



# **Huddersfield Royal Infirmary**

## **Car Park Management Plan**

November 2022

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# 1 Introduction

## 1.1 Background

This Car Park Management Plan (CPMP) has been prepared by Mott MacDonald and is required to be submitted and approved by Kirklees Council for Huddersfield Royal Infirmary, to discharge Condition 14 of the planning permission for application 2021/62/92488/W. The planning application was for the erection of a clinical building to accommodate a new accident and emergency department, associated vehicular access, car and cycle parking spaces, plant and landscaping and was granted conditionally on 20<sup>th</sup> October 2021.

The site is located in Lindley, Huddersfield. It is approximately 3 kilometres north-west of Huddersfield town centre, set in a residential area.

This report provides the CPMP for the proposed development and accompanies a suite of supporting transport related documents which were prepared in support of the application including:

- Transport Assessment;
- Travel Plan; and
- Car Park Management Plan (this report).

## 1.2 Report Purpose

A CPMP is intended to inform the Local Planning Authority of the arrangements for parking on a development site and to demonstrate how parking will be allocated, managed, and enforced by the Calderdale and Huddersfield NHS Foundation Trust.

This report has been prepared to provide a framework for the Trust to adopt and tailor as they occupy the new building and begin to operate the estate in the future. Parking demand is a dynamic situation that is further exacerbated at hospitals with variations across the year and as a result of external forces such as parking policy, permit eligibility and tariffs. The CPMP aims to acknowledge this uncertainty and provide a framework for how the Trust can adapt to these external forces and manage demand.

## 1.3 Report Structure

Following this introduction, the remainder of this report is structured as follows:

- Chapter 2 – Proposed Development;
- Chapter 3 – Detailed Car Park Layouts;
- Chapter 4 – Hospital Car Park Management;
- Chapter 5 – Monitoring; and
- Chapter 6 – Conclusion.

## 2 Proposed Development

### 2.1 Introduction

The planning application for the erection of a clinical building to accommodate a new accident and emergency department, associated vehicular access, car and cycle parking spaces, plant and landscaping was granted conditional permission on 20<sup>th</sup> October 2021.

The reconfiguration of hospital services in tandem with the proposals at Calderdale Royal Hospital (CRH) will see staff levels at HRI change from approximately 3317 to 2478 and bed numbers from approximately 420 to 168. The existing accident and emergency building will be decommissioned once services have been decanted to the new facility, and there are no plans for expansion of services within the decommissioned space.

The proposed development is on the site previously occupied by the two storey Savile Court building and surface car parking. Savile Court historically provided staff rest accommodation. Alternative rest accommodation will be provided in existing hospital floorspace on the estate.

The proposed development will have a total of 23 visitor parking spaces, including 10 disabled parking spaces. Of these, 1 disabled space and 5 standard spaces will have electric vehicle (EV) charging facilities. There will also be four ambulance bays and an ambulance stand down bay. An emergency drop off and pick up point will be located at the front of the proposed accident and emergency building and a loading area will be located at the back. Overall, this will result in a decrease of 60 standard parking spaces across the site.

### 2.2 On-site Parking

#### 2.2.1 Pre-development Parking

The Transport Assessment reported that in total at the main HRI site there were 854 parking spaces (including 53 blue badge bays) and a total of 709 parking spaces (including 10 blue badge bays) at the adjacent Acre Mills site. The car parks, their access control arrangements, payment methods and capacities are detailed in Table 2.1 and Table 2.2. The Glen Acre House car park was sold in 2021 reducing provision by 9 standard spaces and 1 blue badge bay and is therefore not shown on the figure or in the table. Figure 2.1 shows the car park locations.

**Table 2.1: Pre-development HRI main site car parks**

Car Park Area	Designation	Total Capacity	Blue Badge Bays
Main Entrance Car Park	Patient & Visitor Pay on Exit	209	33
North Drive Car Park	Staff Permit Holders & Pay and Display	121	4
Learning and Development Car Park (Main)	Staff Permit Holders & Pay on Exit	112	N/A
Learning and Development Centre Car Park (Front)/Unison	Staff Permit Holders & Pay on Exit	37	3
South Drive Car Park	Staff Permit Holders & Pay on Exit	214	9
Old Tennis Court	Staff Permit Holders & Pay on Exit	70	N/A
Priority Car Park	Reserved for priority staff users	70	N/A
Savile Court Car Park	Staff & Pay on Exit (spaces reserved for Renal Patients)	21	4
<b>Total</b>		<b>854</b>	<b>53</b>

Source: Calderdale and Huddersfield NHS Foundation Trust

**Table 2.2: Pre-development Acre Mills car parks**

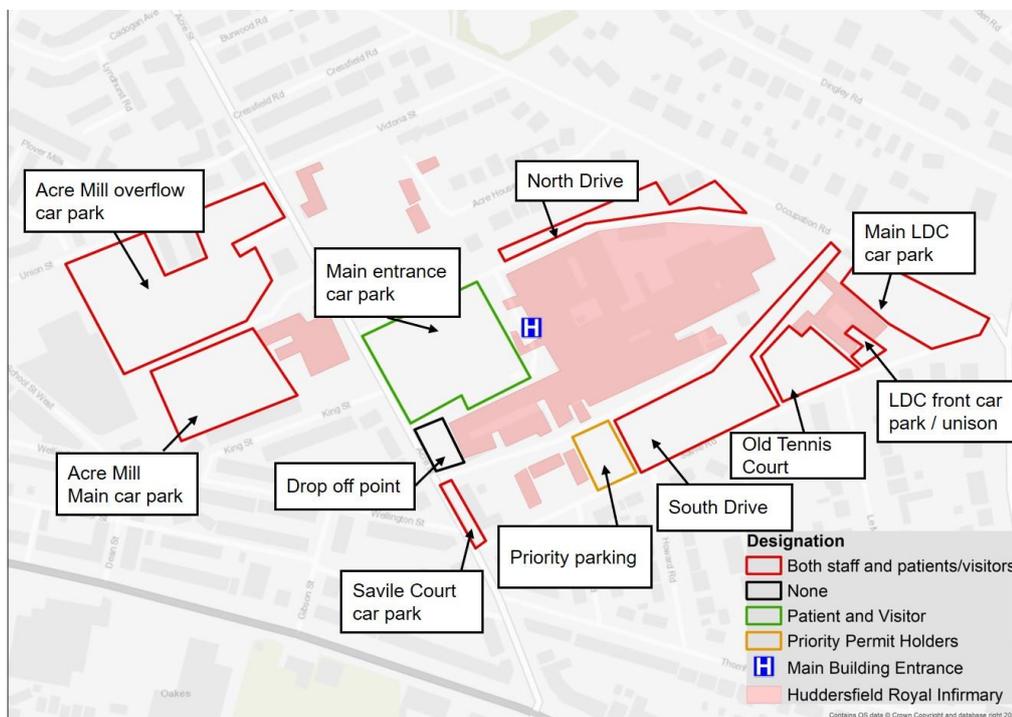
Car Park Area	Designation	Total Capacity	Blue Badge Bays
Acre Mills Outpatients Main Car Park	Patient & Visitor Pay on Exit & Staff Permit Holders	209	10
Acre Mills Overflow Car Park	Patient & Visitor Pay on Exit & Staff Permit Holders	Approx: 500	N/A

Source: Calderdale and Huddersfield NHS Foundation Trust

### 2.2.1.1 Electric Vehicle Spaces

Four dual 7.5kw EV charging stations were also available across the site. Two at Acre Mills for use by the general public and two on the estates / deliveries yards on South Drive for fleet and contractor vehicles. At all four stations electricity is not charged for at the point of use.

**Figure 2.1: Pre-development HRI car parks**



### 2.2.2 Initial Construction Phase

Construction started in Q4 2021. Since the production of the Transport Assessment in June 2021, the parking situation on site has altered, in particular at the Acre Mills car parks. Improvements have been made to the surface treatment, barriers and signage installed in the overflow car park, creating an additional 154 spaces.

A new access point was also added to the Acre Mills main car park, creating 103 spaces for staff and visitors. Spaces are allocated on a first come first served basis. The car park was not previously available for staff to utilise due to the barrier system and staff permits were not programmed to allow access.

The table below outlines what the impacts were on staff and visitor parking spaces during the initial construction phase of the works from October 2021-February 2022.

**Table 2.3: Parking during initial construction**

Timing	Space Reduction	Spaces Added	Net Change on Parking at HRI
Improvement of Acre Mill overflow layout increase of spaces from 346 to 500 – complete October 2022	-	+154	+154
Demolition of learning centre and Savile Court October 2021 – January 2022 and provision of staff spaces on tarmac car park at Acre Mill	- 237 (phased reduction)	+103	-134
February 2022 – reinstated car parking from demolition of learning centre	-	+112	+112
<b>Totals</b>	<b>-237</b>	<b>+369</b>	<b>+132</b>

### 2.2.3 Ongoing Construction

During the remaining construction period, Savile Court and the Priority car park will remain closed. However, this loss is mitigated by the additional parking provided at Acre Mills during the initial construction phase as shown in the table above.

**Table 2.4: Parking lost during ongoing construction**

Car Park Area	Space reduction
South Drive	109
Priority Car Park	70
Savile Court Car Park	21

### 2.2.4 Post Construction

#### 2.2.4.1 New accident and emergency department

##### Car Parking

The new accident and emergency department car park will be for visitors only and have 23 spaces, including 10 accessible parking spaces (1 of which will also be an EV charging space) and 5 standard EV charging spaces. There will also be four ambulance bays and an ambulance stand down bay. An emergency drop off and pick up point will be located at the front of the proposed development and a day surgery loading area will be located at the back, as shown in Appendix A. Directional signage will be provided directing patients and visitors to other (existing) car parks, should the car park be full.

Table 2.5 outlines the car park's capacity and the proposed applicable payment methods for visitors.

**Table 2.5: New accident and emergency department car park**

Car Park Area	Designation	Access Control	Payment	Total Capacity	Blue Badge Bays
New car park next to accident and emergency department	Visitors	Automatic Number Plate Recognition (ANPR)*	App payment / 1 designated pay machine located at the accident and emergency	23	10

Car Park Area	Designation	Access Control	Payment	Total Capacity	Blue Badge Bays
			department entrance		

\*The Trust are actively pursuing an ANPR solution (see Section 4.8)

### Cycle Parking

In accordance with Condition 11 of the planning permission for application 2021/62/92488/W, secure short and long-term cycle parking provision is proposed, as detailed below.

There is a cycle storage area within the development (see Appendix A), which will provide secure storage for 22 bicycles as follows:

- 1 Falco Sail Cycle Shelter (10 bicycle spaces, suitable for short stay parking); and
- 2 Falco Pod Cycle Storage Hangars (6 bicycles per pod, suitable for long stay parking).

Suitable and sufficient cycling amenities in the workplace can often encourage more employees to cycle to work. Encouraging staff to be active can help to improve their health and wellbeing and potentially increase productivity. As outlined in section 5.3.3 of the Travel Plan, the provision of 22 cycle storage spaces exceeds the BREEAM criteria for the building type.

#### 2.2.4.2 Rest of the Site

Whilst much of the 854 spaces across the main site will be unaffected, there will be some permanent changes to the numbers of parking spaces along South Drive. Construction will conclude in Q1 2023. The resulting total change in capacity across the HRI site post construction will therefore be a decrease of 60 standard parking spaces. Table 2.6 and Table 2.7 show the post construction changes in capacity across the HRI main site car parks and at Acre Mills.

**Table 2.6 Post construction HRI main site car parks**

Car Park Area	Designation	Post construction Total Capacity	Post construction Blue Badge Bays	Change in Total Parking Capacity	Change in Blue Badge Bays
Main Entrance Car Park	Patient and Visitor Pay on Exit	209	33	0	0
North Drive	Staff Permit Holders and Pay and Display	121	4	0	0
Learning and Development Car Park (Main)	Staff Permit Holders and Pay on Exit	112	N/A	0	N/A
Learning and Development Centre Car Park (Front) / Unison	Staff Permit Holders and Pay on Exit	0	0	-37	-3
South Drive	Staff Permit Holders and Pay on Exit	105	9	-109	0
Old Tennis Court	Staff Permit Holders and Pay on Exit	70	N/A	0	N/A
Priority Car Park	Reserved for priority staff users	0	N/A	-70	N/A
Savile Court Car Park	Staff and Pay on Exit (spaces reserved for Renal Patients)	0	0	-21	-4
New car park next to Accident and Emergency Department	Visitors	23	10	23	10
<b>Total</b>		640	56	-214	3

**Table 2.7: Post construction Acre Mills car parks**

Car Park Area	Designation	Post-development Total Capacity	Post-development Blue Badge Bays	Change in Total Parking Capacity at Acre Mills
Acre Mills Outpatients Main Car Park	Patient and Visitor Pay on Exit and Staff Permit Holders	209	10	No change
Acre Mills Overflow Car Park	Patient and Visitor Pay on Exit and Staff Permit Holders	654	N/A	+154 spaces
<b>Total</b>		863	10	+154

## EV Spaces

The two existing EV charging spaces situated at Acre Mills and the two on the estates/deliveries yards on South Drive will still remain once the development and reconfiguration of the site is complete. The Acre Mills spaces will become chargeable subject to the approval of the Trust's EV Strategy.

## 3 Detailed Car Park Layouts

### 3.1 Accessible Design Considerations

The car parking spaces and facilities need to be fully accessible. A range of detailed considerations have therefore been given to the car parking layouts at this stage to ensure parking is provided to appropriately cater for the varying needs of all users.

#### Parking Bays

The Kirklees Highway Design Guidance (2019) states that “detailed guidance on the provision of car parking for motorists with disabilities and bay design can be found within Section 5 of *Inclusive Mobility*” (page 58).

The Department for Transport’s (DfT) Inclusive Mobility Guidance was replaced in 2022 by *Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure*. The recommended proportion of designated accessible parking spaces for Blue Badge holders is as follows:

- For car parks associated with existing employment premises: **2%** of the total car park capacity, with a minimum of **one space**.

Spaces for disabled employees must be additional to those recommended above; reservations could be ensured, for example, by marking a space with a registration number.

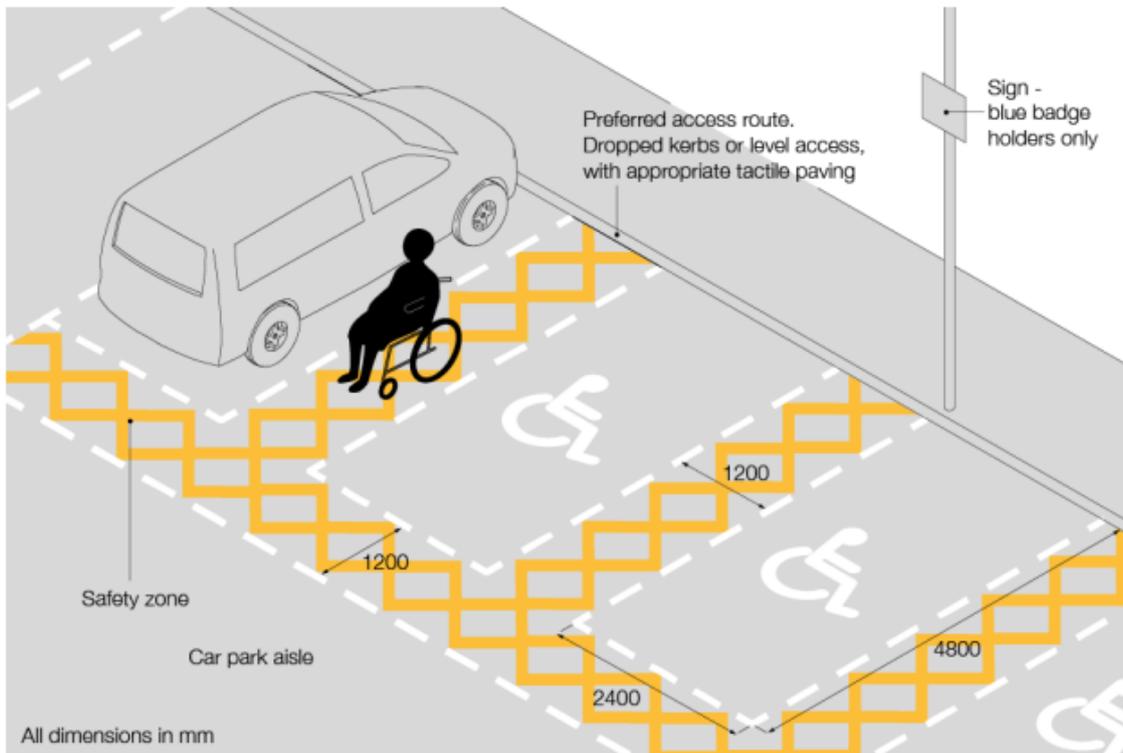
The recommended design of accessible parking spaces is outlined below:

“Designated accessible parking spaces should be located on firm and level ground. The surface of such spaces should be even and stable, with any variation of surface profile not exceeding **± 5mm** (e.g. between paving, surface features or different surfaces). A designated accessible space should be a minimum of **4800mm** long and **2400mm** wide. Where the spaces are perpendicular to the access aisle, an additional width of **1200mm** should be provided on each side. This extra width may be shared with adjacent spaces. An additional zone of **1200mm** should be provided, at the vehicle access end of the space to enable rear access. This will enable a rear hoist to be deployed.

Where an off-street designated accessible space is parallel to the access aisle, an additional zone of at least 1800mm should be created to enable access from the side.” (DfT, 2002, *Inclusive Mobility: making transport accessible for passengers and pedestrians*, page 78).

For reference, the size of standard, accessible and disabled bays are illustrated in Figure 3.1.

**Figure 3.1: Off-street parking**



Source: Inclusive Mobility. A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (publishing.service.gov.uk)

Wherever designated accessible spaces are at a different level from the adjacent pavement, a dropped kerb should be provided for wheelchair users, with an appropriate tactile paving surface.

Direction signs should be provided for guidance to the location of the designated spaces in the car park. Signs should also be provided to indicate an accessible pedestrian route from those spaces to the accident and emergency department.

### **Temporary Disabilities**

The Department of Health published Health Technical Memorandum 07-03 (HTM 07-03) in 2015. HTM 07-03 explains that:

*“NHS car-parks should consider patients with temporary disabilities. While some NHS organisations make allowances for patients with temporary disabilities, most NHS organisations do not appear to have any measures in place to assist these patients. The organisation should decide how to classify a temporary disability.”*

### **Pedestrian Walkways and Crossings**

A pedestrian walkway, clear of the traffic zone should be provided at the rear of all parking spaces. The walkway should be clearly marked with pedestrian markings and in a contrasting colour to the traffic zone.

### **EV Charging Accessibility**

As the UK transitions to adopt EVs it is important to consider the accessibility of charging infrastructure. Disabled drivers require:

- EV charging facilities installed in disabled bays;

- Clear space around charge points to enable disabled users, particularly wheelchair users, to access the charge point;
- Charger screens, sockets and cables positioned at accessible heights for wheelchair users;
- Lightweight cables and sockets for vulnerable or weakened drivers; and
- Sufficient lighting at and around charge points.

The UK Government has announced new accessibility standards for electric vehicle charge points to help disabled people, which are expected to be released imminently. The guidance is being prepared by the DfT in partnership with the British Standards Institution and Motability. The guidance will consider design aspects such as kerb height, adequate space between bollards and heights of charge points for wheelchair users.

### 3.2 Surface Car Park Layout

The new accident and emergency department car park will be for visitors only and have 23 spaces, including 10 accessible parking spaces. Of these, 1 disabled space and 5 standard spaces will be EV charging spaces. There will also be four ambulance bays and an ambulance stand down bay. An emergency drop off and pick up point will be located at the front of the proposed development and a day surgery loading area will be located at the back

In accordance with Condition 20 of the planning permission for application 2021/62/92488/W, the 6 EV charging spaces will each provide a continuous supply of 32kW.

The one accessible bay with an EV charging unit should be installed adhering to the design considerations outlined above. The design considerations specifically for disabled users will also benefit all users. The Trust will need to review the appropriate guidance in the lead up to installation of EV charge points at the site and ensure that EV charging is installed to be inclusive and accessible for disabled drivers.

The scale and illustrative layout of the new ED car park is shown in Appendix A.

## 4 Hospital Car Park Management

### 4.1 Introduction

Car park management plays a vital role in the successful running and operation of a Trust, particularly in relation to patient experience and delivery against expectations. Without appropriate car park management, the patient and visitor experience will be poor.

Throughout the planning of this development the Trust estates team, responsible for parking management, have been consulted with in relation to the current estate conditions, parking demand and known issues. This feedback has been used to steer the development of the proposals for the new accident and emergency department and associated car parking.

Detailed analysis has also been undertaken looking at the current profile of staff using the site, their trip origin (home postcode) and their ability to reach the site at shift times by sustainable modes. This has in turn also enabled an evidence-led view to be taken on the required capacity at the site, to drive positive change in staff travel behaviour towards more sustainable end goals.

Under the proposals for the redevelopment the parking capacity over the whole site is being reduced by 60 spaces. The key challenge will be overseeing the positive shift away from single occupancy car trips among staff to ensure the parking that remains on the site provides adequate capacity to accommodate all patients and visitors and to avoid Did Not Attend (DNAs). The required shift will be led by positive interventions such as the Travel Plan measures, along with tightening of the criteria for the issue of staff parking permits.

### 4.2 Guidance

NHS Health Technical Memoranda (HTMs) give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare. The focus of HTM guidance remains on healthcare-specific elements of standards, policies and up-to-date established best practice. They are applicable to new and existing sites.

HTM 07-03 (2015) sets out best practice in car-park management and sustainable transport. It identifies how the NHS patient, visitor and staff car parking principles can be implemented within an NHS organisation's car parking provision and what measures need to be considered when developing strategies and policies.

The guidance contains a number of measures that have been used by NHS organisations to reduce the demand on parking and promote better use of car parks on NHS sites. These measures have been broken down into the following three categories:

- Sustainable transport;
- Car park management; and
- Car park equipment.

In 2022, the Department of Health published "NHS car parking guidance 2022 for NHS trusts and NHS foundation trusts". The document mandates free car parking for service users, visitors and staff with the greatest need. This includes:

- Disabled people;
- Frequent outpatient attenders;
- Parents of sick children staying overnight; and

- Staff working night shifts, with a shift starting after 07:30pm and ending before 08:00am.

The document also includes voluntary guidance which states that charges should be reasonable for the area. Concessions, including free or reduced charges or caps, should be available for the following groups:

- visitors with relatives who are gravely ill, or carers of such people;
- visitors to relatives who have an extended stay in hospital, or carers of such people; and
- carers of people in the above groups where appropriate.

Other concessions should be considered locally, such as volunteers or staff who car share.

Trusts could consider installing 'pay on exit' or similar schemes as this allows drivers to only pay for the time that they have used. Additional charges should only be imposed where reasonable and should be waived when overstaying is beyond the driver's control (e.g. when treatment takes longer than planned, or when staff are required to work beyond their scheduled shift).

Details of charges, concessions and additional charges should be well publicised including at car park entrances, wherever payment is made and inside the hospital. They should also be included on the hospital website and on patient letters and forms, where appropriate.

NHS trusts should publish:

- Their parking policy;
- Their implementation of the NHS car parking principles including implementation of free car parking for those with greatest need;
- Financial information relating to their car parking; and
- Summarised complaint information on car parking and actions taken in response.

### 4.3 Management System

The HTM guidance indicates that there will need to be a combination of intelligent controls and systems, such as the following:

- Barrier free car park entry;
- ANPR cameras on entry;
- Pay by mobile or machine on exit;
- ANPR controlled barrier at exit;
- Automated staff parking permit system;
- Manual patrols; and
- Security cameras.

### 4.4 Parking Allocation

The new accident and emergency department car park will be for visitors only and have 23 spaces, including 10 accessible parking spaces. Of these 1 disabled space and 5 standard spaces will be EV charging spaces. There will also be four ambulance bays and an ambulance stand down bay. An emergency drop off and pick up point will be located at the front of the proposed development and a day surgery loading area will be located at the back

### 4.5 Site Entry Signage

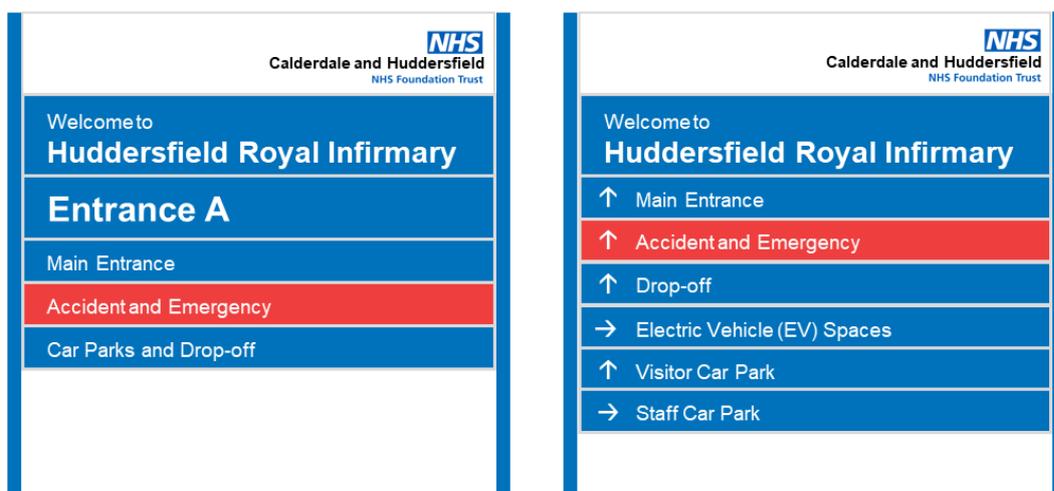
Directional signage will be provided at site entry points directing to appropriate locations on the site. Signage will clearly state:

- The vehicle entrances;

- Direction for the main entrance;
- Direction for accident and emergency department;
- Direction to car parks; and
- Direction for deliveries.

Illustrative signage is shown in Figure 4.1. Signage similar to these examples will be required at vehicle entrances within the site to direct users who are unfamiliar with the site to the appropriate locations.

**Figure 4.1: Illustrative site entry signage**



Source: Mott MacDonald

## 4.6 Car Park Signage

Best practice in car parks is to provide clear and legible information to assist drivers to identify a safe and secure parking space. The more information provided, the easier it will be for the driver to locate an appropriate parking space. However, it is also important to avoid unnecessary sign clutter.

Clear signage will need to be provided at key decision points, such as where drivers turn to enter a car park or drop-off area on the site.

Signage will include, but will not be limited to:

- Directions;
- Restrictions
  - Vehicle type (car, van, servicing, EV Charging, motorcycle)
  - Vehicle height (max. headroom)
  - User type (patient / visitor, staff, car share)
  - Duration (max stay 10 minutes)
- Charges and tariffs; and
- Exemptions.

As detailed in section 4.8 it is proposed that the new car park will be covered by Automatic Number Plate Recognition (ANPR) cameras. This requires a standard entrance sign, which must mention the terms and conditions of use, who manages the car park, the type of parking, how payments should be made and where to find out more details. Text size, colour contrast and illumination are all set out by the British Parking Association (BPA) Code of Practice. Further details and a generic example of an entrance sign can be found in Appendix B. The Trust in conjunction with their chosen ANPR provider will need to review the appropriate guidance in the lead up to the opening of the car park to ensure that the signage complies with the BPA's Code of Practice.

#### 4.7 Car Park Access

The hospital site is almost exclusively used by NHS (and other emergency services) staff, patients and visitors. Other users who require access will include taxi drivers, delivery drivers and maintenance workers. It is key that parking is safeguarded for all these user groups and specifically for patients / visitors and Trust staff who have an eligible parking permit or critical need to park on site.

The site is located in a largely residential area. It is expected that people not using the site will continue to be discouraged from parking at the hospital by standard parking tariffs that will be in place for any and all users who do not have a valid staff parking permit, are not disabled users and / or do not have a form of exemption authorised by the Trust.

Signage on the approach to the new car park and its entry points will make clear that the car park is associated with the hospital, as NHS branded signage will be installed.

Further NHS branded signage will be in place across the site and provide directions to the following:

- Car parks for patients / visitors and staff (including EV charging bays);
- Day surgery drop-off – dedicated drop-off area;
- Cycle parking; and
- Main entrance.

#### 4.8 Parking Management

The Trust are proposing that the new accident and emergency department car park will be covered by ANPR cameras.

ANPR is a technology that uses optical character recognition to read vehicle registration plates to create vehicle location data. In a car park management setting the cameras record the number plates of vehicles entering a car park and use this information to determine appropriate charges for that vehicle. Using an ANPR system for parking management enables the application of various rules and exemptions on different user groups, driver types and vehicle types. The appropriate classifications in this instance are outlined below.

Parking use and exit from the car park can be restricted using ANPR by means of two methods briefly summarised below:

- Fully barrier free – ANPR captures number plate on arrival and departure, any vehicles that have failed to pay for their duration of parking will be issued with a Parking Charge Notice (PCN); and
- Barrier on exit – ANPR captures number plate on arrival and departure, departure cameras check the payment has already been made by the specific vehicle and raises the exit barrier.

The Trust will need to seek expert advice on car park operation and such systems at the time of detailed specification of the ANPR system.

#### 4.8.1 Staff Permit Holders

The Trust operates a staff parking permit system. The system currently determines the eligibility of staff to obtain a parking permit based on set criteria identified in the Trust's car parking policy and operational review (updated periodically). The selection criteria for staff parking permits is currently under review. Should the Trust extend the ANPR system across the site, staff eligible for permits would need to register their vehicles for inclusion on an ANPR database prior to use.

The ANPR system would be able to identify when a registered vehicle enters the car park by recognising the number plate on approach and checking it against those registered against permits. Depending on the exit management system adopted the ANPR system would:

- With a barrier exit system - open the barriers for vehicles that have a valid permit; or
- With a barrier free exit system - record the vehicle on exit and if not covered by a valid permit would automatically issue a PCN.

Department for health guidance mandates free parking for:

- Disabled people; and
- Staff working night shifts, with a shift starting after 07:30pm and ending before 08:00am.

The numbers of HRI staff who are currently eligible for free permit parking includes:

- 64 staff who are permanent night workers;
- 1162 staff with permits who work some night shifts; and
- 52 staff who are blue badge holders.

Staff who work night shifts without a permit can currently access free parking in the main car parks as barriers are lifted at night.

Based on the current provisions the likely number of staff eligible for free permit parking once the reconfiguration of hospital services at both HRI and Calderdale Royal Hospital are complete is:

- 48 staff who are permanent night workers;
- 868 staff with permits who work some night shifts; and
- 39 staff who are blue badge holders.

#### 4.8.2 Non-Permit Holders

Patients and visitors will largely be made up of non-permit holders. The ANPR system would record the number plate of vehicles that do not have a permit of any type on entry to the car park along with the time of arrival.

A pay before exit system will be in operation at the car park. When a user is returning to their vehicle, they will need to either make a payment via the app or visit the designated pay machine located at the accident and emergency department entrance. They will enter their number plate which will prompt the system to look up their number plate and entry time and determine their parking charge. Depending on the exit management system adopted the ANPR system would either:

- With a barrier exit system - open the barriers for vehicles where the correct parking charge has been paid; or
- With a barrier free exit system - record the vehicle on exit and if the vehicle has not paid automatically issue a PCN.

#### 4.8.2.1 Concessions

Currently the Trust has concessions available in qualifying circumstances, with authorisation in forms obtained from the ward. All blue badge holders are eligible for free parking, with six-month passes issued by the General Office<sup>1</sup>.

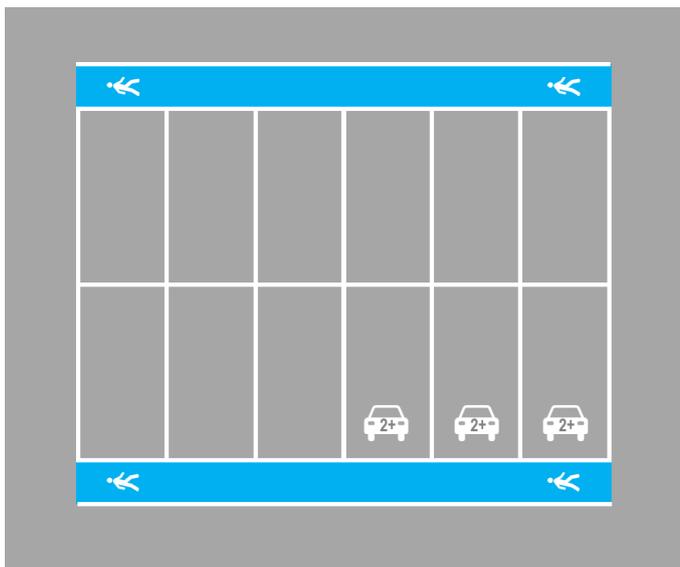
### 4.9 Car Share

Infection control measures during the COVID-19 pandemic ruled out car sharing for staff. As such discussions with LiftShare, a car share specialist were put on hold. However, the Trust still want to pursue car sharing opportunities in the future and are currently exploring staff attitudes towards car sharing as part of their engagement processes. Subject to consultation and approval, the Trust are proposing that car share groups will be a priority for the award of parking permits,

Subject to car sharing being allowed in the future, 78 standard car park spaces within the allocated staff allocation could be dedicated to validated car share vehicles in line with BREEAM requirements.

These spaces will need to be marked clearly as car share spaces and supplemented with signage making it obvious that the spaces are restricted to multiple occupancy vehicles who must have a car share permit and must have used the relevant lift sharing app (such as LiftShare) to validate their journey. An example marking arrangement is shown in Figure 4.2.

**Figure 4.2: Illustrative car share bays**

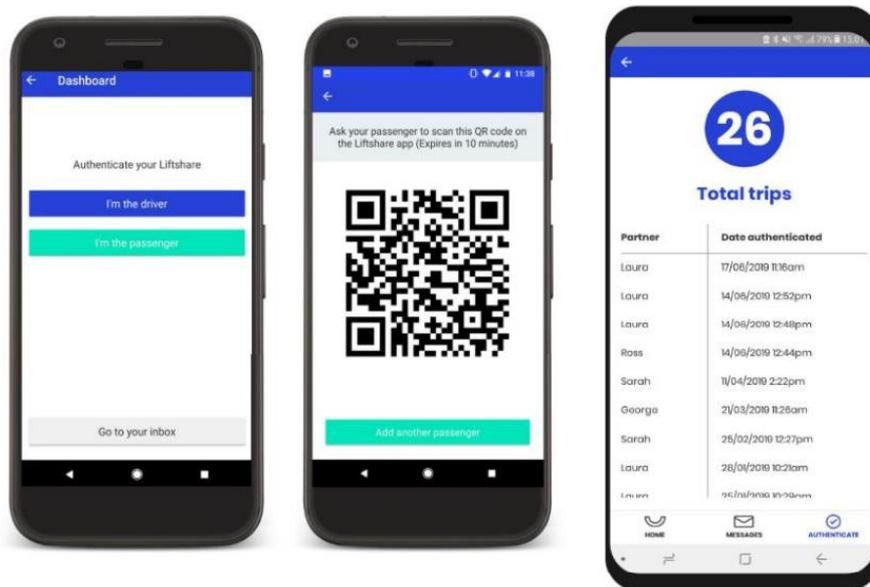


Source: Mott MacDonald

Apps like the LiftShare mobile app enable members to authenticate a shared car journey by physically matching their smartphones. The passenger uses their phone to scan a QR code on the drivers' phone, as illustrated in Figure 4.3. This authenticates that the phones are together along with the location of the scan meaning the trip is now an authenticated shared trip.

<sup>1</sup> <https://www.cht.nhs.uk/patients-visitors/finding-us/car-parking/>

**Figure 4.3: LiftShare trip authentication**



Source: LiftShare

The Trust’s estates team (or appointed third party) will be able to access this information and use this to manually check the number plates of vehicles parked in the designated car share spaces to ensure compliance and take action if required.

#### 4.10 EV Charging Bays

The Transport Assessment recommended that a total of 6 EV charging spaces should be installed in the proposed development.

The new accident and emergency department car park will include 6 EV charging spaces, (1 of which is also an accessible parking space), these will be provided as follows:

- A group of five 32kW EV charging spaces are to be provided to the east of the accident and emergency department;
- A single 32kW accessible EV charging space will be provided in the new car park to the west of the accident and emergency department building.

The proposed locations of the EV charging spaces can be seen in the plan in Appendix A.

##### 4.10.1 Management of EV Charging Bays

The new accident and emergency department car park will be for visitors only.

As detailed within the ‘Electrical Vehicle Strategy Paper November 2021’ the Trust’s preferred purchase model considering installation, ownership and maintenance factors is for the Trust to purchase the ChargePoint from a supplier but employ them to manage the points.

#### 4.11 Parking Tariffs

NHS organisations should regularly review car-parking tariffs. It is recommended where possible to split tariffs into hourly rates as opposed to large groupings such as 1–3 hours. Implementing hourly rates is likely to improve the patient and visitor experience, as some patients and visitors may feel aggrieved paying for three hours of parking when they only need to park for one hour.

Implementing hourly tariffs is also likely to result in a higher turnover of parking spaces. Therefore, finding a parking space will be easier for patients and visitors, which will also improve their overall experience.

An ANPR system at the new accident and emergency department car park would enable all users (not covered by a permit) to pay before they exit the car park, meaning users will only pay for the duration of parking that has been used.

The Trust's current car park tariffs for patients and visitors can be seen in Table 4.1. All blue badge holders are eligible for free parking, with six month passes issued by the general office.<sup>2</sup>

**Table 4.1: Current car park tariffs**

Duration	Cost
Up to 2 hours	£3.00
2-4 hours	£5.00
4-6 hours	£6.00
More than 6 hours	£8.00
Weekly pass	£35.00

#### 4.12 Parking Enforcement

Parking enforcement will be carried out using a variety of means:

- Automatic parking PCN:
  - ANPR cameras check number plates for registration.
- Manual enforcement:
  - Manual checks that vehicles are parked fully within single bays; and
  - Manual checks that vehicles are using correct bays (i.e. staff allocated bays, disabled bays, EV charging bays).

Parking enforcement will need to be adapted in the future. In particular for EV charging spaces as the adoption of EVs increases. Enforcement of the correct use of EV bays to avoid parking when not charging and to ensure the bays are freed up for other users when vehicles have fully charged may need to be reflected in future CPMPs and the Trust's revised car parking policy and operational review.

<sup>2</sup> <https://www.cht.nhs.uk/patients-visitors/finding-us/car-parking/>

# 5 Monitoring

## 5.1 Introduction

HTM 07-30 advises that monitoring and data collection should be carried out annually. This will provide information to stakeholders on how successful the Trust is being in reducing single occupancy trips (amongst staff), increasing the use of sustainable transport and improving the patient and visitor experience.

An estate-wide Travel Plan has previously been prepared in support of the planning application for the proposed development. The Travel Plan includes details on the proposed monitoring regime. The CPMP should remain a live document that is revised and enhanced accordingly.

## 5.2 Suggested Monitoring Data

There is an opportunity to capture valuable data via a combination of automated and live data (ANPR, car share platform reporting) and manual surveys (manual enforcement records, photos, videos surveys). Section 5.2.2 details the data that can be captured and used to report on progress and inform future strategy / policy changes.

### 5.2.1 Automated Monitoring Data

A list of information that it will be possible to capture as part of an automated (and live) monitoring framework is as follows:

#### Car Park Use

- Records of vehicle entries and exits;
- Dwell times (breakdown by time period, day, week etc.);
- Staff use (based on staff permits registered and observed entering / leaving);
- Staff use estimate (based on vehicles exceeding a notional dwell time – for example over 4 hours);
- Patient and visitor use estimate (based on vehicles leaving within a notional dwell time – for example under 4 hours); and
- Revenue generation of car parks.

#### EV Charging

- Frequency of use of EV charging in specific spaces and on specific charging networks, for example:
  - Patient and visitor 32kW; and
- Revenue generation of EV charging.

#### Car Share Scheme

- Number of sign-ups via LiftShare platform;
- Number of validated car share trips on any given day, week, month, year; and
- Trip origin of validated car share trips.

#### Trust Data

- Number of staff parking permits issued;

- Number of staff on waiting list for parking permits;
- Number of inquiries to Travel Plan Co-ordinator;
- Number of inquiries to car parking management team; and
- Number of enforcement notices issued (grouped by type of contravention).

### 5.2.2 Manual Monitoring Data

- Staff use (based on use of allocated staff parking bays);
- Patient and visitor use (based on use of allocated patient and visitor bays);
- Disabled bay use;
- EV charging use and misuse of EV charging bays (parking but not charging, or overstaying after charging);
- Camera surveys at site access points to capture total vehicle arrivals and departures; and
- Dwell times in dedicated drop-off bays (time restricted).

### 5.3 Review

The data captured will provide the Trust with in-depth information on parking activity and use of the car parks and associated facilities by staff, patients and visitors.

This data will be reviewed in a standardised manner so that reporting is regular and consistent. The reporting will also capture any changes to the car parks themselves or to the car park management systems or policies, as deemed appropriate.

Such changes may include but are not limited to:

- Reallocation of spaces between staff and patients / visitors;
- Update of car park tariffs;
- Allocation of car share spaces;
- Changed tariffs for EV charging; and
- Increased number of EV charging bays.

## 6 Conclusion

This CPMP has been prepared to set out the arrangements for parking at the Huddersfield Royal Infirmary site throughout the lifespan of the proposed development. The CPMP provides a summary of the arrangements for parking during the construction phase and post construction phase of the new accident and emergency department car park.

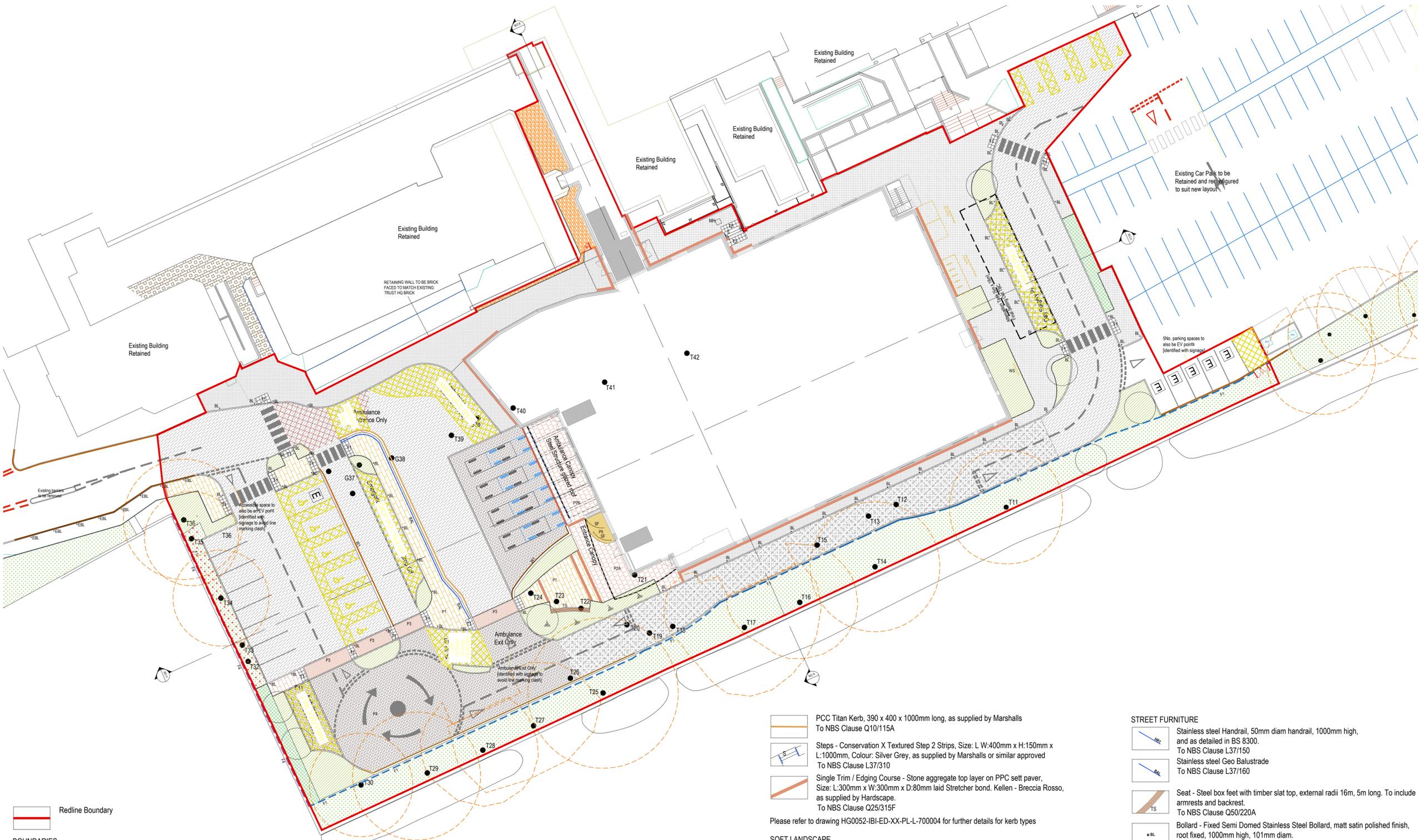
The CPMP provides details of the proposed allocation of spaces and also demonstrates how this can be adjusted on a regular basis by simple changes to markings and/or signage.

The CPMP explains how car parking can be managed by the Trust or an appointed specialist operator. This includes measures such as signage that needs to be provided at site entry points and within car parks, and technology that can be used to manage and monitor usage of spaces and EV charging bays.

The CPMP also provides details of enforcement measures that could be used. The design, services and management measures proposed offer a range of methods including automated enforcement and manual enforcement to ensure appropriate and intended use of the car parking on site.

The report also provides the Trust with details of how the automated and manually collected data can be used to monitor usage, review management and allocations and drive future changes to the Trust's car parking policy, management measures and infrastructure as demands alter.

## **A. External works general arrangement plan**



**Notes:**

- This drawing is copyright.
- Do not scale dimensions from this drawing.
- This drawing is to be read in conjunction with all other relevant drawings.
- All discrepancies on this drawing are to be reported to the architect.
- Do not modify any element of this drawing.
- Use drawing only for purpose(s) issued.

**North Sign / Key Plan**

SCALE - 1:250 @ A0

The following external model files are included within this drawing:

Rev	Date	Description	By	App
C03	15/09/22	Cycle stands shown to FALCOSAIL, short stay cycle storage. Key updated.	DW	DW
C02	31/08/22	Cycle storage updated, 22 No.	KT	DW
C01	11/07/22	Legend updated to include NBS refs. Minor amendments to GA for balustrade and signage provided.	DW	DW
P10	13/05/22	Legend updated to suit amendments to layout site wide. Details for balustrade and signage provided.	DW	DW
P09	19/04/22	Amendments to external works to east side of building. Updates to hard materials and legend.	DW	DW
P08	25/01/22	Amendments to external works to east side of building to omit tank enclosure, show attenuation tank position, show additional planting and orientation of cycle storage. Minor amendments to north and west site perimeter works. Red line amended and shown.	DW	CH
P07	20/12/21	Plans and legend updated to suit amendments agreed with contractor and mark up issued 08/12/21.	DW	CH
P06	16/07/21	Plans and legend updated to suit co-ordination meeting dated 13/07/21.	DW	JK
P05	06/07/21	Latest building details inserted into plan.	DW	RW
P04	15/06/21	Proposed trees to southern boundary omitted. Fence spec of southern and eastern boundary amended to acoustic fence following comment. Spec of screening around Air Source Heat Pumps updated to suit comments. Hedge planting shown.	DW	RW
P03	08/06/21	Retained Trees updated in line with JCA AIA - 07/06/21.	KT	MH
P02	04/06/21	Minor amendments to GA and legend and following meeting with design team. Specifically kerb amends to southern boundary and fence line position.	DW	NV
P01	17/05/21	First issue.	DW	RW
Rev	Date	Revision Notes	Dn	Rv

**Intelligence Buildings Infrastructure**

Project: HUDDERSFIELD ROYAL INFIRMARY; EMERGENCY DEPARTMENT

www.ibigroup.com

Drawing Title: EXTERNAL WORKS GENERAL ARRANGEMENT PLAN

Job Number: 125043	Drawing Originated Date: 18/04/2021	PAS 1192 Status Code: -
Scale@A1: 1:250	Purpose: CONSTRUCTION	
Drawing Number: HG0052-IBI-ED-XX-PL-L-700001	Revision: C03	

- BOUNDARIES**
- Existing Metal Fencing, between 1m - 1.8m high, to be retained. [Refer to topographical information for further details]
  - Proposed wall to engineers specification. W1 - Stone Faced Wall, varying heights, to match detail on building To NBS Clause F20/110A
  - Proposed Jakoustic Reflective / Acoustic Timber fence, 2.5m high, to sound insulation performance of min cat B2 and sound absorption performance of min cat A1, as defined in BS EN 1793 - 1 & 2 To NBS Clause Q40/170
  - Proposed Steel palisade fence, 1.8m high To NBS Clause Q40/350A
  - Proposed Reflective / Acoustic Timber fence fixed to top of existing brick wall. Overall height of boundary to be 2.5m high. Timber fence to match detail of fence type F1. Fence to sound insulation performance of min cat B2 and sound absorption performance of min cat A1, as defined in BS EN 1793 - 1 & 2 To NBS Clause Q40/170A
  - Proposed Single Leaf Metal gate, 1.8m high To NBS Clause Q40/570
  - Proposed Double Leaf Timber gate, 1.8m high To NBS Clause Q40/550
- HARD LANDSCAPE**
- Existing tarmac / paving to be retained and made good as necessary To NBS Clause Q25/315A
  - Pedestrian grade tarmac to engineers specification. To NBS Clause Q22/115
  - Vehicular grade tarmac to engineers specification. To NBS Clause Q22/110

- Vehicular grade permeable tarmac to engineers specification. To NBS Clause Q22/127A
- Stone aggregate top layer on PPC sett paver, Size: L:600mm x W:200mm x D:80mm laid Stretcher bond. Kellen - Breccia Rosso, as supplied by Hardscape. To NBS Clause Q25/315A
- Stone aggregate top layer on PPC slab paver, Size: L:500mm x W:500mm x D:80mm laid Stretcher bond. Kellen - Breccia Tagenta E, as supplied by Hardscape. To NBS Clause Q25/315B
- Stone aggregate top layer on PPC slab paver, Size: L:500mm x W:500mm x D:100mm laid Stretcher bond. Kellen - Breccia Tagenta E, as supplied by Hardscape. To NBS Clause Q25/315C
- Stone aggregate top layer on PPC sett paver, Size: L:210mm x W:105mm x D:80mm laid Stretcher bond. Kellen - Breccia Tagenta B, as supplied by Hardscape. To NBS Clause Q25/315D
- Total Traffic Exopave [TTE] Heavy Duty Pavers with Exopave Brick Inserts, Brick colour: Anthracite, TTE paving system to be laid stretcher bond. As supplied by Geosynthetics or similar approved. To NBS Clause Q25/350
- Stone aggregate top layer on PPC sett paver, Size: L:100mm x W:100mm x D:80mm laid Stack bond. Kellen - Liscio Bianco, as supplied by Hardscape. To NBS Clause Q25/315E
- PCC tactile paving, Blister Hazard Warning Paving, Colour: Natural. Size: L:400mm x W:400mm x D:50mm To NBS Clause Q25/320
- PCC tactile paving, Corduroy Hazard Warning Paving, Colour: Natural. Size: L:400mm x W:400mm x D:50mm To NBS Clause Q25/320A
- Existing gravel retained
- Proposed gravel edge. Gravel to match existing.

- PCC Titan Kerb, 390 x 400 x 1000mm long, as supplied by Marshalls To NBS Clause Q10/115A
  - Steps - Conservation X Textured Step 2 Strips, Size: L:W:400mm x H:150mm x L:1000mm, Colour: Silver Grey, as supplied by Marshalls or similar approved To NBS Clause L37/310
  - Single Trim / Edging Course - Stone aggregate top layer on PPC sett paver, Size: L:300mm x W:300mm x D:80mm laid Stretcher bond. Kellen - Breccia Rosso, as supplied by Hardscape. To NBS Clause Q25/315F
- Please refer to drawing HG0052-IBI-ED-XX-PL-L-700004 for further details for kerb types

- SOFT LANDSCAPE**
- Existing tree/vegetation to be removed
  - Existing Trees retained
  - Root Protection Areas [RPA's]
  - Proposed tree planting in soft landscape. Please refer to planting plan HG0052-IBI-ED-XX-PL-L-700003 and soft landscape details drawing HG0052-IBI-ED-XX-DT-L-700003 for further details. To NBS Clause Q31/505
  - Proposed shrub planting. Please refer to planting plan HG0052-IBI-ED-XX-PL-L-700003 and soft landscape details drawing HG0052-IBI-ED-XX-DT-L-700003 for further details. To NBS Clause Q31/405
  - Proposed hedge planting. Please refer to planting plan HG0052-IBI-ED-XX-PL-L-700003 and soft landscape details drawing HG0052-IBI-ED-XX-DT-L-700003 for further details. To NBS Clause Q31/407
  - Existing grass retained, regraded and made good as required
  - Existing grass with new bulb planting. Please refer to planting plan HG0052-IBI-ED-XX-PL-L-700003 and soft landscape details drawing HG0052-IBI-ED-XX-DT-L-700003 for further details. To NBS Clause Q31/445
  - Proposed grass seeding To NBS Clause Q30/311A

- STREET FURNITURE**
- Stainless steel Handrail, 50mm diam handrail, 1000mm high, and as detailed in BS 8300. To NBS Clause L37/150
  - Stainless steel Geo Balustrade To NBS Clause L37/160
  - Seat - Steel box feet with timber slat top, external radii 16m, 5m long. To include armrests and backrest. To NBS Clause Q50/220A
  - Bollard - Fixed Semi Domed Stainless Steel Bollard, matt satin polished finish, root fixed, 1000mm high, 101mm diam. To NBS Clause Q50/190A
  - Cycle Storage - FALCOPD, 2475mm x 2070mm with a height of 1410mm, 2No. pods to hold 6No. bikes each, as supplied by FALCO.
  - Cycle Shelter - FALCOSAIL, 5000 mm x 2605 mm x 2300 mm high [Head height: 2240 mm], to hold 10No. bikes, as supplied by FALCO.
  - Sculpture Feature - 2 no. Decorative Curved Corten Steel Panels or similar - 2.5m long, 1-1.6m high. Panels to be perforated with open sections to allows views out from adjacent waiting room. To NBS Clause Q50/340A
  - Wayfinding Signage - dCIPHER monolith, single sided, powdercoat finish in black, as supplied by fitzpatrick woolmer or similar approved. Signage strategy TBC. To NBS Clause N91/520
- OTHER**
- Electric vehicle charging point
  - Accessible parking bays

**NOTES:**

- Advice to be sought from Arboriculturist in regard to retained trees shown, their location to the existing retaining wall and extent of RPA in relation to the proposed works. Please refer to tree survey and Arboricultural Report for further information.

## **B. Entrance signs**

# ENTRANCE SIGNS

A standard form of entrance sign must be placed at the entrance to the parking area.

There may be reasons why this is impractical:

- when there is no clearly defined car park entrance
- when the car park is very small
- at forecourts in front of shops and petrol filling stations
- at parking areas where general parking is not permitted.

If you think there are other circumstances where it is impractical or undesirable to have an entrance sign, you must tell us in advance and get our approval to amend the sign or not have one.

Ideally the AOS logo should be incorporated on the entrance sign as it will show motorists that the site is managed by an organisation who have signed up to a recognised Code of Practice. However exemptions will be considered by the BPA Compliance Team if a legitimate reason is given.

You should try to keep to the following design principles:

This blue rectangle with the 'P' symbol can be left out if public parking is not invited and it is trespass you are managing.

If you do not have the 'P' symbol, you may move the AOS roundel to the bottom of the sign alongside the operator's name.

You must always mention that terms and conditions apply and say where to find more details about them.

"Managed by" is **required**

"On behalf of" is **optional**

The sign may be portrait or landscape in layout, depending on where it is placed.

Signs at the entrance to the parking area should clearly show the type of parking; and if, when and how any payment should be made. Ideally the AOS logo should be incorporated to indicate that the parking is managed under a Code of Practice.

We consider it to be good practice that the landowner's name is on the sign, but we understand that in some cases the owner may not want to be mentioned. You may also place your 'private parking' banner above your company details and below your terms and conditions.

If one of the following standard wordings applies to your parking area you should use it. If not, you may alter the wording to fit the situation. Words in square brackets may be left out.

There must be at least one item from Group 1. But no more than three items from Group 1 should appear before, and more prominently than, text from Group 2. You must always mention that terms and conditions apply and say where drivers can find more details – this will usually be on the other notices in the parking area.

If there are different payment terms for blue badge holders, you should also show these. The words 'blue badge holders' should generally be replaced by the blue badge symbol (exactly as shown in the Traffic Signs Regulations Guidance Document, not a local version).

## Group 1

Pay and display [except/free for blue badge holders]  
 [x minutes/hour's/hours'] free parking [for [business name]  
 customers only]  
 Pay on exit  
 Pay [on foot/at machine] when leaving  
 Parking for [business name] customers only  
 Permit holders only

## Group 2

Charges apply [after this][after x minutes/hours]  
 Private land  
 Terms and conditions apply  
 See the notice[s] [in the car park] for details

## Text size

The capital height for Group 1 text will depend on the approach speed of traffic. Group 2 text should be at least 50% of this size. All other text should be smaller than 50% of the Group 1 text size. However, the name of the car park or parking area, or a brief welcome message (if included), may be larger.

Situation	Typical approach speed (mph)	Minimum capital height for Group 1 text (mm)
Barrier control	under 10	50
Parking area entered immediately by turning off a 30 mph road	15	60
Car park entered from higher-speed road or using a length of access road	25	90
Service areas on motorways and dual carriageways	40	120

The sign should be placed so that it is readable by drivers without their needing to look away from the road ahead. Any text on the sign not intended to be read from a moving vehicle can be of a much smaller size.

## Contrast and illumination

There must be enough colour contrast between the text and its background, each of which should be a single solid colour. The best way to achieve this is to have black text on a white background, or white text on a black background.

Signs should be readable and understandable at all times, including during the hours of darkness or at dusk if and when parking enforcement activity takes place at those times. This can be achieved in a variety of ways such as by direct lighting or by using the lighting for the parking area. If the sign itself is not directly or indirectly lit, we suggest that it should be made of a retro-reflective material similar to that used on public roads and described in the Traffic Signs Manual. Dark-coloured areas do not need to be reflective.

