The Hillingdon Hospital Redevelopment

Off-Site Decant Parking Site Review

Project:	The Hillingdon Hospital Redevelopment		
Our reference:	107080-MMD-TR-XX-RP-001	**Your reference:**	
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Approved by:	Mark Staniland	**Checked by:**	James Wright
Subject:	THHR Off-Site Temporary Car Park – Transport Scoping Report		

1 Introduction

1.1 Background

Mott MacDonald has been appointed by The Hillingdon Hospitals NHS Foundation Trust (the Trust) to provide transport planning consultancy services to support them with a hybrid planning application for the proposed redevelopment of Hillingdon Hospital.

The site is in West London and is located south of Uxbridge and north of West Drayton. The Local Planning Authority is the London Borough of Hillingdon (LBH).

The redevelopment comprises:

- The construction of a new hospital building with an accompanying multi storey car park and community mobility hub on the western part of the site, and
- The construction of up to 327 residential dwellings on the eastern part of the site.

The development of the site will be split into two phases. During the first phase, the western area of the site will be cleared to enable construction to commence. This will incur a loss of 600-700 hospital car parking spaces. To offset the spaces to be removed, the Trust has developed a strategy to enable the decant of some operations from Hillingdon Hospital to a number of different sites, this includes some of the parking which will be relocated on a temporary basis (during construction) to a nearby site within walking distance of Hillingdon Hospital.

This report provides a site review for the off-site decant parking on land at Buckinghamshire County Council's Moorcroft Lane site, which can be used to offset the loss of approximately 350 to 450 car parking spaces during the decant and construction phase. The report sets out the decant parking requirements, access requirements and any associated infrastructure requirements to enable access between the car park and Hillingdon Hospital.

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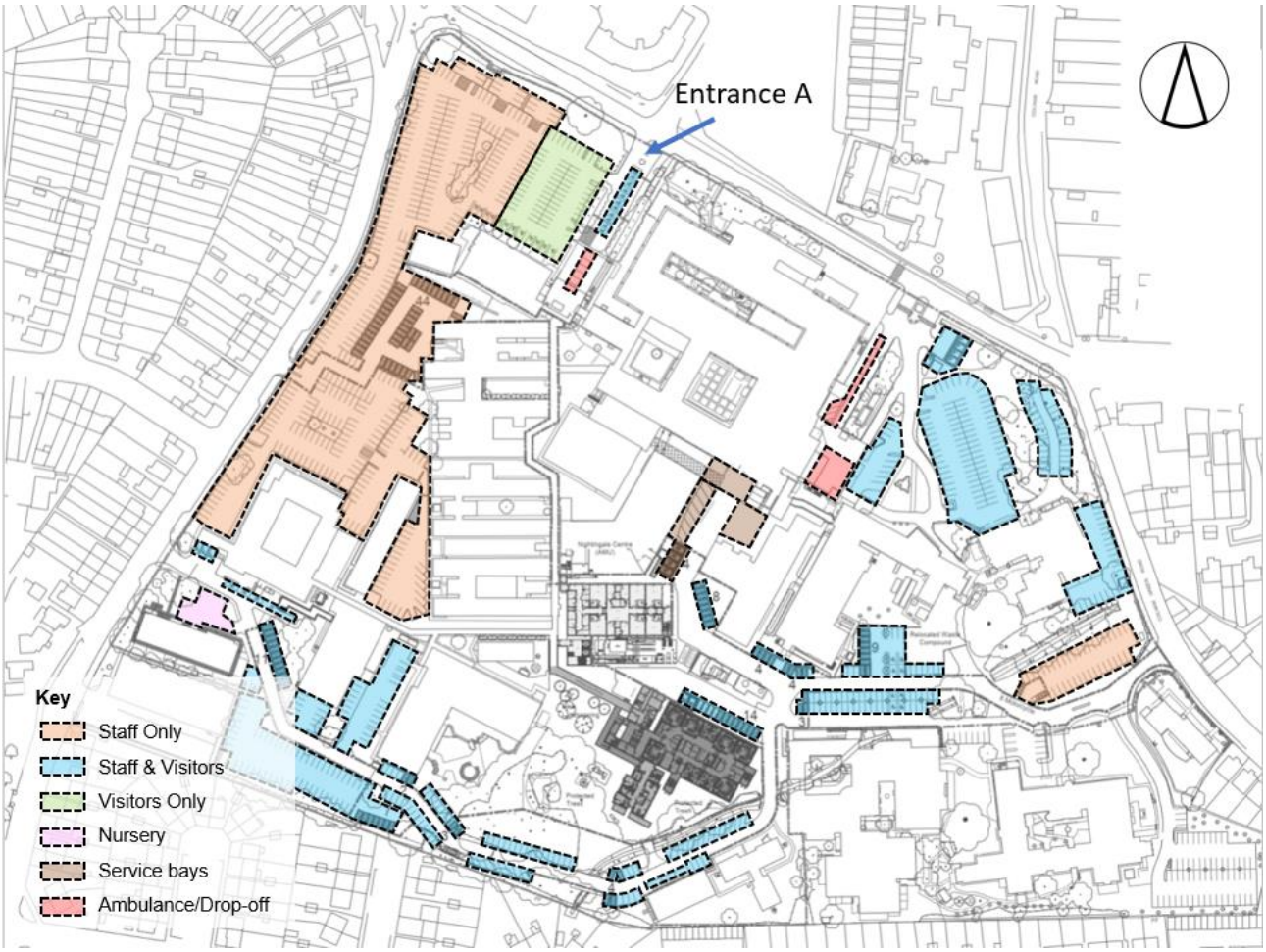
2 Background and Context

2.1 Existing Parking

2.1.1 On-Site Parking

Car parking is currently spread across the Hillingdon Hospital site. Due to the nature of the hospitals development over time, parking has been added and rearranged over the years resulting in a fragmented layout in terms of both access roads within the site and physical car parking spaces. Figure 2.1 shows parking locations across the site along with broad allocations, noting some more intricate allocations which are reflected in Table 2.1.

Figure 2.1: Baseline On-Site Car Parking



Source: Mott MacDonald

The allocation of on-site car parking is strictly controlled and enforced by parking wardens. The visitor only car park, accessed internally from Vehicle Entrance A, is barrier controlled. All other areas are either controlled by staff permit or pay and display arrangements. A summary of car park allocations across the site is shown in Table 2.1.

Table 2.1: On-Site Car Park Allocation Summary

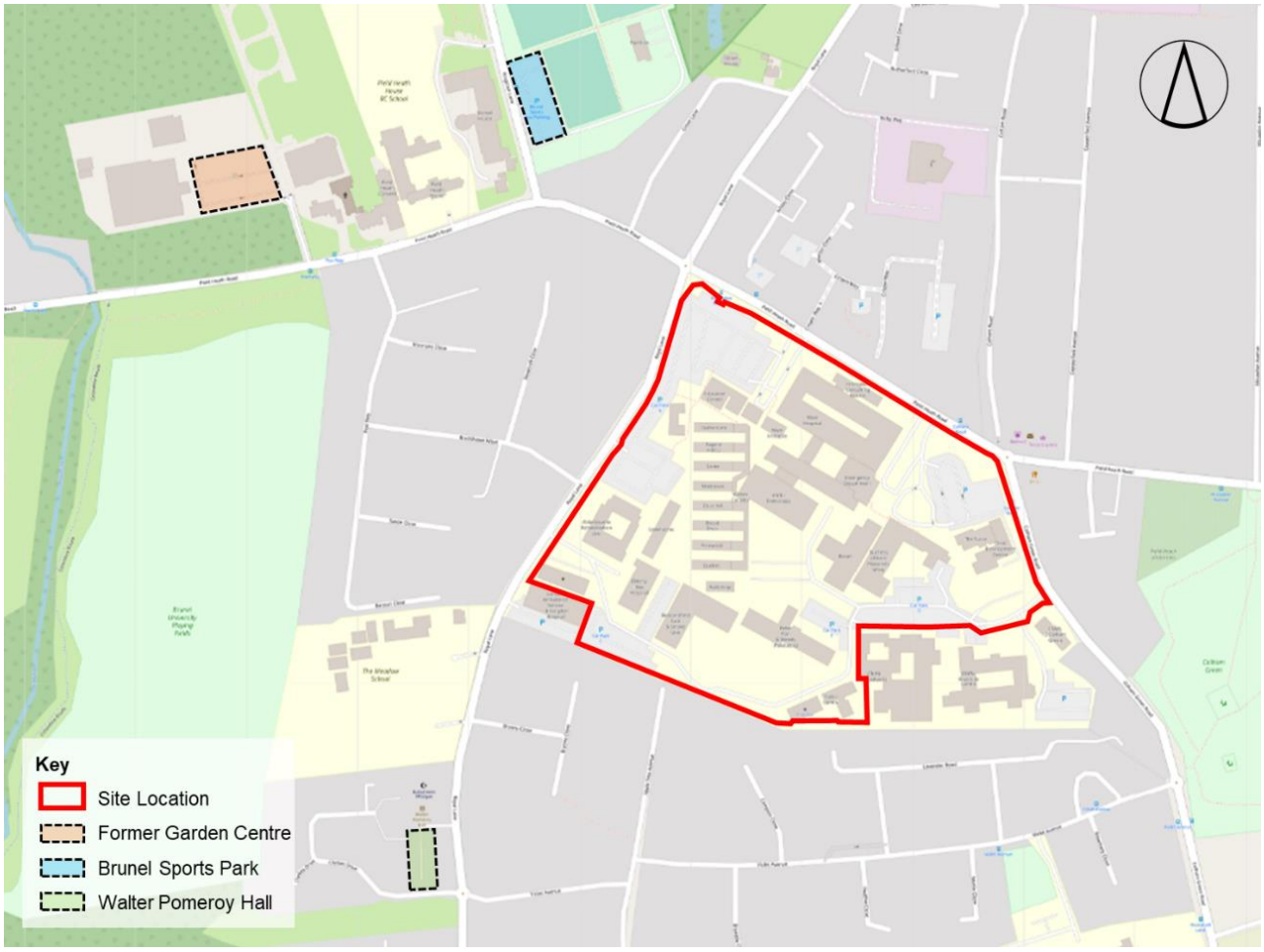
Parking Type	Current Spaces (No.)	Committed Spaces (No.)	Total Spaces (No.)	Comments
Visitor (pay & display)	56	0	56	
Visitor Disabled	8	0	8	
Mixed Staff and Visitor (pay & display)	320	67	387	
Mixed Disabled	40	6	46	
Staff Standard	391	44	435	
Staff Disabled	4	0	4	
Nursery Standard	8	0	8	
Drop-off (20 mins)	17	0	17	
Ambulance only	7	0	7	
Consultant only	12	0	12	
Fleet/servicing only	7	0	7	
Motorcycle	0	8	8	
Ambulance yard	0	0	0	Hatched area in ambulance yard with capacity for five emergency ambulances parked perpendicular to the A&E access.
Service yard	0	0	0	Hatched area in service yard with capacity for four 10m rigid HGVs parked perpendicular to the service yard access road
Total	870	125	995	

It must be noted, however, that 995 on-site spaces is not reflective of the current situation, as it is the maximum level of parking that could be available on-site in the most optimistic case. Over time, and due to different operational impacts that take place frequently within the hospital site, parking capacity fluctuates. At present there is construction activity taking place in the centre of the site and associated parking has been reduced. At the same time, additional parking spaces have been/are being put in place across the site in association with plans prepared in 2018. The levels of parking available on the site therefore changes regularly.

2.1.2 Off-Site Car Parking

For a variety of reasons, including reductions in parking on-site due to development and other interruptions, the Trust currently leases additional off-site parking. The locations of these off-site car parks in the context of the hospital site are shown in Figure 2.2.

Figure 2.2: Off-Site Car Parking



Source: Open Street Map

The parking levels available at each location are:

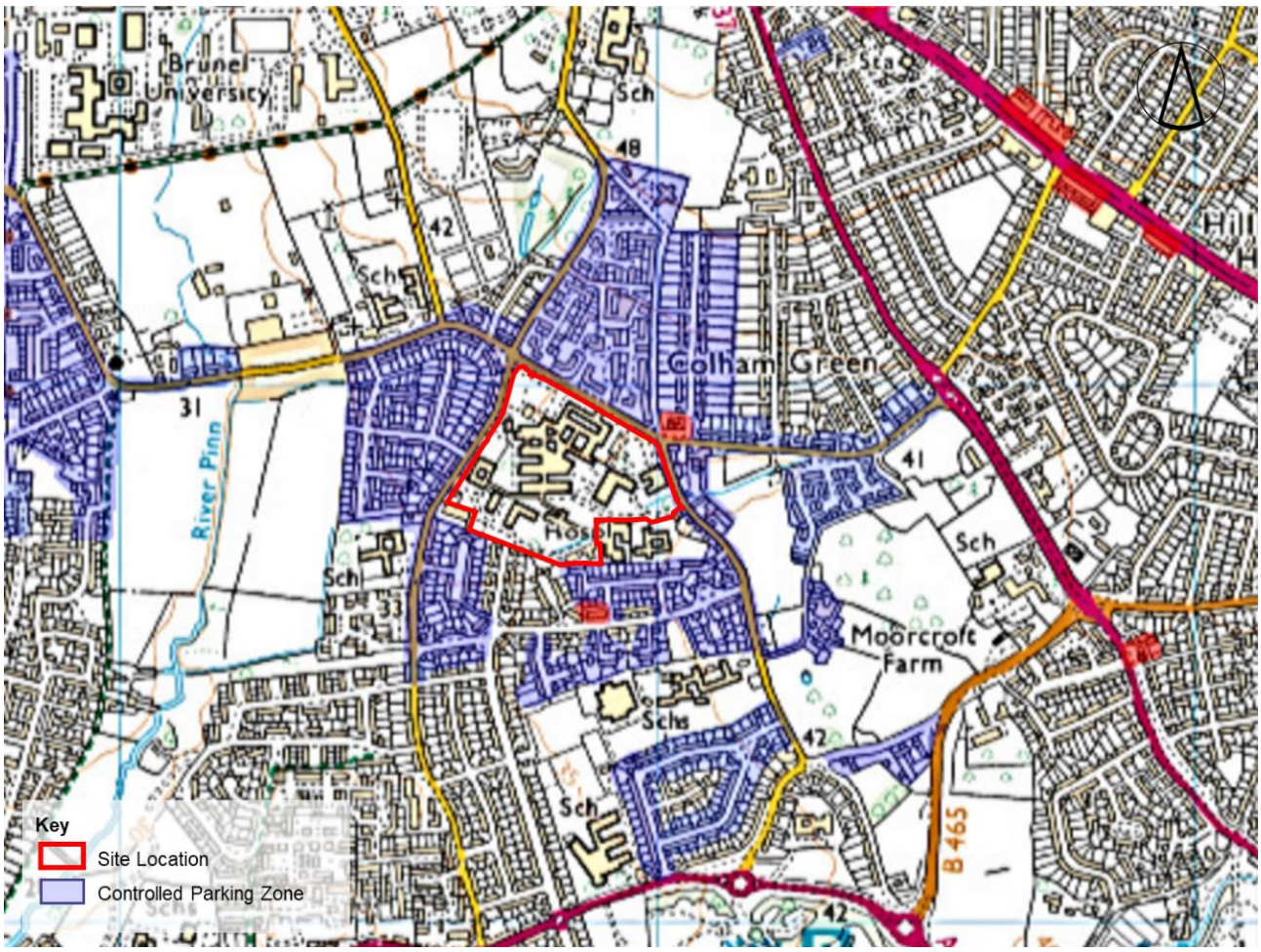
- 75 spaces at the Former Garden Centre
- 75 spaces at Brunel Sports Park
- 25 spaces at Walter Pomeroy Hall

The total level of parking that is available to the hospital, noting the optimistic level of on-site parking noted earlier, is therefore 1,170 spaces. This does not include hatched areas within the service yard or ambulance yard for deliveries/servicing or emergency ambulances.

2.1.3 Local Parking Restrictions

The hospital site is located within a Controlled Parking Zone (CPZ), referred to as Residents Parking Zone 'HH'. The extents of the HH zone are shown in Figure 2.3. During operating hours (9am to 5pm, Monday to Friday), any person parking in this zone is required to display a residents parking permit. The operating hours and permit zone are shown on signs at each parking bay. Outside the operating hours, anyone can park in a permit holder only bay.

Figure 2.3: HH Residents Parking Zone



Source: London Borough of Hillingdon

The HH CPZ allows residents to secure on-street parking nearby their homes by preventing overflow parking on-street that could otherwise be generated by the hospital. This assists with maintaining safe operation of the local highway network and also assist the Trust in taking proactive measures to reduce car reliance, particularly amongst staff.

2.2 Proposed Parking

The following sections demonstrate the proposals for accommodating and managing hospital-related parking through the construction phase of the hospital redevelopment up until completion of the multi storey car park on-site.

2.2.1 Phase 1 Construction Parking

The western area of the site will be cleared to enable construction to commence on the Phase 1 plot, which is broadly the footprint of the new hospital. Figure 2.4 shows the parking that will be lost on-site to enable construction.

Figure 2.4: On-Site Parking Lost for Phase 1 Construction

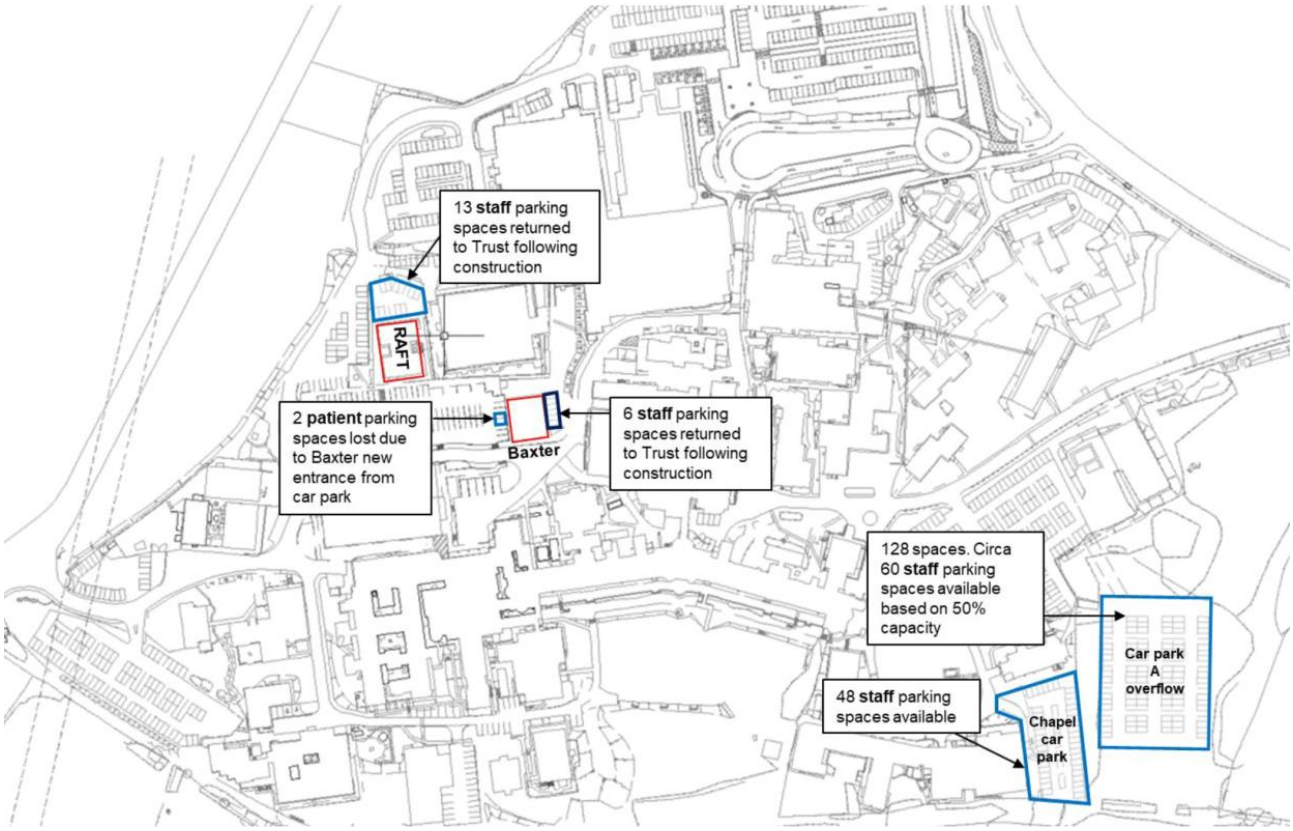
Source: Mott MacDonald

The exact level of parking removed on-site will be subject to confirmation upon contractor appointment and construction planning. At this stage it would appear that the total loss will be in the region of 600 to 700 spaces, though this number may fluctuate slightly depending upon construction traffic routing and phasing of the upgraded southern service route.

All parking for patients, visitors and key hospital operational activity is intended to be maintained on-site as far as is possible. This will be supported by ongoing management measures to carefully manage demand in a responsive manner.

To offset the spaces to be removed, the Trust has developed a strategy to enable the decant of some operations from Hillingdon Hospital to Mount Vernon Hospital. A planning application for the use of existing car parking and reinstatement of temporary car parking, both at the Mount Vernon site, has been submitted to LBH (ref: 3807/APP/2021/3328). This seeks permission for the use of the Car Park A Overflow car park and the Chapel Car Park, along with Trust use of car parking spaces at Mount Vernon that were previously utilised by third party tenants. The Transport Technical Note prepared in support of the application shows that an additional 127 parking spaces would be utilised by the Trust at Mount Vernon Hospital. The additional parking areas which have existing parking spaces not currently used by the Trust, of which use would be formally permitted on a temporary basis and utilised through the construction period, are shown in Figure 2.5.

Figure 2.5: MVH Decant Parking Proposals



This leaves a residual number of approximately 470 to 570 Hillingdon hospital car parking spaces lost during the construction of Phase 1. Therefore, further work has been undertaken to enable decant of Hillingdon hospital car parking.

2.2.2 Proposed – Decant parking during Phase 1

Mott MacDonald have been providing traffic and transport inputs to support a team appointed by the Trust planning for the decant phase.

The decant parking team developed a package of options, including the use of parking at Mount Vernon Hospital referred to earlier in this report. The shortfall, or gap, in parking was then the focus of the decant team. A wide range of options were initially identified for decant car parking nearby Hillingdon Hospital. The options were appraised against criteria set by various parties within the Trust and included:

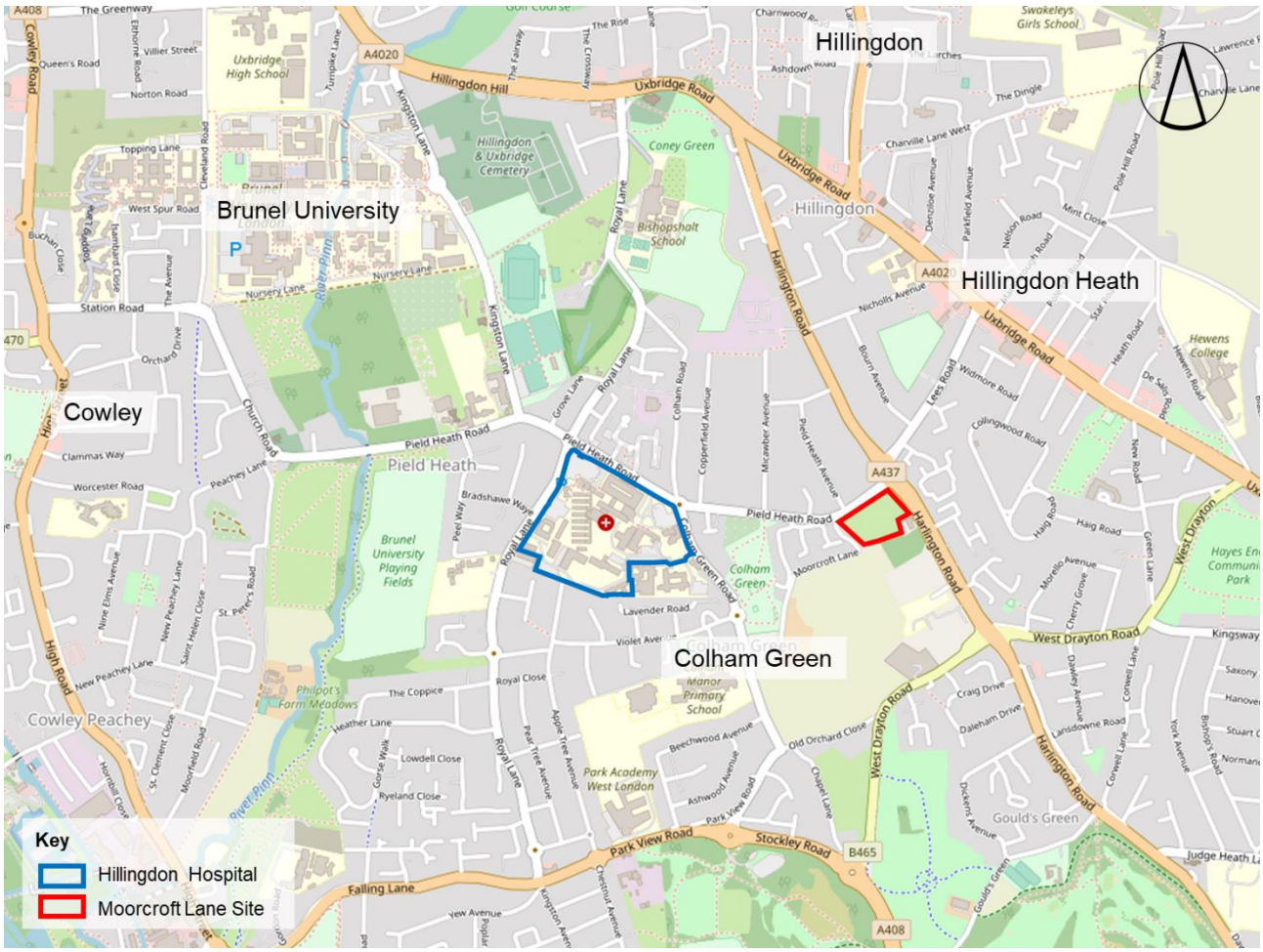
- Travel time from new parking location to hospital;
- Disabled parking provision;
- Cost of public transport (if car park further away from hospital);
- Existence of sufficient public transport links;
- Requirement for shuttle buses;
- Number of off-site parking locations;
- Security (street lighting and car park lighting, boundary security, route to hospital); and
- Effect on Hillingdon Hospital operations (for workers in the community or working across multiple locations).

Following this sequential analysis, the decant team has concluded that that use of the Buckinghamshire County Council 'Moorcroft Lane' site, is the preferred option. The Moorcroft Lane site has the potential to accommodate 400-450 parking spaces during the decant and Phase 1 construction works.

The location of the Moorcroft Lane site is shown in Figure 2.6. The site is located in Hillingdon, West London, is approximately 650m to the east of Hillingdon Hospital and can be accessed by a 650m journey along Pield Heath Road.

The site is adjacent to the A437 Harlington Road, Pield Heath Road, and Moorcroft Lane, which provide access to the local highway network and the A40, M4, M40 and M25.

Figure 2.6: Moorcroft Lane Site Location



Use of the Moorcroft Lane site would see the current on-site parking levels largely maintained through construction, noting there would inevitably be minor losses as a result of hoarding or contractor parking on-site etc.

In the lead up to the decant phase, Mott MacDonald has also been supporting the Trust team in preparing pilot schemes for a new car club and car sharing scheme. So far, consultation has been held with Enterprise Car Club in relation to a targeted Car Club scheme to reduce staff car reliance and avoid the need for some staff to bring a private car to the hospital. Consultation has also been held with LiftShare, a specialist car share platform provider and, as a result, LiftShare will be rolled out to all staff and priority parking will be provided to those staff willing to engage in the LiftShare scheme.

These measures will be in addition to the Trusts existing Travel Planning measures which have been ongoing since 2016.

2.2.3 Proposed – Phase 1 Completion

Upon completion of Phase 1 of the redevelopment, new hospital parking will be provided in a new multi storey car park and a surface level car park. The proposals will see circa 750 spaces provided in the multi storey car park, with a further circa 150 surface level spaces to be delivered at a later date upon clearance of the footprint in the area east of the new hospital.

The proposed decant parking site on Moorcroft Lane will therefore be closed and reinstated following completion of Phase 1 construction works and once the multi storey car park is fully operational.

2.2.4 Proposed - Phase 2 Completion

Upon the completion of the Phase 1 construction, the multi-storey car park will be in operation and the site will have circa 1000+ spaces (circa 750 spaces in multi storey car park + circa 300 retained parking spaces in eastern area of site). This will allow the withdrawal of some of the parking on the Phase 2 site to facilitate demolition operations that will require decommissioning of some areas of the retained surface parking.

The Phase 2 masterplan provides additional surface parking of approximately 150 spaces to enable disposal of land in the remaining site for redevelopment. There will be a total of circa 950 hospital parking spaces on site after Phase 2, which is a reduction of on-site provision of circa 45 compared to the current site and a reduction of 220 spaces when the current off-site parking is also counted.

3 Travel Demand and Traffic Impacts

The proposed temporary car park at Moorcroft Lane has capacity for up to 450 cars (subject to minor fluctuations).

Traffic surveys were undertaken at the hospital in February and November 2021. The surveys captured multi modal activity at and around the site, including vehicle entries and exits at the dedicated staff car park accessed from Royal Lane.

The arrival profiles from the February and November 2021 surveys are shown in Figure 3.1 and the departure profiles in Figure 3.2. These are broken down into 15-minute segments and cover a 24-hour period.

Figure 3.1: Staff Car Park Arrival Profile (Surveyed)

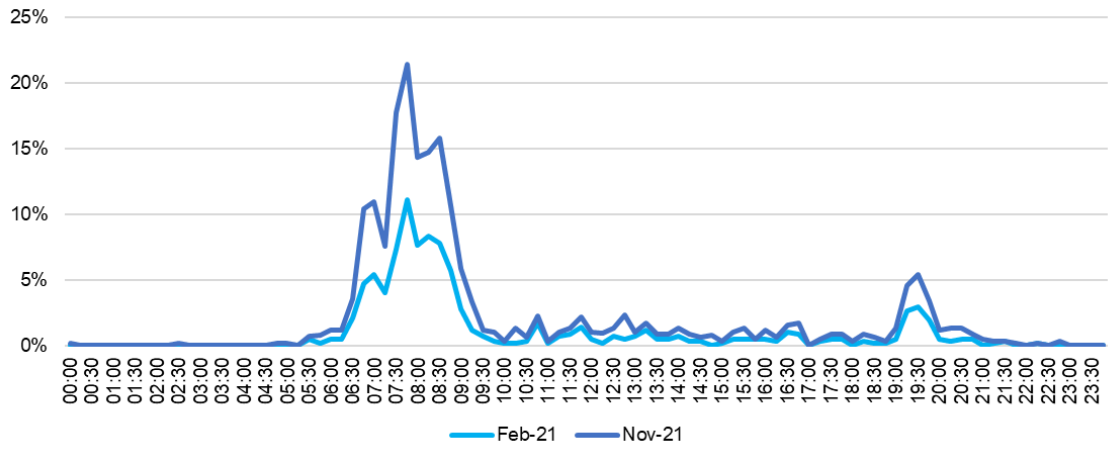
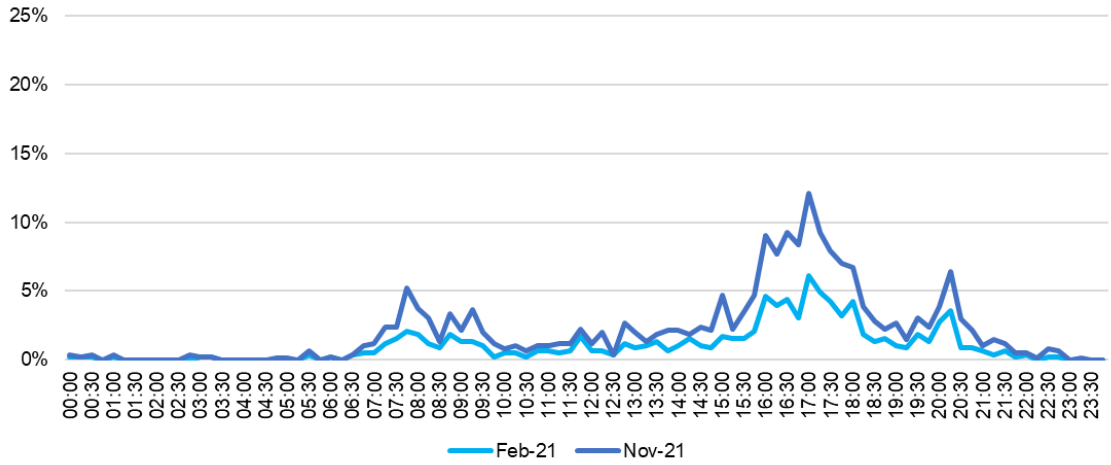


Figure 3.2: Staff Car Park Departure Profile (Surveyed)



The survey data has been analysed on an hourly basis to determine the busiest period for arrivals, departures and the busiest period for two-way trips entering and leaving the car park. Table 3.1 shows the arrivals, departures, two-way trips and car park accumulation.

Table 3.1: Staff Car Park Arrivals and Departures (Surveyed)

	Arr.	Dep.	Tot.	Acc.
00:00	1	2	3	*92
01:00	0	1	1	91
02:00	1	2	3	90
03:00	0	0	0	90
04:00	1	1	2	90
05:00	6	3	9	93
06:00	52	3	55	142
07:00	183	35	218	290
08:00	159	34	193	415
09:00	39	31	70	423
10:00	13	10	23	426
11:00	11	12	23	425
12:00	23	20	43	428
13:00	9	21	30	416
14:00	14	25	39	405
15:00	9	50	59	364
16:00	14	111	125	267
17:00	5	107	112	165
18:00	9	40	49	134
19:00	41	27	68	148
20:00	17	45	62	120
21:00	5	14	19	111
22:00	2	9	11	104
23:00	0	1	1	103

* *Initial accumulation determined by adding all staff car park arrivals after 16:00 (93)*

Based on the overnight accumulation (93), this sees the maximum accumulation peak at 428 vehicles, between 12:00 and 13:00. This broadly aligns with the likely future capacity in the proposed temporary Moorcroft Lane car park. As part of the Transport Statement for the temporary car park, a more detailed assessment of likely forecast demand will be prepared.

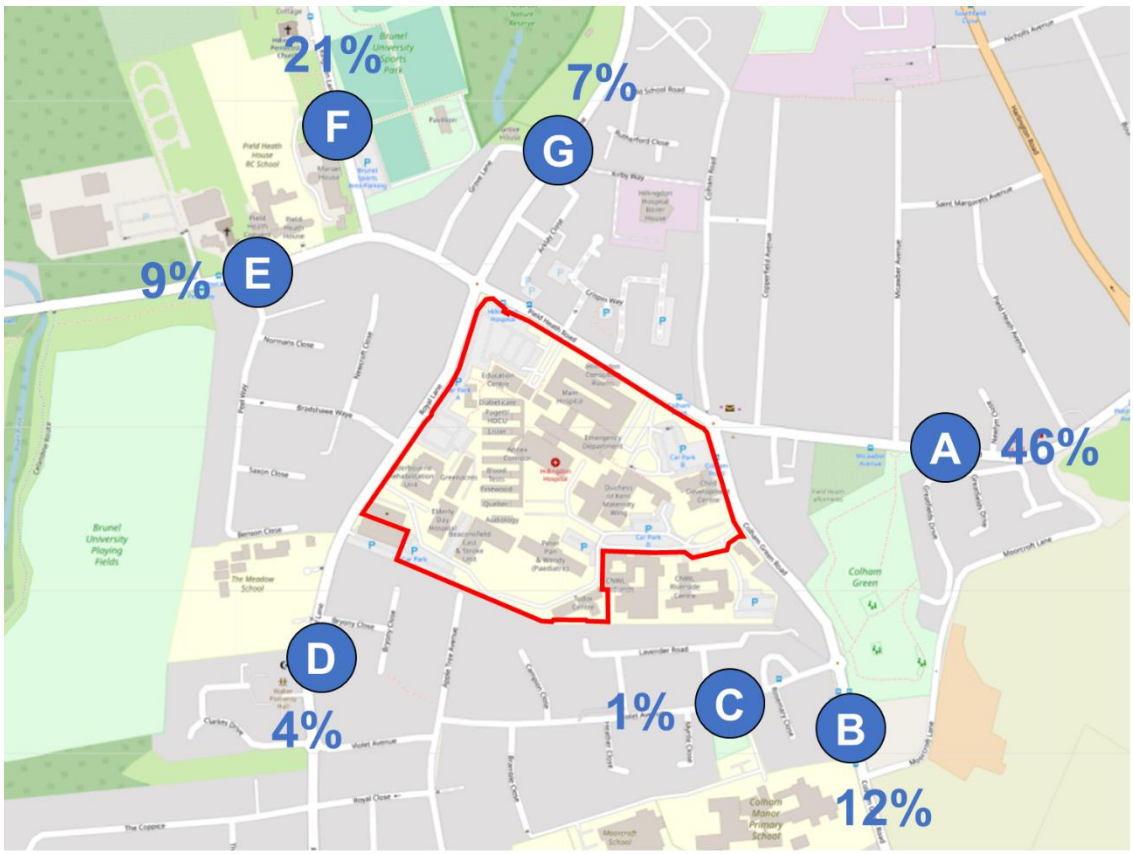
The survey data in Table 3.1 also shows:

- Maximum arrivals (183) between 07:00 and 08:00
- Maximum departures (111) between 16:00 and 17:00; and
- Maximum two-way trips (218) between 07:00 and 08:00.

This suggests that staff travel is at its highest levels in the AM shoulder peak hour of 07:00 to 08:00. Based on wider surveys the network traffic (general background traffic) peaks between 08:00 and 09:00. The key period for any future assessment is therefore between 07:00 and 09:00.

The temporary car park will be used solely by staff, whose car parking on Hillingdon Hospital site will have been removed to clear the construction area for the new hospital. Further analysis has therefore also been undertaken on survey data that captured the origins and destinations of trips to and from the hospital, specifically the staff car park. Figure 3.3: Observed ANPR Origin/Destination Survey below shows the observed distribution of traffic arriving to and departing from the staff car park at Hillingdon Hospital.

Figure 3.3: Observed ANPR Origin/Destination Survey



Source: OpenStreetMap

The relocation of staff parking from the hospital will result in some traffic being reassigned on the local road network. The level of reassignment will be determined by the trip origins and destinations.

If a staff trip to zone G (Royal Lane North) is associated with a residence on Royal Lane, the trip will be reassigned locally. If the same trip to zone G is associated with a residence in Uxbridge, the trip will be reassigned more strategically.

Given the Trusts parking permit policy, staff residing locally are not eligible for parking permits (unless exempt for exceptional reasons). Therefore the majority of car-based trips are from a greater distance and are therefore more likely to be reassigned across the wider network rather than more locally. Analysis of where trips are likely to be reassigned will be provided in the Transport Statement for the temporary car park.

The reassignment is anticipated to see less traffic travelling locally along the hospital frontage. All trips from the east, south and north are likely to be reassigned along Uxbridge Road and Harlington Road, as these provide links to the strategic road network and wider area. Trips locally from the west, specifically the Cowley area, are likely to maintain the current routing along Pield Heath Road. Overall there is likely to be a net benefit locally around the hospital.

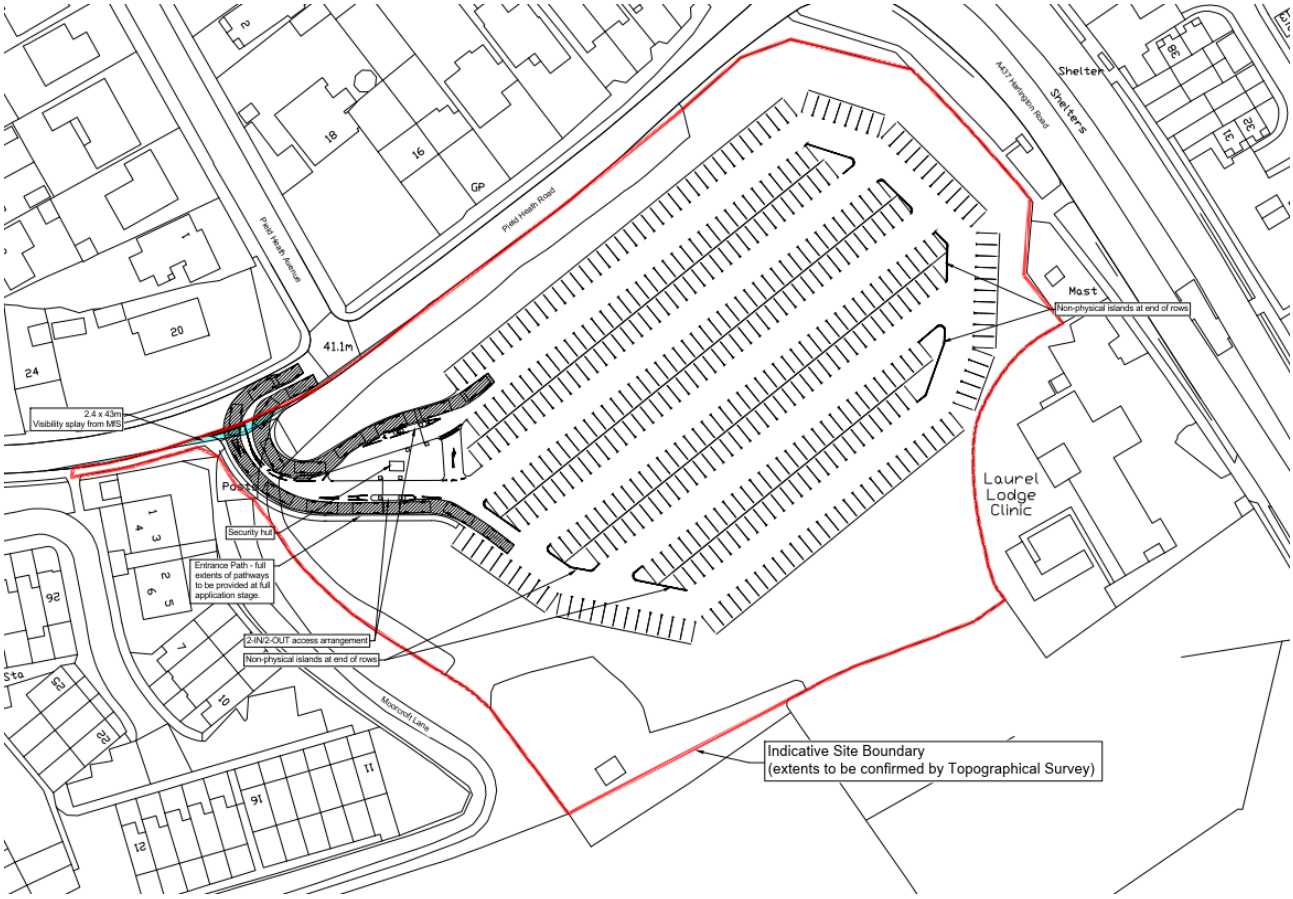
The proposed access junction (described in Section 4) will be assessed using LinSig 3 software to ensure that the junction can operate efficiently within capacity and does not cause any significant effects on Pield Heath Road. This assessment will be undertaken as part of a future Transport Statement for the temporary car park, which will be prepared to support the application for the temporary car park.

4 Concept Design

4.1 Car Park Layout and Capacity

A 2D concept design has been produced for the proposed temporary car park on the Moorcroft Lane site. The design includes a two in-two out access arrangement for the car park and non-physical islands at the end of each parking row. The proposed site access is a priority-controlled T-junction with Pield Heath Road and has been subject to swept path analysis. The concept design is shown in Figure 4.1.

Figure 4.1: Concept Design for Temporary Parking at Moorcroft Lane Site



Source: Ingleton Wood

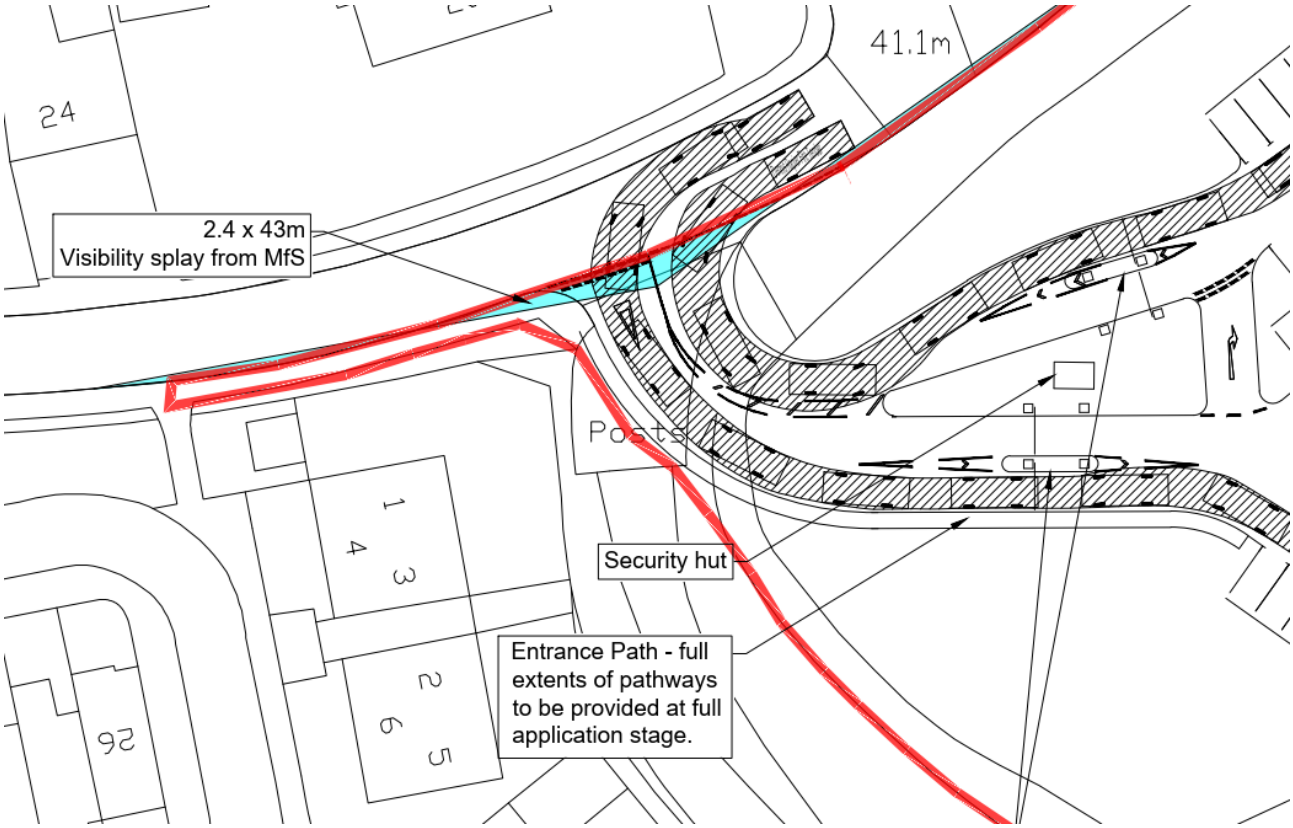
This initial analysis shows that the site accommodating approximately 426 parking spaces. However, this is likely to fluctuate upwards and downwards upon full understanding of the site constraints and it is therefore expected that around 400 to 450 spaces can be accommodated.

4.2 Site Access

The existing Moorcroft Lane/Pield Heath Road access junction will be upgraded to a priority-controlled T-junction. The design will ensure adequate visibility that can be achieved in line with observed 85th percentile speeds. Based on the 30mph speed limit on Pield Heath Road, the access junction is likely to require 2.4m x 43m visibility splays, il-line with Manual for Streets (MfS) guidance.

The current concept layout for the junction is shown in Figure 4.2 and indicates swept paths for a typical fire tender.

Figure 4.2: Concept Layout of Proposed Car Park Access Junction



Source: Ingleton Wood

The swept path analysis shows that in the event of an emergency, a fire tender vehicle can access and egress the site in a forward gear with no conflict.

4.3 Security

A number of security measures are likely be required at the proposed site in order to provide secure car parking for NHS staff, and avoid any unauthorised parking, vandalism, or antisocial/criminal activity.

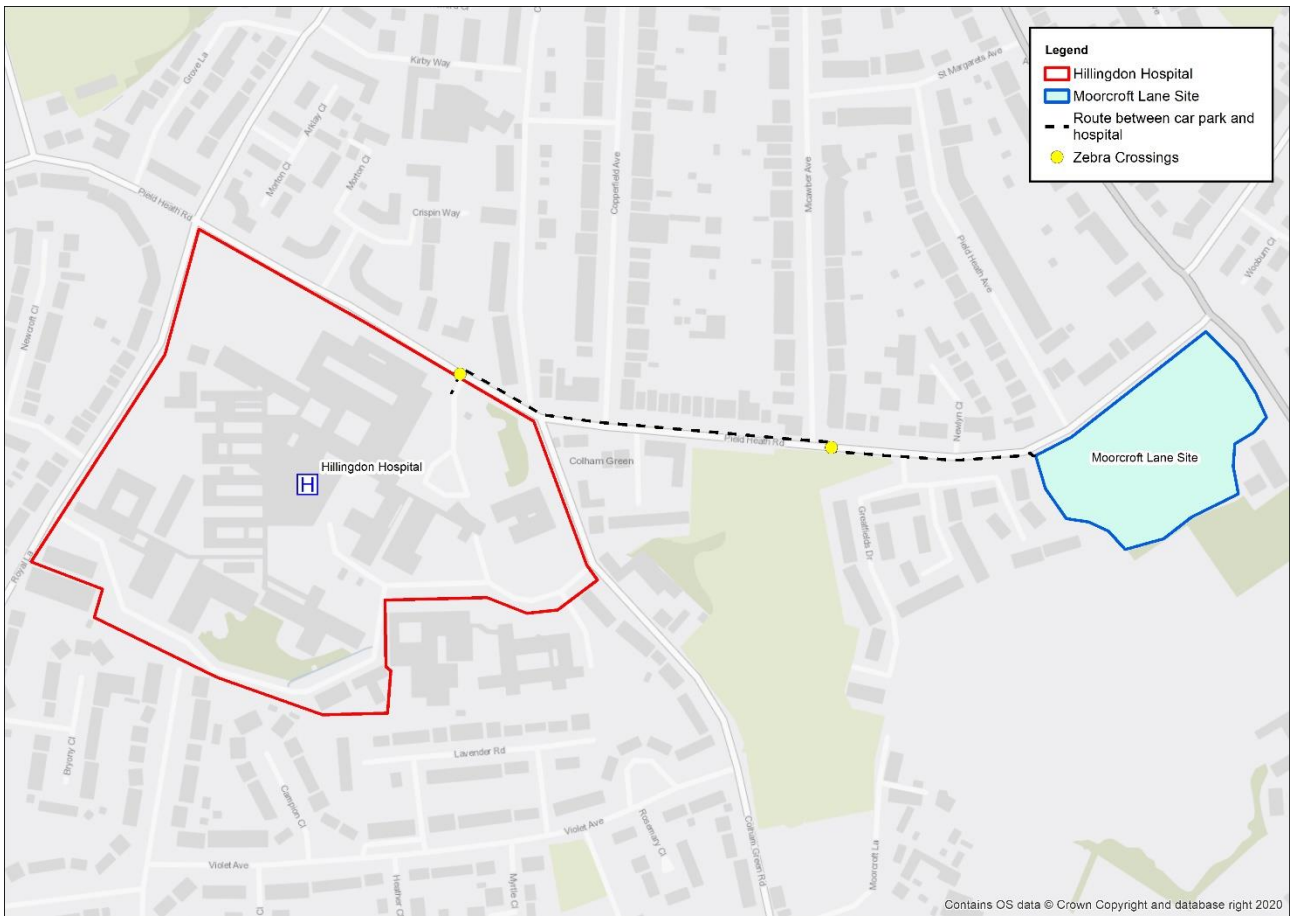
Entrance/exit to the site will be managed by barrier controls (or similar controls), accessed using swipe cards or other entry system that will prohibit unauthorised vehicles from entering the site. Sufficient lighting and CCTV cameras are also likely to be a requirement for personal security and to enable the site to remain operational for those accessing the car park in darkness.

5 Off-Site Considerations

5.1 Access to the Hospital from the Proposed Car Park

The proposed temporary Moorcroft Lane decant parking site is located approximately 650m east of Hillingdon hospital. This equates to an approximate 8-minute walk at an average speed. The route between the hospital and the decant car park is shown in Figure 5.1.

Figure 5.1: Route between Moorcroft Lane car park site and Hillingdon Hospital



The footway on the southern side of Pield Heath Road terminates at the mini-roundabout junction with Colham Green Road but there is a continuous footway along the northern side of Pield Heath Road. Therefore, the recommended route from Moorcroft Lane to the hospital will be:

- Walk along the southern side of Pield Heath Road;
- Cross onto the northern side of Pield Heath Road using the zebra crossing near Micawber Avenue;
- Walk along the northern side of Pield Heath Road;
- Cross onto the southern side of Pield Heath Road using the zebra crossing next to the Hillingdon Hospital access.

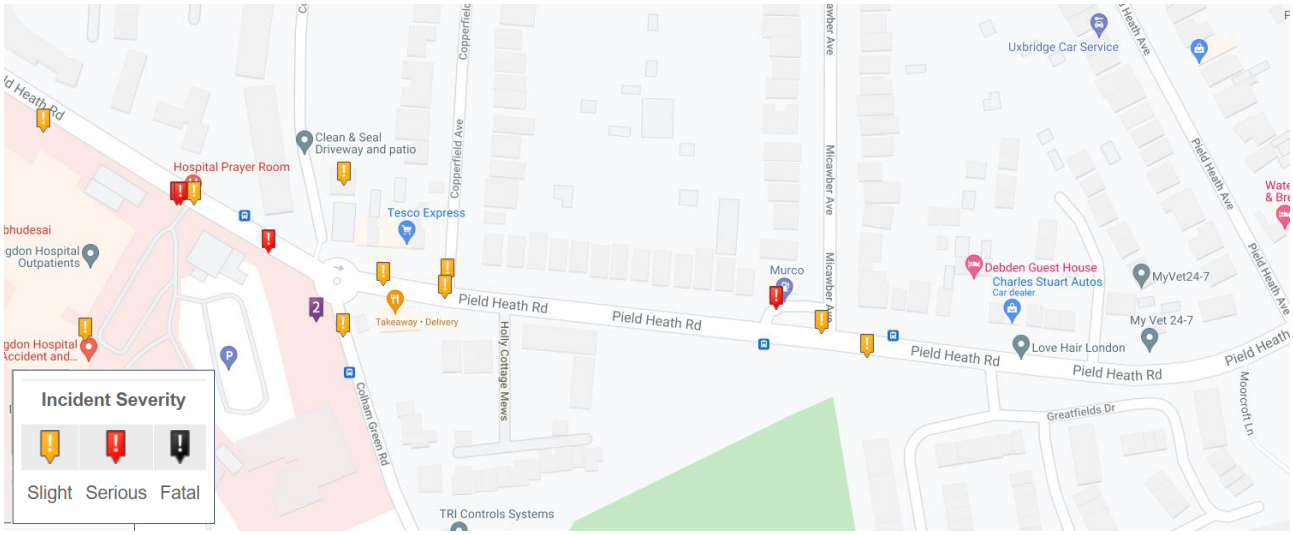
Clear signage will guide pedestrians between the proposed decant car park and hospital, using the existing zebra crossings on Pield Heath Road.

5.2 Road Safety

A highway safety review has been carried out using readily available Crashmap data. There have been nine personal injury collisions along the corridor from the proposed temporary Moorcroft Lane decant car park to the Hillingdon Hospital A&E Entrance in the most-recent five-year period (2016 - 2020). Six of these accidents were classed as slight, and three were serious. There were no fatal accidents.

Figure 5.2 shows the location of all reported personal injury collisions that have occurred along the Pield Heath Road corridor in the search period.

Figure 5.2: Personal Injury Collisions on Pield Heath Road



Source: Crashmap.com

A list of the collisions involving pedestrians, with relevant details is shown in Table 5.1.

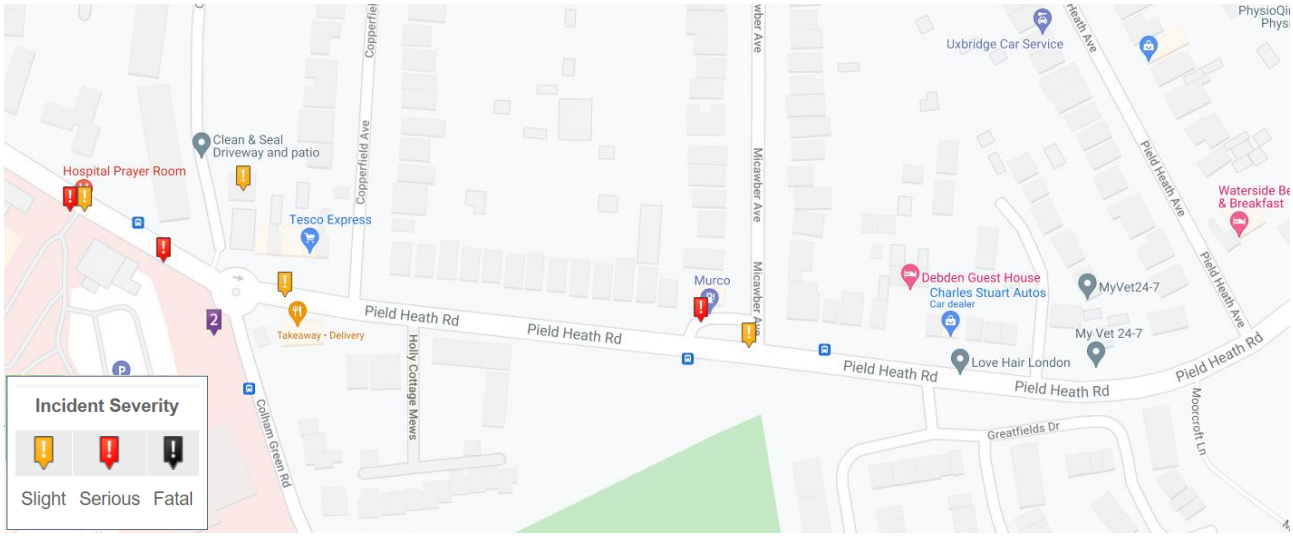
Table 5.1: Personal Injury Collisions Involving Pedestrian Casualties

Location	Year	Casualties	Vehicles Involved	Severity
Pield Heath Road/Colham Green Road Junction	2016	1	1	Serious
Pield Heath Road/Micawber Avenue junction	2017	1	1	Slight
Hillingdon Hospital Access Junction	2018	1	1	Serious
Pield Heath Road/Colham Green Road Junction	2019	1	1	Slight
Hillingdon Hospital Access Junction	2020	1	2	Slight

Source: Crashmap.com

Figure 5.3 shows the locations of all reported personal injury collisions involving a pedestrian casualty that have occurred along the Pield Heath Road corridor in the search period, including those in Table 5.1.

Figure 5.3: Person Injury Collisions Involving a Pedestrian Casualty



Source: Crashmap.com

It is acknowledged that the relocated car park will generate a significant number of pedestrian movements during the decant and construction period but it should also be noted that there are safe priority crossings (zebra crossing facilities) along the route between the decant car park and the hospital.

6 Summary

Phase 1 construction activities at Hillingdon Hospital and the associated loss of parking result in the requirement for approximately 470 to 570 spaces to be temporarily replaced as part of the decant phase of the redevelopment. This takes into account the provision of temporary parking at Mount Vernon Hospital.

This report therefore reviews the potential for off-site decant parking on land at Buckinghamshire County Council's 'Moorcroft Lane' site.

The sections above show that the 'Moorcroft Lane' site is located within walking distance of the hospital and is expected to accommodate around 450 spaces. The route between the Moorcroft Lane site and the hospital is safe and practical for pedestrians, and the design of the temporary car park will provide safe and secure parking for hospital staff. Furthermore, parking at the site will cause a reassignment of staff trips away from the already congested routes around the hospital.

Therefore, the Moorcroft Lane site is considered to be a viable option for the decant of a significant number of parking spaces during the decant and construction phase of the redevelopment