The Queen Elizabeth Hospital NHS
King's Lynn
NHS Foundation Trust

Appendix 1

ACCESS AND CAR PARK STRATEGY
FINAL COPY
JUNE 2012

Final Draft

Version	1.8
Date	June 2012
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The Queen Elizabeth Hospital NHS
King's Lynn
NHS Foundation Trust

Approvals

Version	Date	Name	Title
1.6	June 2012		Access and Car Park Strategy v1.6

Revision History

Version	Date	Author	Summary of Changes
1.4	Feb 2012	David Perry	Draft Issue
1.5	April 2012	David Perry	5.2.1 Objectives - Order changed
1.6	June 2012	David Perry	Draft Issue
1.7	July 2012	B Cummings	Draft for Approval
1.8	July 2012	B Cummings	Final Draft for Approval

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1. OVERVIEW

1.1 Introduction

The Capital Project Team have been asked to produce a Car Park and Access Strategy (Strategy) which looks at the redesign and re-organisation of hospital car parking on the QEH site with the aim of becoming more user friendly in terms of design and where agreed change the model and capacity allocated to staff and visitor parking.

This Strategy will also need to take into consideration the accessibility of the site by non-car modes and how the any proposed change and/or development will integrate with its surrounding area so that the needs of pedestrians, cyclists and public transport users are also met and that emergency vehicles will still be able to access the site with ease.

The site currently suffers from a disorganised and inefficient parking layout which impinges on the experience of our patients in accessing the Trust. This experience materialises in a number of ways, adding stress when visiting the site either for an appointment or treatment, missed appointment times and frustration in terms of the length of time it takes to leave the site due to traffic congestion.

A comprehensive update of the existing Green Travel Plan (a contractual requirement for all NHS organisations) for the hospital will also be undertaken by the Car Park Management Team in late summer 2012 to maximise the potential for staff and visitors of making their journeys to/from the site by sustainable transport modes. It must be remembered that Car Parking provision is only one element of the Trust's responsibilities in terms of its Green Travel Plan.

This Strategy will first describe the existing situation on site, the work undertaken to date in terms of the Trust's Green Travel Plan before setting out the aspirations of the Trust in terms of car parking provision. In the following sections transport issues including accessibility, trip generation and distribution, traffic effects, emergency vehicle and servicing access, car parking and sustainable initiatives will be discussed.

During the preparation of this strategy discussions have been held with Norfolk County Council (NCC) as the local highway authority as the highway authority for the nearby A149 and the scope for this report and the methodologies used have been discussed and agreed in-principle.

In the production of this document Vectos were retained by the Queen Elizabeth Hospital Kings Lynn NHS Foundation Trust (The Trust) to provide advice on the highways and transport implications of extending and partially redeveloping access and car parking at Queen Elizabeth Hospital (QEH).

The culmination of this Strategy will be the production of a Car Parking Strategy Development Plan.

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2 SITE DESCRIPTION

2.1 Hospital Estate

The site area of the Queen Elizabeth Hospital (QEH) is 47 acres (19 ha), and the gross internal floor area of buildings is 54,432m2, with a further 7,377m2 leased out. The site comprises the main hospital with its clinical and support accommodation within the "Best Buy" main block, together with a range of surrounding buildings and structures built at various times since the 1980's.

The QEH sits on the eastern edge of King's Lynn which forms part of King's Lynn and West Norfolk Borough Council, which in turn is situated in the county of Norfolk. **Appendix A** shows the QEH location.

The QEH is located on the north side of the A1076 (Gayton Road) immediately to the north west of the junction with the A149 (Queen Elizabeth Way) which forms the eastern boundary. Residential properties bound the west of the site with open land to the north.

The hospital site is occupied and operated by the Queen Elizabeth Hospital Kings Lynn NHS Foundation Trust (the Trust) which serves a local population of over 250,000 and provides a comprehensive range of acute services including acute medical and surgical specialties e.g. general medicine, general surgery, orthopaedics, ear, nose and throat, ophthalmology, cancer treatment, renal dialysis, chemotherapy, obstetrics & gynaecology and children's services.

Patients, visitors, staff of diverse disciplines and professions, academic teaching, research personnel and students, continuously and heavily populate the hospital site. Most premises, with the exception of the day surgery and day clinics operate on a 24-hour, 7 day week and 365 days a year basis

2.1 Local Highway Network

The A1076 Gayton Road passes the south of the site connecting with the A149 to the east and Lynn Road to the west. Opposite the site on the south side of Gayton Road there is a mini-roundabout junction with Winston Churchill Drive which provides access to nearby residential areas.

The A149 Queen Elizabeth Way forms part of the main arterial route around King's Lynn, linking with the A10 to the south and the A148 to the north east.

2.2 Hospital Vehicle Access

The hospital has two vehicular accesses on Gayton Road with one being a priority T-junction used by emergency and service vehicles, and the other being a mini-roundabout primarily used by staff and visitors. **Appendix B** shows the existing vehicle routes through the hospital.

2.3 Accessibility

Bus Service

There are a number of buses that serve the site and surrounding area which is summarised at Appendix C of the Green Travel Plan using information that is taken from the existing hospital Travel Plan.

The nearest bus stop is located within the hospital site on the main access road. There are additional stops within a short walk of the site on Gayton Road and Winston Churchill Drive.

First Bus Services have decided to withdraw from the North Norfolk area. However, Norfolk Green have informed the Trust that they will be continuing those services as well as doubling the number of buses serving the hospital to 15 buses per hour, in peak periods, by mid 2013.

Rail Services

The nearest rail station to the hospital is King's Lynn Station which is situated approximately 3km to the west in the town centre. Norfolk Green provide a frequent bus services providing connections between the site and rail station.

Pedestrians and Cyclists

Footways exist along the north side of Gayton Road and are provided throughout the hospital site, which has numerous pedestrian crossings. Sections of pavement in the vicinity of the main hospital access are also shared use with cyclists. Pedestrian facilities on the south side of Gayton Road are sporadic with no provision at

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the roundabout with the A149 or beyond. Appendix D of the Green Travel Plan shows a plan of the existing pedestrian routes within the hospital.

A staggered informal crossing is situated opposite the site on Gayton Road which facilitates access to Winston Churchill Drive and other nearby residential areas.

Green Travel Plan

The Green Travel Plan was approved in 2009 and updated in 2010 and 2011. It aims to improve the health and overall wellbeing of people who work at, and are served by, the Hospital. Staff, patients and visitors are encouraged to consider travelling by more sustainable forms of transport through the promotion of various incentives and measures.

There is more work to do to ensure that the Trust's Green Travel Plan incorporates actions which help improve the experience of patients and visitors to the site and build on the work of the Patient Experience Committee in addressing issues of concern.

The Green Travel Plan has been produced in accordance with transport guidance and is updated and managed continually by the hospital's Travel Plan Co-ordinator. The main objectives of the Green Travel Plan are as follows:

- Meet existing and future undertakings on managing the traffic impacts on site.
- Meet requirements for the submission of any future planning applications.
- Promote the use of more environmentally-friendly alternatives than driving alone.
- Widen travel choice facilitating alternative modes of transport.
- Discouraging travel by single occupancy vehicles.

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3 CAR PARKING CURRENT STATUS

3.1 Approach to the Production of the Car Parking Strategy

In producing this Strategy the Trust has brought together various workstream outputs to propose a direction of travel in terms of changes to the car parking environment. In addition, the Trust is bound by its legal requirement to ensure any action taken is in line with national sustainable development policy.

The next section of the paper pulls together the outputs of work to date from the Green Travel Plan.

3.2 The Trust's Green Travel Plan

The Trust has a Board approved Green Travel Plan which is a contractual requirement for all NHS organisations. The Trust's Plan was produced by the Travel Plan Group.

A Travel Plan Group was established and meets regularly, chaired by the Trust's Director of Non-Clinical Services & Performance Management, to implement the aims outlined in the Plan which were to:

- Improve car parking.
- Improved hospital access.
- Improve the use of sustainable travel.
- Improvements to cycle storage facilities for patients, visitors and staff.
- Effectively communicate with patients about transport and travel options for getting to the hospital, including information sent out with appointment letters, and a travel information website.
- Establish travel partnerships with other local organisations.
- Set up a transport information area in the hospital main entrance.
- Work with local bus companies to develop hospital-specific information and guidance for users.
- Introduce a car leasing scheme, including the potential to incorporate carbon-efficient pool care component.
- Find ways to incentivise staff to travel to work by bus or bike.
- Publicise cycle routes.
- Supporting initiatives such as "Walk to Work Week" and "National Bike Week".
- Develop a prioritisation system for permit issue using post codes and includes proposals to encourage alternative modes of transport to car use.

This work will continue but incorporate learning from the Patient Experience Committee in terms of patient, visitor and carer needs but this has formed the basis of this Strategy.

In terms of measuring success of this Plan the Trust devised a number of measures which are regularly reported on within the Trust. These are:

- Increase public transport usage.
- Increase bycicle usage.
- Increase motor cycle usage.
- Increase the number of people walking.
- Reduce car usage.

The Travel Plan measures have been devised from:

- Consultation with staff via drop-in sessions held in October 2011, Car sharing incentives, newsletters and Staff Net.
- Consultation with local residents.
- Meetings of the Hospital Access, Car Parking and Travel User Groups.

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- Liaison with key operational staff in Facilities / Car Park Team.
- Staff Travel Surveys.
- Visitor/patient Travel Surveys.
- Previous studies by consultants on the hospital's travel and parking issues.
- Work undertaken on the existing Trust Travel Plan.
- Government Guidance on Travel Plans.
- Best practice in other Hospital Travel Plans.

The measurable outputs from this work have seen the following achievements:

- Single occupancy car usage has been reduced by 6% of baseline and 8% of 2010
- All modes of sustainable transport have increased by around 3%
- Events are taking place every month to promote different modes of sustainable transport
- Working in partnership with Norfolk Green to promote and improve bus services around the hospital the new number 7 bus service has been created
- Car sharing numbers are increasing, currently there are 195 members a 35% contact rate
- New cycle storage facilities have been installed onsite
- Bike user group has been set up to promote cycling
- Bike maintenance sessions are on site
- Lunch time walking group has been set up.

3.3 Current Car Park Capacity and Management System

The Trust has approximately 1,219 car parking spaces split between visitors and staff.

However, approximately 409 cars park in unofficial areas, 284 on grass verges and 125 on tarmac areas making the Trusts total 1,628 and the overall total 1,809.

Demand currently exceeds supply, resulting in overspill parking on to the local streets surrounding the Hospital.

Pay & Display systems have been installed in areas allocated to visitor parking.

Table 1 shows the breakdown of the Trusts official parking spaces at QEH.

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Table 1: Current car park space breakdown

Car Park Area	Location Description	Breakdown of current official parking spaces as Nov 2011						
		Regular Spaces		Premium	Disabled	On-Call	Special	2011/12
		Visitors	Staff	Staff	(free)	(free)	(free)	Total spaces
Car Park A	Adjacent to tennis court	**12**	**94**					**106**
Car Park B	Bus shelter area	**3**	**35**				**2**	**40**
Car Park C	Tennis court		**44**					**44**
Car Park D	Day surgery		**15**	**26**	**2**	**11**	**5**	**59**
Car Park E	Theatre on-call					**7**		**7**
Car Park F	Front of hospital				**9**		**5**	**14**
Car Park G	Roxburgh				**15**			**15**
Car Park H	Main car park	**211**	**494**		**27**	**3**		**735**
Car Park I	Disabled area				**13**			**13**
Car Park J	Opposite residencies		**2**					**2**
Car Park K	Residences							**0**
Car Park L	Dialysis						**6**	**6**
Car Park M	Print room		**4**	**11**			**5**	**20**
Car Park N	MacMillan				**3**		**6**	**9**
Car Park O	Staff gravel area		**89**					**89**
Car Park P	Trust vehicle area						**30**	**30**
Car Park R	Back of estates		**1**	**9**				**10**
Car Park S	Back of hotel services		**1**	**4**				**5**
	Miscellaneous						**15**	**15**
	TOTAL	**226**	**779**	**50**	**69**	**21**	**74**	**1219**

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4 CASE FOR CHANGE

- Complaints about car parking on site and in the surrounding areas continue to increase with this being the single most 'complained about' topic.
- Inability to improve ease of car parking at the QEH for patients and visitors will detrimentally effect our reputation and could see a drift in terms of being the hospital of choice for the local population.

Objectives and benefits of implementing the strategy have been determined as described in the table below.

Objective	Benefit	Benefit Criteria
To provide adequate parking to meet current and future demand in accordance with the Travel Plan and Capacity Planning. It is recognised that the maximum parking density may not be achieved in the short term that an initial project may support current demand and a further development may be required at a later stage.	To provide sufficient capacity on site to meet physical requirements.	**Capacity**
To provide a secure and safe car park environment for patients, staff and bona fide hospital visitors, their vehicles and their property.	Patients, staff and visitors feel comfortable leaving their vehicles and property.	**Safety**
To provide car parking areas that maximise the use of the space, whilst minimising the risk of crime and pollution.	To maximise the use of available space with minimum disruption to the environment.	**Environment**
To manage traffic across the site ensuring free flow of traffic and access to all facilities at all times	Staff, patients and visitors have adequate access to facilities.	**Access**
To promote the NHS Green Transport Plan by encouraging the use of sustainable transport modes such as public transport, cycling, walking and car sharing.	Promotion of alternative modes of transport in line with NHS Environmental Strategy helps to avoid congestion.	**Sustainability**
To be mindful of social responsibilities; reducing off site parking and inconvenience to neighbours. To minimise off site parking by 2014.	Congestion around the site is reduced and road safety enhanced. The Trust no longer impinges on its neighbours	**Corporate Citizenship**
To ensure the development supports the redevelopment of acute hospital services.	Additional car parking capacity is provided during current and future hospital development.	**Strategic Fit**
Clinical care to patients must not be disrupted or compromised during the redevelopment of car parking services.	Patients receive continuity of parking facilities whilst parking improvements are carried out.	**Clinical Service Delivery**

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4.1 Issues for Consideration

There is a recognised need to rigorously pursue opportunities for rationalising and increasing car parking provision at Queen Elizabeth Hospital. To help relieve the pressure that has been created the Trust have previously explored and exhausted all possibilities of providing additional surface parking and have also examined, but not carried out, a scheme for developing a double deck multi storey car park.

- The main hospital complex is on the outskirts of King's Lynn, Norfolk, although some specialist services or clinics are provided at outlying facilities such as the North Cambridgeshire hospital in Wisbech, and Swaffham Community hospital.
- QEH catchment area covers the towns of King's Lynn, Wisbech, Hunstanton, Downham Market and Swaffham, with the remainder of the population in villages and hamlets across an area of more than 750 square miles. The population of this area is approximately 240,000 people.

- The population profile includes a high proportion of older residents, since this is a popular coastal retirement area. However, new housing developments in recent years have seen large population growth in towns such as Downham Market, principally of families with children.
- QEH provides a comprehensive range of specialist, acute, obstetrics and community-based services. Treatment of cancer patients is amongst the best in the country - the Macmillan Centre provides palliative care for patients with cancer and other chronic illnesses - and have a 'Charter Mark' award-winning Day Surgery centre.
- The Trust has a work force of approximately 2,700 people and has an annual income of around £160 million.
- In 2010/11 QEH treated 391,207 patients, 52,348 attended accident and emergency, 36,368 attended for inpatient or day case treatment, 32,566 attended as emergency admissions, and there were 269,925 outpatient appointments.
- Demand for car parking exceeds the 1,219 official capacity, with a requirement for circa 1800 spaces. This results in inappropriate parking, obstructions to emergency vehicles and overspill parking onto surrounding public streets (an estimated 10% of staff and visitors use the surrounding roads).
- Various external reviews have been undertaken; previous recommendations for multi-storey car park developments have not been implemented for planning and financial reasons.
- Planning permission is required from Borough Council of Kings Lynn and West Norfolk to redevelop the site parking, and the Council will require that an effective and robust Travel Plan is developed before they will grant planning consent to the Hospital.
- The Green Travel Plan supports proposals to increase parking density on-site and demonstrates that whilst increasing parking on-site, the hospital is doing all it can to ensure that increased parking does not translate to increased car trips to the site, through promoting and encouraging the use of sustainable travel modes.

4.2 Constraints

Key constraints on delivering the Strategy have been identified as follows:

- Must be deliverable alongside range of onsite developments.
- The assumption that any investment must be self funding project in terms of capital / revenue.
- Attractiveness of the development to the private sector.
- Site availability for car parking.

Actions to mitigate these constraints will be included with the Car Parking Strategy Development Plan.

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5 CAPACITY PLANNING

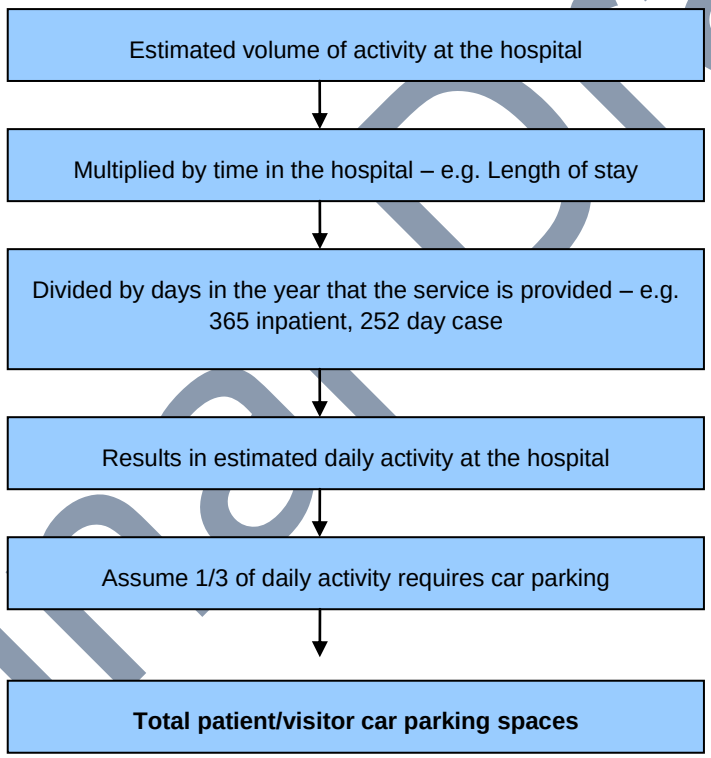
5.1 Methodology

The number of visitor and staff parking spaces is dependent on different variables, activities and staff respectively. The approach adopted in determining the requirements has been based on actual activity and predicted activity over the next five years using data agreed with local health care commissioners. These figures assume that 10% of outpatient work is transferred from Queen Elizabeth Hospital to primary care and a further 10% of elective outpatients and 8% of elective surgical work is transferred to a Norfolk private sector provider.

Visitor Car Parking

Visitor parking is associated with the volume of activity provided at the site and the requirements have been determined using the following methodology:

Figure 1 - Capacity Planning Methodology – Visitor Parking



Staff Car Parking

To determine the car parking requirements the HTM 07-03 the Health Technical Memorandum for Transport Management and Car-Parking have been applied and adjusted for the rural location of QEH of one space per three staff employed.

Disabled Car Parking

Parking Standards for Norfolk 2006 states that where more than 200 spaces will be provided the minimum DDA compliant spaces is 6% of the total spaces.

However the Trust has a desire to decrease these spaces and use the Shopping, Recreation and Leisure Guidelines of 4 plus 4% due to the use of the car park. 1100 spaces used by staff, which by nature of their work, generally do not require disabled parking and around 600 spaces used by patients and visitors require a higher percentage of disabled parking. Therefore, the guidelines cannot be applied in determining the number

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of disabled parking spaces. In applying 4 plus 4% of staff, patients and visitor parking we arrive at 72 disabled parking bays far greater than if 6% was applied to visitor parking.

5.2 Future Demand Car Parking

Visitor Car Parking

The Trust has worked with Advisors to develop assumptions on the future clinical activity this includes supporting the transfer of care to a primary care based setting through Practice Based Commissioning or the Choice Initiative through the Independent Sector Treatment Centre Contracts. Using activity figures provided by the Trust and the assumptions outlined above the following attendances have been calculated for 2010/11 in **Table 2** below.

Table 2 - Attendances and parking demand

Hospital Parking Requirement	Estimated parking spaces using 2010/2011 activity		
	2010/2011		
	Total activity	Guide	Parking spaces
A & E attendance	52,348	1 space per 2 attending	72
Inpatient or day case	36,368	1 space per 3 beds	172
Emergency admissions	32,566	1 space per 3 beds	included above
Outpatient (new and follow up)	269,925	1 space per 4 attending	270
Fermoy Mental Health Unit		Estimated	50
Sandringham Private Hospital		Estimated	25
Ambulance Services			0
Total patients	**391,207**		**589**
Staff	3,500 (3,000 WTE)	1 space per 4 staff adjusted to 1 space per 3 staff due to rural location	1167
Trust, volunteers, care workers, drop-off and emergency vehicles			79
Total car parking demand			**1835**

The table above suggests that demand for parking spaces is 1835 in 2010/2011 based on 100% occupancy.

PG13 regulations state one space per three visitors should also be provided therefore applying this to the figures above suggests that additional car parking spaces should be provided. This has been calculated by taking the average LoS of 4 days by 36,368 patients. If 20% of patients have visitors then 80 additional spaces will increase daily car parking demand. However these spaces have not been allowed for.

Staff Car Parking

As outlined earlier the staff car park requirements are estimated using guidance on the number of spaces per staff. **Table 2** above outlines the maximum requirements using the current staffing numbers of 3,500 (2,700 WTE), which include staff, temporary staff, volunteer workers, care workers, contract service workers and contractors.

Sensitivity Testing

Three sensitivity tests have been applied:

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I. 15% additional capacity in visitor spaces due to fluctuating peak demand and operational overlap of spaces whilst cars circulate round the car park
II. Introduce improvements outlined in the Travel Plan to reduce the use of cars by 10% over the next five years.
III. Failure of the proposals to transfer work to Independent Sector (IS) private providers or into community locations will require an additional 100 spaces.

Table 3 - Results of Sensitivity Tests on Spaces Required (2014/15)

	Original	+15% Visitors	-10% all	Failure to shift work to IS / community
Visitor	589	677	530	677
Staff (maximum)	1,246	1,246	1,121	1,246
Total	**1,835**	**1,923**	**1,651**	**1,923**

5.3 Summary of Outcome

Consultation and future projections demonstrate that the additional 15% of demand will not materialise if the car park has an effective layout and mode of operation and this strategy has not included this into its final assumption. Therefore the capacity required is between 1,651 and 1,923, i.e. an additional 432 to 704 spaces

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6 CAR PARKING FUTURE SERVICE COMPONENTS

This section identifies the parameters within which future Car Parking changes/improvements will be made and any Car Parking Strategy Development Plan must be produced in terms of the components, legislation and more specifically in terms of aspirational estate management.

Where highlighted recommendations are made in terms of any future works to the external estate which will enhance the experience, safety and ease of access of the users of the Trust's car parks.

6.1 Planning Policy

In developing any strategy the Trust must take into consideration the following local Planning Policy:

- Relevant planning policies are contained in the Local Development Framework (LDF) for Kings Lynn and West Norfolk May 2009. It requires proposals to respect the character of the locality, meet design criteria and not adversely affect residential amenity in terms of appearance, overlooking, noise, smell, parking, traffic or other activity.
- The relevant policies relating to parking are contained in the Parking Standards for Norfolk 2007. The purpose of this document is to provide a consistent set of parking standards for application throughout Norfolk. Local Planning Authorities will need to include policy in their Local Development Frameworks to determine local parking standards and a policy context for their application. These policies will accord with Government advice, Regional Planning advice, Structure Plan policies and other relevant transport policies and strategies. It is expected that Local Planning Authorities will refine and modify the parking standards in their Local Development Frameworks to reflect local circumstances.
- The standards cover those vehicular modes of transport commonly in use, e.g. bicycles, powered two wheelers, cars, buses, coaches and servicing vehicles.
- The standards take the form of maximum standards for car parking and minimum standards for all other vehicle types to accord with the latest Government advice as set out in PPS 3 - Housing (November 2006), and PPG 13 –Transport (March 2001). Generally, developers should not be expected to provide more spaces than they themselves wish but sufficient spaces must be provided to avoid on-street parking and road safety problems as well as fully catering for car drivers with disabilities and non-car modes. Sufficient spaces must be provided for development in areas of poor accessibility to public transport where the car will continue to be the dominant form of transport.
- Generally, the hospital should contain all its associated parking requirements within the boundary of the site, and allow vehicle access and egress from the adjacent public highway in forward gear. All parking areas should be available for use at all times and in all weather conditions. Kings Lynn and West Norfolk Borough Council will be expected to condition non-residential planning permissions to prevent the obstruction of parking.

6.2 Cycle Access

Currently there are limited existing facilities for cyclists. In terms of gaining access to the site, cyclists find it difficult due to the congested roads and lack of dedicated cycle tracks. Site observations indicate that the majority of cyclists enter the site from Gayton Road, through both entrances others use footpaths and side entrance onto the Springwood Estates.

There is scope to improve access for cyclists by providing cycle lanes from the entrances to points further within the site. The benefits of designated cycle lanes are that they are clearly marked for the use of cyclists; provide a route to signed cycle parking facilities; and increase a perception of safety in cyclists.

This action will be considered in any future redevelopment/improvement.

6.3 Cycle Parking Facilities

The main cycle parking facilities on site are located outside the hospital administration entrance, alongside the covered link with the Fermoy Building and outside the front of Outpatients entrance.

Site observations suggest that currently there are insufficient numbers of available cycle stands in which to secure bicycles. Some of the provided cycle facilities are not covered and do not protect cycles from adverse weather. Work will continue to progress in terms of enhancing and increasing where necessary the provision of secure cycle storage.

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6.4 Disable Parking Provision

In accordance with the Council Guidelines for Vehicle Parking Standards, 2001, a facility such as a hospital with more than 200 parking bays should have the minimum provision of 4 bays plus 4% of total designated for disabled badge holders. In most cases disabled parking bays should not be no more than 50 meters from the entrance of the main entrance or an applicable building.

The Trust currently has 69 dedicated disabled parking spaces located throughout the site which will be maintained throughout any redevelopment work.

6.5 Signage and Way-Finding

Generally the Trust must ensure way-finding for both pedestrians and vehicles is positioned at each decision point on the approach to and within the car park. This is particularly important for a hospital of this size which presents patients, visitors and staff with a multitude of options and has the potential to create confusion if there is any ambiguity in the mind of the person of what direction they should take at any given point.

The signage must fulfil the following basic requirements;

- Identify the hospital site to approaching street traffic;
- Direct motorists to available parking spaces;
- Identify any segregated parking areas;
- Direct motorists to the most convenient exit;
- Warn of oncoming traffic, potential conflicts and prohibitive movements;

Whilst the essential purpose of signage is to provide direction, clarity and ease of use for the customer, it is also important that the signage, and style of signage, be in keeping with the rest of the scheme.

Site Signage

Generally, signs and road markings comply with Traffic Signs Regulations and General Directions 2002 (TSRGD) however some signs are not to the required standard and will require removal or replacement as part of the upgrading of the site

Types of Signs

Site signage must comply with the latest NHS guidelines, minimum standards and be included in any site developments financial costs. (Wayfinding Strategy Guidance)

Current Signs on Site

There are road signs and direction signs leading to the hospital site located along Gayton Road. This type of sign is a subject for the highway department and the format and location on the road can be found in the NHS Way-finding Good Practice Guide section 2.3 getting to the site

In relation to signage on site the following summarises the current situation:

- There are 2 separate public car park areas, but there are no signs to distinguish between the car parking areas as identified by the Trust. (Car Park A, B, --- to Car Park M)
- Apart from the A&E most buildings on the site remain un-marked landmarks. Clearer signs may be required to distinguish the car parks if the P&D machines are replaced with access control barriers to minimise confusions between the car parks.
- There are 7 patients' drop-off points on the site but these locations do not feature in most of the existing signage.
- The trees happen to pose a big problem to the visibility of the signage during the summer months. Some trees may have to be lopped to improve the situation.
- The Current Signage on the site follows different designs and patterns consistent with the times they were ordered. These differences most especially when read within the same location make they are visually untidy.
- The signs are set at different heights that make it difficult for some users to read. Again the

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inconsistency in setting the heights and sizes of the signage will further damage the visual acceptance of the signs.

- Most of the existing signs are not illuminated and will be hard to read at night.
- Location signs to disabled car parks not visible on site.
- In the car parks no prohibitive signs to promote health and safety not visible (e.g. parking restrictions etc).
- Warning signs of CCTV surveillance not visible in some important locations

A complete review of site signage to be undertaken and prioritisation of work to standardise approach across the Trust and an implementation plan to be agreed. Any work to improve/redevelop car parking must take into account latest best practice.

6.6 Lighting

In assessing the exterior lighting on the QEH site the following factors have been considered:

- Distribution of light over the designated area.
- Illumination of particular areas or tasks
- Avoidance of light disability or discomfort due to glare
- Choice of lamp
- Provision for selective switching or dimming
- Control of depreciation of light output by design and regular maintenance
- Coordination with other services and equipment
- Appearance of the lighting
- Effect on the appearance on the surrounding
- The effects of site objects like trees buildings etc.

Overall lighting is generally good in most parts of the site. External lighting has been upgraded to LED low energy lights over the last 2 years but the lighting levels do not meet the requirements for the Trust to achieve ParkMark are accreditation in the car parks. Lighting along footpaths is in need of improvement for the safety of its users.

Investment in exterior lighting will have both Capital and revenue implications. To bring lighting on the site to the acceptable standard, we may be looking between 30-50% boost to the current level which will be detrimental to the Trust's ability to meet its NHS Carbon Reduction Targets.

Roadway Lighting

Road Lighting installations generally conform to Groups B8 and B5/6 as defined in BS 5489: Part 3 Lighting for subsidiary roads is generally adequate for all roadways around the hospital complex. The amount of light should be compatible with that on the adjacent public roads which may have Group A12 or A10 installations.

Considerations should be given to the use of Group B8 lighting for hospital roads used by public transport vehicles or having traffic flow exceeding 400 vehicles per hour. Some grading of lighting levels may be desirable to avoid sharp contrast between the Group levels.

Car Park Lighting

The staff car park, the main car park and the front car park could be classed as medium size car parks and peripheral lighting to Group 5/6 or equivalent to that of adjacent buildings could be adequate. Floodlighting using high output low energy sources will deliver the much needed lighting improvements to the car parks. However maintenance of any flood lighting mounted at heights over 8m should be taken into consideration

For detailed information of light sources and their applications, please refer to section 9 of CIBSE Lighting guide. For guidance on the lighting design in the healthcare building see CIBSE Lighting guide for hospitals and healthcare buildings LG2 1989.

The investments into the hospital site could be quite complex and expensive. This could be phased to reduce the impact on the overall service developments costs of the site. The car park redevelopment provides a good opportunity to upgrade the infrastructure around the site at various stages.

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A complete review of site lighting to be undertaken and prioritisation of work to standardise approach across the Trust and an implementation plan to be agreed. Any work to improve/redevelop car parking must take into account latest best practice.

6.7 CCTV

The CCTV cameras monitoring the hospital and the main car park are managed remotely in the Kings Lynn Town Centre control room.

CCTV is used and monitored in compliance with the Trust's CCTV Policy.

Any change to CCTV as a result of improvements to the car parks of the Trust must be in line with the Trust's CCTV Policy.

6.8 Car Park Barrier and Access Control

There is a mixed regime operating on the site, with commercial and some staff vehicles using the rear site entrance and patients, visitors and staff use the front of the site entrance. There are minimal controls and the circulation patterns at the front of the hospital is complex.

Any Car Parking Strategy will need to ensure that emergency vehicles (Ambulance and Police) have full access to A&E and there is also unfettered access for fire engines and associated equipment. Any installation of access control systems must be carefully evaluated to ensure these needs are accommodated.

The use of a barrier control system at the entrances to the car parks offers the following benefits to the regulation of vehicle traffic and circulation on site

- All vehicles on the site can be counted in and out therefore making it possible to control.
- Vehicles can be redirected to empty car parking bays therefore making it possible to use the facility to the full capacity.
- The ability to control the number of vehicles on the site contributes to the general safety since every car allowed into the site is able to park within the allocated spaces and reduces the risks of parking illegally on the site.
- The barrier makes parking fee evasion less likely.
- The Barrier Controls if fitted with the right equipment and linked to a central station can provide a useful tool for information gathering about the car park activities, e.g. number of users at the different times of the day, peak times, revenue, etc. This information and the statistics are very important for planning improvements to the facilities on-site.
- The barriers when fitted with counters and displays can provide the users with the information on the availability of car park spaces and through electronic messaging signs direct users to parking spaces.

When considering revising car parking management on site include the requirement to implement an improved traffic management system.

6.9 Sustainable Energy

This Trust is committed to progressively integrating sustainable development principles into its daily activities and any change to its car parks will be considered in light of its commitment to Sustainable Energy Management.

6.10 Site Safety (ParkMark)

The Trust will aim for its car parks to meet the "ParkMark" Safer Parking recommendations.

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APPENDIX 1 - Existing Car Park Site Plan

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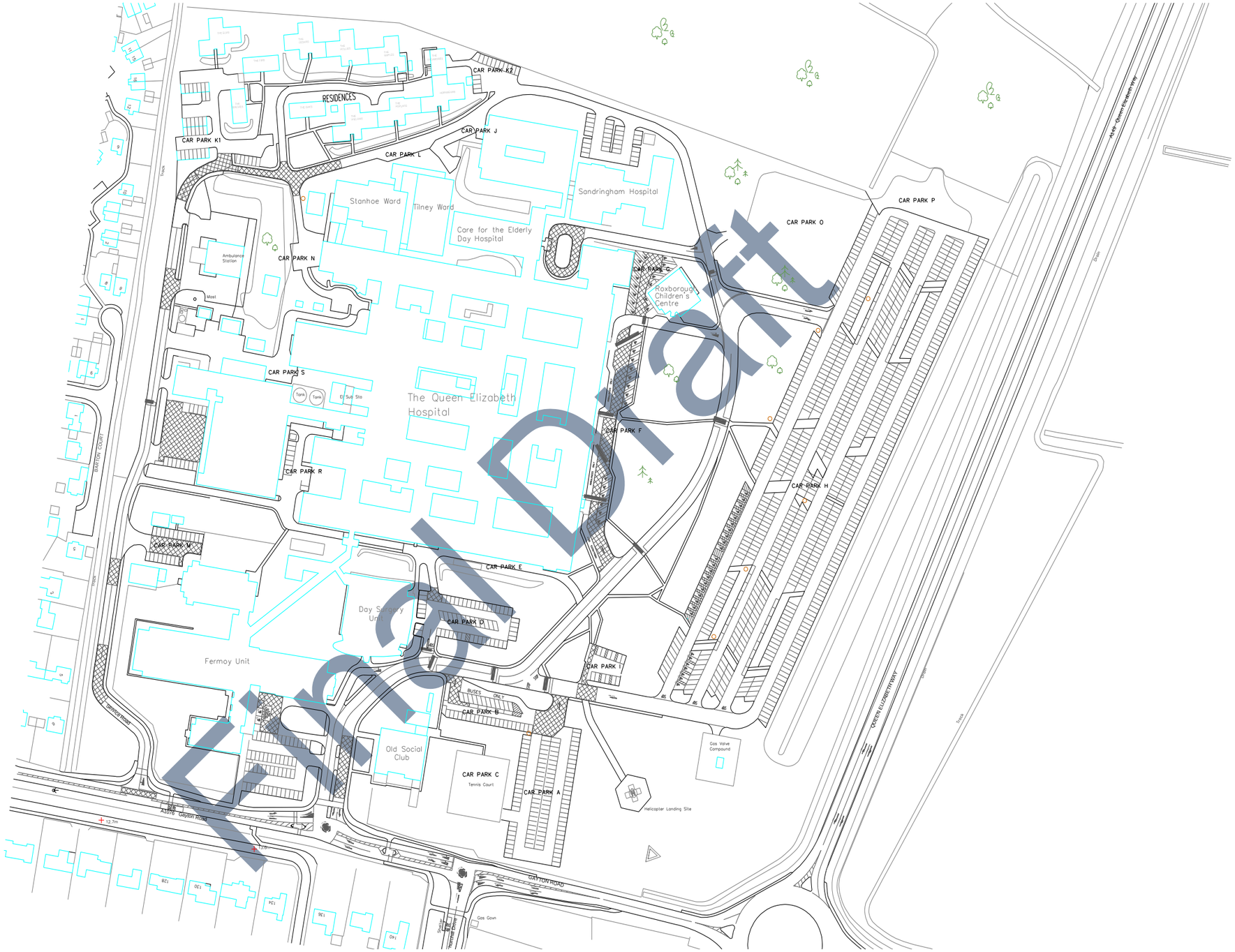
RESIDENCES
CAR PARK K2
CAR PARK K1
CAR PARK J
CAR PARK L
Stanhoe Ward
Tilney Ward
Care for the Elderly Day Hospital
Sandringham Hospital
CAR PARK P
CAR PARK O
Ambulance Station
CAR PARK N
CAR PARK G
Roxborough Children's Centre
CAR PARK S
The Queen Elizabeth Hospital
CAR PARK F
CAR PARK R
CAR PARK H
CAR PARK M
CAR PARK E
Day Surgery Unit
CAR PARK D
Fermoy Unit
CAR PARK I
BUSES ONLY
CAR PARK B
Old Social Club
CAR PARK C
Tennis Court
CAR PARK A
Helicopter Landing Site
Gas Valve Compound
QUEEN ELIZABETH WAY
GAYTON ROAD
Gas Govn

Draft

APPENDIX 2 Trust Car Parking Policy

TRUST CAR PARKING POLICY

To be appended when approved.

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