable and efficient service compared to the shuttle bus, which had a lower frequency, and a longer journey time, which varied depending on traffic congestion.

5.3.15 A contactless payment travel system has been introduced at Luton Airport Parkway station and this will be extended to include the Luton DART service.

Bus and coach services

5.3.16 The airport Public Transport Hub (PTH), located adjacent to the terminal, is arranged to cater for the wide variety of services that the airport operations demand with 18 bus/coach stands allocated to specific services. Bus and coach operations are a prominent feature of the hub to serve the need for interchange with this important mode. Alongside coach and bus services, the dedicated PTH accommodates the regular rail-air shuttle and shuttle buses linking with the airport's Long, Mid and peripheral staff car parks and the car hire facility.

5.3.17 Details of coach and local bus services are summarised in **Table 5.2** and **Table 5.3**. These details have been taken from timetables before the Covid-19 pandemic as they show more clearly the typical level of bus and coach services as the airport approached its limit of the passenger throughput set by planning conditions.

Table 5.2: Coach services at the airport

Service	Operator	Route	Daily Services (one-way weekday)
A1	National Express (in association with easyBus)	London (Victoria) – London Luton Airport	47
A2	National Express (in association with easyBus)	London (Paddington) – London Luton Airport	36
99	Stagecoach	Milton Keynes – London Luton Airport	16
230	National Express	Gatwick Airport – Heathrow Airport – London Luton Airport – Leicester – Nottingham – Sheffield – Leeds – Bradford	9
240	National Express	Heathrow Airport – London Luton Airport – Leicester – Nottingham – Derby	6
422	National Express	London (Victoria) – London Luton Airport – Birmingham – Wolverhampton – Manchester – Burnley	1
707	National Express	Gatwick Airport – Heathrow Airport – London Luton Airport – Milton Keynes – Northampton	8
737	National Express	Stansted Airport – London Luton Airport – Oxford	8
757	Green Line Coaches (in association with Arriva)	London (Victoria) – London Luton Airport	42
777	National Express	Stansted Airport – London Luton Airport – Milton Keynes – Birmingham	9
787	National Express	Heathrow Airport – London Luton Airport – Cambridge	9
920	National Express	London (Victoria) – London Luton Airport – Birmingham – Manchester – Carlisle – Dumfries – Belfast	1

5.3.18 Both the Green Line Coaches service 757 and National Express service A1 provide an express coach link between the airport and Victoria Coach Station in Central London. National Express service A2 provides an alternative service between the airport and Paddington station. These services are operated in association with easyBus to offer an attractive high frequency, low-cost express bus service between Central London and the airport.

5.3.19 Other National Express routes serve destinations across the UK including major cities and airports. Direct services to and from the airport include service 707 to Northampton, service 737 to High Wycombe and Oxford, service 767 to Leicester and Nottingham, service 777 to Coventry, Birmingham and Wolverhampton and service 787 to Cambridge. Many of these call at the Milton Keynes Coachway. Regular direct services are also provided to Stansted, Heathrow and Gatwick Airports, while Stagecoach route 99 operates an hourly express service seven days per week between the airport and Milton Keynes.

Table 5.3: Bus routes serving the airport and its vicinity

Bus Route	Operator	Route	Weekday Daytime Frequency	Saturday Daytime Frequency	Sunday Daytime Frequency
Serving the airport					
A	Arriva	Dunstable – London Luton Airport	Every 7 minutes	Every 7/8 minutes	Every 10 minutes
100	Arriva	Luton – Stevenage	2 services per hour	Every 40 minutes	Every 2 hours
755	Arriva	Luton – London	2 services per day	-	-
In the vicinity - Eaton Green Road/Lalleford Road					
17/17A	Centrebus	Luton town centre – Wigmore	Every 30 minutes	Every 30 minutes	No service

* Bus service frequencies are one direction

5.3.20 There are three bus services that serve the airport terminal and one route that operates in the vicinity of the airport.

5.3.21 The majority of local bus services are operated by Arriva. The most frequent service is guided bus service A that runs to Luton station, and onwards to Dunstable. The service operates for 24 hours, every day of the week. On weekdays and Saturday, the service operates with a frequency of four buses per hour between 07:00 and 19:00, reducing to three buses during the evening and two buses per hour through most of the night. On Sundays the daytime service operates with a frequency of three buses per hour.

5.3.22 Centrebus service 17/17A is a circular route that operates between Luton town centre, Stopsley, and Wigmore. It runs along the section of Eaton Green Road between its junctions with Lalleford Road and Colwell Rise, also travelling along both of those roads.

5.3.23 The 100 and 755 bus route serves both the airport terminal and Percival Way.

5.3.24 Centrebus also provide services from Luton town centre that provide access to Slip End, Markyate, Hemel Hempstead, Harpenden, and Hatfield by interchanging with a route that travels between the airport and Luton town centre.

5.3.25 The current geographic coverage of the bus and coach routes is broadly similar to the services provided before the pandemic and **Figure 5.8** shows the bus and coach route map in the vicinity of the airport, which has been taken from the LBC bus map (Ref 5.1).

Figure 5.8: Bus and coach route map

5.4 Pedestrian and cycle access

5.4.1 For passengers, pedestrian and cycle access is not generally practical due to the length of the journey to the airport and the need to travel with luggage. Walking is generally used for trip end movements, having travelled by another mode including when passengers have stayed overnight at a hotel.

5.4.2 For staff, given the size of the airport estate, walking is for the most part, likely to be a mode used for commuter trip ends and for movements in and around the airport. Walking commuter trips may however be possible for a small number of staff who live local to Frank Lester Way and work in the airport's associated buildings on Percival Way/President Way. Cycling is a practical staff travel option for those that live in the Luton area.

Cycle facilities

Cycle parking

5.4.3 The airport has staff cycle parking located at various buildings on the airport estate. The locations with the largest number of cycle parking spaces are at the main terminal, where there are 30, and at the TUI hangar, where there are 25. The existing cycle parking is summarised in **Table 5.4**.

Table 5.4: Existing cycle parking spaces

Company	Location	Cycle parking spaces	Lockers	Showers
TUI	TUI Hangar	25	250	2
Signature Flight Support	Terminal 1	Yes	60	7
	Terminal 2	Nil	Nil	7
	Hanger 125	Yes	Nil	1
	Hangar 7 & 8	Nil	Nil	1
	Hangar 219	Yes	Nil	1
Harrods Aviation	Hangar 201	Stored in building	Yes	Yes
	FBO Terminal	Stored in building	Yes	Yes
easyJet	Main office	8	500	3
LLAOL	Main Terminal	30	82	3
LLAOL Technical Services	Hangar 24	4	Nil	2
LLAOL	Percival House	Stored in building	7	1
Airport Fire Service	Fire Station	Stored in building	61	5

5.4.4 In total, there are at least 67 cycle parking spaces at the airport with further parking at Terminal 1, Hangar 125 and Hangar 219. In addition, there are four buildings where bikes are stored within the buildings. Showers and lockers are

provided at the main terminal, TUI hangar and easyJet main office to compliment the cycle parking. All buildings have showers, but some do not have lockers.

Cycle routes

5.4.5 **Figure 5.9** shows the existing cycle facilities in the vicinity of the airport, which is an excerpt from the LBC cycle route map (Ref 5.2). Further improvements are being implemented across the town by LBC, supported by the Active Travel Fund.

Figure 5.9: Existing cycle routes around the airport

5.4.6 In the vicinity of the airport, there is a shared off-road pedestrian/cycle path between Parkway Road at Luton Parkway station and the A1081 New Airport Way/Kimpton Road/Vauxhall Way roundabout. This shared off-road facility runs alongside the bus and taxi lane from Parkway Road onto the A1081 New Airport Way and re-joins New Airport Way to the south west of the junction with Kimpton Road. Cyclists have to dismount on the section of footway between the A1081 and Kimpton Road. On the section of the route that runs along the bus and taxi lane and the A1081, cyclists can use either the bus lane or the shared path. At the junction with Vauxhall Road there are uncontrolled crossings of both the Kimpton Road and Vauxhall Way arms of the roundabout. The off-road shared pedestrian/cycle path continues north along Vauxhall Way to the roundabout with Eaton Green Road, and east towards the airport.

5.4.7 To the east of the A1081/Vauxhall Way/Kimpton Road roundabout, the shared off-road route uses the path on the northern side of Airport Way, up to the access to the Holiday Inn where it continues alongside Spittlesea Road. At the Airport Way/New Airport Way/Percival Way roundabout, cyclists and pedestrians are able to cross Percival Way via an uncontrolled splitter island, before entering Airport Way on the approach to the terminal. East of the roundabout with Percival Way, cyclists wishing to access the airport are directed to re-join the Airport Way carriageway.

5.4.8 Mandatory on-road cycle lanes are provided along the A1081 New Airport Way, between the Capability Green Business Park grade-separated junction and the Percival Way roundabout.

5.4.9 Immediately north of the airport, a series of shared off-road cycle and pedestrian footpaths are provided within the residential areas of Vauxhall Park and Wigmore Park, however these do not connect directly with roads accessing the airport.

5.4.10 National Cycle Network Route 6 (NCN 6) runs along the River Lea Valley to the south west of the airport. The route provides a continuous link between London and the Lake District. Between Harpenden and Luton, NCN 6 follows an off-road route. Travelling beneath the A1081 New Airport Way on the B653 Lower Harpenden Road, the route enters Parkway Road on the approach to Luton Airport Parkway station. Cycle lanes are provided on both sides of the Parkway Road carriageway up to the station forecourt. NCN 6 connects with the shared off-road pedestrian/cycle path leading towards the A1081 New Airport Way/Kimpton Road/Vauxhall Way roundabout and the airport.

5.4.11 To the west, NCN 6 links with Park Street, via an off-road shared footpath which runs parallel to the northern side of the A1081 New Airport Way. Entering Park Street, advisory cycle lanes are provided along both sides of the road. The route leaves Park Street at Park Square and follows the pedestrianised sections of George Street and Manchester Street to pass through the town centre.

5.4.12 Toward the north of Luton town centre, at the junction between New Bedford Road and the Luton Dunstable Busway, NCN route 606 spurs west from NCN route 6, and continues west along the route of the guided busway as an off-road shared pedestrian/cycle route. NCN 606 provides connectivity with the western extent of Luton, and links with Dunstable town centre before re-joining NCN route 6. North of the town centre, NCN 6 follows the A6 to the junction with Austin Road

at Barnfield, at which point it travels west towards Leagrave, Lewsey Park, Houghton Regis, Dunstable and beyond.

5.4.13 The Chilterns Cycleway is a 170-mile circular cycle route through the Chilterns Area of Outstanding Natural Beauty (AONB). The route is mainly on-road and is signposted throughout. It is closest to the airport on the section between Lilley and Kinsbourne Green that passes through Breachwood Green. The route is on country roads, albeit generally lightly trafficked, and does not provide any specific facilities for cyclists. The purpose of the route is for leisure trips.

Future proposals

5.4.14 In addition to the existing cycle facilities, LBC proposes to improve pedestrian and cycle links along the A505 Vauxhall Way as part of the dual-carriageway proposals in the East Luton Study. These works, anticipated to be completed by LBC in advance of assessment phase 1, would provide an off-road shared pedestrian/cycle route along Vauxhall Way between Stopsley Way to the north and Eaton Green Road to the south, together with improved crossing facilities at major junctions. At the southern end, the route would join the existing off-road shared pedestrian/cycle path on Vauxhall Way between Eaton Green Road and Kimpton Road.

Pedestrian facilities

5.4.15 Pedestrian facilities are provided within the airport to meet operational needs. Under the current arrangements, within the terminal area, all pedestrian routes are fully accessible, with dropped kerbs and tactile paving. Zebra crossings are provided at busier locations, and there is lighting throughout the area. Footways and crossings are also provided on Airport Way, Percival Way, President Way and Frank Lester Way as well as other roads within the estate, which link into the wider pedestrian network in Luton.

There are also several Public Rights of Ways (PRoWs) located within the airport, including:

a. Public bridleway Kings Walden 052, which connects between Coleman's Road (near Breachwood Green) and Eaton Green Road, and partially serves as a section of the Chiltern Way long distance footpath

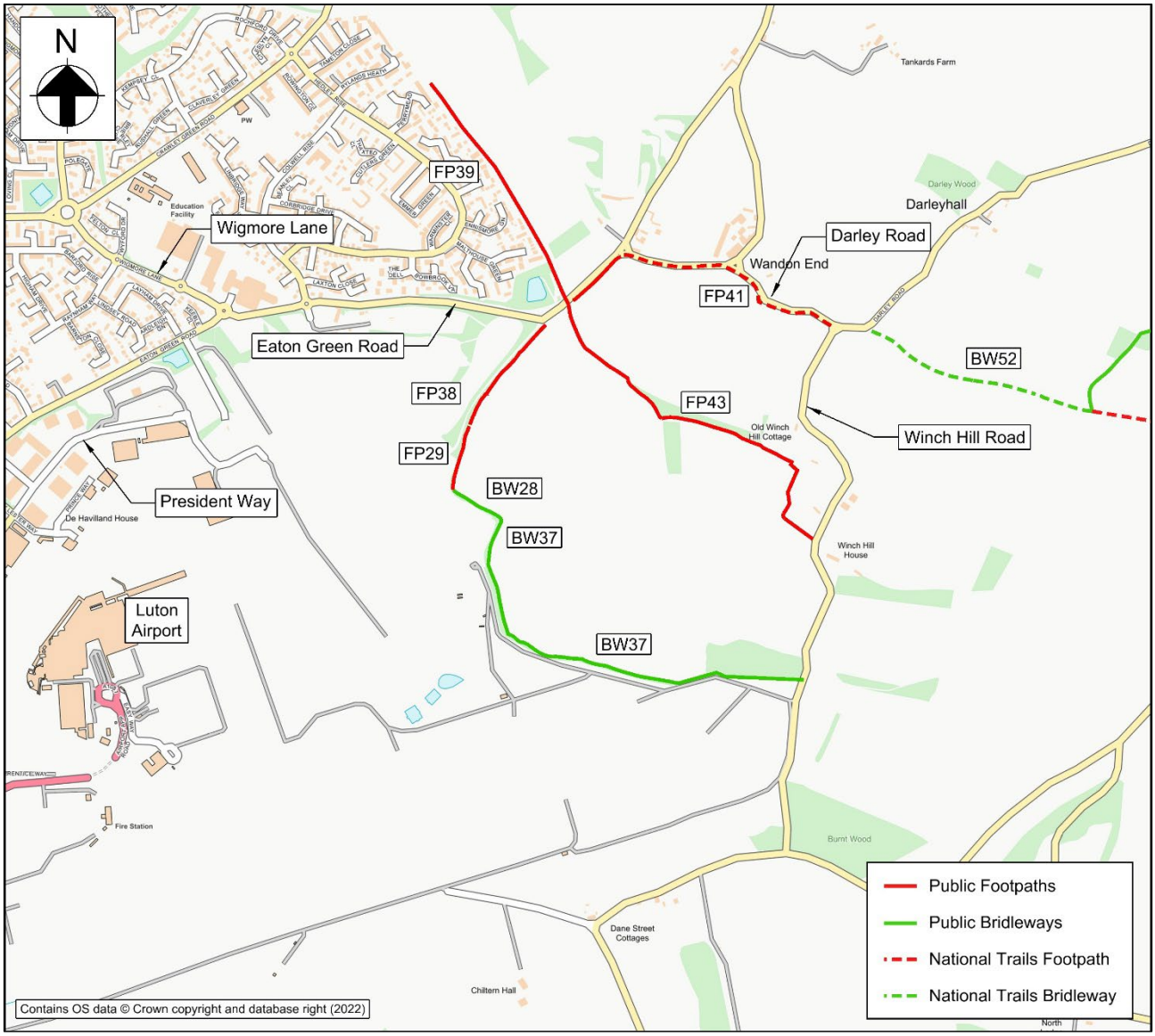
b. Public footpath Kings Walden 041, which borders Darley Road and Eaton Green Road, and also partially serves as a section of the Chiltern Way long distance footpath

c. Public footpath Kings Walden 043, which crosses the ridgeline of Winch Hill and connects between Eaton Green Road and Winch Hill Road

d. Luton Borough public footpaths FP29 and FP38, and Luton Borough bridleways BW28 and BW37, which follow the mature hedgerow to the south east of Wigmore Valley Park and east of the airport between Eaton Green Road and Winch Hill Road

5.4.16 The PRoW routes in the immediate vicinity of the airport are shown on **Figure 5.10**.

Figure 5.10: PRoW routes

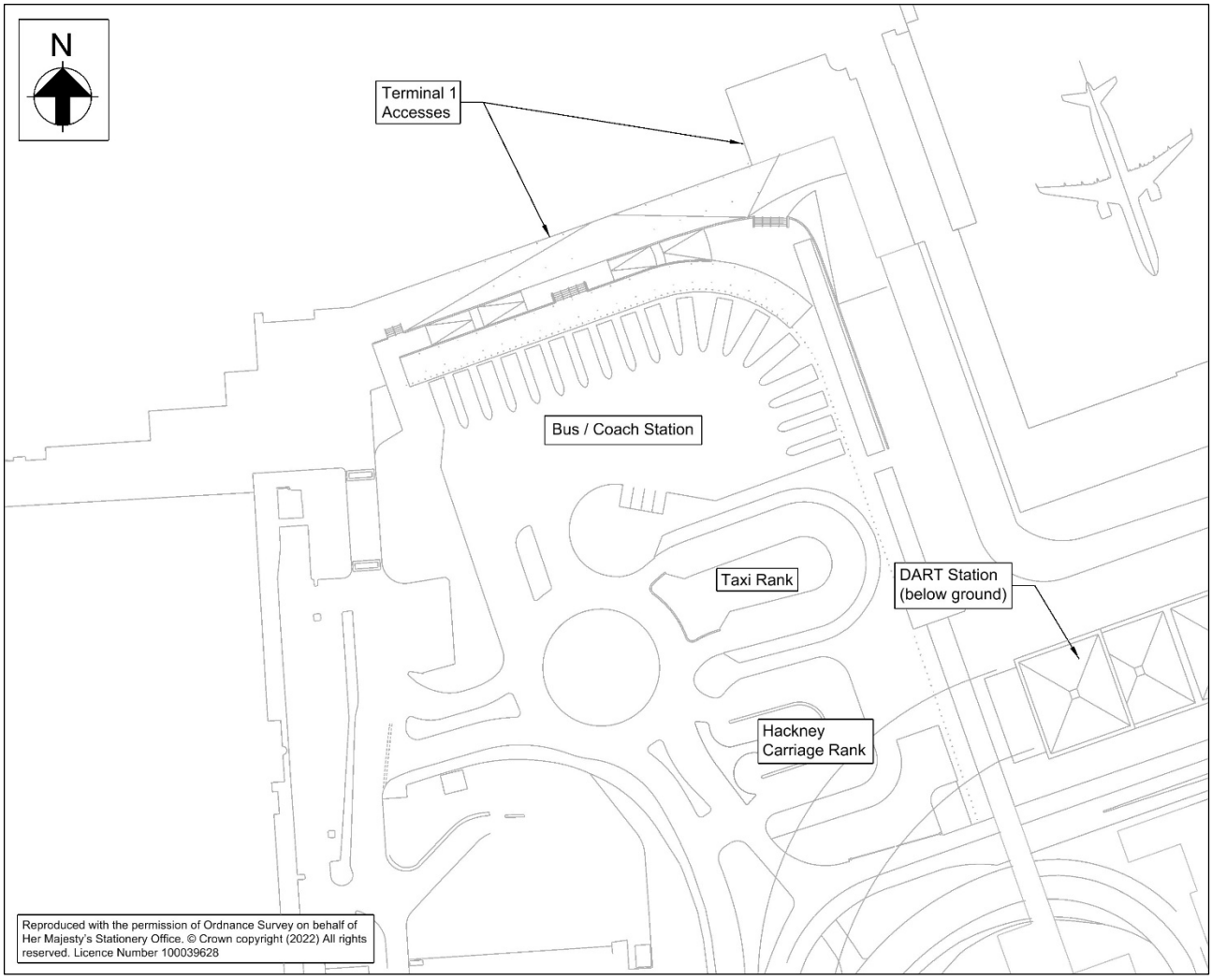


5.5 Airport layout landside

5.5.1 The terminal forecourt is approached from the Airport Approach Road, which provides direct access to the Mid stay car park, Car Park 1, Car Park 2, the drop off on the ground floor of Car Park 2, and the main servicing area ('East deliveries') for the terminal. There is a branch off to the north which via a roundabout provides access to the public transport hub (bus and coaches), a taxi drop off, hackney carriage bays, a small area of staff parking and a servicing area ('West deliveries').

5.5.2 The existing layout of the forecourt at the airport terminal is shown on **Figure 5.11**.

Figure 5.11: Existing forecourt layout



5.5.3 The landside transport facilities include the following:

a. Luton DART terminal station.
b. Car parking for staff and passengers.
c. Private drop off/pick up.
d. Taxi bays.
e. Bus/coach interchange.

5.5.4 In addition, there are also third party operated car parks, which are in private ownership and not under the control of the airport.

Luton DART terminal station

5.5.5 Luton DART will provide a direct rail connection between the airport terminal and Luton Airport Parkway station, which facilitates access to the rail services on the Midland Main Line. The announcement of an official opening date will be made in early 2023.

5.6 Car parking

On-site

5.6.1 The car parking at the airport in 2019 is summarised in **Table 5.5**.

Table 5.5: London Luton Airport - Existing Car Parking Provision (2019)

London Luton Airport Parking Type	Parking Spaces (*rounded figures)
Passenger Multi Storey Car Parks 1 and 2	3,700
Passenger Medium stay (Mid stay)	2,350 (pre-Luton DART)
Passenger Long stay	4,500
Sub-total	10,550
Staff (airport related)	3,800*
Car hire	350
Valet Pick up/Drop off	50
Total Spaces	14,750

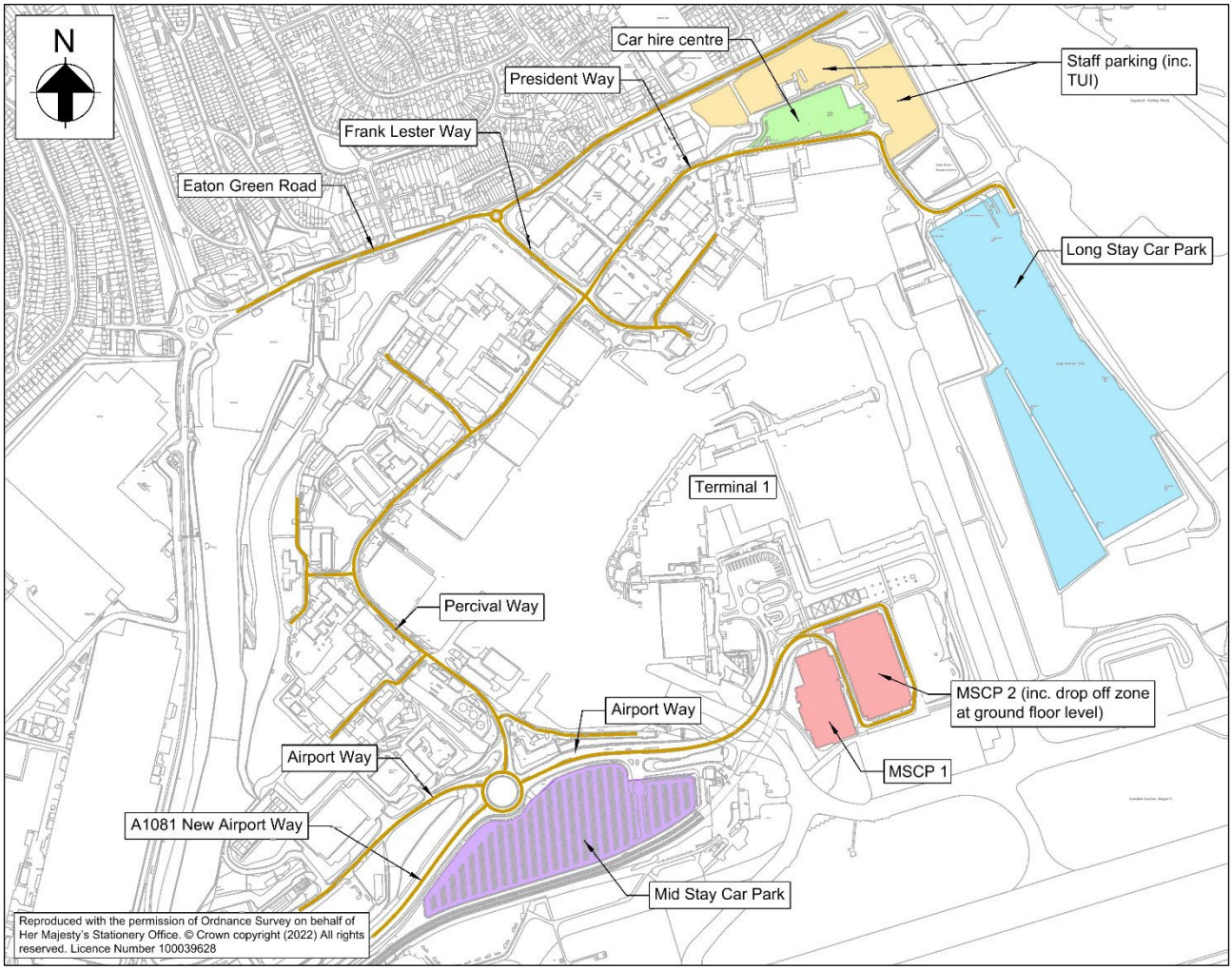
*Note: This includes 800 Easyjet staff spaces at Vauxhall Way/Eaton Green Road

5.6.2 The Short, Mid and Long stay car parks provided a total of 10,550 spaces for passengers, pre-Covid-19-pandemic. This level of car parking was required at the point when the airport reached its permitted capacity of 18 mppa.

5.6.3 The airport's 2020 Annual Monitoring Report (Ref 5.3) indicates that the total passenger car parking across the Short, Mid and Long stay car parks has reduced since 2019 and is now 9,055 spaces, a reduction of 1,500 spaces. This reflects a loss of parking at the Mid stay car park due to the construction of Luton DART.

5.6.4 The location of the car parking is shown in **Figure 5.12**.

Figure 5.12: Car parking locations



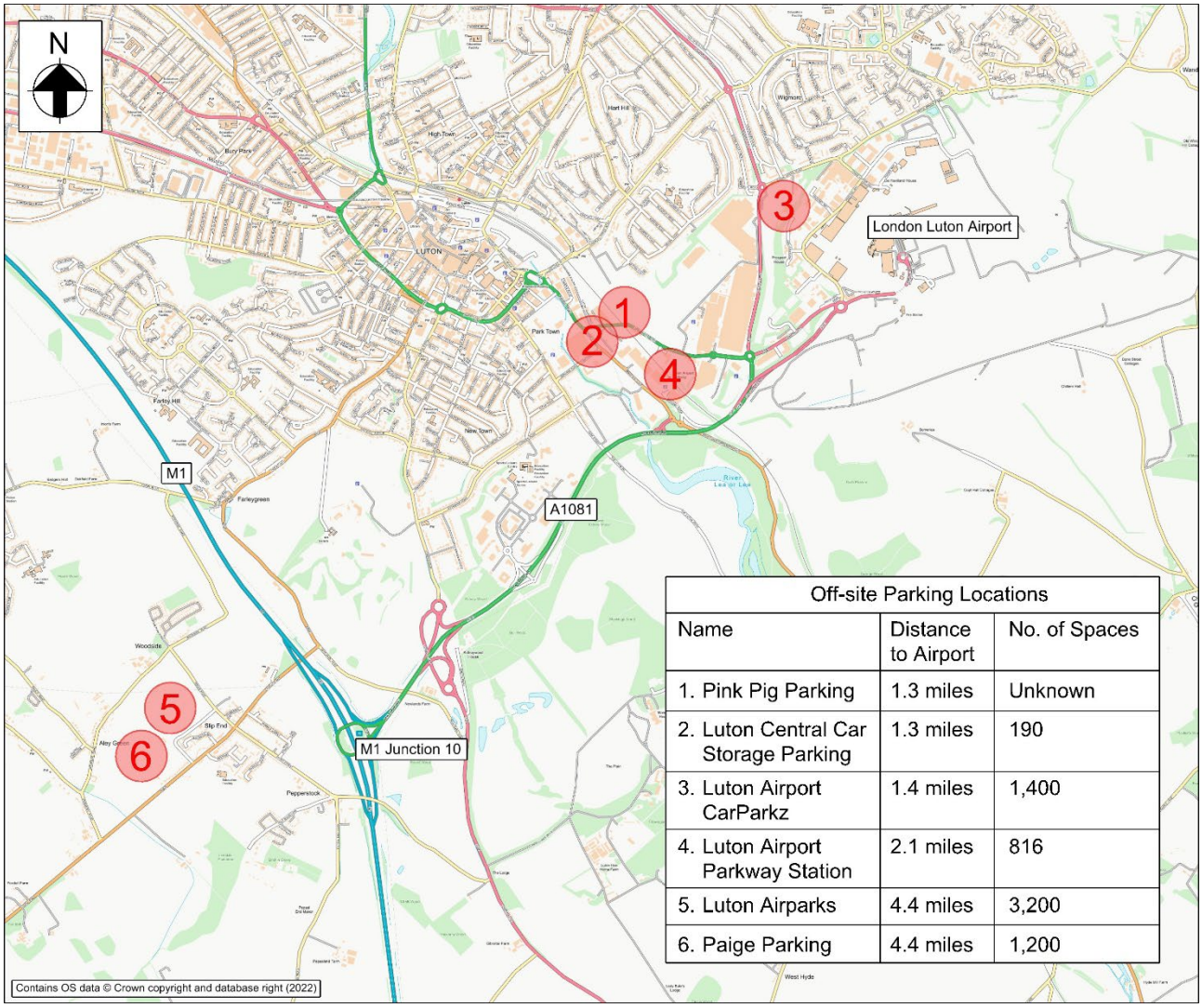
5.6.5 Multi Storey Car Parks (MSCP) 1 and 2 are connected to the airport terminal by a covered pedestrian walkway. The Mid and Long stay car parks are located approximately 400m and 2km away from the terminal area, respectively, and are accessible via regular, free shuttle bus services. The Long stay car park is accessed off President Way.

Third party operated car parks

5.6.6 In addition to the on-site airport car parking, there are also privately owned third party operated car parks offering parking for airport passengers.

5.6.7 **Figure 5.13** shows all the passenger car parking within a 3.3mile radius of the airport, in 2019, excluding on-site parking at the airport. The third party operated car parking capacity in 2019 was at least 6,800 spaces and a large proportion of this parking was located at Slip End, which is in Central Bedfordshire, near M1 Junction 10.

Figure 5.13: Additional third party operated car parking facilities



Off-site Parking Locations		
Name	Distance to Airport	No. of Spaces
1. Pink Pig Parking	1.3 miles	Unknown
2. Luton Central Car Storage Parking	1.3 miles	190
3. Luton Airport CarParkz	1.4 miles	1,400
4. Luton Airport Parkway Station	2.1 miles	816
5. Luton Airparks	4.4 miles	3,200
6. Paige Parking	4.4 miles	1,200

5.7 Drop off, taxi and bus capacity

5.7.1 The ground floor of MSCP 2 includes 75 drop off/pick up bays and the forecourt area outside the terminal includes 25 taxi bays, 32 hackney carriage-only bays and 18 bus bays.

5.7.2 The capacity of the onward travel facilities was the level required at the point when the airport reached its permitted capacity of 18 mppa in 2019.

5.8 Servicing to terminal

5.8.1 There are two separate service areas for the airport terminal. ‘West deliveries’ is in the central terminal area and accessed off the western arm of the internal roundabout. ‘East deliveries’ is accessed from the Airport Approach Road via a route that loops around the Luton DART station. Both of the delivery areas are barrier controlled to prevent general traffic access.

6 EXISTING TRAVEL DEMAND

6.1 Introduction

6.1.1 The airport is well-located in relation to many areas of the UK, and benefits from excellent accessibility by road, rail and bus. It is located close to the M1, linking London with the East Midlands, the north east and other areas via the SRN. It is also connected to the rail network via a shuttle bus to Luton Airport Parkway station, which is served by local, regional and long-distance services, including frequent direct services to Central London and the south east. The recently constructed Luton DART will provide a direct rail link between Luton Airport Parkway station and the airport – the announcement of an official opening date will be made in early 2023. The bus and coach hub at the airport provides extensive local, regional and long-distance journeys to locations including London (Paddington and Victoria), Birmingham, Manchester, Leeds, Sheffield, Nottingham and the Luton and Dunstable area.

6.1.2 The following section outlines the staff and passenger mode share over recent years and the staff and passenger landside travel demand for 2017, which is the baseline year in the Vissim model used to assess local traffic impacts (see Chapter 10), and for 2019 when the airport had reached its permitted capacity of 18 mppa.

6.2 Mode share patterns

Passengers

6.2.1 Every year, the CAA undertakes a survey of departing passengers at major UK airports, including London Luton Airport. This includes the collection of data including surface access travel modes. The data is available for analysis and is also presented in summary reports published by the CAA. These reports were published annually until 2019 and **Table 6.1** provides an extract from the CAA published report showing the split between public and private access modes between 2012 and 2019. This data excludes those passengers transferring between aircraft at the airport and not, therefore, using the surface transport network.

Table 6.1: CAA passenger surveys report public-private mode share (%)

Mode	2012	2013	2014	2015	2016	2017	2018	2019
Public Transport	33.1	31.7	28.2	30.6	31.4	33.2	34.4	40.4
Private Transport	66.2	68.0	70.9	69.4	68.4	66.6	65.6	59.9

6.2.2 **Table 6.1** shows that whilst there was a slight decline in public transport use between 2012 and 2014, there was a gradual upward trend to 2019, with reported public transport mode share up to 40.4%.

6.2.3 For the period between 2017 and 2019, the CAA also published data on the principal mode of travel where multiple modes were recorded (e.g. bus to rail station, then train, then shuttle to airport, which would be categorised as rail). This

data is based on a smaller sample size and as such could be subject to a greater sampling error. Nonetheless, the principal mode of travel data which is summarised in **Table 6.2** shows a trend of increasing public transport mode share which is consistent with the data in **Table 6.1**.

Table 6.2: CAA passenger surveys report sub-mode share (%)

Mode	2017	2018	2019
Car	51.6	47.2	39.8
Taxi/Minicab/Uber	17.6	16.4	16.4
Bus/Coach	13.5	16.1	22.3
Rail	17.1	19.8	21.2
Tube/Metro/Subway/Tram	0.0	0.0	0.1
Other	0.2	0.4	0.3

6.2.4 Whilst the above data shows a similar trend of increasing public transport mode share, the smaller sample size, which was used by the Operator in their application to increase to 19 mppa, appears to suggest that the airport achieved a higher public transport mode share of around 43.5% in 2019.

6.2.5 The airport also uses the CAA survey data in its Annual Monitoring Reports (AMR) which include consideration of surface access travel to the airport and provides the sub-modes from 2012 to 2020 which therefore also captures the immediate impact of the pandemic. **Table 6.3** shows the AMR passenger mode share for 2012-2020.

Table 6.3: Passenger mode share (%)

Mode	2012	2013	2014	2015	2016	2017	2018	2019	2020
Drop off/taxi	44	45	42	43	45	42	45	45	56
Car park	23	23	28	27	23	20	17	16	31
Rail	17	16	14	16	16	17	17	21	6
Bus / coach	16	16	15	15	16	16	16	17	3

*The reported mode share for 2012 to 2016 was based on the total passengers using surface access modes at London Luton Airport. For 2017 to 2020, the mode share was based on the total passengers using London Luton Airport, including those transferring between flights – a small percentage of passengers do not therefore use surface access modes.

6.2.6 **Table 6.3** shows that whilst there was a slight decline in public transport use between 2012 and 2014, there was a gradual upward trend to 2019, bringing the public transport mode share up to 38%. As expected, the 2020 data shows a marked decrease in public transport use and an increase in car use, due to the impact of the pandemic and the Government restrictions on social mixing.

6.2.7 Whilst there are some differences between the figures presented in the CAA reports and AMR[1], the overall trend in increased public transport mode share for

[1] Due to variations in the treatment of transfer passengers within the mode share analysis

passengers is consistent. The traffic modelling base years are 2016/2017 (which, as set out in the modelling methodology, represent the most recent available traffic data pre-pandemic) and at that point in time the public transport mode shares were reasonably well aligned across the various analyses of the raw datasets.

Staff

6.2.8 **Table 6.4** shows the staff mode share data since 2010 as presented in the airport's AMRs. The mode share data is based on staff travel surveys undertaken every two years.

Table 6.4: Staff mode share (%)

Mode	2010	2012	2014	2016	2018	2020
Drive alone	66	66	62	68	59	78
Car share	12	8	11	7	8	1
Taxi	1	1	0	1	1	2
Motorcycle	1	1	1	1	1	5
Rail	5	5	10	7	8	2
Bus/coach	7	9	8	9	16	3
Cycle	2	2	2	2	2	3
Walk	5	6	7	5	6	6

6.2.9 The historic data shows that there has been an increase in staff travelling by bus between 2010 and 2018 with a marked change after 2016. There was also a marked decrease in single occupancy car use between 2016 and 2018. All other mode shares have been fairly static between 2010 and 2018.

6.2.10 The 2020 data shows a marked increase in single occupancy car use and marked decreases in car share, bus and rail use due to the pandemic.

6.3 Airport landside travel demand

6.3.1 The landside travel demand for 2017 and 2019 has been established from a mix of first principles and surveys.

6.3.2 For passenger travel demands, data used included a typical daily flight schedule, associated passenger numbers, detailed mode split data and various criteria set out in the trip generation methodology (see Section 10.3).

6.3.3 For staff travel demands, data used included the number of office staff on site on a typical day, the typical office car park demand profile (reflecting working patterns) and mode split data.

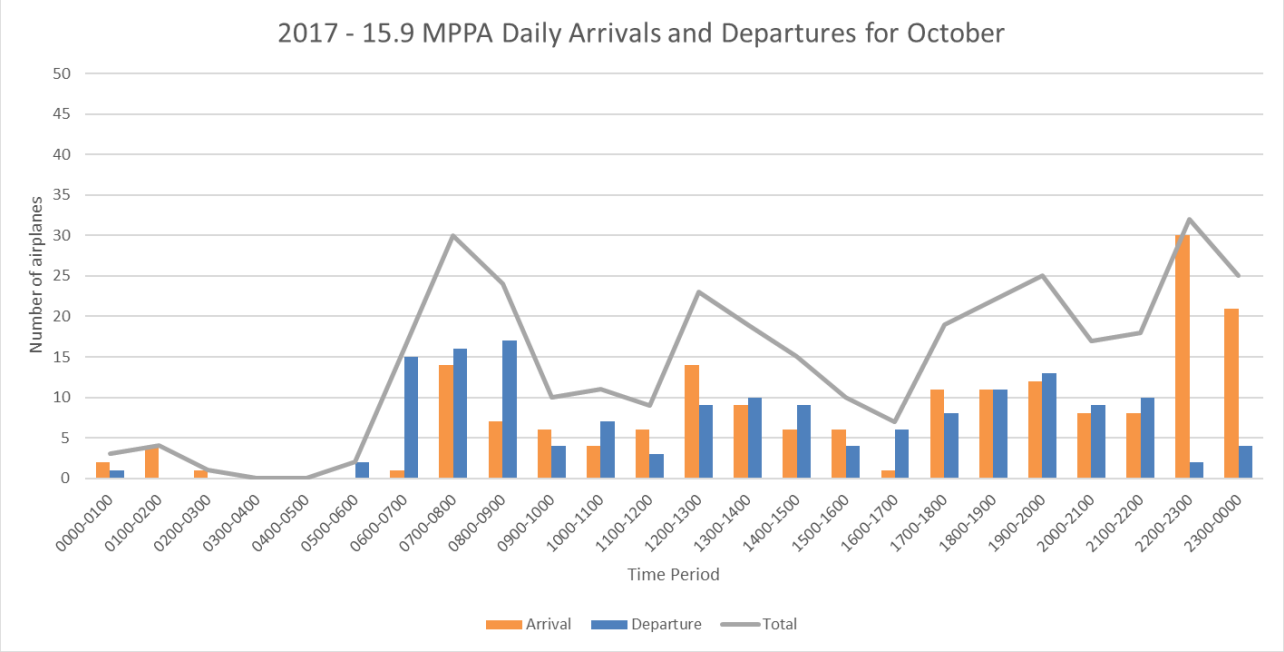
6.3.4 The following section presents a summary of the data used.

2017 passenger travel demand

Flight schedule

6.3.5 **Figure 6.1** shows the typical daily aircraft arrivals and departures in October 2017, when the airport served 15.9 mppa. October was considered as a neutral month outside the summer holiday period when air travel is highest, but background landside travel demand is lower.

Figure 6.1: October 2017 – 15.9 mppa



6.3.6 The profile of daily flights shows the peak time for aircraft departures occurred between 06:00 and 09:00 when there were between 15 and 17 departures per hour. The peak time for arriving flights was between 22:00 and 00:00 with between 21 and 30 flights per hour. Between the peak periods, there were generally 5 to 10 arriving and departing flights per hour.

Number of passengers

6.3.7 The number of passengers arriving and departing the airport in the AM and PM peak hour are shown in **Table 6.5**. The AM and PM peak hour were defined through the traffic surveys and modelling analysis as 08:00 to 09:00 and 17:00 to 18:00.

Table 6.5: Number of passengers – 2017 AM and PM peak

Time period	Arrivals	Departures
AM peak	682	2,167
PM peak	1,876	548

Mode split

6.3.8 A detailed breakdown of transport modes used by passengers to access the airport in 2017 has been established from the detailed CAA passenger survey data. The resulting mode splits are shown in **Table 6.6**.

Table 6.6: Passenger mode split – 2017 (15.9 mppa)

Mode of travel to the airport	Passenger
Bus / Coach	15.4%
Rail / MPT (includes MPT from 2020)	16.6%
Taxi / Minicab	17.1%
Walk / Cycle	0.2%
Motorcycle	0.0%
Private Car (Drop Off / Pick Up)	29.1%
Private Car (On Site Car Park)	10.9%
Private Car (Off Site Car Park)	6.2%
Rental Car	2.0%
Other	2.5%
Total	**100%**

Notes:

1. The use of the detailed CAA passenger survey data as the basis for the mode split has resulted in some small variations to the headline passenger mode share figures contained in the airport's Annual Monitoring Reports
2. The mode splits represent the CAA main mode used to access the airport

Passenger trip generation

6.3.9 The 2017 person trip generation by mode for passengers is shown in **Table 6.7**.

Table 6.7: Passenger person trip generation – 2017 AM and PM peak

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Bus / Coach	105	334	289	84
Rail / MPT (includes MPT from 2020)	113	360	311	91
Taxi / Minicab	117	371	321	94
Walk / Cycle	1	4	4	1
Private Car (Drop Off / Pick Up)	198	631	546	159

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Private Car (On Site Car Park)	74	236	204	60
Private Car (Off Site Car Park)	42	134	116	34
Rental Car	14	43	38	11
Other	17	54	47	14
Total	**682**	**2,167**	**1,876**	**548**

2017 Staff travel demand

Number of staff

6.3.10 The number of staff arriving and departing the airport in the AM and PM peak hour is shown in **Table 6.8**.

Table 6.8: Number of staff – 2017 AM and PM peak

Time period	Arrivals	Departures
AM peak	428	-
PM peak	-	321

Mode split

6.3.11 The mode split used in the calculation of travel demands is based on the 2016 Staff Travel Survey data (see **Table 6.4**), as there was no survey in 2017.

Staff trip generation

6.3.12 The 2017 person trip generation by mode for staff is shown in **Table 6.9**.

Table 6.9: Staff person trip generation – 2017 AM and PM peak

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Drive alone	291	-	-	218
Car share	30	-	-	22
Taxi	4	-	-	3
Motorcycle	4	-	-	3
Rail	30	-	-	22

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Bus/coach	39	-	-	29
Cycle	9	-	-	6
Walk	21	-	-	16
Total	**428**	**-**	**-**	**319**

2017 Heavy Goods Vehicle and Light Goods Vehicle trip generation

6.3.13 The 2017 HGV and LGV trip generation is shown in **Table 6.10**.

Table 6.10: HGV and LGV vehicular trip generation – 2017 AM and PM Peak

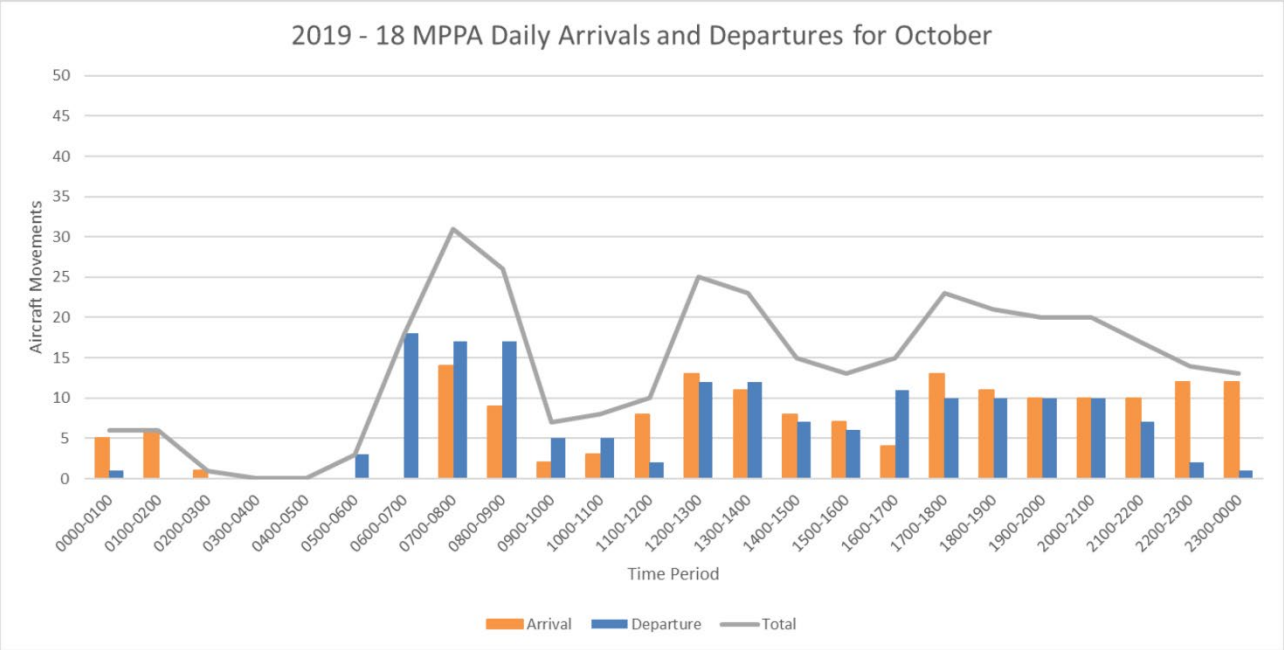
HGV/LGV	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
HGV	90	88	76	73
LGV	100	99	75	58

2019 Passenger travel demand

Flight schedule

6.3.14 **Figure 6.2** shows the typical daily aircraft arrivals and departures in October 2019, when the airport served the maximum permitted 18 mppa.

Figure 6.2: October 2019 – 18 mppa



6.3.15 The profile of daily flights shows the peak time for aircraft departures occurred between 06:00 and 09:00 when there were between 17 and 18 departures per hour, which is similar to 2017. The peak time for arriving flights was between 07:00 and 08:00, which is a change from the 2017 schedule, where there was a peak after 22:00. There is a flatter profile of flight arrivals from 17:00 to 00:00 with between 10 and 13 flights per hour.

Number of passengers

6.3.16 The number of passengers arriving and departing the airport in the AM and PM peak hour are shown in **Table 6.11**.

Table 6.11: Number of passengers – 2019 AM and PM peak

Time period	Arrivals	Departures
AM peak	726	2,516
PM peak	1,790	1,024

Mode split

6.3.17 A detailed breakdown of transport modes used by passengers to access the airport in 2019 has been established from the detailed CAA passenger survey data. The resulting mode splits are shown in **Table 6.12**.

Table 6.12: Passenger mode split – 2019 (18 mppa)

Mode of travel to the airport	Passenger
Bus / Coach	16.86%
Rail / MPT (includes MPT from 2020)	20.72%
Taxi / Minicab	17.94%
Walk / Cycle	0.17%
Motorcycle	0.0%
Private Car (Drop Off / Pick Up)	26.75%
Private Car (On Site Car Park)	9.82%
Private Car (Off Site Car Park)	5.80%
Rental Car	1.88%
Other	0.06%
Total	**100%**

Notes:

1. The use of the detailed CAA passenger survey data as the basis for the detailed mode split has resulted in some small variations to the headline passenger mode share figures contained in the Annual Monitoring Reports
2. The mode splits represent the main mode used to access the airport

Passenger trip generation

6.3.18 The 2019 person trip generation by mode for passengers is shown in **Table 6.13**.

Table 6.13: Passenger person trip generation – 2019 AM and PM Peak

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Bus / Coach	122	424	302	173
Rail / MPT (includes MPT from 2020)	150	521	371	212
Taxi / Minicab	130	451	321	184
Walk / Cycle	1	4	3	2
Private Car (Drop Off / Pick Up)	194	673	479	274
Private Car (On Site Car Park)	71	247	176	101
Private Car (Off Site Car Park)	42	146	104	59
Rental Car	14	47	34	19
Other	0	1	1	1
Total	**726**	**2,516**	**1,790**	**1,024**

2019 Staff travel demand

Number of staff

6.3.19 The number of staff arriving and departing the airport in the AM and PM peak hour is shown in **Table 6.14**.

Table 6.14: Number of staff – 2019 AM and PM peak

Time period	Arrivals	Departures
AM peak	459	-
PM peak	-	344

Mode split

6.3.20 The mode split used in the calculation of travel demands is based on the 2018 Staff Travel Survey data (see **Table 6.4**), as there was no survey in 2019.

Staff trip generation

6.3.21 The 2019 person trip generation by mode for staff is shown in **Table 6.15**.

Table 6.15: Staff person trip generation – 2019 AM and PM peak

Mode of travel	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
Drive alone	271	-	-	203
Car share	37	-	-	28
Taxi	5	-	-	3
Motorcycle	5	-	-	3
Rail	37	-	-	28
Bus/coach	73	-	-	55
Cycle	9	-	-	7
Walk	28	-	-	21
Total	**465**			**348**

2019 HGV and LGV Trip Generation

6.3.22 The 2019 HGV and LGV trip generation is shown in **Table 6.16**.

Table 6.16: HGV and LGV vehicular trip generation – 2019 AM and PM peak

HGV/LGV	AM peak		PM peak	
	Arrivals	Departures	Arrivals	Departures
HGV	102	99	86	83
LGV	113	112	85	66

7 PERSONAL INJURY COLLISION DATA

7.1.1 In the 2022 statutory consultation, Chapter 18 of Volume 2 of the Preliminary Environmental Information Report (PEIR) included consideration of Personal Injury Collisions (PIC) at the following junctions in the Luton area:

a. A505/Vauxhall Way/Eaton Green Road
b. A505/Vauxhall Way/Crawley Green Road
c. A505/Vauxhall Way/Stopsley Way
d. Vauxhall Way/Airport Way/Kimpton Road
e. A1081/link to Gipsy Lane
f. Gipsy Lane/Link to A1081
g. Windmill Road/Kimpton Road
h. Crawley Green Road/Lalleford Road
i. Crawley Green Road/Wigmore Lane
j. Eaton Green Road/Frank Lester Way
k. Eaton Green Road/Lalleford Road
l. Eaton Green Road/Wigmore Lane

7.1.2 PIC data was analysed for the five-year period from 1 January 2015 to 31 December 2019 and it was found that there were no junctions where there was a significantly high number of PICs or specific patterns.

7.1.3 The scope of the PIC analysis has been reviewed as part of the Transport Assessment and expanded to include the main access route (M1 Junction 10 and the A1081) and areas where the increase in traffic due to the Proposed Development is forecast to be greater than 20% in either the 2027, 2039 or 2043 AM or PM peak hour. The percentage increase is a conservative approach based on the Institute of Environmental Management and Assessment Guidelines (Ref 7.1) that suggest more detailed appraisal of traffic-related environmental impacts may be required where traffic flows on highway links would increase by more than 30%.

7.1.4 The expanded area for the assessment of collision data therefore comprises:

a. M1 Junction 10.
b. A1081 highway links and key junctions between M1 Junction 10 and the airport.
c. A505 Vauxhall Way links and key junctions between Kimpton Road and Stopsley Way.
d. Eaton Green Road links and Key junctions between the A505 Vauxhall Way and Wigmore Lane.

7.1.5 The analysis of the PIC at junctions on Eaton Green Road and Vauxhall Way was not included in the 2022 statutory consultation but is included in the following section for completeness.

7.1.6 A summary of the number of collisions and degree of severity by year is shown in **Table 7.1** for M1 Junction 10, **Table 7.2** for the local road network junctions and **Table 7.3** for the local road network links. Given the size of M1 Junction 10, where entry and exit arms and therefore conflict points, are some distance apart, the collisions have been separated by location to assist in identifying any clusters.

Table 7.1: M1 Junction 10 - Summary of PIC, 2015 to 2019

Location	Severity		Number of collisions				
			2015	2016	2017	2018	2019
M1 Junction 10	Fatal	Northbound (NB) off-slip (roundabout entry)	0	0	0	0	0
		NB on-slip (roundabout exit)	0	0	0	0	0
		Southbound (SB) off-slip (roundabout entry)	0	0	0	0	0
		SB on-slip (roundabout exit)	0	0	0	0	0
		A1081 (roundabout entry)	0	0	0	0	0
		A1081 (roundabout exit)	0	0	0	0	0
		Total	0	0	0	0	0
	Serious	NB off-slip (roundabout entry)	1	0	0	0	1
		NB on-slip (roundabout exit)	0	1	0	0	1
		SB off-slip (roundabout entry)	0	0	0	0	0
		SB on-slip (roundabout exit)	0	0	0	1	0

Location	Severity		Number of collisions				
			2015	2016	2017	2018	2019
		A1081 (roundabout entry)	0	0	0	0	0
		A1081 (roundabout exit)	0	0	0	0	0
		Total	**1**	**1**	**0**	**1**	**2**
	Slight	NB off-slip (roundabout entry)	1	0	2	0	0
		NB on-slip (roundabout exit)	0	1	2	2	2
		SB off-slip (roundabout entry)	0	0	0	0	0
		SB on-slip (roundabout exit)	1	0	0	0	0
		A1081 (roundabout entry)	0	0	1	0	1
		A1081 (roundabout exit)	0	0	1	0	1
		Total	**2**	**1**	**6**	**2**	**4**
	Total	NB off-slip (roundabout entry)	2	0	2	0	1

Location	Severity		Number of collisions				
			2015	2016	2017	2018	2019
		NB on-slip (roundabout exit)	0	2	2	2	3
		SB off-slip (roundabout entry)	0	0	0	0	0
		SB on-slip (roundabout exit)	1	0	0	1	0
		A1081 (roundabout entry)	0	0	1	0	1
		A1081 (roundabout exit)	0	0	1	0	1
		Total	**3**	**2**	**6**	**3**	**6**

7.1.7 The analysis shows that there were 15 collisions classed as slight, five classed as serious and no fatal collisions at M1 Junction 10 between 2015 and 2019.

7.1.8 The highest number of collisions in any one location was three in 2019 at the Northbound on-slip (roundabout exit), but there were fewer annual collisions between 2015 and 2018. In all other locations on the junction there were two or less collisions per year. There are not therefore any collision clusters indicating underlying issues with the layout of M1 Junction 10.

Table 7.2: Local Road Network Junctions - Summary of PIC, 2015 to 2019

Junction	Severity	Number of collisions				
		2015	2016	2017	2018	2019
A505 Vauxhall Way / Eaton Green Road	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0

Junction	Severity	Number of collisions				
		2015	2016	2017	2018	2019
	Slight	3	0	0	3	1
	Total	**3**	**0**	**0**	**3**	**1**
A505 Vauxhall Way / Crawley Green Road	Fatal	0	0	0	0	0
	Serious	0	0	2	0	1
	Slight	2	2	1	1	1
	Total	**2**	**2**	**3**	**1**	**2**
A505 Vauxhall Way / Stopsley Way	Fatal	0	0	0	0	0
	Serious	0	0	0	0	1
	Slight	1	1	0	3	4
	Total	**1**	**1**	**0**	**3**	**5**
A505 Vauxhall Way / Airport Way / Kimpton Road	Fatal	0	0	0	0	0
	Serious	0	1	0	0	0
	Slight	1	2	2	2	0
	Total	**1**	**3**	**2**	**2**	**0**
A1081 New Airport Way / London Road – North Roundabout	Fatal	0	0	0	0	0
	Serious	1	0	0	0	0
	Slight	2	1	1	2	2
	Total	**3**	**1**	**1**	**2**	**2**
	Fatal	0	0	0	0	0

Junction	Severity	Number of collisions				
		2015	2016	2017	2018	2019
A1081 New Airport Way / London Road – South Roundabout	Serious	1	0	0	0	0
	Slight	2	0	0	1	1
	Total	**3**	**0**	**0**	**1**	**1**
A1081 New Airport Way / B653 – signal controlled junction	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	0	0	0	0	2
	Total	**0**	**0**	**0**	**0**	**2**
B653 / Gipsy Lane Roundabout	Fatal	0	0	0	0	0
	Serious	0	0	0	2	0
	Slight	1	0	0	0	1
	Total	**1**	**0**	**0**	**2**	**1**
A1081 New Airport Way / Airport Way / Percival Way	Fatal	0	0	0	0	0
	Serious	0	0	0	1	0
	Slight	4	2	0	1	0
	Total	**4**	**2**	**0**	**2**	**0**
Eaton Green Road / Frank Lester Way	Fatal	0	0	0	0	0
	Serious	0	1	0	0	0
	Slight	0	0	0	0	0
	Total	**0**	**1**	**0**	**0**	**0**

Junction	Severity	Number of collisions				
		2015	2016	2017	2018	2019
Eaton Green Road / Lalleford Road	Fatal	0	0	0	0	0
	Serious	0	0	0	0	1
	Slight	0	0	1	0	1
	Total	**0**	**0**	**1**	**0**	**2**
Eaton Green Road / Wigmore Lane	Fatal	0	0	0	0	0
	Serious	0	0	1	0	0
	Slight	1	0	1	0	0
	Total	**1**	**0**	**2**	**0**	**0**

7.1.9 The analysis shows that there were no fatal collisions on these local road network junctions between 2015 and 2019.

7.1.10 Generally, there were three collisions or less each year at each junction. There were two locations with more than three collisions in a year and these were at the A505 Vauxhall Way/Stopsley Way junction and the A1081 New Airport Way/Airport Way/Percival Way junction.

7.1.11 The highest number of collisions occurred at the A505 Vauxhall Way/Stopsley Way junction where there were five collisions in 2019. This was much higher than the previous four years, and the junction has since been upgraded from a roundabout to a signalised T junction, which should improve the safety characteristics of the junction.

7.1.12 There were four collisions at the A1081 New Airport Way/Airport Way/Percival Way roundabout in 2015. This was noticeably higher than in the other four years indicating that there is no underlying issue with the junction layout. In addition, the roundabout will be upgraded to a signalised junction as part of the Proposed Development, which should improve safety characteristics.

Table 7.3: Local Road Network Links - Summary of PIC, 2015 to 2019

Links	Severity	Number of collisions				
		2015	2016	2017	2018	2019
A505 Vauxhall Way between Kimpton Road and Eaton Green Road	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**
A505 Vauxhall Way between Eaton Green Road and Crawley Green Road	Fatal	0	0	0	0	0
	Serious	0	0	1	0	0
	Slight	0	0	0	0	0
	Total	**0**	**0**	**1**	**0**	**0**
A505 Vauxhall Way between Crawley Green Road and Stopsley Way	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	1	1	1	0	0
	Total	**1**	**1**	**1**	**0**	**0**
A1081 New Airport Way between M1 Junction 10 and London Road	Fatal	0	0	0	0	1
	Serious	1	2	0	0	1
	Slight	3	1	2	2	2
	Total	**4**	**3**	**2**	**2**	**4**
A1081 New Airport Way between London Road and B653	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	1	1	1	2	1

Links	Severity	Number of collisions				
		2015	2016	2017	2018	2019
	Total	1	1	1	2	1
A1081 New Airport Way between B653 and Percival Way	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	0	0	0	0	4
	Total	**0**	**0**	**0**	**0**	**4**
Eaton Green Road between A505 Vauxhall Way and Frank Lester Way	Fatal	0	0	0	0	0
	Serious	0	0	0	1	1
	Slight	1	1	1	2	1
	Total	**1**	**1**	**1**	**2**	**1**
Eaton Green Road between Frank Lester Way and Lalleford Road	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**
Eaton Green Road between Lalleford Road and Wigmore Lane	Fatal	0	0	0	0	0
	Serious	0	0	0	0	0
	Slight	1	1	2	0	0
	Total	**1**	**1**	**2**	**0**	**0**

7.1.13 The analysis shows that there was one fatal collision on the highway links between 2015 and 2019. This was on the A1081 New Airport Way between M1 Junction 10 and London Road.

7.1.14 For most of the highway links, there were two or less collisions per year. There were two locations with more than two collisions a year and these were on the A1081 New Airport Way between M1 Junction 10 and London Road, and between the B653 and Percival Way.

7.1.15 The highest number of collisions occurred between M1 Junction 10 and London Road where there were between two and four collisions per year. On the A1081 between the B653 and Percival Way, there were no collisions between 2015 and 2018 but four collisions in 2019. There are no clear reasons or trends as to why there was a marked increase in collisions in 2019. Irrespective of the slightly higher collision numbers on these two highway links, there were no noticeable clusters, indicating that there are no underlying issues with the highway layout in the vicinity of the airport.

8 DEVELOPMENT PROPOSALS

8.1.1 Delivery of the Proposed Development would take several years, during which time the airport will remain operational. Additional capacity to meet the forecast growth in demand would be delivered in undefined increments that appropriately respond to demand over time. The following sections provide an overview of the scheme proposals assumed to come forward in each assessment phase including any associated mitigation.

8.2 Assessment phasing

8.2.1 For the purposes of this Transport Assessment three assessment phases are considered, with each phase delivered to meet the forecast passenger demand at that stage.

a. Assessment Phase 1 – a core case of 21.5 mppa by 2027 is assumed to deliver works to facilitate the expansion of capacity in T1 in line with the demand forecasts contained in the application for development consent.

b. Assessment Phase 2a – a core case of 27 mppa by 2039 when T2 opens is assumed to deliver works to build and operate T2, and any associated infrastructure.

c. Assessment Phase 2b – a core case of 32 mppa by 2043 when T2 is fully built out.

8.3 Proposed Development

8.3.1 The Proposed Development is shown in **Figure 8.1**. This would comprise two terminals north of the runway, retaining and expanding the existing terminal and delivering a new terminal on part of the existing Wigmore Valley Park, which would be replaced further to the east. The new terminal would be delivered in undefined increments that appropriately respond to demand over time.

8.3.2 As well as the development of the terminal buildings, the proposal covers the concurrent development of the airfield infrastructure, the associated surface access enhancement into the airport, the necessary enabling works and extension to the Luton DART. The Proposed Development aims to contain the airport as far as practical within the Applicant's current limits of ownership.

8.3.3 There are existing surface access issues and other proposed projects which need to be taken into consideration. The main priorities are to achieve greater use of public transport by air passengers and staff, and to make the best use of existing highways infrastructure, providing improvements to mitigate any identified airport expansion impacts. Highway infrastructure will need to be provided on the site as well as improvements to some local roads and junctions.

8.3.4 In terms of surface access related proposals that would be delivered as part of the Proposed Development, there are two key projects which need to be considered:

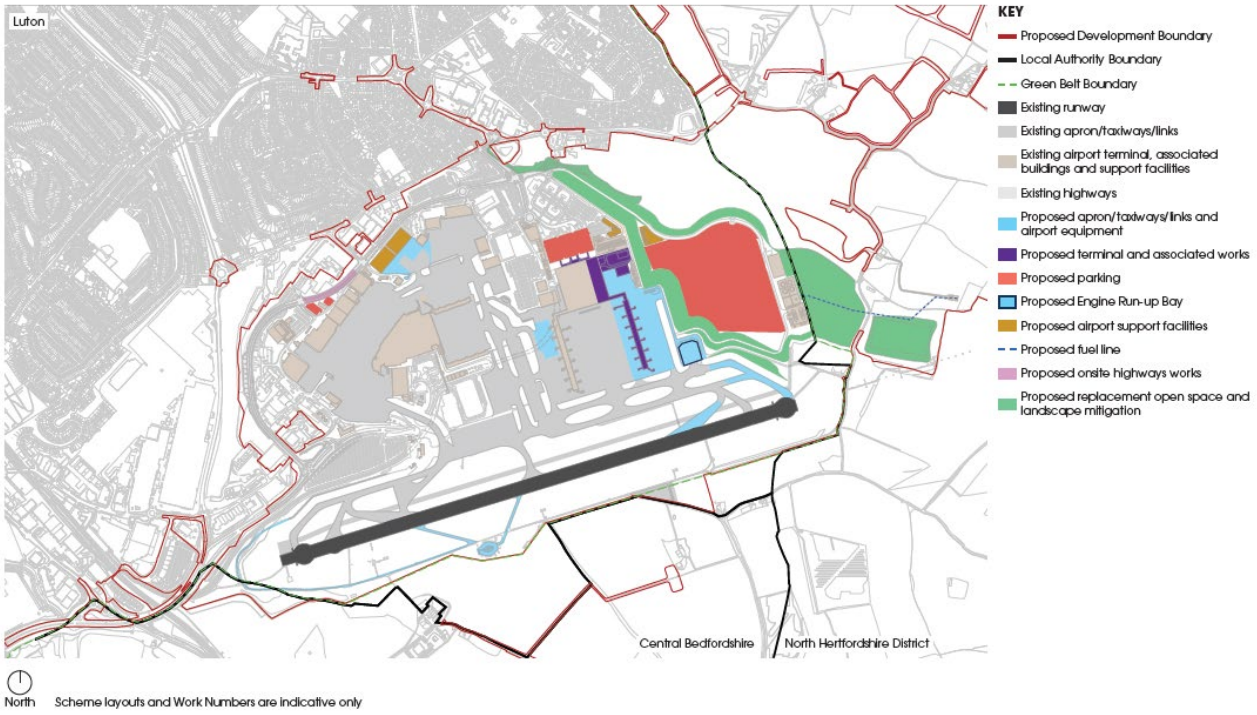
a. Airport Access Road (AAR) – this road will provide access to the new terminal, T2. The road would also support the Proposed Development at

GHP (formerly NCP), which is an undeveloped site on the north east side of the airport. The site has planning consent for mixed use commercial development. The AAR would be delivered as part of the application for development consent.

b. Luton DART – the fully automated light rail transport system would be extended from T1 to provide a link between Luton Airport Parkway station and T2. The Luton DART extension would be delivered as part of the application for development consent.

8.3.5 The basic principles of the Proposed Development allow for a multi modal transport accessibility approach at both existing T1 and the new T2, with public transport being a key component.

Figure 8.1: Proposed Development layout (indicative)



Access arrangements

8.3.6 The majority of passengers arriving by road approach and depart through Luton and via the M1 motorway. This is expected to continue to be the primary access route from the SRN.

8.3.7 The Proposed Development would increase capacity at the existing terminal (T1) and access would continue to be provided via Airport Way/Airport Approach Road. The junction of the A1081 New Airport Way/Airport Way/Percival Way would be upgraded from the existing roundabout junction to a signal-controlled junction. The junction design has been developed to reduce the need for abortive works in later stages of the development. There would also be some minor reconfiguration to the eastern end of the existing President Way to accommodate changes to parking.

8.3.8 The proposals also include a new terminal (T2) to the east of the airport which would be accessed via the AAR. The AAR, formerly known as Century Park Access Road (CPAR) and provided to connect Airport Way with NCP as part of the consented development, is now included as part of the application for development consent. This provides the certainty that the road would be delivered ahead of the time it would be relied upon for access to the expansion area east of the existing airport.

8.3.9 The original CPAR design has been modified in the AAR proposal to provide sufficient capacity to cater for the Proposed Development. The AAR would be delivered in phases in line with the expansion of the airport and delivery of the new terminal (T2) of the Proposed Development.

8.3.10 **Figure 8.2** and **Figure 8.3** show the AAR alignment and junctions assumed to be delivered during assessment phase 2a (27 mppa) and assessment phase 2b (32 mppa) respectively.

Figure 8.2: Airport Access Road – Assessment Phase 2a (27 mppa)

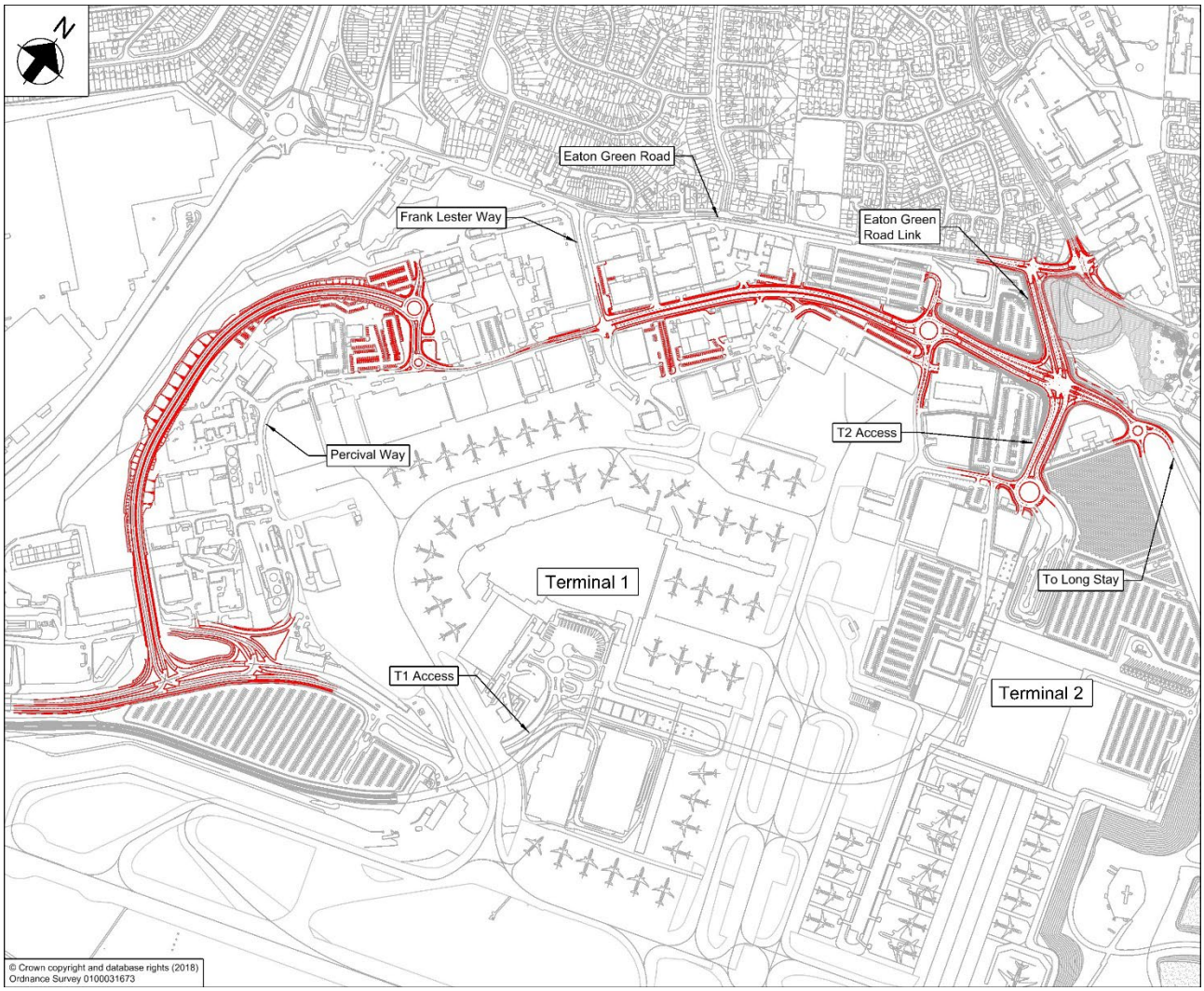
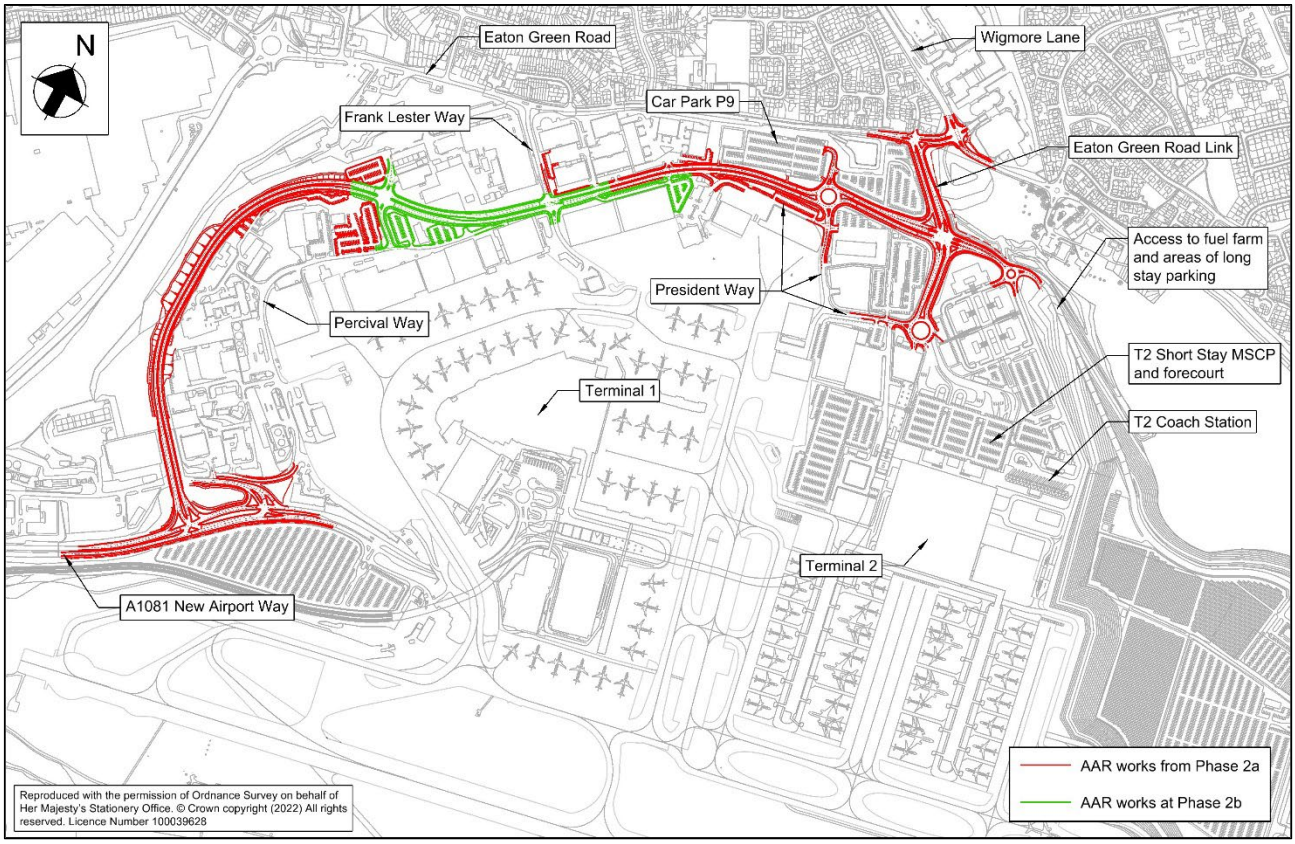


Figure 8.3: Airport Access Road – Assessment Phase 2b (32 mppa)



8.3.11 The western section of AAR would provide a dual two-lane carriageway link which is proposed to begin at a new signalised junction on the A1081 New Airport Way, to the west of Percival Way. This new junction would incorporate improvements to the adjacent Percival Way junction, through replacement of the roundabout with a signalised junction to provide additional capacity. The alignment of AAR to the north of the A1081 New Airport Way then largely follows the alignment of the consented CPAR design up to the realigned junction with Provost Way.

8.3.12 The amended design of the eastern section of AAR also retains the main principles of the already consented CPAR design in that a dual carriageway road is proposed between the realigned junction with Provost Way and the Eaton Green Road Link connecting the AAR to Eaton Green Road. Key areas where the Proposed Development alignment of the AAR alters the previously consented design include:

a. Minor realignment to the AAR at the junction with Provost Way

b. Widening and realignment to the AAR at the junction with Frank Lester Way, to provide dedicated right turn lanes into Frank Lester Way and Airport Approach Road

c. Frank Lester Way would be made one-way northbound between its junction with the AAR and Eaton Green Road, to tie into the junction proposals at Eaton Green Road

d. A four-arm roundabout would be introduced to the AAR near the existing airport car hire centre, to enable vehicles to enter or exit an area of

proposed staff parking from either direction along the AAR. The roundabout would enable easier access/egress routes to some of the retained sites along AAR. Introducing the roundabout requires the eastern section of the AAR to be locally realigned to the south

e. Direct linkages would be provided between the AAR and the retained section of President Way to the south and west of the four-arm roundabout, to minimise the impact on access to and from various properties and to reduce the need for dead end access routes

f. The link road between Eaton Green Road and the AAR - known as the Eaton Green Road Link - would be widened from a single lane carriageway to a dual two-lane carriageway

g. The roundabout junction between the AAR and the AAR link road to Eaton Green Road Link would be changed to a four-arm signalised junction, to provide additional capacity.

8.3.13 The above changes have been designed to improve access to suit the needs of the airport, whilst retaining or improving access to retained properties along the AAR.

8.3.14 At the eastern end of the AAR, access would be provided to T2 via a short length of dual carriageway. Onward access is shown to the proposed Long stay car park and fuel farm areas via a dedicated road leading east from the AAR, with a separate access also leading to the proposed GHP employment area, T2 coach station, T2 servicing area and a controlled airside access point.

8.3.15 The AAR link road is shown as a dual two-lane carriageway, which would connect Eaton Green Road with the eastern end of the AAR, providing access to GHP and the airport. The consented link road was designed as a single carriageway with a signalised junction at its northern end with Eaton Green Road, where realignment and widening were also planned to Eaton Green Road on the approach to Wigmore Lane.

8.3.16 As with the consented CPAR link road layout, pedestrian and cycle facilities are indicated on all arms of the junction between the Eaton Green Road Link and Eaton Green Road, with signalised crossings incorporated into the junction. Similarly, crossing facilities would be included at the southern junction between Eaton Green Road Link and the AAR.

8.3.17 Signalised on-demand standalone pedestrian crossings are also included along the AAR, to the east and west of the proposed four-arm roundabout. These crossing points will aid connectivity between T2 and the proposed staff parking areas of Car Park P9.

8.3.18 A number of existing car parks and accesses associated with various businesses would be affected by the proposed alignment of the AAR at assessment phase 2a. These areas of affected parking are proposed to be replaced or reconfigured to retain the same overall number of spaces. Details of the affected areas of parking are provided below and are shown in **Figure 8.4**:

a. David Berryman Ltd: The AAR alignment passes through the southern (front) car park of this property, affecting 20 perpendicular parking bays. It

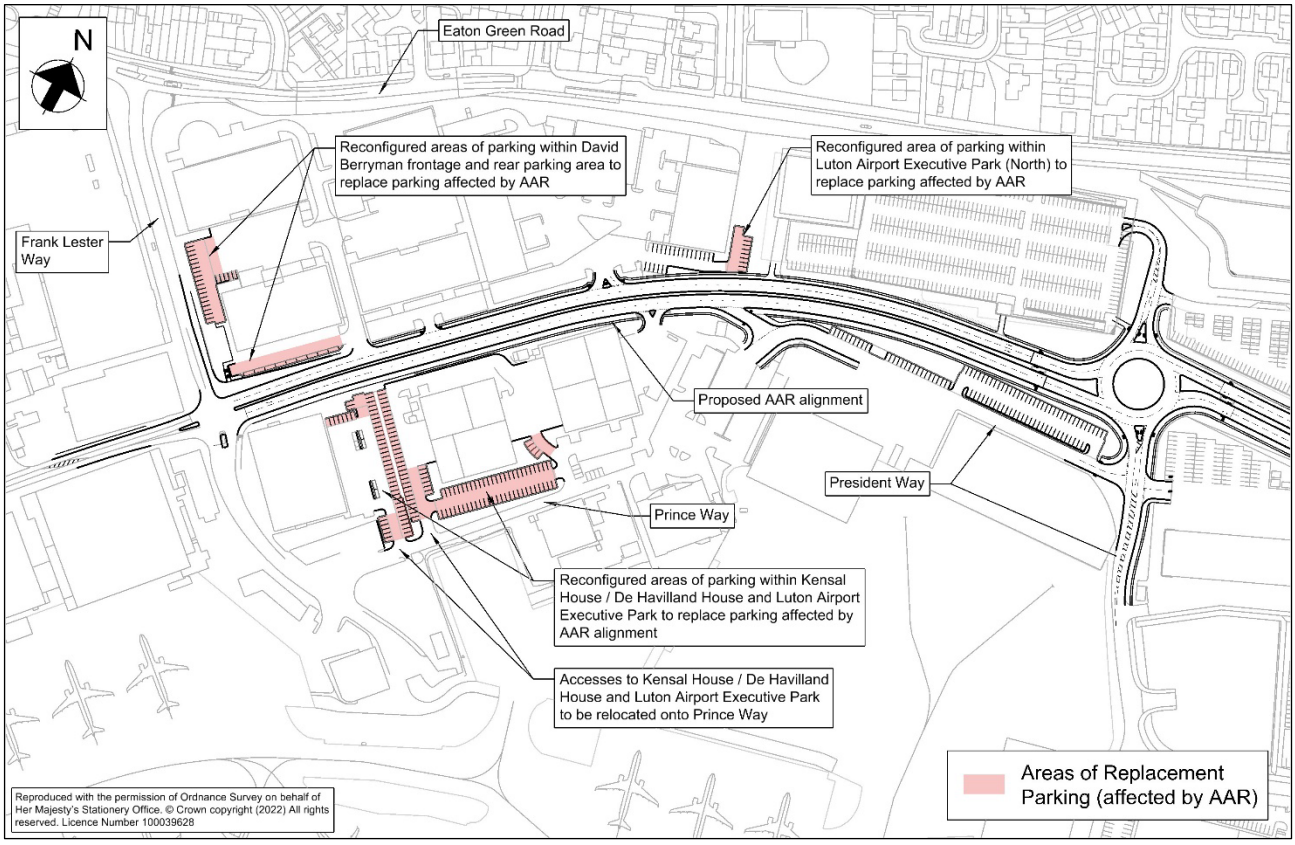
is proposed to reconfigure the affected spaces into nine parallel bays, with a further 11 spaces created to the rear of the property through reconfiguration of the existing yard. Improved access to the rear parking area would be provided through a new footway, and rebuilt footsteps to the front of the property. This results in no net change in car parking space provision;

b. Kensal House / De Havilland House: The AAR alignment would comprise widening to the south of President Way which would pass through the existing shared site access to these properties. It would also affect 16 parking spaces to the north of the site. The site access is proposed to be relocated to the south of the site onto Prince Way, via Airport Approach Road. This enables the site to be accessed from either direction along the AAR. Reconfiguration of the existing parking area is also proposed, to provide an additional 16 spaces, resulting in no net change in parking space provision;

c. Luton Airport Executive Park (South): The AAR alignment comprises widening on the south side of President Way, which affects the existing frontage car parks of Luton Airport Executive Park, and the various site accesses. It is proposed to relocate the site access to the south onto Prince Way, with changes to the internal road layout to suit the locations of the amended site accesses. This enables the site to be accessed from either direction along the AAR. In addition, new areas of parking are created to the south of the plot in a landscaped area adjacent to Prince Way, which results in no net change to parking space provision;

d. Luton Airport Executive Park (North): The AAR alignment comprises widening and realignment to the north side of President Way, which affects a small area of parking associated with the GateGourmet business within Luton Airport Executive Park. It is proposed to reconfigure and extend the remaining parking area to the east into airport-owned land, to replace the affected number of parking spaces. This results in no net change to parking space provision.

Figure 8.4: Replacement areas of AAR affected car parking



8.3.19 As the Proposed Development will increase the demand for surface access trips, further mitigation is proposed at a number of off-site locations to provide additional capacity. The off-site highway works are shown in **Appendix A** and summarised in **Table 8.1**, which references the drawing number and also shows the assessment phase they have been assumed to be delivered in. The mitigation interventions would be delivered when deemed appropriate through a comprehensive monitoring program of surface access effects (see Section 15.3), however it is expected to be closely aligned with the growth in passenger throughput and the assessment phases where they have been assumed to be delivered and assessed as part of this Transport Assessment.

Table 8.1: Proposed off-site highway works (described by DCO work number)

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
6e(a)	Windmill Road / Kimpton Road	Minor widening of the carriageway and kerb realignment on Windmill Road to convert the mini-roundabout into a three-arm signalised junction. There would be no anticipated impact on	No additional mitigation required	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
		the highway boundary or third-party land. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0006**		
6e(b)	A1081 New Airport Way / B653 / Gipsy Lane	Reconfiguration is shown to the A1081 to provide three lanes in both directions through the signalised junction with Gipsy Lane. This widening is achieved by narrowing the central reserve, with no amendments required to the existing outer kerb lines. The existing bus and taxi-only right turn lane from A1081 into Gipsy Lane is to be removed. Widening is indicated along Gipsy Lane on the immediate approach to the A1081 junction, to provide additional left turn entry lanes to the A1081. This widening would be provided in existing landscaped areas. Widening is also indicated to the A505 Gipsy Lane to the north of the roundabout with Lower Harpenden Road to provide additional entry capacity to the roundabout. This widening is accommodated within an existing verge area. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0005**	No additional mitigation required	No additional mitigation required
6e(c)	A1081 New Airport Way / A505 Kimpton Road / Vauxhall Way	-	Additional widening is indicated along A1081 New Airport Way to provide a dedicated left turn	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
			lane into A505 Kimpton Road. These works are in addition to the planned works forming part of the East Luton Study, to be undertaken by others. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0016**	
6e(d)	Eaton Green Road / Lalleford Road	Mini roundabout to be replaced with a three-arm signalised junction. Minor kerbline amendments are necessary along Eaton Green Road and Lalleford Road. All Work contained within the highway boundary. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0011**	No additional mitigation required	No additional mitigation required
6e(e)	Wigmore Lane / Crawley Green Road	-	Including works to: (i) the Junction of Wigmore and Crawley Green Road, including the removal of the existing roundabout junction and conversion to a signalised junction, the provision of signalised pedestrian crossings, the provision of give-way left-turn flares and the realignment and widening of the carriageway; (ii) Wigmore Lane, including the realignment and widening of the lane and removal of a bus stop layby; and (iii) the junction of Wigmore Lane and Raynham Way,	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
			including the removal of the existing roundabout junction and conversion to a signalised junction, the provision of signalised pedestrian crossing and the realignment and widening of the carriageway; **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0012**	
6e(f)	Eaton Green Road / Wigmore Lane	-	Roundabout to be replaced with a four-arm signalised junction, incorporating the Wigmore Place arm. Local widening along Wigmore Lane to provide two lanes in either direction, with the Asda mini-roundabout converted to signals. Reconfiguration of the existing Eaton Green Road carriageway to provide two entry and two exit lanes from the Wigmore Lane junction, with widening to the south of Eaton Green Road into existing verge areas. Work would tie into the Work No. 6a(02) link road which runs to the south east and connects with Work No. 6a(02). **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0013**	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
6e(g)	A1081 / London Road (North)	Amendments to the road markings to provide a spiral operation. Minor amendments to kerb lines on the east of the roundabout to provide a dedicated exit lane onto the A1081 eastbound. Partial signalisation of the roundabout on two of the arms; the northbound off-slip from the A1081 and the exit from Newlands Park. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0008**	No additional mitigation required	No additional mitigation required
6e(h)	A1081 / London Road (South)	-	Part-time signals to be introduced on the roundabout (PM only) **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0017**	No additional mitigation required
6e(i)	Windmill Road / St. Mary's Road / Crawley Green Road	-	Widening, reconfiguration and signalisation of roundabout to provide additional traffic capacity. Widening to the circulatory carriageway through realigning and narrowing of the central island, with all arms of the roundabout to be signalised. Amendments are required to the extents of the subway portals to accommodate the widened roundabout carriageway. Kerbline amendments are also shown along Windmill Road to provide a two-lane	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
			diverge from the roundabout. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0015**	
6e(j)	Crawley Green Road / Lalleford Road	-	Mini roundabout to be replaced with a three-arm signalised junction. Minor kerbline amendments are necessary along Crawley Green Road and Lalleford Road, with all of the Work contained within the highway boundary. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0018**	No additional mitigation required
6e(k)	A602 Park Way / A505 Upper Tilehouse Street	-	Minor widening is proposed to the roundabout entries, to provide increased lengths of two-lane entry. The widening on Park Way would be contained within an existing grass verge / landscape area, with the proposed realignment of Upper Tilehouse Street potentially requiring amendments to an existing retaining structure and vehicle restraint system. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0027**	No additional mitigation required
6e(l)	A505 Moormead Hill / B655 Pirton Rd / Upper Tilehouse Street		Minor widening and realignment of Upper Tilehouse Street entry is proposed, to provide an increased length of two-lane entry to the existing mini roundabout. All of	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
			the Work would be contained within the existing highway boundary. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0026**	
6e(m)	A602 Park Way / Stevenage Road		Minor widening of carriageway and realignment of various kerb lines is proposed on A505 Park Way, Hitchin Hill and A602 Stevenage Road to provide increased lengths of two-lane entry to the roundabout. These Work are restricted to existing grass verge and landscaping areas, within the highway boundary. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0028**	No additional mitigation required
6e(n)	M1 J10	Widening to the northbound off-slip to provide a third lane on the approach to the roundabout, with the widening accommodated in existing verge and embankment. Widening to the western circulatory carriageway to provide four circulating lanes, with this widening accommodated in the existing landscaped area on the inside of the roundabout. Amendments to the exit from the roundabout onto the A1081, to allow three lanes to diverge from the roundabout. This widening would be	See work no. 6e(o)	See work no. 6e(p)

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
		accommodated within existing verge area. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0009**		
6e(o)	M1 J10	-	Widening to the A1081 westbound carriageway to enable two left turn lanes to continue onto the M1 southbound on-slip, where widening is also proposed. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0024 and LLADCO-3C-ARP-SFA-HWM-DR-CE-0025**	See work no. 6e(p)
6e(p)	M1 J10	-	-	Widening of the western circulatory carriageway to provide five lanes. Realignment of the A1081 exit to enable three lanes to exit roundabout onto A1081, with segregated left turn lane removed and junction of southbound off-slip signalised. Provision of two southbound merging lanes onto M1 through All-Lane Running. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0029 and LLADCO-3C-ARP-SFA-HWM-DR-CE-0030**
6e(q)	Eaton Green Road / Frank Lester Way	-	Roundabout to be replaced with a signalised junction, and Frank Lester Way to be made one-way northbound as per the adjacent	No additional mitigation required

Work No. 6e	Name/Location	Form of Mitigation and Anticipated Delivery Phase		
		Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
			Work No. 6a(02) proposals. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0014**	
6e(r)	A505 Vauxhall Way / Eaton Green Road	Roundabout to be partially signalised. Signalisation of roundabout is proposed in addition to works planned as part of the East Luton Study, to be undertaken by others. Signalisation of roundabout is only required at 21.5 mppa, in advance of delivery of Work 6a. **Drawing LLADCO-3C-ARP-SFA-HWM-DR-CE-0007**	No additional mitigation required	No additional mitigation required

8.3.20 This highway mitigation is embedded into design of the Proposed Development and the assessment has been undertaken on the basis that the mitigation would be required in line with the assessment phases of passenger growth to 21.5 mppa, 27 mppa and 32 mppa. The actual phasing of their delivery will be determined by the on-going monitoring with delivery of any mitigation adjusted to address the requirements of the scheme.

Forecourt arrangements

8.3.21 The existing forecourt areas at the airport will continue to provide access for T1 passenger drop off, taxi and bus in early stages of the Proposed Development. T1 facilities would be improved to provide further bus and coach capacity via additional bays, and this is described under the public transport section of this chapter. It is considered that there is adequate capacity within the existing facilities to cater for the forecast assessment phase 1 demand for drop off and taxis and no capacity enhancements are therefore considered necessary. Amendments to the T1 forecourt are shown in **Figure 8.5.**

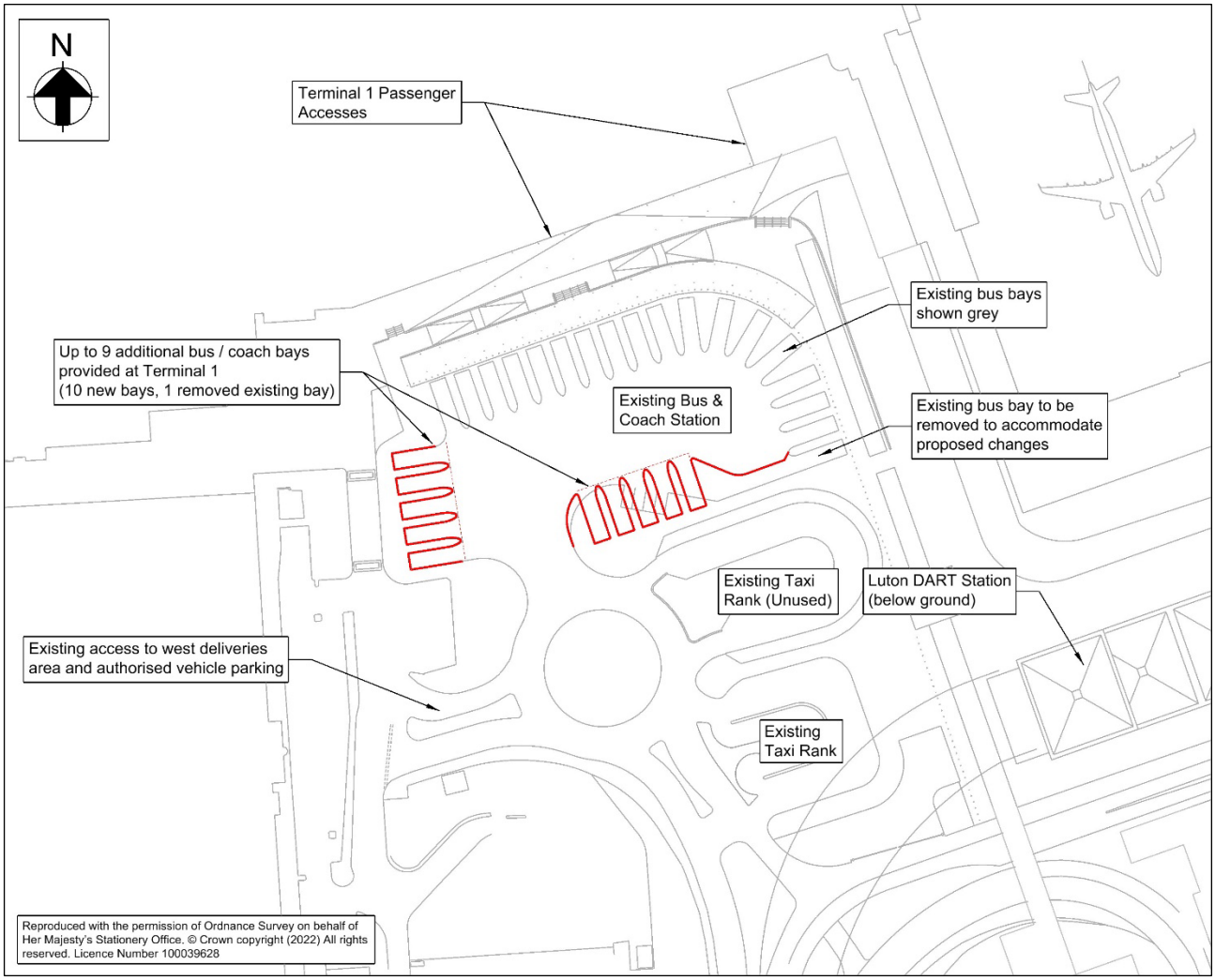
8.3.22 The assessment phase 1 forecourt at T1 would include:

a. The existing hackney carriage rank with circa 32 bays

b. The existing separate taxi rank with circa 25 bays (previously only for Addison Lee usage but unused since January 2023)

c. A maximum of 27 no. bus/coach bays (including up to an additional nine bays)

Figure 8.5: Assessment Phase 1 – Proposed T1 forecourt layout



8.3.23 A new forecourt area with passenger drop-off, taxi, bus stands and coach station would be provided to serve T2 and delivered in a phased approach as the airport expands. For the purposes of this Transport Assessment, during assessment phase 2a, the forecourt would be oriented in a north-south direction to the west of Car Parks P6 and P7 (see Parking Provision). During assessment phase 2b, the forecourt would be reoriented to run alongside the T2 plaza. The forecourt has been designed to cater for the airport's busiest hours and to cater for drop off and pick up, taxis, regular buses, shuttlebuses and coaches.

8.3.24 The forecourt design is based on private car drop off activity taking place at ground level, and all private car pick-up movements taking place within the short stay parking facilities; Car Park P5 in assessment phase 2a, and Car Park P12 in assessment phase 2b in the form of a multi-storey car park (MSCP) located directly above the forecourt.

8.3.25 A charged (financial tariff) vehicle access zone for drop off and pick up is currently in operation at the airport, providing convenient access to T1 for those that need it, while also incentivising alternatives to private vehicle use. This approach would be extended to T2 and would form part of the proposals to discourage car use

and help achieve the mode share Targets set in Travel Plans and environmental objectives.

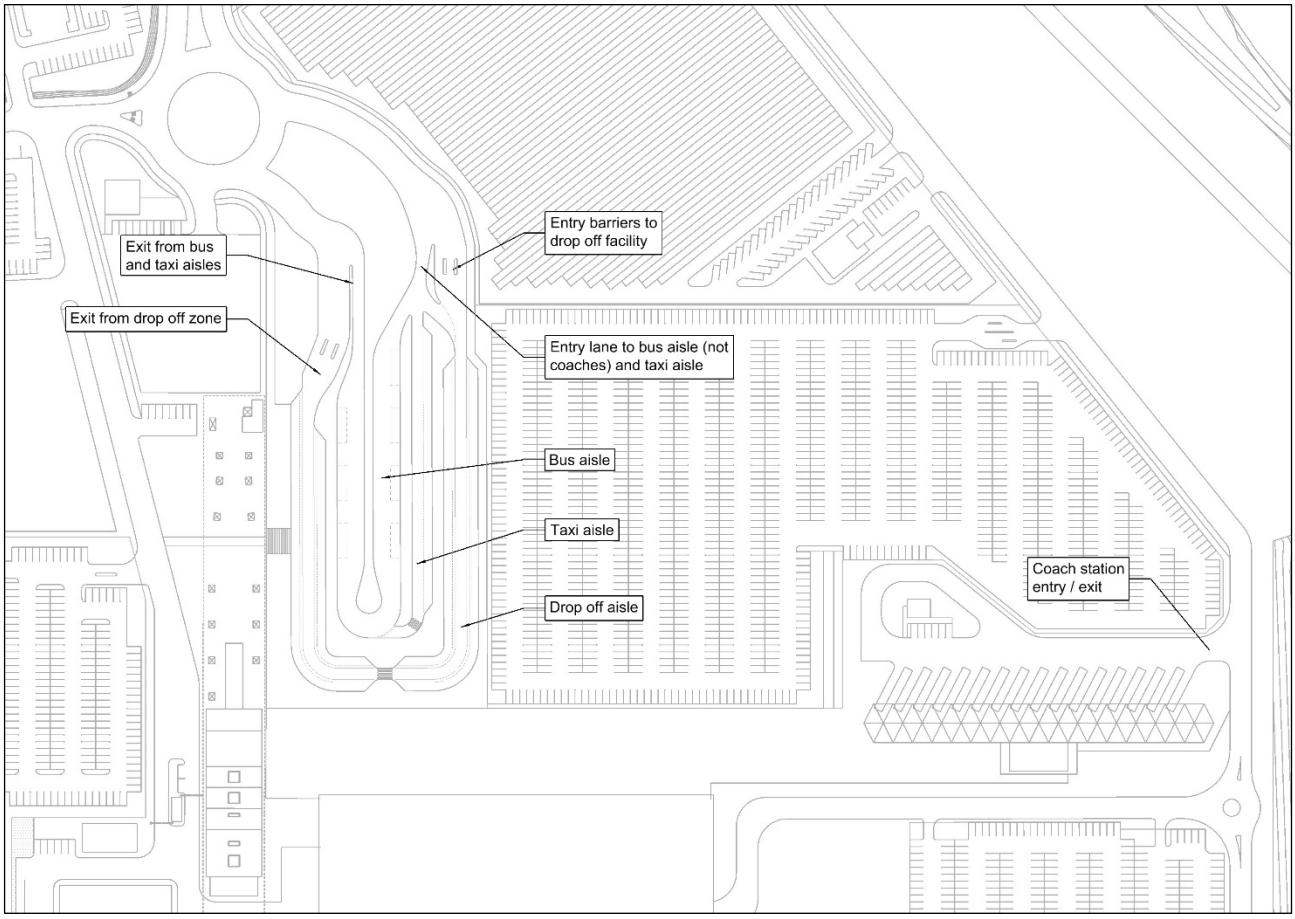
8.3.26 The design maintains flexibility to enable a ticketed pay-on-foot or pay-at-barrier system or automated payment using Automatic Number Plate Recognition (ANPR) systems to be implemented.

8.3.27 Within the assessment phase 2a surface level forecourt, wide pedestrian routes would be located around the drop off aisles to connect directly with the terminal frontage. The private vehicle drop-off facility would be accessed via barrier control and comprises parallel parking bays to either side of a one-way aisle, to minimise conflict. A dedicated taxi aisle would be provided for pick up and drop off alongside a parallel bus aisle, both of which would be accessed via barrier control. The bus bays would serve local bus services and car park shuttle buses.

8.3.28 Immediately to the east of the forecourt, there would be a Short stay car park and coach station. The Short stay car park would provide for private vehicle pick up and the coach station would serve longer distance coach services such as National Express and Megabus. The design of the assessment phase 2a forecourt and coach station is indicated in **Figure 8.6**.

8.3.29 Whilst vehicular access to all of the T2 facilities would be from the AAR, the T2 forecourt and short stay car park would be accessed via a dedicated road. The coach station and GHP would be accessed from a separate road which leads from the eastern end of AAR.

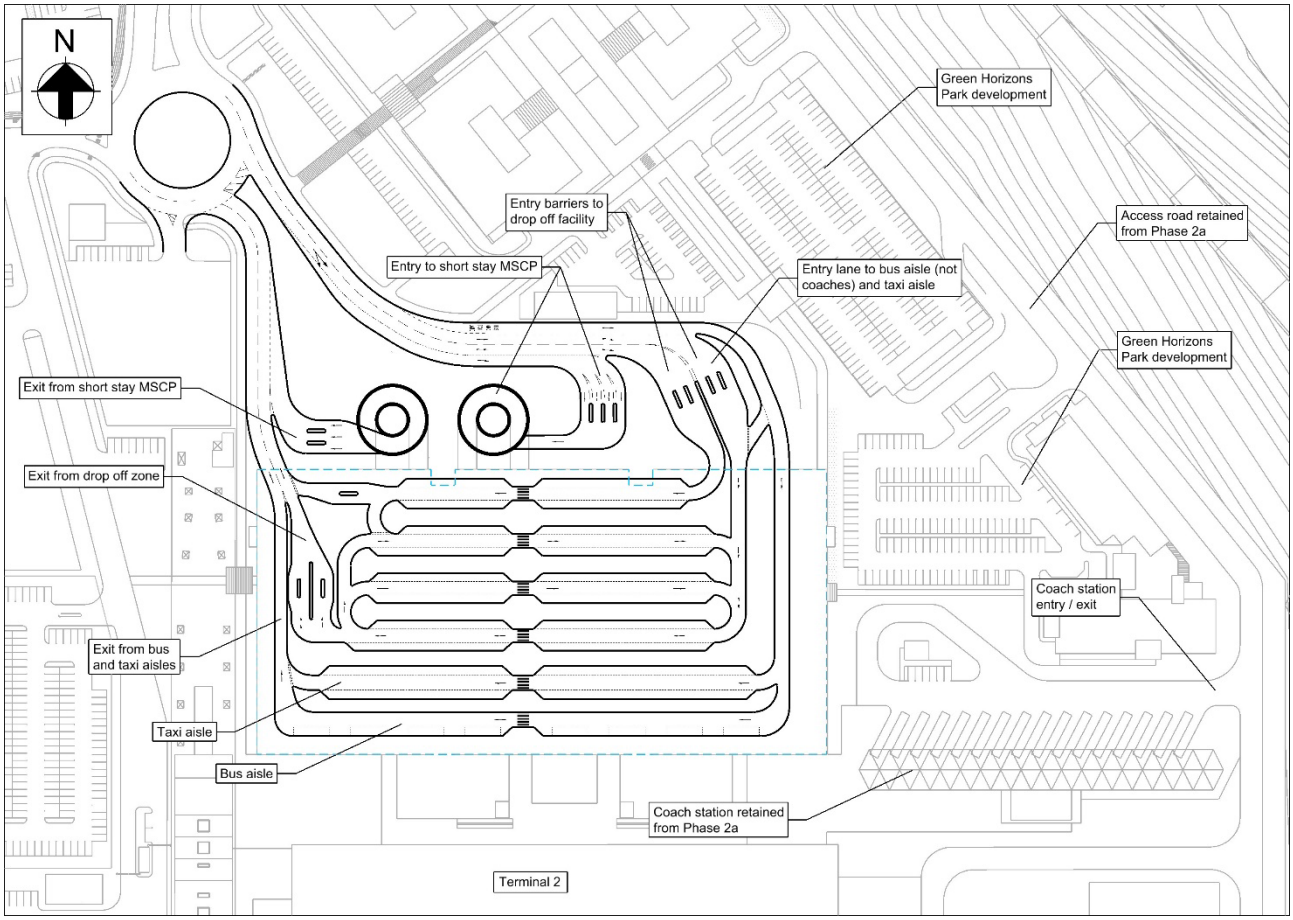
Figure 8.6: Assessment Phase 2a- Proposed T2 Forecourt



8.3.30 In assessment phase 2b, the T2 forecourt area would be reconfigured to run along the proposed T2 building frontage. Wide pedestrian routes would be located between the drop off aisles, leading to one central pedestrian route that connects with the terminal frontage. As per the assessment phase 2a layout, the private vehicle drop-off facilities would comprise parallel parking bays to either side of one-way aisles and would be accessed via a barrier. A dedicated taxi aisle would be provided for pick up and drop off along with a bus aisle, which would be closest to the terminal frontage. Both would be accessed via barrier control. The bus aisle would serve local bus services and car park shuttle buses.

8.3.31 The proposed assessment phase 2b T2 ground floor forecourt layout is shown in **Figure 8.7**.

Figure 8.7: Assessment Phase 2b- Proposed T2 ground level forecourt



8.3.32 As part of the assessment phase 2b reconfiguration, a new Short stay MSCP would be constructed directly above the T2 ground level forecourt. This would replace the assessment phase 2a surface level Short stay car park. Vehicular access to and from the MSCP would be via two spiral ramps on the northern edge of the forecourt. The MSCP would include valet parking. All private vehicle pick up activity would take place within the short stay MSCP. Several lift cores would be located on the edge of the MSCP closest to the terminal, in addition to above ground pedestrian links connecting directly to T2 and providing access to all floors of the MSCP. As with the ground floor drop off area, vehicles using the MSCP would be subject to a charging tariff which, due to its nature, would potentially be controlled by a pay on foot or ANPR arrangement.

8.3.33 The T2 coach station provided as part of the assessment phase 2a works would be retained in assessment phase 2b, together with the access road which leads from the eastern end of the AAR. Some local reconfiguration of the access road would be required to suit the planned GHP development.

8.3.34 Requirements for the number of spaces within the drop off zone, taxi rank, bus and coach bays were calculated using the detailed CAA passenger mode share data used in the AMRs, busy hour rates and the modal share assumptions for each of the assessment phases (see Chapter 9). The overall requirements for each of these facilities were calculated by factoring up the total number of

passengers using these modes of transport and applying the projected mode share assumptions. The following assumptions were used in these calculations:

a. Allowance for an increased bus/coach mode share in line with the assessment phase assumptions (see Chapter 9 (Table 9.4));
b. Bus stand and taxi rank requirements were calculated on the basis of the existing T1 facilities operating at 90% of their capacity;
c. In calculating the requirement for vehicle spaces at the drop off zone, an assumed dwell time of three minutes per vehicle has been used, together with an average occupancy rate of 1.2 passengers per vehicle.

8.3.35 In addition to the T1 forecourt improvements, the assessment Phase 2a forecourt at T2 would include:

a. Kerbspace for circa 56 no. drop off spaces;
b. Kerbspace for circa 16 no. taxi spaces;
c. Seven bus bays; and
d. 16 no. coach bays.

8.3.36 The full assessment phase 2b build-out at the ground level forecourt at T2 would include:

a. Kerbspace for circa 100 no. drop off spaces;
b. Kerbspace for circa 49 no. taxi spaces;
c. Eight bus bays; and
d. 16 no. coach bays.

Parking provision

8.3.37 The types of passenger car parking provision proposed would be similar to the existing offer and cover:

a. Short stay;
b. Mid stay; and
c. Long stay.

8.3.38 Parking locations have been designed to maximise use of land owned by the Applicant, to avoid third party land impacts or Green Belt land. For Long and Mid stay parking, a mixture of standard and block parking[2] layouts are proposed in order to provide the required number of parking spaces without requiring decked or MSCP structures, which offer limited flexibility in terms of the phased approach to the Proposed Development.

8.3.39 A maximum ratio of approximately 60:40 between block parking and standard parking respectively is proposed, to maintain flexibility of choice for car park

[2] Block parking represents a highly efficient use of space where cars are parked in blocks according to the time of collection. Vehicles will arrive at pre-booked times, and the operator will park the vehicle to suit the collection time. This reduces the amount of circulation space required in the car park.

users. All Short stay parking would be standard parking, i.e. not the block arrangement.

8.3.40 Future passenger car parking requirements have been determined from the baseline of 10,550 parking spaces which was the level of car parking required at the point when the airport reached its permitted capacity of 18 mppa. The future car parking takes account of the growth in passengers and the assumed reduction in car parking mode share (see Section 9).

8.3.41 Future staff parking requirements have been determined from a baseline of 3,670 airport related staff parking spaces. An assumption of 350 additional on-site staff for every additional 1 mppa was adopted as the basis for estimating future year staff car parking. This is a conservative assumption as subsequent more detailed analysis of the expected on-site employment growth (provided as **Appendix 11.1** to the **ES** submitted as part of the application for development consent **[TR020001/APP/5.02]**) shows that the expected employment growth will be of the order of 320 additional on-site staff for every additional 1 mppa. The future car parking takes account of the growth in airport related staff and the assumed reduction in car driver mode share (see Chapter 9). The mode shift assumptions have only been applied to 'new' staff over and above the existing staff, to enable a robust traffic analysis.

8.3.42 The proposed parking provision assumed to be delivered during assessment phases 1, 2a and 2b is summarised in **Table 8.2**.

Table 8.2: Proposed Assessment Phase Car Parking Provision

Parking type	Number of spaces (rounded)			
	Existing (2019)	Assessment Phase 1 (21.5mppa)	Assessment Phase 2a (27mppa)	Assessment Phase 2b (32mppa)
Passenger Short stay	3,700	4,150	4,800	5,800
Passenger Mid stay	2,350	2,600	3,000	3,650
Passenger Long stay	4,500	4,675	5,400	6,550
Staff (airport related)	3,800	4,400	4,900	5,200
Car hire	350	500	600	700
Valet pick up/drop off	50	75	100	125
Total	**14,750**	**16,400**	**18,800**	**22,025**

8.3.43 The proposed car parking capacity would include provision for disabled parking and electric vehicle (EV) parking. For new car parks, 5% of the car parking capacity would be provided for disabled parking. As the rate of increase in future demand for EV parking is difficult to predict, the intention would be to provide the infrastructure required for future installation of EV charging in new car parks and to provide EV charging points to meet demand, which would be monitored. More details on the approach to delivering EV charging infrastructure is included within the **FTP [TR020001/APP/7.13]**.

8.3.44 To meet the anticipated parking requirements, Short stay provision would include the existing MSCP facilities at T1, together with a new surface level car park (upgraded to a MSCP when needed) adjacent to T2.

8.3.45 The Mid stay and Long stay car parks would have shuttle buses to deliver air passengers to both terminals.

8.3.46 Parking for staff would be accommodated within a car park on the site of the existing staff car park and car hire centre, known as Car Park P9. This is currently located to the north of President Way. Additional provision for dedicated airport staff parking is to be made at the following locations (se**e Figure 8.8** for locations):

a. Car Park P1 (assessment phases 2a and 2b) – New MSCP at Parkway Road (capacity 1,000 bays)

b. Car Park P2 (assessment phases 2a and 2b) – surface car park near Vauxhall Road with access from Kimpton Road (capacity 450 bays)

c. Car Park P7 (assessment phase 1) – surface car park east of existing long stay car park (280 staff bays provided within overall 3,090 space car park)

d. Car Park P10 (assessment phase 2b) – surface car park east of T2 (505 staff bays provided within overall 3,165 space car park)

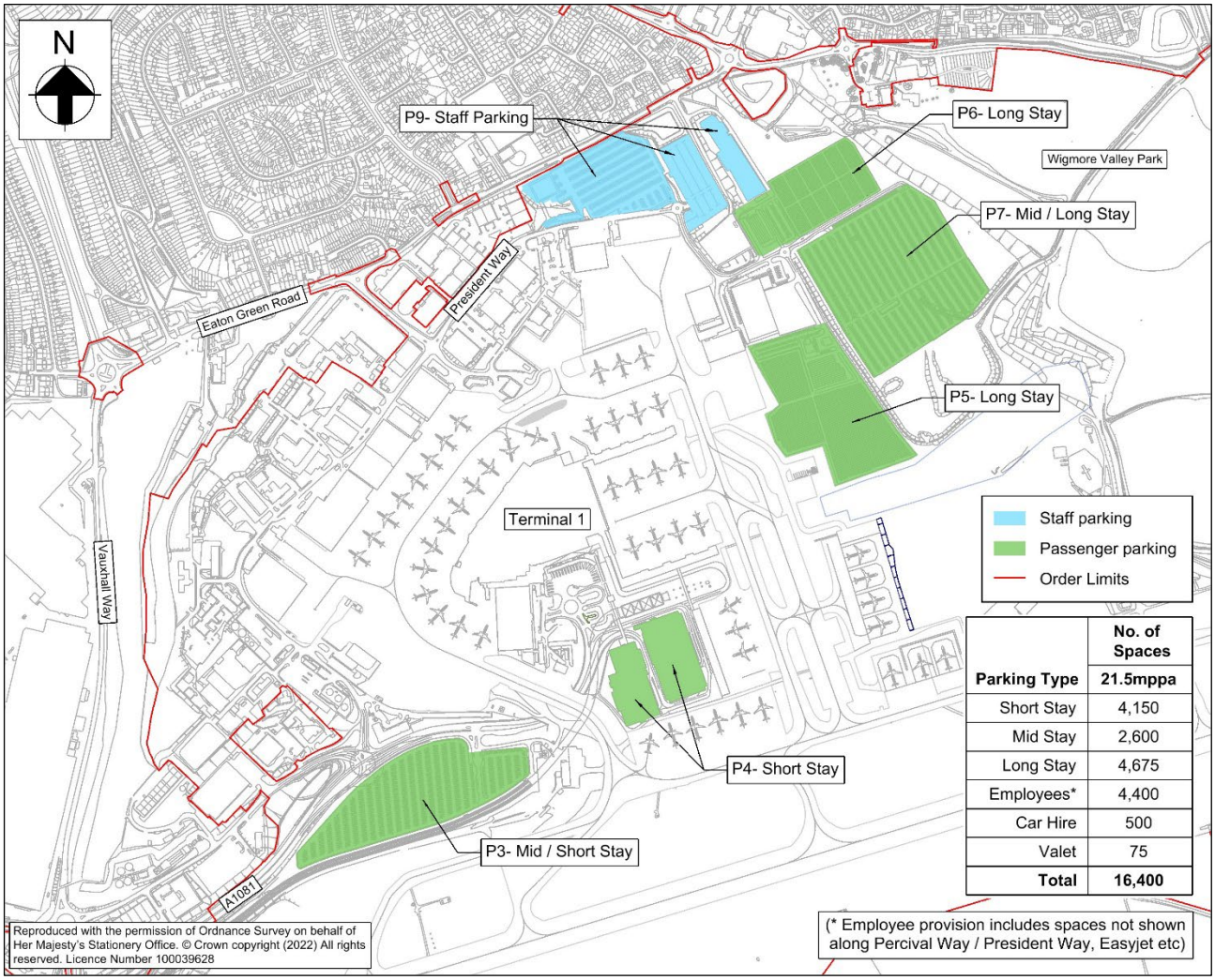
e. Various retained car parks along Percival Way, President Way and Vauxhall Way (easyJet)

f. Various new parking areas provided along the AAR to replace affected car parks as a result of the AAR works (assessment phase 2a and 2b)

8.3.47 Staff parking in the proposed car parks near Luton Airport Parkway station (Car Parks P1 and P2) would be able to use the Luton DART to reach T1 and T2.

8.3.48 Proposed car parking locations are shown in **Figure 8.8**, **Figure 8.9** and **Figure 8.10**.

Figure 8.8: Car Parking Proposals - Assessment Phase 1



Parking Type	No. of Spaces 21.5mppa
Short Stay	4,150
Mid Stay	2,600
Long Stay	4,675
Employees*	4,400
Car Hire	500
Valet	75
Total	**16,400**

8.3.49 For assessment phase 1 (21.5 mppa), the parking provision would be as follows:

a. Car Park P3 - The existing Mid stay car park accessed from Airport Way is retained in its current configuration, with circa 1,700 spaces provided.

b. Car Park P4 - The two existing T1 multi-storey car parks are retained in their current configuration, with circa 3,714 spaces provided.

c. Car Park P5 - The existing Long stay car park is reduced in size to accommodate extensions to the airside land platform. Circa 2,450 spaces are provided within the remaining area of parking.

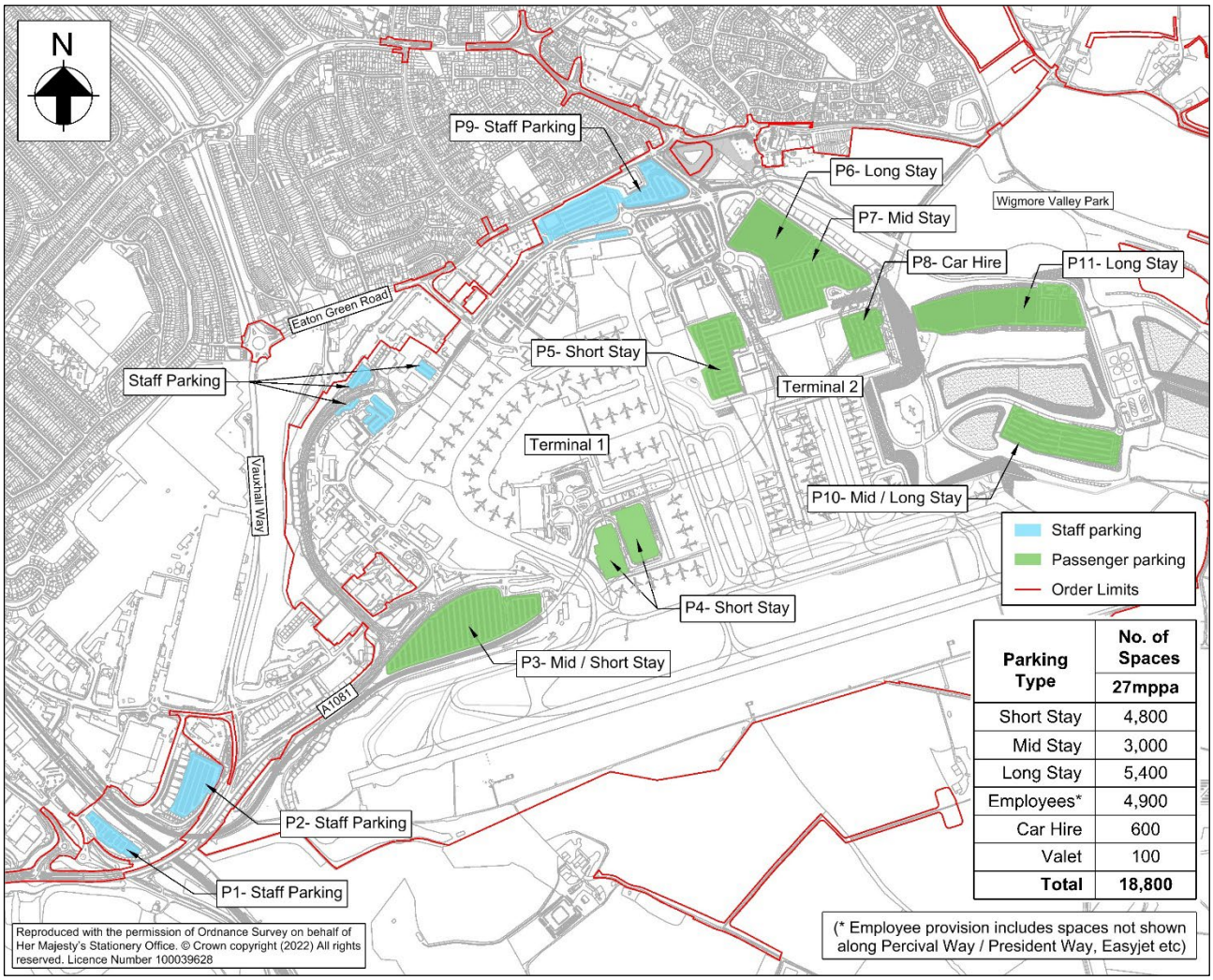
d. Car Park P6 - A new area of parking is provided on an existing area of Wigmore Park, to offset losses from Car Park P5 and meet anticipated demand. Circa 1,250 spaces are provided in a block parking configuration.

e. Car Park P7 - A new area of parking is provided on an existing area of Wigmore Park, to offset losses from Car Park P5 and meet anticipated demand. Circa 3,090 spaces are provided in a standard bay configuration.

f. Car Park P9 - The existing car hire centre and area of staff parking is reconfigured to provide circa 1,075 at-grade parking spaces for staff only,

with car hire spaces relocated to Car Park P7 within a segregated area. The existing area of parking associated with TUI and the overflow staff car park (810 spaces in total) located east of Car Park P9 are retained.

Figure 8.9: Car Parking Proposals - Assessment Phase 2a



8.3.50 For assessment Phase 2a (27 mppa), the parking provision would be as follows:

a. Car Park P1 - A new multi-storey car park is constructed on the 'tiered site' to the east of Luton Parkway station MSCP. Circa 1,000 parking spaces are proposed for airport staff only.

b. Car Park P2 - A new surface level car park is constructed on the trailer park site which is currently utilised for HGV parking and coach layover. Circa 450 parking spaces are proposed for airport staff only.

c. Car Park P3 - Minor amendments are proposed to the overall area and shape of the existing Mid stay car park, to accommodate adjacent works to the A1081/AAR/Percival Way junction. Circa 1,700 parking spaces are provided.

d. Car Park P4 - The existing T1 multi-storey car parks are retained, with circa 3,714 parking spaces provided.

e. Car Park P5 - The existing Long stay car park is further reduced in size to accommodate the new T2. The car park is converted to a partially decked short stay car park with circa 1,200 parking space capacity.

f. Car Park P6 - The overall area and shape of Car Park P6 is amended to suit the ongoing development of T2 and the partial provision of GHP. Circa 1,620 parking spaces are provided as block parking.

g. Car Park P7 - The overall area and shape of Car Park P6 is amended to suit the ongoing development of T2 and the partial provision of GHP. Circa 1,230 parking spaces are provided in a standard bay configuration.

h. Car Park P8 - A new surface car park for car hire is provided, with circa 600 parking spaces.

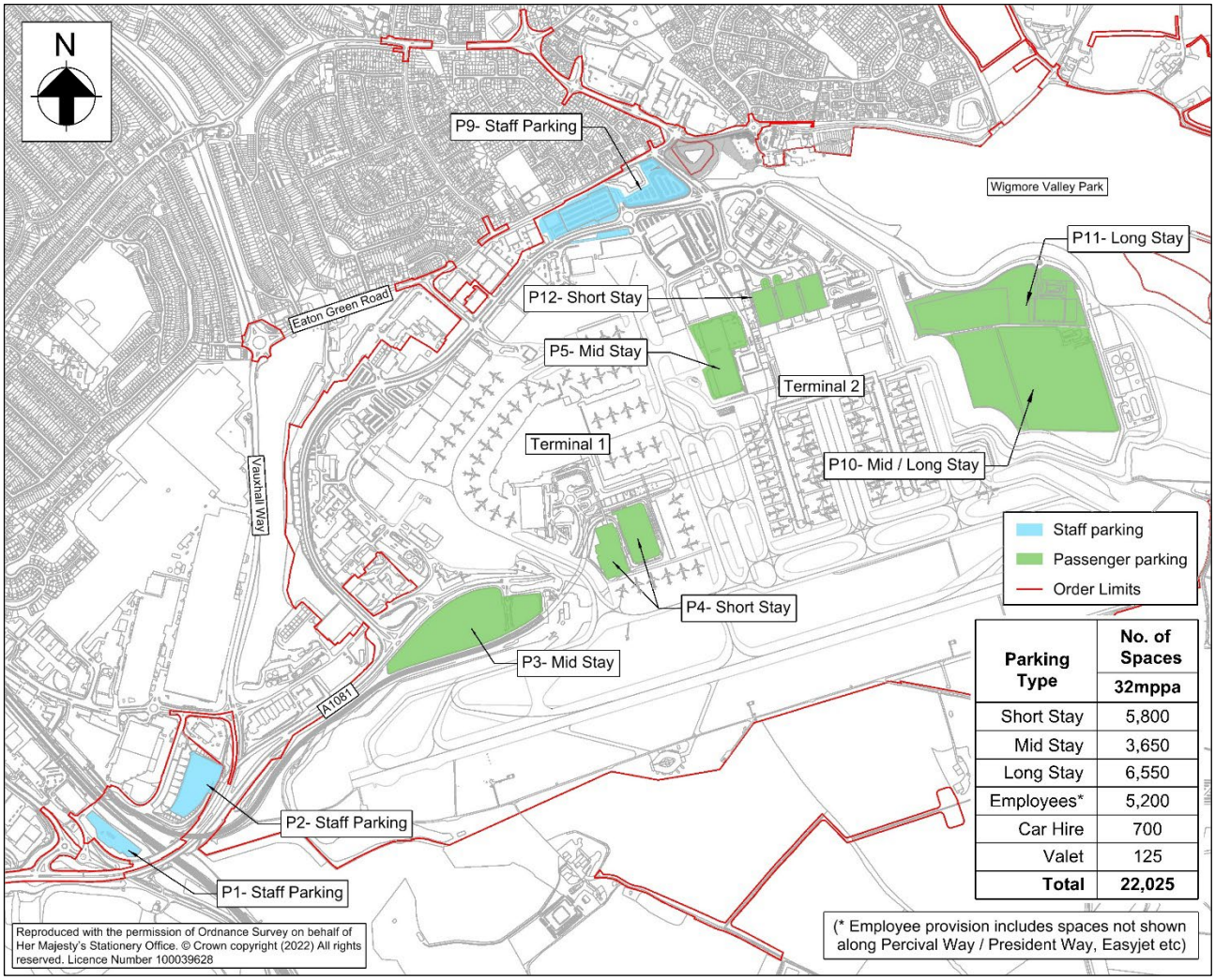
i. Car Park P9 - The area of staff parking from assessment phase 1 is reconfigured to suit the proposed alignment of AAR. Circa 1,200 parking spaces are provided for staff only in a partially decked configuration, with the 500 affected TUI car park spaces to be re-provided in this car park.

j. Car Park P10 - A new area of surface level parking is proposed within the excavated area, east of T2. Circa 1,150 parking spaces are provided in a standard parking bay configuration.

k. Car Park P11 - A new area of surface level parking is proposed within the excavated area, east of T2. Circa 2,700 parking spaces are provided in a block parking configuration.

l. AAR - A series of replacement staff parking areas are provided along the AAR alignment, to replace areas of existing parking which are affected as a result of the proposed works. Circa 450 spaces are provided, with approximately 1,850 existing staff spaces retained (including easyJet and parking areas along President Way/Percival Way etc).

Figure 8.10: Car Parking Proposals - Assessment Phase 2b



8.3.51 For assessment hase 2b (32 mppa), the parking provision would be as follows:

a. Car Parks P1, P2, P3 and P4 are retained as per assessment phase 2a.

b. Car Park P5 - The short stay decked car park adjacent to T2 is converted into mid stay parking. Circa 1,200 parking spaces are retained.

c. Car Park P6 and P7 - These car parks are removed to accommodate the GHP development.

d. Car Park P8 – This car hire parking area is removed at assessment phase 2b to allow the T2 building to be expanded, and is relocated within Car Park P10 with an increased capacity of 750 spaces.

e. Car Park P9 – This car park is retained from assessment phase 2a.

f. Car Park P10 - This car park is expanded and reconfigured to provide circa 3,165 parking spaces in a standard bay configuration, including 505 staff spaces.

g. Car Park P11 - This car park is expanded and reconfigured to provide circa 5,350 parking spaces in a block parking configuration.

h. Car Park P12 - A new MSCP directly along the T2 frontage, which will provide circa 2,225 parking spaces for Short stay and pick up / drop off activity including valet parking.

i. AAR – Approximately 1,455 staff parking spaces are retained along AAR, Percival Way and President Way, with a further 850 spaces retained at easyJet (Vauxhall Way).

Public transport

8.3.52 Public transport provision within the Proposed Development includes the following elements:

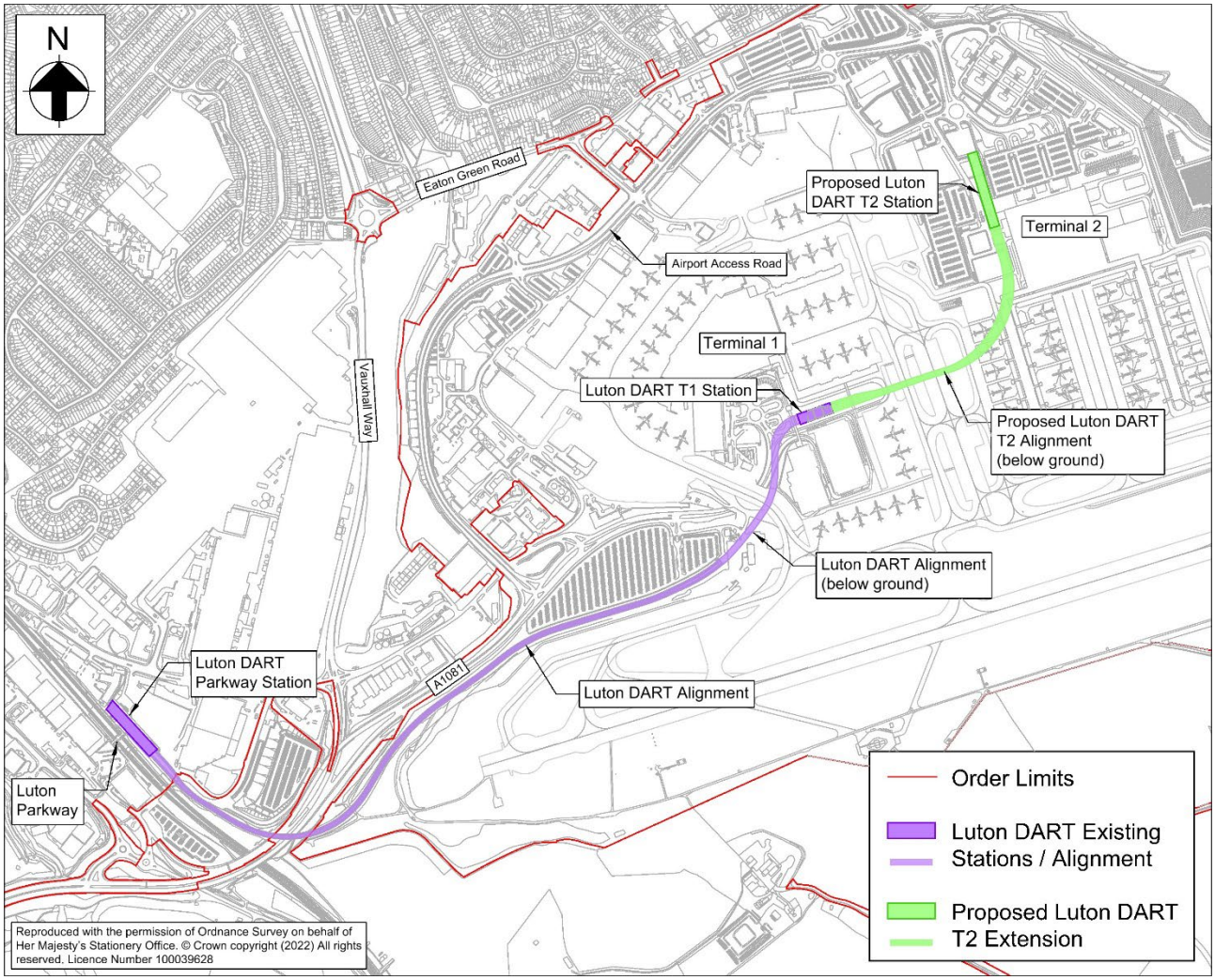
a. An extension to Luton DART which would link T2 to the national rail services at Luton Airport Parkway station;

b. Provision for bus services; and

c. Provision for coach services.

8.3.53 The recently constructed Luton DART will provide a direct link from Luton Airport Parkway station to T1, replacing the existing shuttle bus service and providing a high-quality connection to T1 - the announcement of an official opening date will be made in early 2023. Luton DART will be extended to T2 as part of the Proposed Development as shown on **Figure 8.11**.

Figure 8.11: Proposed extension of Luton DART



8.3.54 At T2, the Luton DART station will be positioned to the immediate west of the terminal entrance at a below ground level. Escalators and steps will be provided from the station platforms to the terminal plaza, with passengers able to walk directly into the T2 building.

8.3.55 The existing bus station at T1 would be expanded to include additional bus bays and new bus and coach facilities would be provided at T2 as described earlier in this Section. It is expected that local bus services and shuttle buses associated with airport related car parks would be accommodated within the ground floor forecourt at T2, with the separate coach station servicing longer distance routes.

Pedestrian and cycle facilities

8.3.56 Whilst it is unlikely that passengers will walk or cycle to the airport due to the length of the journey and the need to travel with luggage (which is reflected by the low mode share for passengers), there are a number of potential opportunities to improve walking and cycling facilities for staff.

Cycle parking

8.3.57 The cycle parking provided at various locations around the airport estate was sufficient to meet demand from staff at the point when the airport was handling the permitted capacity of 18mppa. The proposed future cycle parking makes allowance for the increase in walking/cycling mode share (see Section 9.3) and takes account of forecast growth in staff at the airport. The increase in cycle parking provision forecast to be required at each assessment phase is shown in **Table 8.3**.

Table 8.3: Proposed additional cycle parking spaces (minimum)

Assessment Phase 1 (21.5 mppa)	Assessment Phase 2a (27 mppa)	Assessment Phase 2b (32 mppa)
10	52	106

* It has been assumed that all the assumed increase in the walking/cycling mode share would be for cycling, given the limited catchment for walking.

8.3.58 Demand for cycle parking would be monitored as part of the **FTP [TR020001/APP/7.13]** measures and if demand met or exceeded the minimum provision, the number of cycle parking spaces would be increased in line with the growth in demand.

8.3.59 Cycle parking will be located close to staff entrances and will be secure and weatherproof. The Proposed Development would include supporting changing facilities, lockers and showers.

Pedestrian and cycle routes/facilities

8.3.60 Pedestrian and cycle facilities would be provided along all new road links within the Proposed Development, including the AAR, Eaton Green Road Link and the retained section of President Way. Shared pedestrian/cycle facilities would run along the southern side of the AAR and the western side of the Eaton Green Road Link. The implementation of the AAR should also lead to a reduction in traffic on Percival Way which would make the road carriageway quieter and therefore more attractive for cycle use.

8.3.61 These improvements would help encourage walking and cycling commuter trips, particularly between the large residential area of Wigmore to the north of the airport, and the main employment areas at the airport terminals and businesses located along the AAR, Percival Way and President Way. In addition, the walking and cycling improvements would support staff movements between the airport terminals and the associated businesses on the AAR, Percival Way and President Way.

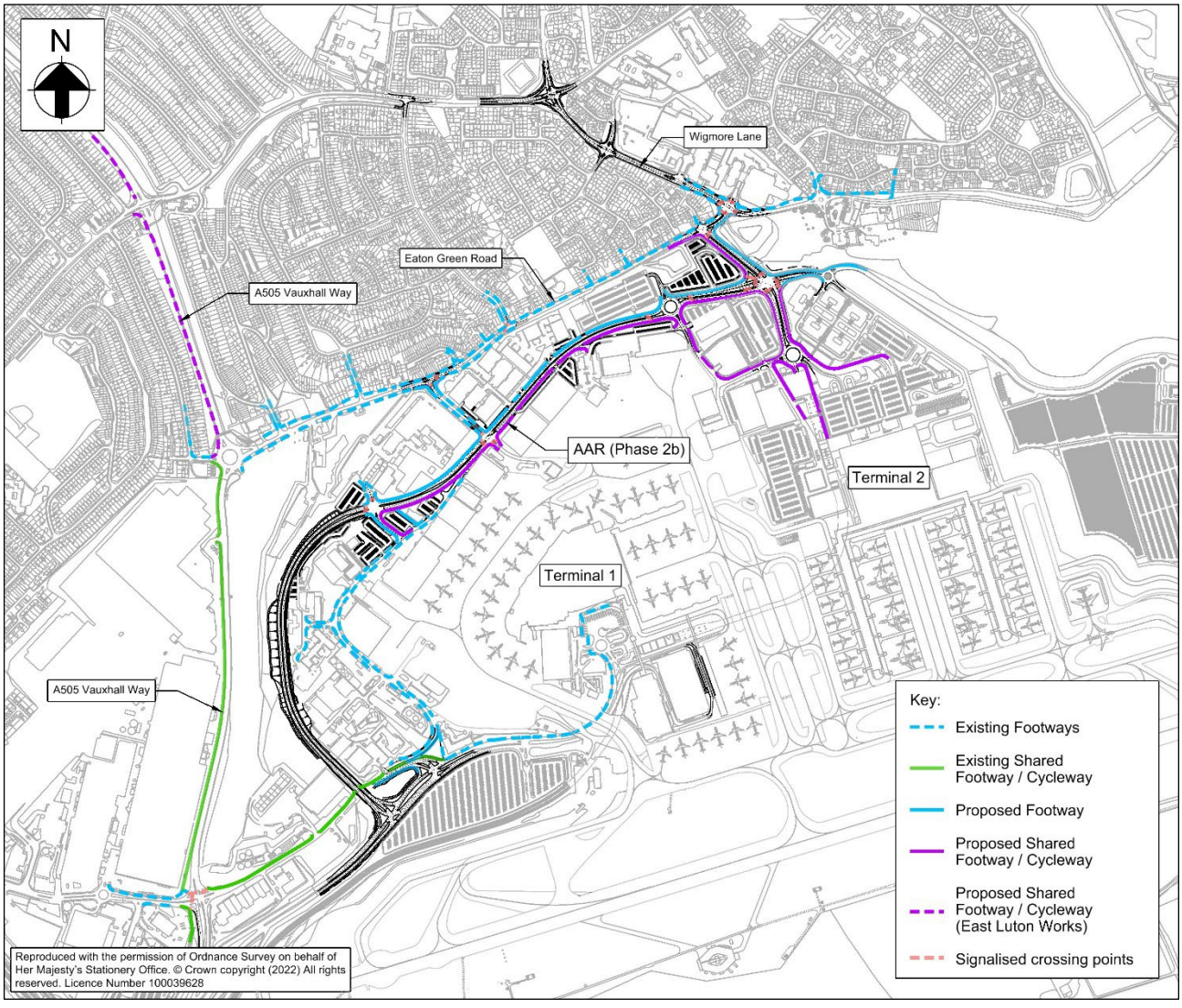
8.3.62 East of T2, improved pedestrian and cycle connections are proposed within the area of replacement parkland and Wigmore Park. These connections will take the form of new footways, multi-use paths and bridleways, which will improve linkages between the airport and rural locations such as Breachwood Green.

8.3.63 On the west side of the airport, the proposed shared pedestrian/cycle route along the AAR, and the more lightly trafficked section of Percival Way would make cycling from the west a more attractive proposition, with existing routes on Airport Way and the southern section of Vauxhall Way between Airport Way and Eaton Green Road. The LBC proposal to extend the off-road shared pedestrian cycle path on Vauxhall Way from Eaton Green Road to Stopsley Way would potentially open up a wider catchment to the north for cycling to the airport and the associated businesses.

8.3.64 Various forms of junction mitigation are also proposed within the vicinity of the airport, which include measures such as signalised junctions. These signalised junctions would allow the provision of improved pedestrian crossings, further enhancing pedestrian connectivity.

8.3.65 A plan showing existing and proposed pedestrian and cycle routes is shown in **Figure 8.12**.

Figure 8.12: Existing and proposed pedestrian and cycle routes



8.4 Public Rights of Way

8.4.1 A series of improvements and alterations are proposed to PRoWs in the vicinity of the Proposed Development. These include new and improved routes within the planned replacement parkland and Wigmore Park and stopping up of existing PRoWs.

8.4.2 Key planned improvements to PRoWs include:

a. the creation of a new footpath to connect Footpaths 38 and 43, within the area of replacement parkland;

b. improvements to Footpaths 41 and 43 to provide surfaced multi-use tracks, suitable for cyclists and equestrians;

c. improvements to the uncontrolled pedestrian crossing of Eaton Green Road at the north western extent of Footpath 43, as it connects with Footpath 39;

d. improvements to Bridleway 52 to provide a surfaced multi-use track, encouraging linkages to Breachwood Green;

e. the creation of a new multi-use bridleway linking Footpath 41 and Bridleway 52, via a new at-grade crossing of Winch Hill Road as part of Work No. 5b(05);

f. the creation of a new multi-use bridleway linking Winch Hill Road with Footpath 43 as part of Work No. 5b(04), replacing the stopped up north/south route comprising Footpath 29 and 38 and Bridleway 28 and 37;

g. upgrading of Footpath 41 to a bridleway as part of Work No. 5b(06);

h. upgrading of Footpath 43 to a bridleway as part of Work No. 5b(07);

i. the provision of multiple new unnamed footpaths within the replacement parkland and Wigmore Park; and

j. the creation of a new public right of way via the existing tunnel beneath the Midland Mainline, linking Car Parks P1 and P2 and enabling a pedestrian route to Luton DART from Car Park P1.

8.4.3 Footpaths 29 and 38, and Bridleways 28 and 37, would be stopped up to accommodate the excavated area to the east of T2.

8.4.4 The proposed changes to PRoW are shown on **Figure 8.13**, **Figure 8.14** and **Figure 8.15**.

Figure 8.13: Proposed changes to PRoW (Assessment Phase 1)

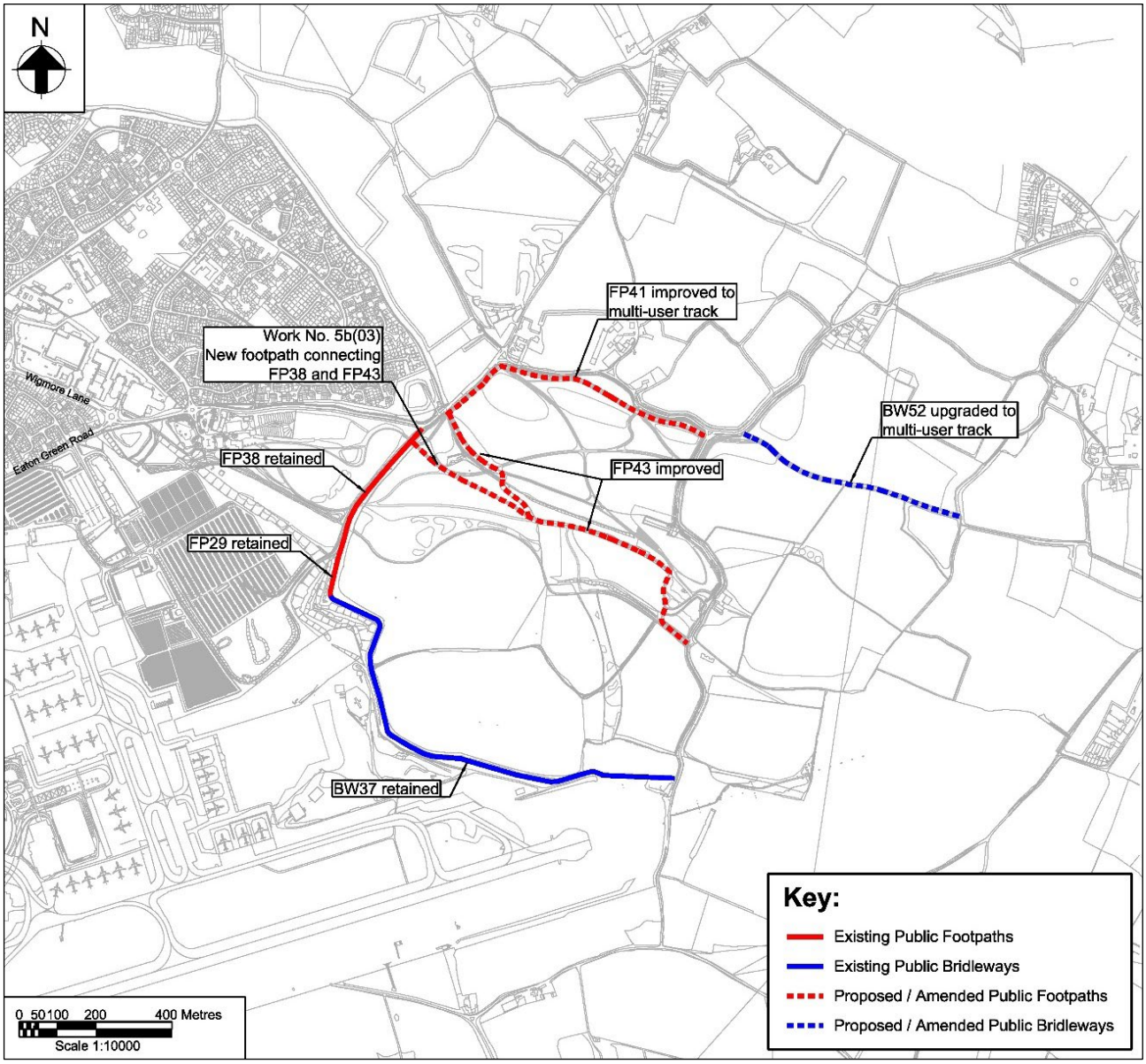


Figure 8.14: Proposed changes to PRoW (Assessment Phase 2a)

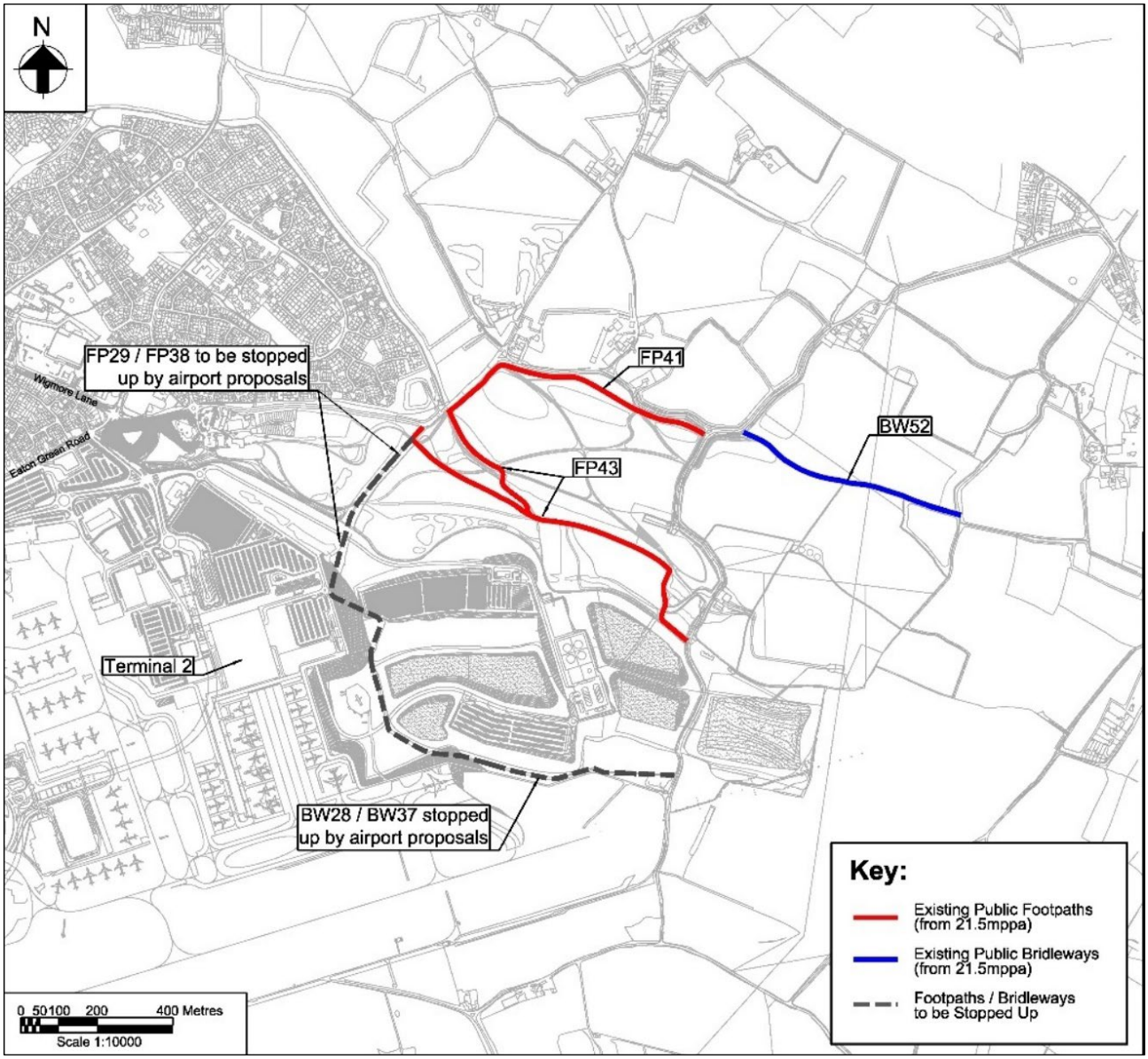
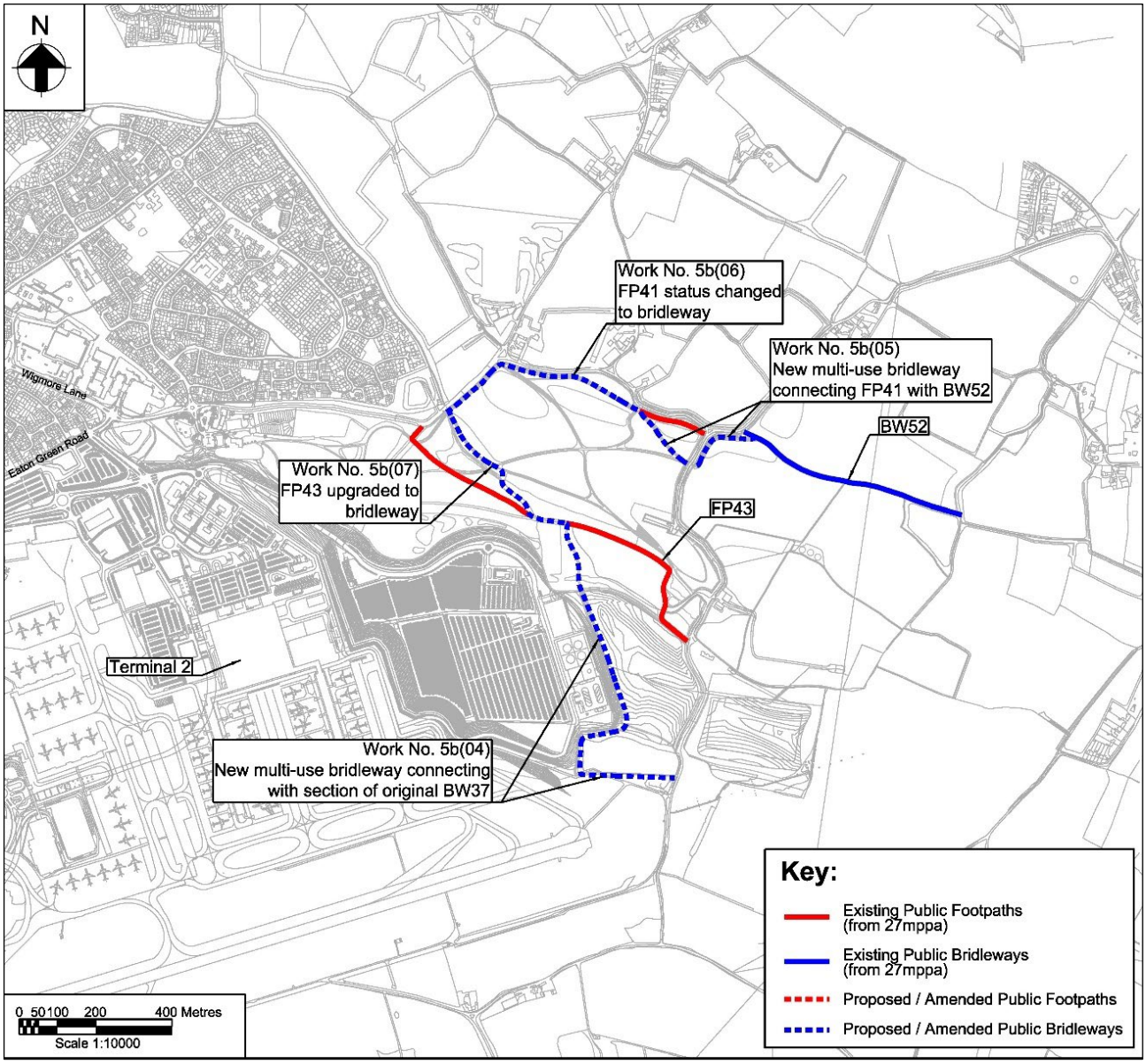


Figure 8.15: Proposed changes to PRoW (Assessment Phase 2b)



8.4.5 the baseline HGV and LGV movements to/from the airport. The future year trip generation is shown in **Table 8.4**.

Table 8.4: Forecast HGV and LGV trip generation - AM and PM peak hour

Inbound/ Outbound	Baseline	Future Baseline (Without Proposed Development)	With Proposed Development		
	2017	2027, 2039, 2043	2027	2039	2043
AM Peak					
HGV					
Total Vehicles	**178**	**202**	**241**	**302**	**358**
Inbound	90	102	122	153	182
Outbound	88	99	119	149	177
LGV					
Total Vehicles	**199**	**225**	**269**	**338**	**400**
Inbound	100	113	135	170	201
Outbound	99	112	134	168	199
PM Peak					
HGV					
Total Vehicles	**149**	**169**	**202**	**253**	**300**
Inbound	76	86	102	128	152
Outbound	73	83	99	125	148
LGV					

Inbound/ Outbound	Baseline	Future Baseline (Without Proposed Development)	With Proposed Development		
	2017	2027, 2039, 2043	2027	2039	2043
Total Vehicles	**133**	**151**	**180**	**226**	**268**
Inbound	75	85	102	128	151
Outbound	58	66	78	98	117

* 2017 Baseline (Vissim model) shown for comparison purposes

Trip distribution

8.4.6 The distribution and assignment of passenger trips with the Proposed Development operational is based on CAA origin and destination data. For the Future Baseline scenarios, the trip distribution is based on the existing movement patterns established from the 2016 (CBLTM-LTN) and 2017 (Vissim) base models.

8.4.7 Future year trip distribution and assignment for staff, HGV and LGV trips are based on the movement patterns established from the 2016 (CBLTM-LTN) and 2017 (Vissim) base models.

8.5 Road traffic forecasts

8.5.1 Future Baseline traffic flows have been developed as described earlier in this chapter, with an adjustment of the airport trip generation made to suit the airport handling the permitted maximum capacity of 18 mppa i.e. the airport handled 14.6 mppa in 2016 (CBLTM-LTN baseline) and 15.9 mppa in 2017 (Vissim model baseline) so the airport trip generations were increased to reflect 18 mppa.

8.5.2 The process for adding the With Proposed Development traffic flows is described below for the CBLTM-LTN and the Vissim model respectively.

8.5.3 As set out in Chapter 8 of this report, the Proposed Development is described in three phases for the purposes of assessment: assessment phase 1, assessment phase 2a and assessment phase 2b. These are ‘assessment phases’. In practice, the Proposed Development will be delivered in undefined increments that appropriately respond to demand over time, which may differ from the assessment phases providing delivery does not give rise to impacts which are materially different to those reported in this Transport Assessment.

8.5.4 The three assessment phases of the Proposed Development comprise the works associated with the expansion of the airport and off-site mitigation measures (see **Table 8.1**). The assessment includes off-site mitigation measures associated with each assessment phase, however, the need and delivery of any mitigation measure will be dependent on the undefined incremental delivery of the Proposed

Development. As such it is proposed to implement a monitoring regime with triggers to determine when each intervention is required. Notwithstanding this, and for assessment purposes, the works assumed in each assessment phase are summarised below.

CBLTM-LTN

8.5.5 To produce the With Development scenario in the CBLTM-LTN, the following incremental changes were made to the Future Baseline:

a. Forecast airport travel matrices representing the assumed airport throughput in each forecast year were updated
b. Proposed highway improvement schemes were added depending on the forecast year, as detailed in
c. Network changes to represent the proposed T2, including the extension of Luton DART to serve T2

8.5.6 The AAR has been included with staged delivery between assessment phase 2a and assessment phase 2b.

8.5.7 The GHP development has been included in the With Development scenario only.

8.5.8 Full details of the With Development scenario are provided in the Strategic Modelling Forecasting Report (see **Appendix F**).

Vissim model

8.5.9 To produce the With Development scenario in the Vissim model, the following changes were made to the Future Baseline:

a. Baseline passenger demand has been replaced with Proposed Development passenger demand
b. Growth factors have been applied to the baseline staff vehicle trips, HGV and LGV trips in the airport zones
c. The proposed highway improvement schemes were added to the relevant future year in line with **Table 8.1**
d. Highway network changes were made to represent the Proposed Development including T2
e. The AAR has been included with staged delivery assumed between assessment phase 2a (2039) and assessment phase 2b (2043)
f. The GHP development has been included with staged delivery assumed between assessment phase 2a (2039) and assessment phase 2b (2043)

8.5.10 Full details of the With Development scenario are provided in the Vissim Modelling Forecasting Report (see **Appendix G**).

REFERENCES

Ref 5.1 LBC (2023) *Bus Map and Journey Planner.* Available on LBC website, accessed 17 February 2023.
Ref 5.2 Luton Borough Council (2023) *Luton and Dunstable Area Cycle Map.* Available on LBC website, accessed 17 February 2023.
Ref 5.3 London Luton Airport (2020). *Annual Monitoring Report 2020*. Available on LLA website, accessed 17 February 2023.
Ref 7.1 Institute of Environmental Management and Assessment (2023). *Guidelines for the Environmental Assessment of Road Traffic.* Available on IEMA website, accessed 17 February 2023