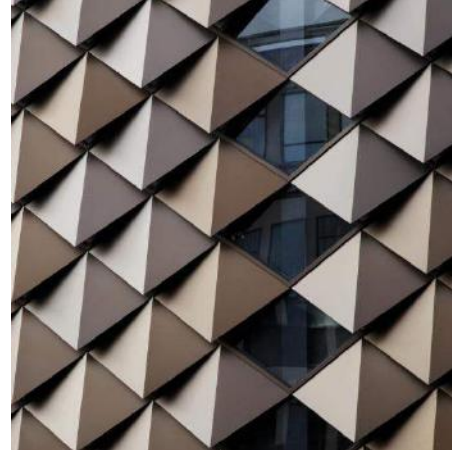
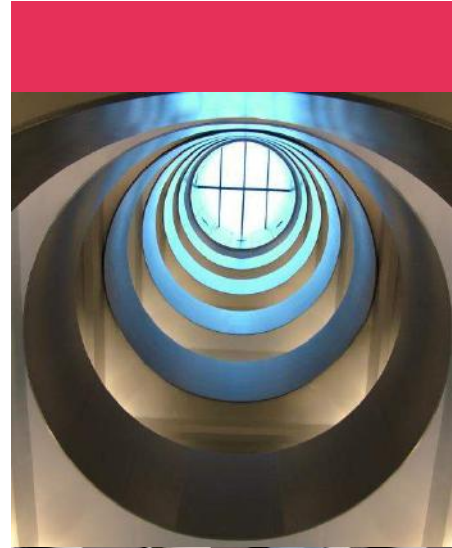


# North Denbighshire Community Hospital, Rhyl Transport Assessment

Curtins Ref: 074057-CUR-00-XX-RP-TP-001-V01  
Revision: V01  
Issue Date: 13 April 2020

Client Name: Kier Construction Ltd.



Curtins  
51-55 Tithebarn Street,  
Liverpool, L2 2SB  
Tel: 0151 726 2000

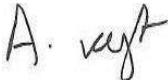
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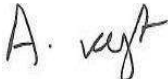


## Control Sheet

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Author	Signature	Date
<b>Danny Jones</b> MPlan MRTPI Principal Transport Planner		13 April 2020

Reviewed	Signature	Date
<b>Alex Vogt</b> BSc (Hons) MSc MCIHT TPP Technical Director		13 April 2020

Authorised	Signature	Date
<b>Alex Vogt</b> BSc (Hons) MSc MCIHT TPP Technical Director		13 April 2020

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- Appendix A** – Proposed Site Layout
- Appendix B** – CrashMap Outputs
- Appendix C** – Review of Existing Parking Provision
- Appendix D** – TRICS Outputs

## 1.0 Introduction

### 1.1 Background

1.1.1 Curtins has been appointed on behalf of Kier Construction Ltd. to provide traffic and transport advice in relation to the proposed redevelopment of the Royal Alexandra Hospital, Rhyl. In accordance with the NHS Direct Wales website, the existing hospital offers the following services:

- Child and Adolescent Mental Health (CAMHs)
- Child Health & Development
- Chiropody Service
- Continence Service
- Dental Service
- Dietetics
- District Nursing
- Occupational Therapists
- Outpatient Clinic
- Physiotherapy
- Psychology Treatments and Interventions
- Sexual Health
- Speech and Language Therapy
- X-Rays

1.1.2 The redevelopment would see the main hospital building retained, with a new community healthcare facility (known as North Denbighshire Community Hospital - NDCH) delivered to its south on land that currently primarily accommodates surface car parking and facilities buildings.

1.1.3 The NDCH building would re-accommodate much of the services currently available on site, providing a building that is fit for purpose as a modern healthcare facility.

1.1.4 As part of the proposals the existing surface parking provision would be rationalised and re-provided to the west of Alexandra Road; constructed on the site of existing ancillary hospital buildings (the uses of which would be re-accommodated in the new building) and their associated areas of surface car parking. Alexandra Road would also be stopped-up in order to restrict vehicular access from Russell Road and provide public realm.

1.1.5 The redevelopment proposals can be seen in **Appendix A**.

### 1.2 Purpose and Scope of this Report

1.2.1 This Transport Assessment (TA) has been written in order to consider the development proposals and their potential impact on the surrounding area from a traffic and transportation perspective. It has been written in consideration of PPW/TAN18 principles and in accordance with scoping discussions held with Highways Officers at Denbighshire Council.

1.2.2 Curtins met on site with Highways Officers on 30<sup>th</sup> January 2020 to discuss the initial development proposals and principle of closing Alexandra Road to general vehicular traffic.

- 1.2.3 This site meeting was followed up with a more thorough scoping discussion over the phone between Curtins and Denbighshire Highways on 24<sup>th</sup> March 2020. Key notes of these discussions are provided in **Table 1.1**:

Point of Discussion	Denbighshire Highway Status
Given that any increase in GFA and service provision on site would be minimal, there should be no need for vehicle capacity assessments (this is in line with the previously approved Transport Statement, dated 2014).	This approach was agreed in principle, although full details of the proposed uses justifying this should be provided throughout the TA in accordance with TAN18 guidance.
The existing parking provision would be re-designed and rationalised, with numbers being retained comparable to the existing levels of parking.	This approach was accepted in principle, although full details of nearby on street parking, car parks and accessible travel should be provided in the TA. Denbighshire's SPG21 should also be referenced and considered.
All customer/staff parking would be provided from East Parade and the Alexandra Road/ Russell Road junction would be closed off to regular vehicular traffic.	This approach was accepted in principle. It was also confirmed that a fall back should be referenced should the SUO not be finalised. This would include retention of Alexandra Road as adopted highway with a prohibition of vehicles order covering any pedestrianised area, and commuted sum provisions as appropriate.
Refuse and servicing access provided from Grosvenor Road. Egress for all normal servicing vehicles would be via Grosvenor Road, whereas egress for refuse vehicles would be via Russell Road.	This approach was accepted. It was also confirmed that consideration should be given to wall heights and pedestrian splays.

**Table 1.1** – Scoping Discussion Summary

- 1.2.4 In addition to other matters, this TA provides information in line with discussions as captured in the above **Table 1.1**.

### 1.3 Structure of the Report

- 1.3.1 Following this introduction, **Section 2** of the report provides a comprehensive description of the existing site and its location. This includes the local highway network and facilities for pedestrians, cyclists and public transport users; in addition to the existing facilities and parking provision.
- 1.3.2 **Section 3** provides a review of the current transport planning policy and guidance relevant to the redevelopment proposals.
- 1.3.3 **Section 4** contains details of the development proposals including the proposed net increase in GFA, the various proposed access strategies and the proposed consolidation and rationalisation of the existing areas of parking.

- 1.3.4 **Section 5** contains an assessment of the site by non-car modes of transport; considering travel on foot, by bicycle and via public transport.
- 1.3.5 **Section 6** demonstrates how the redevelopment would result in a negligible highway impact, using a TRICS sensitivity test to provide further comfort.
- 1.3.6 A Transport Implementation Strategy (TIS) is provided in accordance with TAN 18 in **Section 7**, and the report is summarised and concluded in **Section 8**.

## 2.0 Existing Situation

### 2.1 Site Location

- 2.1.1 The application site is located within Rhyl, approximately 1km north east of the town centre. The site currently comprises buildings and parking associated with The Royal Alexandra Hospital.
- 2.1.2 The site is bounded to north by East Parade, by Grosvenor Road to the east, Russell Road to the south and the rear of existing residential properties off Beechwood Road to the west. Alexandra Road bisects the site, extending from East Parade to Russell Road.
- 2.1.3 **Figures 2.1 and 2.2** below show the site location from a regional and local perspective:



**Figure 2.1 – Site Location (Regional)**



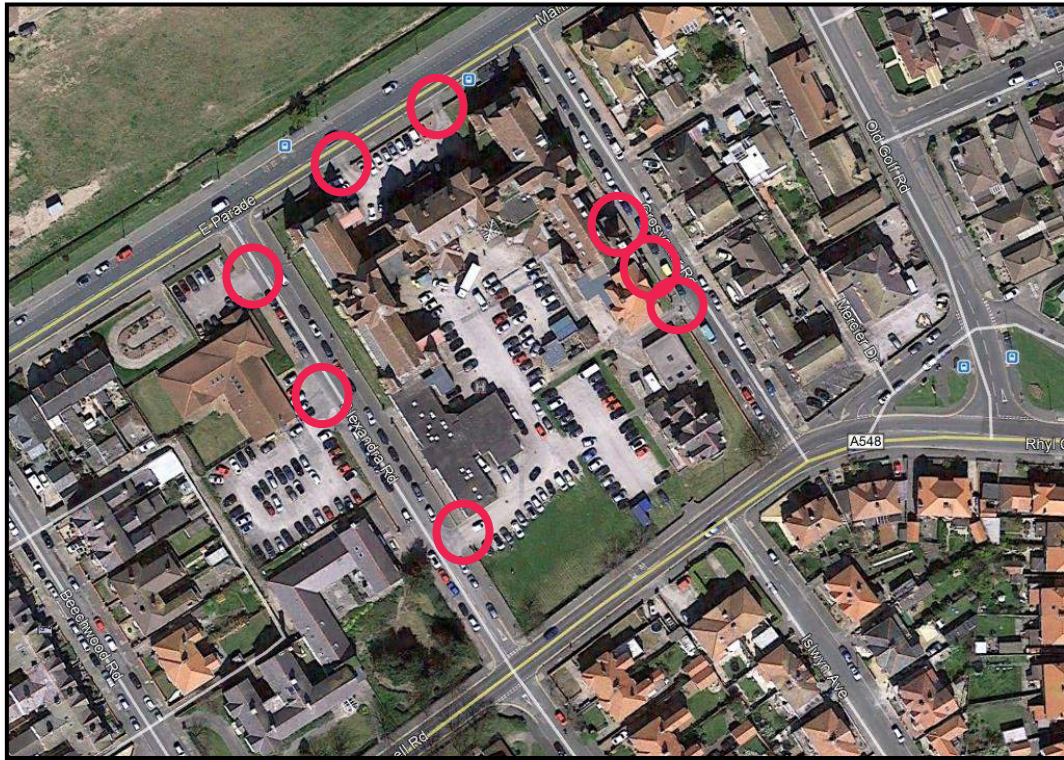
**Figure 2.2 – Site Location (Local)**

## 2.2 Existing Use

- 2.2.1 The application site currently comprises The Royal Alexandra Hospital buildings and associated surface car parking.

## 2.3 Existing Access Arrangements

- 2.3.1 Vehicular access to the site is provided from eight access points along Alexandra Road, East Parade and Grosvenor Road. All take the form of simple priority access points, with a mixture of full access points and dropped kerbs providing access to various sections of car parking and facility buildings.
- 2.3.2 The access junctions are illustrated on **Figure 2.3**:



**Figure 2.3 – Existing Access Points**

- 2.3.3 The existing buildings provide several pedestrian and cycle connections around their perimeter, meaning the site is permeable and can be accessed directly from East Parade, Alexandra Road and Grosvenor Road.

## 2.4 Surrounding Road Network

### ***B5118 East Parade***

- 2.4.1 The B5118 East Parade forms the northern boundary of the proposed development site. East Parade runs along the coastline of Rhyl; from the roundabout junction with West Parade/ Stryd Y Baddon approximately 900m to the south west of the site, to a priority junction with Grosvenor Road at the north east corner of the site, where the B5118 continues to the east as Marine Drive.
- 2.4.2 In the vicinity of the site, East Parade comprises a single lane, two-way road with a total carriageway width of approximately 9m. Opposite the northern site boundary, there is on-street Pay & Display/coach parking on the north-western side of the carriageway.
- 2.4.3 Also, in the vicinity of the site, East Parade is subject to a 30mph speed limit. Footways are present at 2-3m in width and street lighting provided along both sides of the carriageway. No waiting at any time (double yellow line) parking restrictions and no loading at any time restrictions are present on the southern side of the road.

2.4.4 **Figure 2.4** shows views to the west and east along East Parade from its junction with Alexandra Road:



**Figure 2.4** – East Parade (views from the junction with Alexandra Road)

- 2.4.5 Alexandra Road provides two points of access to a small area of parking to the immediate north of the main hospital building.
- 2.4.6 East Parade benefits from a scheme of pedestrian facilities including pedestrian guard railing points complete with dropped kerbs and tactile paving to facilitate crossings. Bus stops are provided at various points along East Parade with the closest within 20m of the site boundary.

#### ***A548 Russell Road***

- 2.4.7 The A548 Russell Road forms the southern boundary of the proposed development site. The road extends for approximately 1,000m along a north east/south west alignment between a priority junction with High Street in the west, where the road continues on as Wellington Road, and a priority junction with Old Golf Road in the east, where it continues on as Rhyl Coast Road.
- 2.4.8 In the vicinity of the site, Russell Road is approximately 6-6.5m in width. Similar to East Parade, Russell Road forms priority controlled T-junctions with Alexandra Road and Grosvenor Road. **Figure 2.5** provides a westbound view along Russell Road at the southern corner of the site.
- 2.4.9 In the vicinity of the site Russell Road is subject to a 30mph speed limit with footways approximately 2m in width provided on either side of the carriageway. The road is also well lit by street lighting.
- 2.4.10 Russell Road includes double yellow line parking restrictions along the majority of its length, and there are instances of traffic calming road markings (ARAF/SLOW).



**Figure 2.5** – Russell Road (view Westbound)

### **Alexandra Road**

- 2.4.11 Alexandra Road bisects the development site, extending for approximately 135m between two priority controlled T-junctions with East Parade in the north and Russell Road in the south. Alexandra Road is two-way road with a single lane in each direction.
- 2.4.12 Alexandra Road has a typical carriageway width of approximately 7m. However, the effective width varies along the road's length due to on-street parking which is often present as much of the carriageway is uncontrolled.
- 2.4.13 Alexandra Road provides access to three of the existing access points, leading to associated parking for the current Hospital buildings. **Figure 2.6** provides a northbound view along the eastern footway of Alexandra Road adjacent to the main car park access, c.30m north of Russell Road:



**Figure 2.6** – Alexandra Road (view Northbound)

- 2.4.14 The road is subject to a 30mph speed limit, with footways 2-3m in width and street lighting provided along both sides of the carriageway.

**Grosvenor Road**

- 2.4.15 Grosvenor Road is located on the eastern perimeter of site and extends along a north-west/south-east alignment. The road comprises a single carriageway and is one-way in a southbound direction. From its northern entrance at East Parade, formed by a priority controlled T-junction, the road extends approximately 130m to the south east and terminates at another priority controlled T-junction with Russell Road.
- 2.4.16 Grosvenor Road has a typical carriageway width of approximately 7m. However, the effective width varies along the road's length due to on-street parking which is often present as much of the carriageway is uncontrolled.
- 2.4.17 Footway widths are approximately 2-3m along Grosvenor Road, and street lighting is provided at regular intervals. **Figure 2.7** provides a southbound view along the western footway of Grosvenor Road at the midpoint of the road between East Parade and Russell Road:



**Figure 2.7** – Grosvenor Road (view Southbound)

- 2.4.18 Grosvenor Road accommodates three of the six access junctions to the existing site, with one full access point approximately 45m north of the junction with Russell Road and two gated access points to the building only.
- 2.4.19 The road benefits from existing pedestrian facilities including dropped kerbs to facilitate pedestrian movement, and tactile paving at its junction with Russell Road. Grosvenor Road is subject to a 30mph speed limit.

## 2.5 Highway Safety Records Review

- 2.5.1 Personal Injury Accident (PIA) data for the highway network adjacent to the site has been obtained from CrashMap for the most recent five years available (being 2013 – 2018). A breakdown of the information is contained in **Table 2.1**, and the full search extents are provided in **Appendix B**:

Junction/Link	Slight	Serious	Fatal	Totals
Russell Road (link)	0	1	0	1
Russell Road/Beechwood Road	1	0	0	1
Russell Road/Alexandra Road/Bryntirion Avenue	2	0	0	2
Russell Road/Grosvenor Road	1	0	0	1
East Parade (link)	1	0	0	1
East Parade/Conwy Street	1	0	0	1
Old Golf Road/Burns Drive	1	0	0	1
Totals	7	1	0	8

**Table 2.1** – Personal Injury Accident Data Summary

- 2.5.2 There has been a total of eight accidents in the latest five-year period available, comprising seven ‘slight’ incidents and one ‘serious’ incident. No fatal accidents have been recorded in the study area and period. There is nothing to suggest an existing safety issue from the breakdown in accidents to locations as indicated in the above table.
- 2.5.3 More detailed records for the serious collision have been included to the rear of this report in **Appendix B**. The incident occurred approximately 200m to the south west of the site (approximately 40m south west of the A548/Queen’s Walk/Conwy Street junction) on Friday 9<sup>th</sup> December 2016 at 12:41 AM.
- 2.5.4 It involved one single vehicle (motorbike) and one casualty (driver or rider). Street lighting was present and lit, and the road surface was wet/damp. The vehicle was proceeding normally along the carriageway (i.e. not on a bend), and the first point of impact was noted as being a kerb on the nearside.
- 2.5.5 Following a thorough review of the records, it is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.

## 2.6 Existing Parking Provision

- 2.6.1 A review of existing parking provision to the east and west of Alexandra Road has been undertaken, the results of which are provided in **Appendix C** to the rear of this report. The areas of parking were split up into seven zones, and a summary is provided in **Table 2.2**:

Parking Zone	Regular Bays	Disabled Bays	Total Bays
East Parade (Green Zone)	17	0	17
Alexandra Road West A (Orange Zone)	11	1	12
Alexandra Road West B (Yellow Zone)	46*	0	46
Main Car Park A (Blue Zone)	50	11	61
Main Car Park B (Red Zone)	23	4	27
Main Car Park C (Purple Zone)	23	3	26
Main Car Park D (Grey Zone)	27*	0	27
Totals	197	19	216

\*estimated count (informal parking)

**Table 2.2** – Personal Injury Accident Data Summary

- 2.6.2 There is a total of approximately 216 car parking spaces on site, comprising 197 regular bays and 19 marked disabled bays.
- 2.6.3 It should be noted that provision at the 'Alexandra Road West B' and 'Main Car Park D' zones (total of 73 spaces) have been estimated using an assumption of relatively efficient parking.

## 3.0 Transport Planning Policy and Guidance

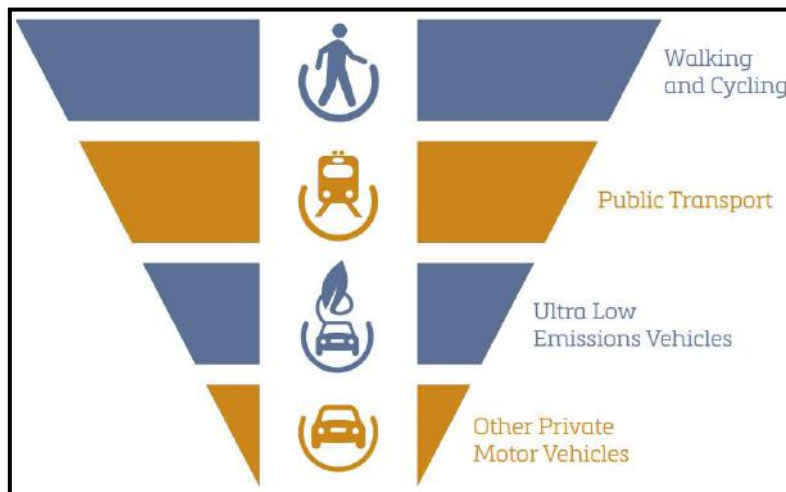
### 3.1 Introduction

- 3.1.1 When developing scheme proposals, it is important to understand the national and local transport related planning policies. This section aims to outline the key policies throughout relevant national and local policy and guidance documents.

### 3.2 National Planning Policy and Guidance

#### *Planning Policy Wales (Edition 10, 2018)*

- 3.2.1 Updated and reissued as Edition 10 in December 2018, Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.
- 3.2.2 The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales. Section 4.1 of PPW relates to transport. The section focuses on:
- ***“Enabling More Sustainable Travel Choices – measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel;***
  - ***Network Management – measures to make best use of the available capacity, supported by targeted new infrastructure; and***
  - ***Demand Management – the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles.”***
- 3.2.3 The document recognises that the planning system has a key role to play in reducing the need to travel and supporting sustainable transport. The planning system should do this by facilitating developments which:
- ***“Are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;***
  - ***Are designed in a way which integrates them with existing land uses and neighbourhoods; and***
  - ***Make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.”***
- 3.2.4 In line with the above, PPW sets a transport hierarchy which has been reproduced as **Figure 3.1**. This transport hierarchy has formed the basis of the proposed development from a design and access perspective; including influencing the site access and parking provision:



**Figure 3.1** – The Sustainable Transport Hierarchy for Planning (reproduced from PPW)

**TAN 18: Transport (2007)**

- 3.2.5 The transport-related Technical Advice Note ‘TAN 18: Transport’ referenced in PPW was produced in March 2007. The document notes that:

*“An efficient and sustainable transport system is a requirement for a modern, prosperous and inclusive society. However, transport, in particular road traffic, can also have negative impacts on human health and the environment. Road traffic growth is a cause of increased local air pollution, green house gas emissions contributing to global warming and climate change and, in some areas, congestion, which can affect economic competitiveness.”*

- 3.2.6 The document sets various pieces of policy and guidance to influence design and is a material consideration when determining planning applications. TAN 18 is supplemented by a number of Annex’s, comprising:

- Annex A – Accessibility;
- Annex B – Visibility Standards;
- Annex C – Definitions of Highway Routes;
- Annex D – Transport Assessment;
- Annex E – Planning Application Procedures; and
- Annex F – Conditions Requiring Works in the Highway

- 3.2.7 Of particular relevance to the proposed development are annex letters A, B and D.

Annex A

- 3.2.8 Annex A of TAN 18 notes that accessibility planning has the potential to contribute to a number of Assembly Government priorities including addressing climate change and social exclusion, ensuring sustainable development and contributing to the health and wellbeing of the population of Wales.

- 3.2.9 The document notes that different accessibility measuring techniques may be appropriate depending upon local circumstances and the nature of the plan proposal or planning application. This Transport Assessment has used data obtained from site visits in conjunction with GIS based tools to assess the site's accessibility.

Annex B

- 3.2.10 The Stopping Sight Distance (SSD) values presented in Table B of Annex B have been used to assess the proposed access junction from East Parade, based on a design speed of 30mph.

Annex D

- 3.2.11 Various thresholds for Transport Assessments are provided within Annex D of TAN 18. The land use 'Hospitals' suggests a Transport Assessment threshold of greater than 2,500m<sup>2</sup> GFA of development. Given the redevelopment proposals result in marginally more than this, a Transport Assessment rather than a Transport Statement has been provided.

- 3.2.12 Annex D of TAN 18 also notes that the output of any Transport Assessment should be a Transport Implementation Strategy (TIS). On this basis, a TIS has been included as **Section 7** within this document. The TIS should satisfy the following aims:

- Understand the transport impacts of the development;
- Clearly communicate the impacts to assist the decision making process;
- Demonstrate the development is sited in a location that will produce a desired and predicted output (for example in terms of target modal split);
- Mitigate negative transport impacts through the design process and secured through planning conditions or obligations;
- Maximise the accessibility of the development by non-car modes; and
- Contribute to relevant development plan and RTP objectives relating to accessibility of services and modal share.

- 3.2.13 With regard to hospitals, the following additional information is provided:

*"Hospitals can generate substantial volumes of traffic and it is therefore important to undertake robust transport assessment. For hospitals and other health care facilities the TA should clearly set out how the proposed location meets sustainability principles. The TIS in turn should include measures to promote non-car access to the site especially for staff and visitors and should set out robust access arrangements that are sensitive to the differing needs of its users."*

***An Active Travel Action Plan for Wales (2016)***

- 3.2.14 An Active Travel Action Plan for Wales guidance document was produced in February 2016 following the Active Travel (Wales) Act of 2013.

3.2.15 The Welsh Government aims to increase levels of walking and cycling in Wales and realise the many benefits that travelling actively brings. The Active Travel Act focuses on walking and cycling as a mode of transport, and the Active Travel Action Plan was finalised after consultation. The document focuses on the following topics as ways to encourage and facilitate active travel:

- **Leadership** – from a national and local level;
- **Legislation, Standards and Tools** – including at the planning and design stages;
- **Infrastructure** – referencing Welsh Government funding and developer contributions;
- **Promotion & Behaviour Change** – through communication of information, consultation and engagement;
- **Skills & Training** – with access to professionals and decision makers; and
- **Monitoring & Evaluation** – underpinning and refining the process.

### 3.3 Local Planning Policy and Guidance

#### *Denbighshire Local Development Plan 2006 – 2021 (2013)*

3.3.1 The Denbighshire Local Development Plan (LDP) determines where new development will take place and was adopted in June 2013. Under the theme ‘Achieving Sustainable Accessibility’, there are three transport-related policies:

- Policy ASA 1 – New transport infrastructure
- Policy ASA 2 – Provision of sustainable transport facilities
- Policy ASA 3 – Parking standards

3.3.2 Policies ASA 2 and ASA 3 are particularly relevant to this application. As such, ASA 2 reads:

*“Development proposals expected to result in a need to bring forward improvements to public transport, walking or cycling infrastructure will be required to incorporate or contribute to the cost of their provision. Subject to individual assessments, schemes may be required to provide or contribute to:*

- *Capacity improvements or connection to the cycle network;*
- *Provision of walking and cycling links with public transport facilities; and*
- *Improvement of public transport services.”*

3.3.3 The matter of capacity is considered throughout the Highway Impact section (**Section 6**) of this report. The proposed development is very well connected to the surrounding pedestrian and cycling network, as well as a number of bus services, as demonstrated in **Section 5** of this report.

3.3.4 Policy ASA 3 reads:

*“Development proposals, including changes of use, will be expected to provide appropriate parking spaces for cars and bicycles. If the use of a property or premises requires parking infrastructure for mobility impaired people, these facilities will be taken into account when determining the amount of parking space required. Consideration will be given to the following circumstances (where they apply) in determining parking provision:*

- *The site is located within a high-densely populated area;*
- *Access to and availability of public transport is secured;*
- *Parking is available within reasonable distance of the site;*
- *Alternative forms of transport are available in the area.”*

3.3.5 The proposed level of parking has been considered thoroughly throughout **Section 4** of this report, with further analysis of alternative areas of parking within a reasonable walking distance of the site in **Section 6**. The LDP is also supported by SPG 21, as discussed below.

#### **SPG 21: Parking Requirements in New Developments**

3.3.6 SPG 21 is one of a series of Supplementary Planning Guidance notes (SPGs) amplifying the development plan with the aim of improving the process, design and quality of new development. The notes are intended to offer more detailed guidance which will assist members of the public, Members of the Council, and officers in discussions prior to the submission of planning applications and assist officers and Members in determining planning applications.

3.3.7 The parking standards are laid out for two principle parking zones, and the proposed development site sits within Parking Zone 1 (being within the town of Rhyl). The relevant parking standards for the proposed development are reproduced in **Table 3.1**:

Type of Development	Operational	Non-operational
Hospitals *	Essential vehicles as required	2.5 spaces per bed

\* - This level of provision would be appropriate for acute and Neighbourhood District Hospitals. For other types of hospitals a lower level of provision may be acceptable.

**Table 3.1** – SPG 21 Parking Recommendations

### **3.4 Conclusions**

3.4.1 In summary, the development proposals are considered to be consistent with local and national transport planning policies and guidance. The site is located within an area which has a range of existing local facilities and plenty of sustainable travel choices, and is an existing established hospital.

## 4.0 Development Proposals

### 4.1 Introduction

- 4.1.1 Curtins has been appointed on behalf of Kier Construction Ltd. to provide traffic and transport advice in relation to the proposed redevelopment of the Royal Alexandra Hospital, Rhyl.
- 4.1.2 The redevelopment would see the main hospital building retained, with a new community healthcare facility (known as North Denbighshire Community Hospital - NDCH) delivered to its south on land that currently primarily accommodates surface car parking and facilities buildings. The proposed redevelopment comprises the following principle stages:
- Demolition of outdated and inefficient facilities structures;
  - Retention of main hospital building and associated services; and
  - Addition of new-build facility with re-worked access, parking and landscaping.
- 4.1.3 A plan of the proposed redevelopment is provided in **Appendix A** to the rear of this report.
- 4.1.4 This section firstly considers the proposed net increase in GFA, before providing information on the proposed access, servicing and parking arrangements.

### 4.2 Proposed Net Increase in GFA

- 4.2.1 Despite the proposed demolition of some facilities and retention of others, the redevelopment of Royal Alexandra Hospital would result in a net increase in GFA. As summarised in **Table 4.1**, the proposed development would result in a net increase of approximately 3,000m<sup>2</sup> GFA (or c. 37.2%):

Existing Situation			Proposed Redevelopment		
Buildings for Demolition	Buildings for Retention	Total Existing GFA	Buildings for Retention	New Build NDCH	Total Proposed GFA
2,594m <sup>2</sup>	5,533m <sup>2</sup>	8,127m <sup>2</sup>	5,533m <sup>2</sup>	5,619m <sup>2</sup>	11,152m <sup>2</sup>
Net Increase in GFA:					+ 3,025 m <sup>2</sup>

**Table 4.1** – Net Increase in GFA

- 4.2.2 The remainder of this subsection provides details on calculations behind the above figures; considering the buildings for demolition, the buildings for retention and the new build NDCH.

#### ***Buildings for Demolition***

- 4.2.3 As part of the redevelopment proposals, a number of existing buildings on site would need to be demolished. These buildings are outlined in red in **Figure 4.1**, whilst a building previously demolished is outlined in black:



**Figure 4.1 – Buildings for Demolition**

4.2.4 As the building outlined in black is already demolished, this structure has not been considered further. Details of the buildings outlined red in the above figure are populated in **Table 4.2** below:

Building		Floors			Total GFA (sqm)
		GF	1 <sup>st</sup>	2 <sup>nd</sup>	
A	RAH Dental	264.6	202.8	140.6	608
B	Estates	161.8	76.1	0	237.9
C	Mortuary	141.3	0	0	141.3
D	Energy Facilities	127.2	0	0	127.2
E	Pre-operative Assessment	568	170	0	738
F	General Hospital	654	87.9	0	741.9
<b>Total GFA (sqm):</b>					<b>2,594</b>

**Table 4.2 – Buildings for Demolition**

4.2.5 A total of 2,594.3m<sup>2</sup> of buildings will be demolished. Currently, these buildings accommodate a variety of uses ranging from dental and estates facilities, to clinic rooms and energy facilities.

### ***Buildings for Retention***

- 4.2.6 As part of the redevelopment proposals, the existing main hospital building fronting East Parade would be retained. This building is outlined in green in **Figure 4.2**:



**Figure 4.2** – Buildings for Retention

- 4.2.7 Details of how the main hospital building to be retained will be used are populated in **Table 4.3** below:

Ground Floor Services	GFA (sqm)	1 <sup>st</sup> Floor Services	GFA (sqm)
Area Centre Team: Area Quality Team	53	Chapel	99
CAMHS Circulation	112	Child Services: CAMHS	253
Child Services	0	Circulation	314
Child Services: CAMHS	272	Community Dental	162
Child Services: Paediatric OT	139	Corporate	66
Circulation	170	Entrance	26
Community Dental	44	Meeting	77
Community Resource Team	53	Storage & Plant	4
Corporate	62	Support	121
Entrance	40	Therapies	364
Existing - Patient Records	0	Vertical Circulation	113
Facilities	16		
Meeting	42		

Mental Health	21		
Not in Scope	70		
Pead OT circulation	38		
SPOA	10		
Storage & Plant	163		
Support	165		
Therapies	70		
Vertical Circulation	116		
2 <sup>nd</sup> Floor Services	GFA (sqm)	3 <sup>rd</sup> Floor Services	GFA (sqm)
Area Centre Team	109	Child Services	293
Area Centre Team: Management Accounts	35	Circulation	163
Child Services	23	Community Dental	72
Circulation	300	Meeting	16
Community Resource Team	342	Mental Health	12
Continence	64	Sexual Health	118
Corporate	51	Storage & Plant	11
Facilities	22	Support	49
Meeting	9	Therapies	13
Mental Health	166	Vertical Circulation	53
Phlebotomy	8		
Safeguarding	30		
SPOA	100		
Support	86		
Tissue Viability	15		
Vertical Circulation	118		
Total GFA (sqm):			5,533

Table 4.3 – Buildings for Retention

- 4.2.8 The main hospital building will be retained, totalling of 5,533m<sup>2</sup>. Currently, the main hospital building accommodates uses comparable to those proposed as outlined in **Table 4.3**.

#### **New Build NDCH**

- 4.2.9 As part of the redevelopment proposals, a new community healthcare facility (known as North Denbighshire Community Hospital - NDCH) would be provided. Details of how the new build would be used are populated in **Table 4.4** below:

Service (all Floors)	GFA (sqm)	Service (all Floors)	GFA (sqm)
Catering	94	Outpatients Circulation	131
Circulation	221	Patient & Visitor Hub	65
Communication	503	Plant	430

Service (all Floors)	GFA (sqm)	Service (all Floors)	GFA (sqm)
Day Therapy Assessment Unit (IV)	162	Same Day Care Centre	202
Day Therapy Assessment Unit (IV) Circulation	72	Same Day Care Centre Circulation	59
Dental	216	Sexual Health	166
Dental Circulation	74	Sexual Health Circulation	54
Emergency Multi-Disciplinary	134	Staff Hub	104
Emergency Multi-Disciplinary Circulation	32	Therapies Inpatients	54
Facilities Management	204	Therapies Outpatients	446
Imaging & Ultrasound	100	Therapies Outpatients Circulation	149
Imaging & Ultrasound Circulation	24	Toilets	8
Main Entrance	209	Void	57
Op Mental Health	165	Ward	811
Op Mental Health Circulation	49	Ward Circulation	277
Outpatients	347	<b>Total</b>	<b>5,619</b>

Table 4.4 – New Build NDCH

4.2.10 The new build NDCH would total 5,619m<sup>2</sup>, accommodating a mix of healthcare facilities and services.

### 4.3 Proposed Customer/Staff Vehicular Access

#### *General Principles of Access and Proposed Stopping-up of Alexandra Road*

- 4.3.1 As demonstrated on the site plan in **Appendix A**, in order to calm vehicle speeds and control through-traffic along Alexandra Road, it is proposed that the existing priority controlled T-junction at Alexandra Road/Russell Road is closed off to vehicular traffic. This will require a stopping-up order.
- 4.3.2 Notwithstanding this, the design has retained flexibility by allowing for the occasional access of vehicles via Russell Road if ever required through the use of bollards. For example, vehicles that might require occasional access could include rigid or articulated HGVs that cannot turn within the proposed car parking area.
- 4.3.3 Considering the nature of the development and the reasons for stopping up Alexander Road, it has been agreed with Highways Officers at Denbighshire Highways that proceeding down the Section 247 route under the Town and Country Planning Act (TCPA) is the most appropriate course of action. Following any forthcoming planning approval, a separate application to Welsh Government would be undertaken to secure the legal road closure.
- 4.3.4 As Section 247 of the TCPA requires a separate application, there cannot be any guarantee of its completion within any forthcoming planning approval. Therefore, it has been agreed with Denbighshire Highways Officers that a fallback position would be useful in the event the SUO not be finalised. This would include retention of Alexandra Road as adopted highway with a prohibition of vehicles order covering any pedestrianised area, and commuted sum provisions as appropriate.

- 4.3.5 As it is proposed Alexandra Road is taken out of the adopted highway ownership, it would seem appropriate to attach a reduced speed limit (10mph) in order to control vehicle speeds.

#### ***Car Park Access***

- 4.3.6 As demonstrated on the site plan in **Appendix A**, the existing car parking provision will be rationalised, with one point of entry/exit from East Parade.
- 4.3.7 **Drawing 074057-CUR-00-XX-DR-TP-05001** shows a large car (based on an Audi A6) accessing and egressing the site.
- 4.3.8 The access from East Parade operates currently as a priority controlled T-junction with no recorded collisions within the most recent five-year study period (see **Section 2.5** and **Appendix B**). Notwithstanding this, and for completeness, **Drawing 074057-CUR-00-XX-DR-TP-75001** shows visibility stplays in accordance with TAN18 Table B.

#### ***Drop-off Access***

- 4.3.9 **Drawing 074057-CUR-00-XX-DR-TP-05001-P01** also shows a large car using the drop-off area. It is envisaged this would be used by those patients and visitors that arrive by taxi or any local community transport vehicles.

#### ***Pedestrian/Cycle Access***

- 4.3.10 The majority of pedestrians and cyclists would continue to access the site from Alexandra Road via either East Parade or Russell Road. A total of seven different areas of cycle storage would be provided throughout the site to ensure convenient storage locations.
- 4.3.11 It is envisaged that the proposed downgrading of the Alexandra Road/Russell Road junction to accommodate pedestrian and cycle access only would make this access point more attractive than it is currently. Pedestrian footways at least 2m in width would be maintained at the Alexandra Road/East Parade junction, and tactile paving could be provided.
- 4.3.12 Additionally, the existing pedestrian access points from East Parade and Russell Road would be retained. The pedestrian route from Russell Road would be enhanced to accommodate cyclists. A formal access way would be provided, lined with trees and feature lighting.

### **4.4 Proposed Emergency Vehicle Access**

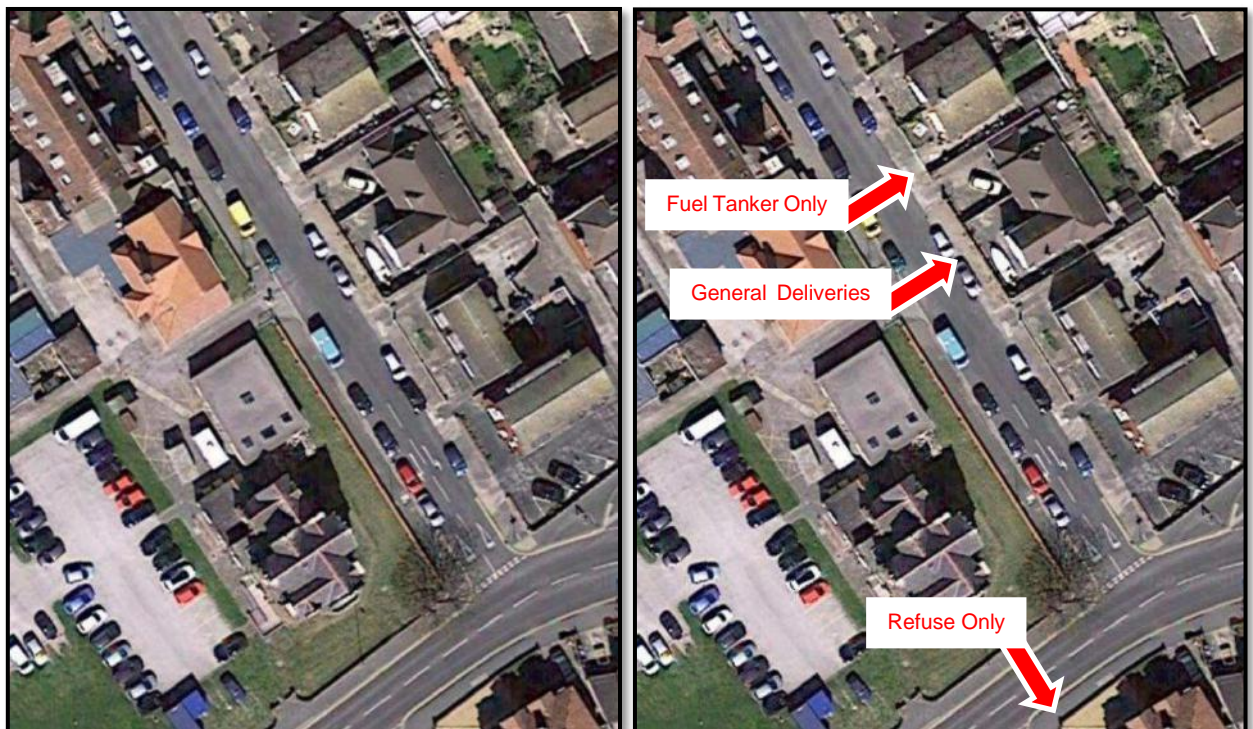
- 4.4.1 Whilst the proposal does not include specific Accident and Emergency (A&E) provision, it is considered appropriate to allow for ambulance vehicle access either in the event a patient or visitor requires transfer to an emergency medical facility.
- 4.4.2 **Drawing 074057-CUR-00-XX-DR-TP-05002** shows a 7.5T Panel Van (which is representative of all larger ambulance vehicles) using the drop-off area.

## 4.5 Proposed Servicing and Refuse Collection

4.5.1 As demonstrated on the site plan in **Appendix A**, all servicing and refuse collection vehicles would take access at the south east corner of the site. The following vehicles need to be catered for:

- **Large Refuse Vehicle (11.2m Rigid):** this vehicle type would require regular access (once a day), and a secure area to load.
- **Fuel Tanker (8.8m Rigid):** this vehicle type would require very infrequent access (perhaps once a year) to serve the back-up generators with fuel).
- **General Deliveries (7.5T Box Van):** general deliveries would require very regular access (multiple times a day). Some vehicle would need to access to specific hospital stores, whilst others would load/unload in a general servicing area.

4.5.2 The servicing strategy includes two points of ingress to accommodate the above vehicles; these are shown marked by green arrows in **Figure 4.3**. The egress manoeuvres would be segregated across three points; also as shown in **Figure 4.3**:



**Figure 4.3 – Servicing and Refuse Collection Strategy**

4.5.3 The above swept path manoeuvres are demonstrated in **Drawings 074057-CUR-00-XX-DR-TP-05003 to 05005**. It has been agreed with Denbighshire Highways Officers that the most appropriate form of access is likely to be a dropped kerb rather than a full junction. Therefore, in order to protect these manoeuvres, it is suggested the existing yellow lining Traffic Regulation Orders (TROs) on the western side of Grosvenor Road are extended for approximately 50m north from the junction with Russell Road.

- 4.5.4 Additionally, wall heights could be dropped to a maximum of 0.6m at the point of egress to aid visibility – should this be deemed necessary by Denbighshire Highways. **Drawing 074057-CUR-00-XX-DR-TP-75002** shows the 2m x 2m pedestrian visibility splay envelopes that may need to be considered.

## 4.6 Proposed Parking

- 4.6.1 As part of the proposals the existing surface car parking provision would be rationalised and re-provided in one area to the west of Alexandra Road (plus the retention of the existing small East Parade car park with 17 spaces). The car park would be constructed on the site of existing ancillary hospital buildings (the uses of which would be re-accommodated in the new NDCH building) and their associated areas of surface car parking.
- 4.6.2 To cater for appropriate parking demand, in addition to regular parking spaces, the rationalised area of surface parking would also accommodate; disabled, parent & child, electric vehicle and motorcycle spaces.
- 4.6.3 Alexandra Road would also be stopped-up in order to restrict vehicular access from Russell Road and provide public realm. One point of entry/exit would be provided from East Parade.
- 4.6.4 Secure cycle parking would be provided in one cycle store in a central location in-between the existing hospital building to be retained and the proposed NDCH building, whereas visitor spaces would be provided at six different locations across the site for maximum convenience.
- 4.6.5 The overall proposed parking quantum is summarised in **Table 4.5**:

Proposed Parking Levels						
Regular Car	Disabled Car	Parent & Child Car	Electric Vehicle	Motorcycle/ Powered 2-wheeler	Staff Secure Bicycle Spaces	Visitor Bicycle Spaces
147	9	9	13	9	81	100

**Table 4.5** – Proposed Parking Levels

- 4.6.6 Denbighshire Council's 'Supplementary Planning Guidance Note: Parking Requirements in New Developments' (SPG 21) has been considered when setting the above parking levels. The document sets the following standards for hospitals, considered the most appropriate category of development:
- Essential vehicles as required;
  - Non-operational car parking spaces as 2.5 per bed;
  - Minimum cycle parking spaces as 1 per 10 employees; and
  - New employment premises should designate 5% of the total car park capacity for accessible spaces.

4.6.7 However, as noted in the document, the standards set in SPG 21 are considered “...*appropriate for acute and neighbourhood District Hospitals. For other types of hospitals a lower level of provision may be acceptable.*” Therefore, whilst SPG 21 has been considered fully throughout the design process, a level of flexibility (which allows a focus on encouraging uptake in sustainable modes of travel where possible and practical) has been adopted.

4.6.8 Therefore, the following notes should be read alongside the proposed values in **Table 4.5**:

- **Car parking provision** – the proposals would result in a modest reduction of approximately 38 car parking spaces (at c. 17.6%) across the whole site when compared with the existing provision of 216. However, the existing provision is in excess of the SPG 21 recommendations and is split inefficiently across seven illegible parking zones accessed from four different primary access points; with 73 of the spaces in unmarked parking areas. It is considered the rationalisation of the parking will result in patients/visitors and staff parking much more efficiently.
- **Disabled parking provision** – the proposed proportion of disabled parking bays is 5.1%, which is in line with the ‘new employment premises’ levels established by SPG 21. Notwithstanding this, the proposals would result in a reduction of 10 marked disabled parking bays (at c. 52.6%) across the whole site when compared with the existing provision of 19. However, as the existing provision is split across seven parking zones serving different clusters of buildings, an increased provision is currently necessary to ensure parking spaces are located adjacent to the buildings they serve. Therefore, once the site is developed to include one centralised area of parking with direct and close access to the development, it would be appropriate to reduce the number of disabled spaces. Additionally, it would be NDCH policy that blue badge holders could park in available Parent & Child spaces, increasing the effective disabled parking provision to 18 (at a negligible reduction of c. 5.3% on existing levels).
- **Parent & Child parking provision** – providing Parent & Child spaces at 5.1% allows for greater flexibility (as noted above, blue badge holders would be permitted to park in these spaces) whilst still providing for those users of the paediatric facilities and any other uses as appropriate.
- **Electric vehicle charging** – providing electric vehicle charging spaces at 7.3% helps future-proof the site in anticipation of increased electric vehicle usage in the coming years. It would also serve as encouragement for staff and visitors/patients to use electric/hybrid vehicles in preference over traditionally-fuelled vehicles if they are to travel to the site by car.
- **Motorcycle/powered 2-wheeler provision** – providing 2-wheel parking spaces at 5.1% serves as encouragement for staff and visitors/patients to use vehicles which take up less parking space if they are to travel to the site in a motorised or powered vehicle as a single occupant.
- **Cycle parking provision** – the provision of 181 cycle parking spaces serves as encouragement for staff and visitors/patients to cycle to the hospital.

- 4.6.9 Alongside the above, it should be noted that the total proposed parking provision accounts for 368 vehicles/bicycles. This is an increase of c. 70.3% on the existing parking provision of 216 car spaces; which is beyond the proposed GFA increase of c. 37.2%. Therefore, whilst there is a reduction in number of car parking spaces per m<sup>2</sup> of GFA, the overall parking provision is increased.
- 4.6.10 In its flexibility, it is considered a variety of centralised parking is more appropriate for serving a community hospital – and there are alternative areas of parking available (see **Section 6**) if required.

## 5.0 Accessibility by Sustainable Modes of Travel

### 5.1 Introduction

5.1.1 A key element of national, regional and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. It is important to ensure that developments are not isolated but are located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

5.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian Accessibility;
- Accessibility by Cycle; and,
- Accessibility by Public Transport.

### 5.2 Pedestrian Accessibility

5.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. Although the Chartered Institution for Highways and Transportation (CIHT) document entitled '*Providing for Journeys on Foot*' has no legal standing within Scotland, the suggested walking distances found therein are considered applicable to this planning application. These are reproduced in **Table 5.1**.

	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere/Local Services (m)
<b>Desirable</b>	200	500	400
<b>Acceptable</b>	400	1,000	800
<b>Preferred Maximum</b>	800	2,000	1,200

**Table 5.1** – CIHT Suggested Acceptable Walking Distances

5.2.2 To assist in summarising, the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. Drawings **074057-CUR-00-XX-DR-TP-06001** and **06004** to the rear of this report show the CIHT '*Desirable*', '*Acceptable*' and '*Preferred Maximum*' for commuting trips and trips elsewhere, respectively.

5.2.3 The hospital itself would include complimentary facilities for staff, patients and visitors on site such as cafés and convenience shops, as well as facilities at the Rhyl Pavilion. Additionally, there are a variety of residential properties in the close proximity to the proposed site, that could accommodate both staff and patients; as well as Care homes and hotels/B&B facilities.

- 5.2.4 There are several bus stops located within the 500m walking catchment, which can be found Russell Road, East Parade Street and Old Golf Road. These bus stops offer access to a wide variety of bus services and useful destinations that can be used for commuting and appointments purposes. The public transport section of this Chapter discusses the bus and rail services available from the site in further detail.
- 5.2.5 Within a 1km walking distance of the development there are similar facilities to those found within the 500m walking catchment, along with a greater number of residential properties extending as far as roads such as Molineaux Road in the east, Brighton Road in the south and Church Street in the west. This catchment area also contains educational facilities, Rhyl Leisure Centre, convenience stores, Rhyl Botanical Gardens, amongst many other useful facilities. Rhyl Bus station is also located within this catchment, providing a variety of buses across Rhyl and Denbighshire.
- 5.2.6 Within the final 2km walking distance of the site there are more of the same facilities as found within the previous 500m and 1km areas, as well as some new facilities including schools, Pharmacies, Morrisons, Aldi, restaurants, among other retail sites. Rhyl Railway station is also located in this catchment, just outside the 1km catchment. This allows for both staff and patient access to the hospital via a multi modal route from the station.
- 5.2.7 Also, within the 2km catchment the majority of residential areas within Rhyl are incorporated, which represents a large proportion of the patient base served by the existing (and proposed) hospital.

### 5.3 Accessibility by Cycle

- 5.3.1 In order to assist in assessing the accessibility of the site by cycle, **Drawing 074057-CUR-00-XX-DR-TP-06002** to the rear of this report presents an 8km cycle catchment, which equates to approximately 30mins when cycling at a comfortable speed of 15kmph (10mph). The catchment extends as far as Prestatyn in the east, Pengwern in the south and Abergele in the west.
- 5.3.2 In the immediate vicinity of the site there are several recommended or signed routes for cycling, the most significant of which is National Cycle Route (NCR) 5 along the promenade within c.100m of the site boundary. There are two links to the route to NCR 5 at the north east and north west of the site via the northern footway of East Parade.
- 5.3.3 NCR 5 is a long-distance route which connects Reading and Holyhead via Oxford, Stratford-upon-Avon, Bromsgrove, Birmingham, Stoke-on-Trent, Chester, Colwyn Bay and Bangor. But locally, it links Pensarn to Prestatyn, providing a high-quality off-road cycle link along the front of Rhyl.
- 5.3.4 Additionally, in the surrounding area, there are more local link routes along; Conwy Street, Queens Walk, A548 Rhyl Coast Road, Oakville Avenue, Eastville Avenue and Garford Road. The surrounding cycle network is illustrated in **Figure 5.1**:

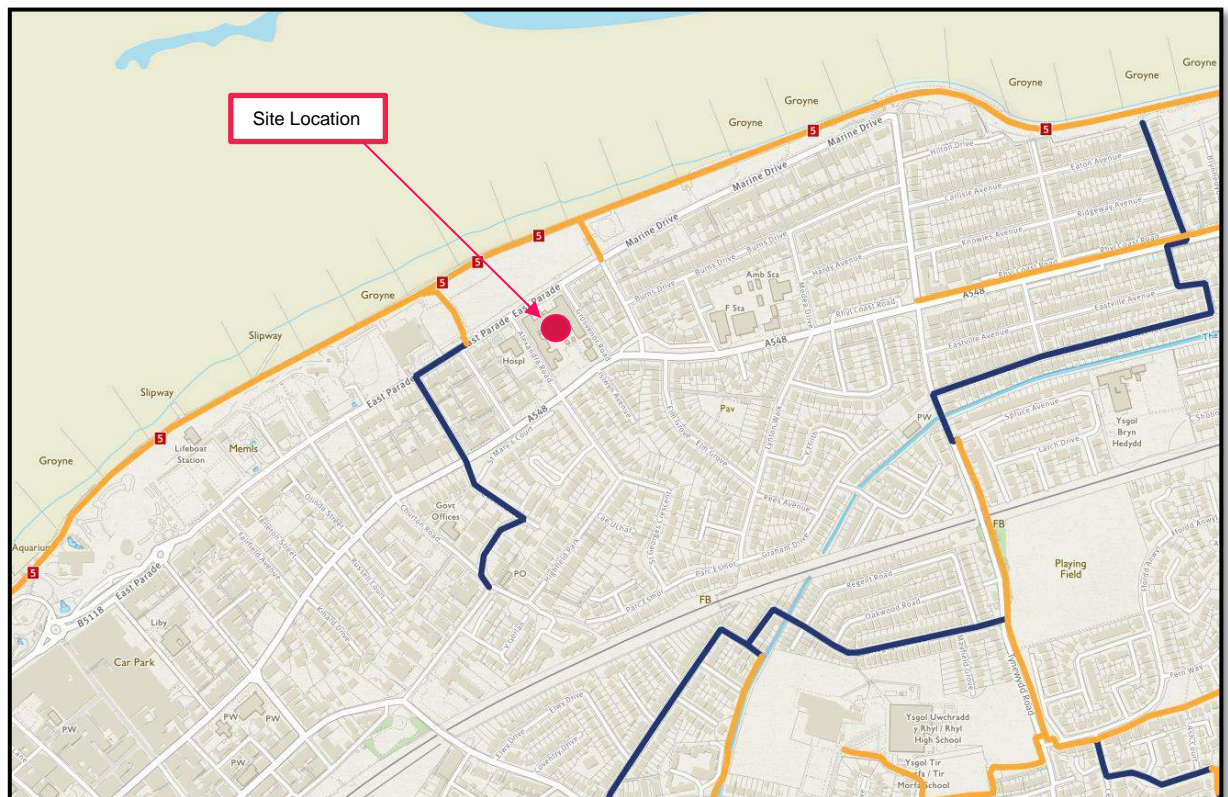


Figure 5.3 – Extract from Sustrans Cycle Mapping

## 5.4 Accessibility by Public Transport

5.4.1 The site is well situated to take advantage of existing public transport infrastructure within Rhyl. **Drawing 074057-CUR-00-XX-DR-TP-06005** demonstrates the areas accessible via public transport within 20, 40 and 60 minutes journey of the site. Accessibility by bus and rail are considered in further detail below.

### Bus Accessibility

5.4.2 The nearest pair of bus stops to the site is located immediately adjacent to the proposed development on East Parade, as well as upon Russell Road. Both pairs of stops are within 150m. The pair of stops upon East Parade contain shelter, timetable and seating. Shelter and timetable facilities are also provided at the stops on Russell Road. **Table 5.2** details the services that call at these stops and their associated frequencies:

Bus Service	Route	Typical Frequency (mins)		
		Mon – Fri	Sat	Sun/Hols
Services from East Parade				
35	Rhyl Circular Route	30	30	120

Bus Service	Route	Typical Frequency (mins)		
		Mon – Fri	Sat	Sun/Hols
Services from Russell Road				
18	Rhyl- Flint Cottage Hospital	120	120	-
19	Flint- Prestatyn-Hoylwell-Rhyl	120	Peak AM/PM Services	-
40	Dyserth- Rhyl	30	-	-
47	Rhyl - Rhyl via Brynheddydd	Peak AM/PM Services	Peak AM/PM Services	-

**Table 5.2** – Summary of the Frequent Bus Services from East Parade/Russell Road

- 5.4.3 In summary, in light of the site's location close to a number of existing services on East Parade and Russell Road, it has been demonstrated that the site is accessible by bus.

#### ***Rail Accessibility***

- 5.4.4 The nearest railway station to the site is Rhyl Railway Station, which is located approximately 1.1km from the site. Rhyl station is served by Avanti West Coast and Transport for Wales. It has regular services that run to Holyhead at a frequency of approximately 1 train every 30 minutes in each direction. It also serves hourly trains to Llanelli and Llandudno. Stations such as Manchester Airport, Birmingham International, Cardiff Central, Manchester Piccadilly and London Euston, are served frequently by this station. Allowing further catchments for staff and patients.
- 5.4.5 Whilst the walking distance from the site to the railway station may be too far a walk from some prospective site users, it may still be viable for some users, particularly those who cycle or 'park and ride'. Furthermore, Rhyl Bus station is situated adjacent to the railway station, providing frequent services that link to the hospital (including 40 as listed in **Table 5.2**).
- 5.4.6 It is therefore considered that a multi-modal rail journeys would be viable for users of the site who are unable or unwilling to walk the 1.1km distance. In view of the availability of connecting bus services to access the nearby railway stations, and the level of service available at the station, it is considered that the site is accessible for travel by rail.

## **5.5 Summary**

- 5.5.1 In summary, the site is located such as to benefit from existing walking, cycling and public transport opportunities. The site is located in close proximity to a variety of key services and facilities as well as a number of pre-existing residential areas. The site is therefore considered to be accessible from sustainable modes of travel in line with national and local transport planning policy outlined in **Section 3** of this TA.

## 6.0 Highway Impact

### 6.1 Introduction

- 6.1.1 The proposals presented in this Transport Assessment and wider planning application are for the redevelopment of an existing hospital to provide a new community hospital building and rationalise the existing parking provision. The NDCH building would re-accommodate much of the services currently available on site, providing a building that is fit for purpose as a modern healthcare facility.
- 6.1.2 As the proposals present a modest increase in GFA and as operations at the hospital will remain similar to the existing facility, vehicle traffic generation is expected to remain comparable to the current situation. Additionally, as discussed thoroughly in **Section 4** of this TA, the proposals include a decrease of approximately 17.6% in total vehicle parking capacity on site.
- 6.1.3 Therefore, it can be concluded that any vehicular impact of the proposed development would be negligible, with forecasted increase in uptake in sustainable modes of transport supported by the proposed associated infrastructure, good levels of accessibility and a Travel Plan (document reference: **074057-CUR-00-XX-RP-TP-002-V01**).
- 6.1.4 Notwithstanding this, the section below sets out details of the anticipated impact of the development proposals upon the surrounding highway network by considering the baseline traffic levels and providing a TRICS sensitivity test. Further consideration is also given to off-site car parking facilities.

### 6.2 Baseline Traffic along Russell Road

- 6.2.1 No traffic data has been collected as part of this Transport Assessment for the reasons explained within the preceding 'Introduction' subsection. However, traffic count data from the DfT for Russell Road has been provided for information.
- 6.2.2 The below **Table 6.1** shows eastbound Average Annual Daily Traffic (AADT) movements along Russell Road (DfT counter 9976, adjacent to St Thomas' Church). It is clear that, in previous years, Russell Road has carried higher volumes of traffic than the road does currently. But over the last four years available, the eastbound counts have stabilised at c.5,400 – 5,500 eastbound movements per day:

Year	Pedal Cycles	2-Wheeled Motors	Cars and Taxis	Buses and Coaches	All Motor Vehicles
2018	23	20	4645	29	5427
2017	21	20	4697	32	5469
2016	22	20	4732	34	5473
2015	24	21	4659	37	5349
2014	62	19	8229	68	9348
2013	63	20	8012	70	9070

Year	Pedal Cycles	2-Wheeled Motors	Cars and Taxis	Buses and Coaches	All Motor Vehicles
2012	64	18	8083	67	9101
2011	68	19	8211	62	9214
2010	62	22	8236	66	9156
2009	62	23	8286	58	9147
2008	62	21	8108	59	8963
2007	55	22	8291	68	9141
2006	58	14	3637	30	4099
2005	37	16	3708	32	4175
2004	43	20	3886	34	4332
2003	54	30	3837	42	4253
2002	60	21	3984	43	4377
2001	58	20	3921	43	4305
2000	61	19	4046	41	4432

**Table 6.1** – Russell Road DfT AADT Counts (eastbound only)

### 6.3 TRICS Traffic Generation Sensitivity Test

6.3.1 TRICS is the industry recognised tool for calculating the anticipated future trip demand of a proposed development. The database contains multi-modal surveys of varying land uses in multiple destinations across the UK, including hospitals.

6.3.2 Without prejudice to the conclusion that any vehicular impact of the proposed development would be negligible, the TRICS database has been interrogated for weekday surveys for hospital developments in order to provide a trip generation sensitivity test. Reference should be made to **Appendix D** for a copy of the full TRICS outputs.

- TRICS 7.7.1;
- Land Use: 05 – Health;
- Category: B - General Hospital - Without Casualty;
- Vehicles only;
- Selection by GFA (trip rates by 100m<sup>2</sup>); and
- Weekdays only.

6.3.3 After reviewing the TRICS data, it can be confirmed that the vehicular trips associated with comparable hospital uses are spread quite evenly across the day. However, the following development peak hours where most vehicular movements occur were obtained:

- AM Peak: 09:00 – 10:00; and,
- PM Peak: both 13:00 – 14:00 and 14:00 – 15:00.

6.3.4 Additionally, it is appropriate to consider the traditional network AM and PM peaks of 08:00 – 09:00 and 17:00 – 18:00. Therefore, the following **Table 6.2** provides a summary of trip rates and generations for all hours as identified, along with the total daily trips from 07:00 – 21:00. All trips rates shown below are per 100m<sup>2</sup> GFA:

TRICS – Hospitals (no casualty)	Average TRICS Trip Rates			Proposed Net Additional Trips (+3,050m <sup>2</sup> GFA)		
	Arrive	Depart	Total	Arrive	Depart	Total
AM (08:00 – 09:00)	0.624	0.157	0.781	19	5	24
AM (09:00 – 10:00)	0.789	0.269	1.058	24	8	32
PM (13:00 – 14:00)	0.509	0.461	0.97	16	14	30
PM (14:00 – 15:00)	0.557	0.413	0.97	17	13	30
PM (17:00 – 18:00)	0.203	0.68	0.883	6	21	27
Daily (07:00 – 21:00)	5.243	5.254	10.497	160	160	320

**Table 6.2 – TRICS Traffic Generation Sensitivity Test**

6.3.5 The above table demonstrates that the additional GFA could theoretically generate approximately 24 – 27 two-way trips during the network peaks of 08:00 – 09:00 and 17:00 – 18:00 respectively. Volumetrically, this equates to less than one vehicle on the surrounding highway network every 2 minutes.

6.3.6 This is a negligible increase in traffic, and when compared to the eastbound flows along Russell Road, would fall comfortably within expected daily traffic variation. This sensitivity test has therefore demonstrated that the proposed development would not have a significant impact on the surrounding highway network, and that capacity assessments are not appropriate.

## 6.4 Off-site Parking Facilities

6.4.1 Whilst there is an intention for the proposed development to help reduce vehicular modal split with a particular focus on achieving this channelled through the Travel Plan (document reference: **074057-CUR-00-XX-RP-TP-002-V01**), it is appreciated that overspill parking on to the surrounding roads would not be desirable.

6.4.2 As noted in Policy ASA 3 of the Denbighshire Local Development Plan, consideration will be given to off-site parking within reasonable distance of the site as appropriate. Therefore, a review of nearby car parking facilities has been undertaken, including:

- Surrounding On-road P&D Parking;
- Rhyl Pavilion Car Park; and
- East Parade Car Park.

### ***Surrounding On-road P&D Parking***

- 6.4.3 On-street Pay & Display parking is present along the northern side of East Parade, adjacent to Grosvenor Road and at the north east corner of the site. The provision extends for approximately 500m to the north east and along marine Drive, accommodating c.87 vehicles (at 5.75m per PCU).
- 6.4.4 Additionally, also on the northern side of East Parade but to the south west of the site, on-street Pay & Display parking is present adjacent to Beechwood Road. This provision also extends for approximately 500m but to the south west, and split into sections as described below:

- Parking Length A: c. 35m (6 spaces)
- Parking Length B: c. 35m (6 spaces)
- Parking Length C: c. 75m (13 spaces)
- Parking Length D: c. 25m (4 spaces)
- Parking Length E: c. 12m (2 spaces)
- Parking Length F: c. 12m (2 spaces)
- Parking Length G: c. 60m (10 spaces)

**Total: c. 43 spaces**

- 6.4.5 As there are approximately 130 on-street Pay & Display parking spaces along East Parade/Marine Drive, it is clear some users of the site could use this provision for short stay uses if appropriate.

### ***Rhyl Pavilion Car Park***

- 6.4.6 Rhyl Pavilion Car Park is situated within 150m of the site to the west, and is operated by Denbighshire County Council. The following details have been obtained from Denbighshire's parking webpage:

- 244 spaces and 10 disabled spaces (plus overflow car park);
- Open 07:00 – 00:00 all week; and
- Parking charges of £2.00 - £4.50 depending on season.

- 6.4.7 It is clear that the Rhyl Pavilion Car Park could be utilised for additional car parking if required.

### ***East Parade Car Park***

- 6.4.8 East Parade Car Park is situated within 350m of the site to the west, and is operated by Denbighshire County Council. The following details have been obtained from Denbighshire's parking webpage:

- 331 spaces;
- Open 24hrs all week; and
- Parking charges of £2.00 - £4.50 depending on season.

- 6.4.9 It is clear that the East Parade Car Park could be utilised for additional car parking if required, albeit Rhyl Pavilion Car Park would be more convenient for users.

### ***Off-site Parking Summary***

- 6.4.10 It has been demonstrated that there are in excess of 575 spaces across the Rhyl Pavilion and East Parade Car Parks within 150m-350m of the site, and a total of c.130 Pay & Display bays on-street along East Parade/Marine Drive within 20m-500m of the site. There is clearly an opportunity to utilise this provision if required.
- 6.4.11 However, to provide Denbighshire Highways comfort that surplus parking demand would not overspill inappropriately to uncontrolled areas on to the surrounding streets, it is suggested that parking demand is monitored throughout the Travel Plan surveys (document reference: **074057-CUR-00-XX-RP-TP-002-V01**). If necessary, a permit scheme could potentially be agreed with Denbighshire County Council which allows employees to park in locations such as Rhyl Pavilion Car Park.

## **6.5 Highway Impact Conclusions**

- 6.5.1 It has been demonstrated throughout this section that the proposed redevelopment of Alexandra Hospital would have a negligible impact on the surrounding road network from a vehicle capacity perspective.
- 6.5.2 Furthermore, it is anticipated that, through design and prioritisation of cycle/EV/powered 2-wheeler parking provision, future users would be encouraged to travel by more sustainable modes of travel. This is in line with the PPW Sustainable Transport Hierarchy for Planning reproduced in **Figure 3.1**.
- 6.5.3 Notwithstanding this, there is the potential to utilise adjacent off-site parking provision in the surrounding area if deemed necessary by Denbighshire Highways or as a travel planning measure via subsequent Travel Plan surveys.

## 7.0 Transport Implementation Strategy

### 7.1 Introduction

- 7.1.1 In line with the guidance contained in TAN 18, this section is intended to draw together the elements of a Transport Implementation Strategy for the proposed development.

### 7.2 Policy Requirements and Objectives

- 7.2.1 **Section 3** of this Transport Assessment includes an examination of national and local transport policy relevant to the development. The main national and local policy objectives that have been identified following this examination can be summarised as follows:

- Reduce the need to travel, especially by private car;
- Improve accessibility by walking, cycling and public transport;
- Promote walking and cycling and sustainable modes of travel;
- Ensure that transport is accessible to all;
- Support the provision of high quality public transport; and
- Support necessary infrastructure improvements.

### 7.3 Measures

- 7.3.1 In order to successfully deliver the development whilst meeting the above objective the following measures are proposed:

#### ***Infrastructure Improvements***

- New vehicular access arrangements are proposed at the site as summarised below:
  - Control traffic along Alexandra Road by taking ownership of the road through a Section 247 Stopping-up Order;
  - Closure of the Russell Road/Alexandra Road junction to vehicular traffic (a fall-back provision could be a Prohibition of Driving Order);
  - Retention of East Parade/Alexandra Road junction as the primary point of ingress/egress;
  - Controlled servicing and refuse access points provided from Grosvenor Road; and
  - Controlled refuse egress point on to Russell Road; and
  - Drop-off/pick-up provision which can accommodate an ambulance vehicle in the event a patient or visitor requires transfer to an emergency medical facility.
- Enhanced pedestrian/cycle access arrangements are proposed at the site as summarised below:
  - High quality pedestrian/cycle access at the closed Russell Road/Alexandra Road junction;

- Upgraded pedestrian/cycle access from Russell Road which leads to a high quality wide shared-surface access way lit by feature lighting; and
  - The main area of parking would be served by a shared surface access way, also lit by feature lighting with seating present.
- A rationalisation of the existing parking provision on site is proposed as follows:
  - Removal of inefficient unmarked parking areas;
  - Rationalisation of six areas of car parking across the site (both east and west of the existing Alexandra Road) to one main area of parking for patients/visitors (one small area would be retained as existing from East Parade for staff);
  - Flexibility of Parent & Child/Disabled parking bays, with all such provision centralised at one arrival point to the hospital rather than dispersed around it; and
  - Acknowledgement of the PPW Sustainable Transport Hierarchy; prioritising cycle, powered 2-wheeler and EV charging spaces over regular car parking spaces where possible.
- Internal speed limit along Alexandra Road set to 10mph (Section 247 Order permitting).
- A total of 181 cycle parking spaces (comprising 100 visitor and 81 secure staff) across seven stores for convenience.
- All access points and shared pedestrian/cycle routes to be lit by lighting.
- Service access points to be protected by extension of existing yellow lining Traffic Regulation Orders (TROs) on the western side of Grosvenor Road for approximately 50m north from the junction with Russell Road.

### ***Travel Planning and Demand Management***

7.3.2 An Interim Travel Plan (document reference: **074057-CUR-00-XX-RP-TP-002-V01**) has been prepared to accompany the outline application. The key initiatives are summarised below:

- Welcome packs would be issued to all future employees of the site, which would provide details of:
  - Local walking and cycling routes;
  - Local bus timetable/route information;
  - Information on the health and environmental benefits of walking and cycling; and
  - Information on the benefits of car sharing.
- Notice boards to be provided in communal areas to provide additional information regarding walking, cycling, public transport and car sharing opportunities.
- Appointment of a Travel Plan Coordinator (TPC).
- Promotion of key infrastructure improvements including cycle and EV parking.
- Management of any off-site parking.

## **7.4 Targets and Monitoring**

7.4.1 The effectiveness of the above measures will be monitored within the Travel Plan process.

7.4.2 It is important that an accurate baseline for modal split is ascertained so that realistic targets for modal shift can be set. However, such information is not available until the site has been surveyed and so this TIS does not set a specific target.

7.4.3 Within three months of the NDCH being occupied, travel surveys would be distributed to all employees and any patients/visitors. From this baseline scenario, targets will be set for achieving a shift towards sustainable modes of travel. The TPC would then undertake annual surveys to monitor modal shift, reporting these findings to the Local Authority.

## **7.5 Summary of Impacts**

7.5.1 It has been demonstrated throughout this Transport Assessment that the proposed development would result in a negligible impact from a vehicular perspective. As demonstrated throughout this TIS, this would be underpinned by the following three main principles:

- Provision of improved pedestrian and cycle infrastructure;
- Rationalisation of car parking and prioritising cycle, powered 2-wheeler and EV charging spaces over regular car parking spaces; and
- Adoption of a robust Travel Plan (document reference: **074057-CUR-00-XX-RP-TP-002-V01**) with monitoring and review.

## 8.0 Summary and Conclusions

### 8.1 Summary

- 8.1.1 Curtins has been appointed on behalf of Kier Construction Ltd. to provide traffic and transport advice in relation to the proposed redevelopment of the Royal Alexandra Hospital, Rhyl.
- 8.1.2 The redevelopment would see the main hospital building retained, with a new community healthcare facility (known as North Denbighshire Community Hospital - NDCH) delivered to its south on land that currently primarily accommodates surface car parking and facilities buildings. The NDCH building would re-accommodate much of the services currently available on site, providing a building that is fit for purpose as a modern healthcare facility.
- 8.1.3 This Transport Assessment has been written to assess the development proposals from a traffic and transport perspective. It follows local and national planning policy/guidance, and is in accordance with scoping discussions held with Highways Officers at Denbighshire County Council.
- 8.1.4 Full details of the redevelopment have been provided; including the net change in GFA, access for all vehicle types and proposed levels of parking.
- 8.1.5 The site is considered to be accessible by sustainable modes of transport. There is a good level of existing pedestrian, cycle and public transport infrastructure; access to which would be enhanced by the redevelopment proposals.
- 8.1.6 It has been demonstrated throughout this Transport Assessment that the proposed development would result in a negligible impact from a vehicular perspective; with a TRICS sensitivity test confirming this. As demonstrated throughout the TIS, this negligible highway impact would be underpinned by the following three main principles:
- Provision of improved pedestrian and cycle infrastructure;
  - Rationalisation of car parking and prioritising cycle, powered 2-wheeler and EV charging spaces over regular car parking spaces; and
  - Adoption of a robust Travel Plan (document reference: **074057-CUR-00-XX-RP-TP-002-V01**) with monitoring and review
- 8.1.7 Notwithstanding this, there is the potential to utilise adjacent off-site parking provision in the surrounding area if deemed necessary by Denbighshire Highways.

### 8.2 Conclusions

- 8.2.1 From a traffic and transportation perspective there are no reasons why the development proposals should not be granted planning approval.

## Plans



Office 51-55 Tithebarn Street Liverpool L2 2SB  
Telephone 0151 726 2000  
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Project:

Alexandra Hospital, Rhyl

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY  
INDICATIVE WALKING CATCHMENT

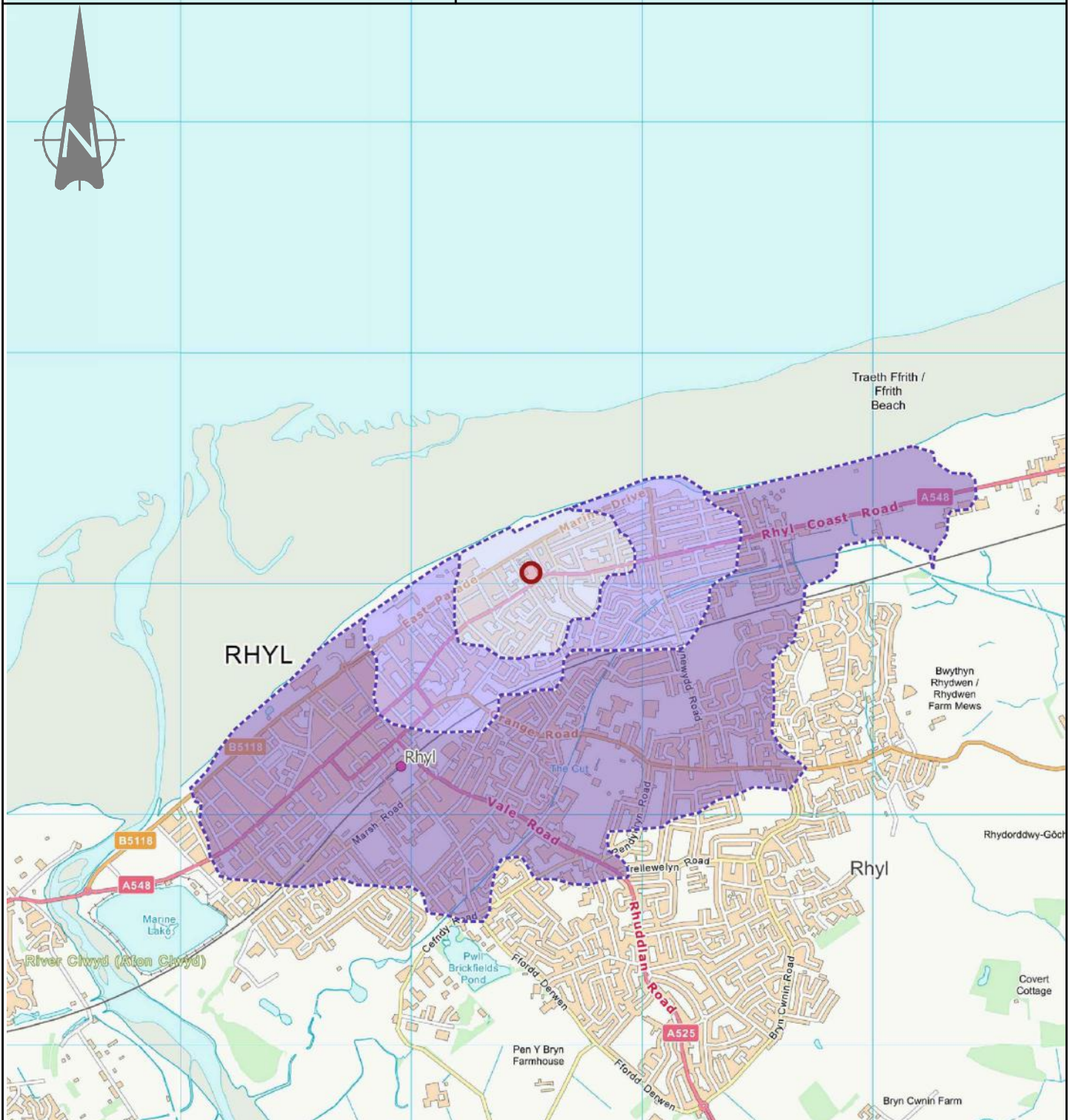
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Designed By: HD Date: 18/03/20

Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

074057 - CUR - 00 - XX - DR - TP - 06001 - P01



Site  Walking Catchment  
2000m   
1000m   
500m 

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Project:

Alexandra Hospital, Rhyl

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY  
INDICATIVE CYCLING CATCHMENT

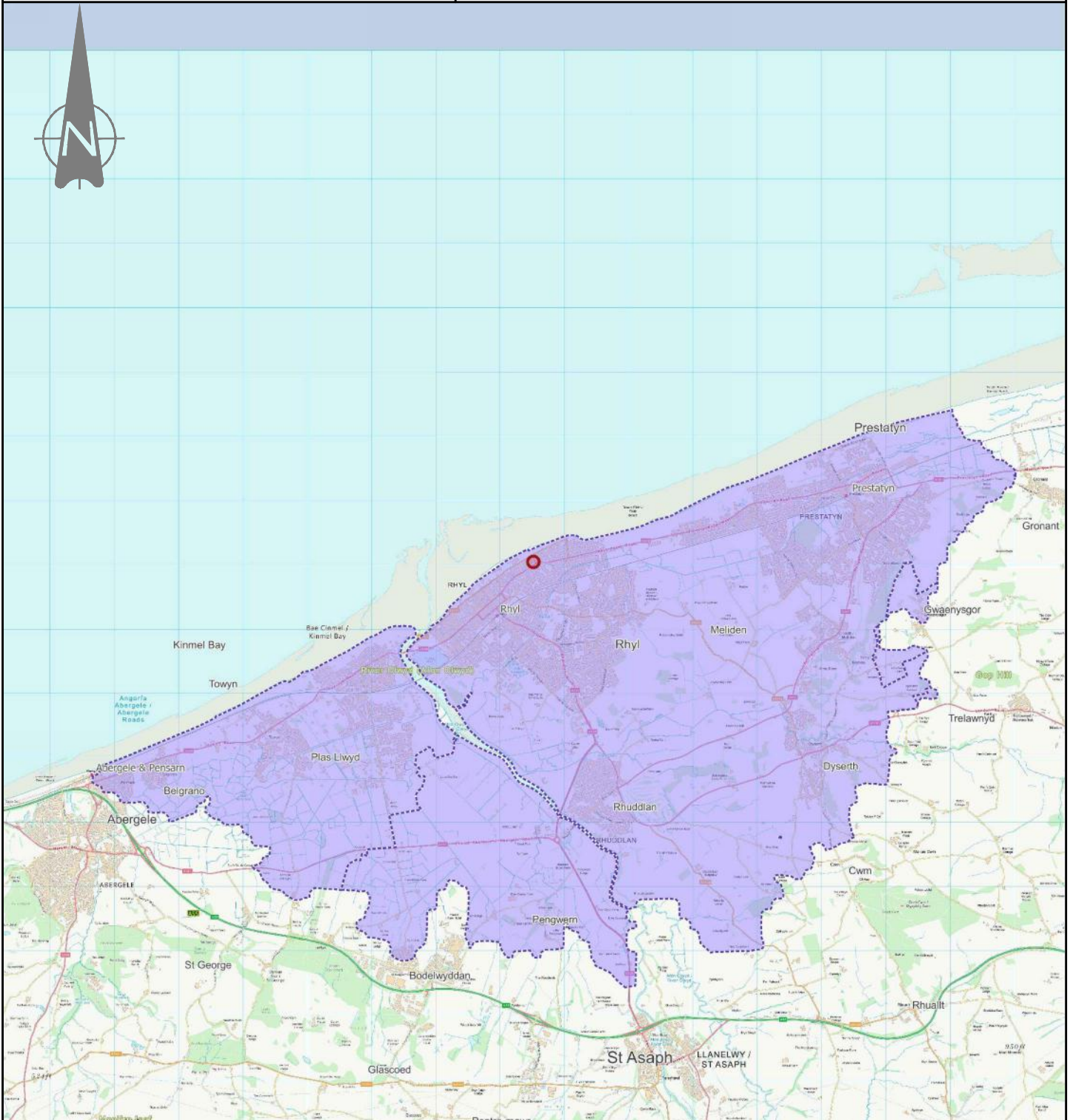
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Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

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○ Site Cycling Catchment  
8000m

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Project:

Alexandra Hospital , Rhyl

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY  
INDICATIVE PT CATCHMENT

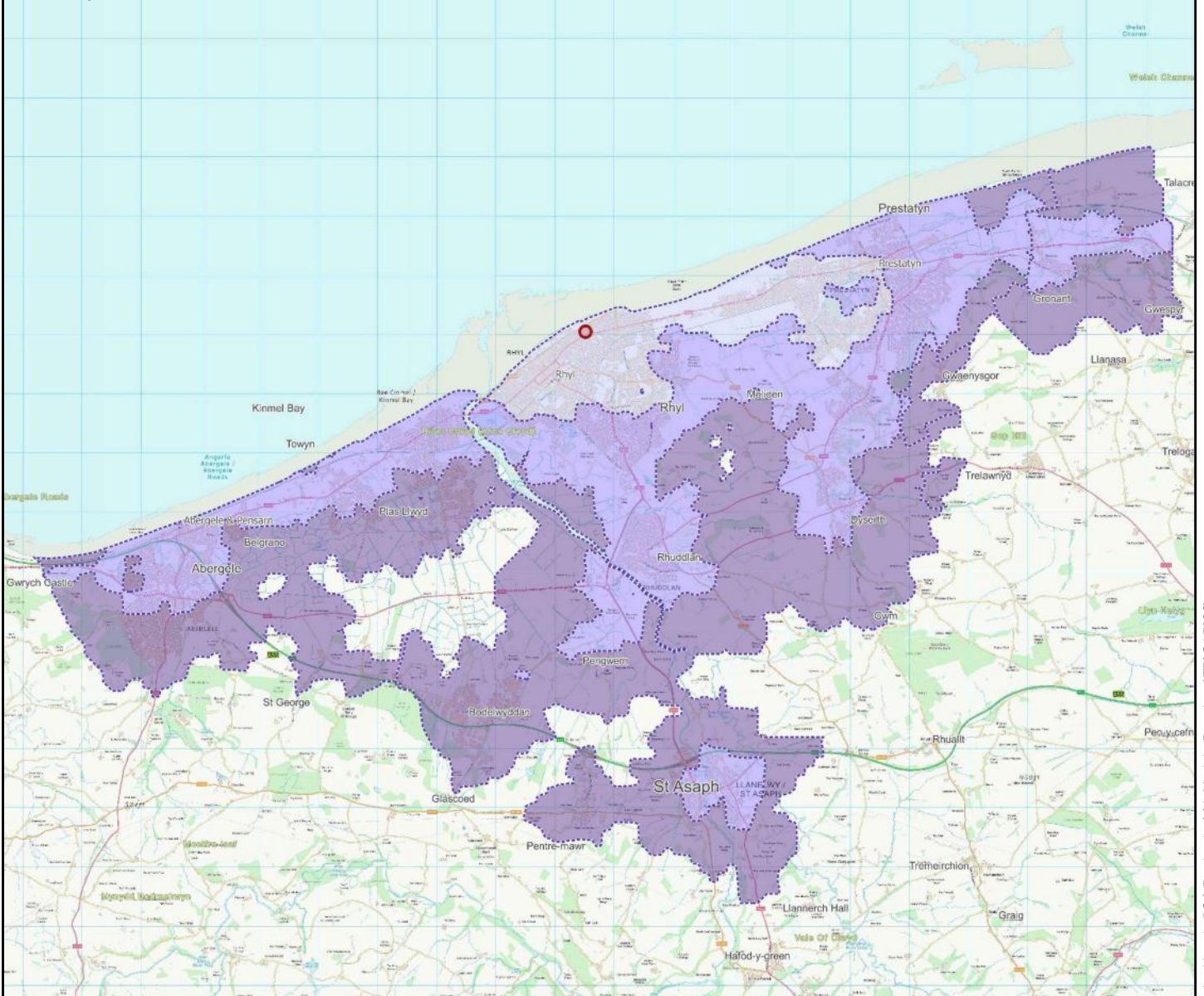
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Designed By: HD Date: 18/03/20

Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

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- Site PT Catchment
- 60 minutes
- 40 minutes
- 20 minutes

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Project:

Alexandra Hospital, Rhyl

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY  
INDICATIVE VISITOR WALKING  
CATCHMENT

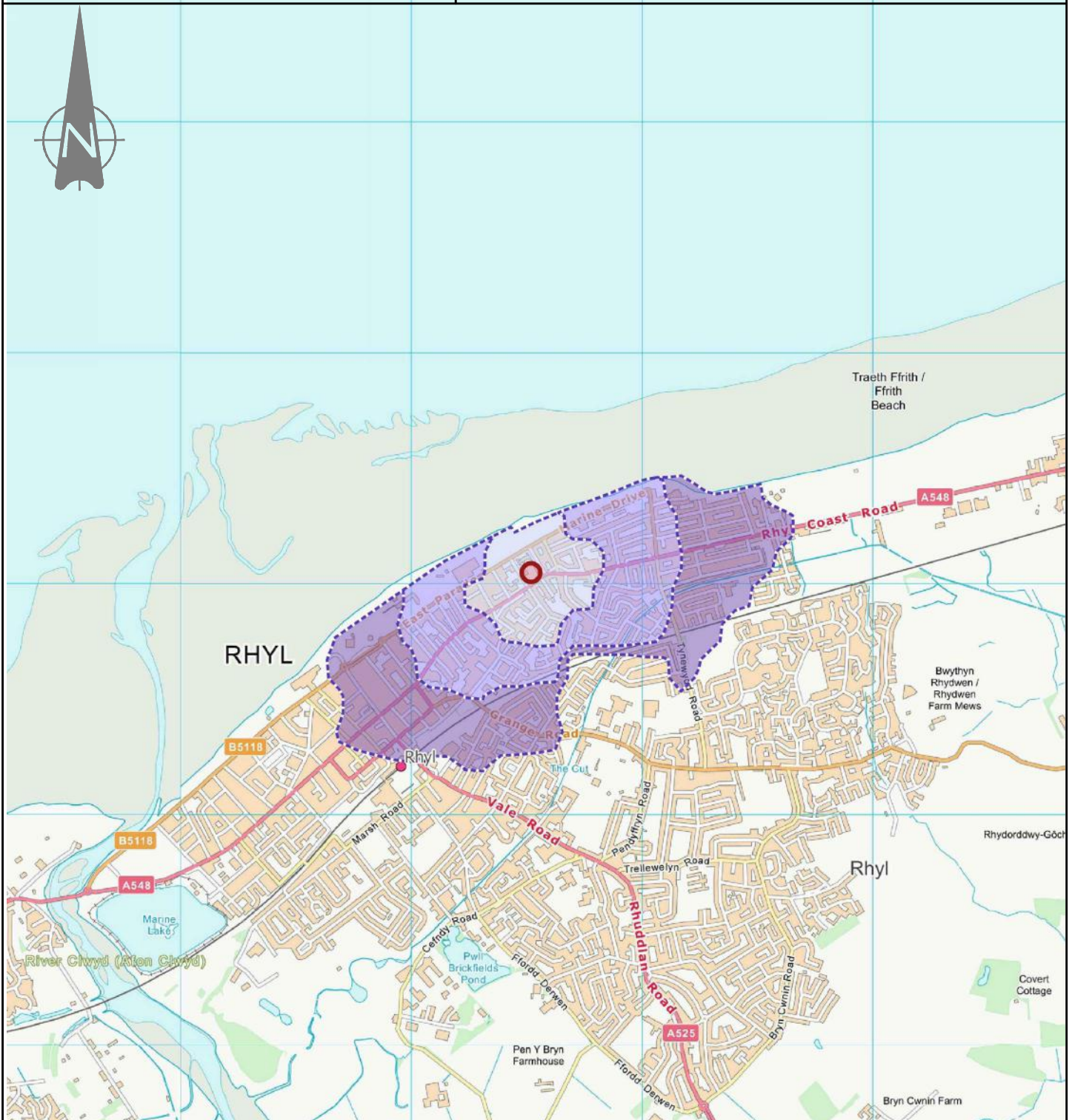
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Designed By: HD Date: 18/03/20


Scale: NTS

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

074057 - CUR - 00 - XX - DR - TP - 06004 - P01



Site  Visitor Catchment

1200m 

800m 

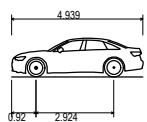
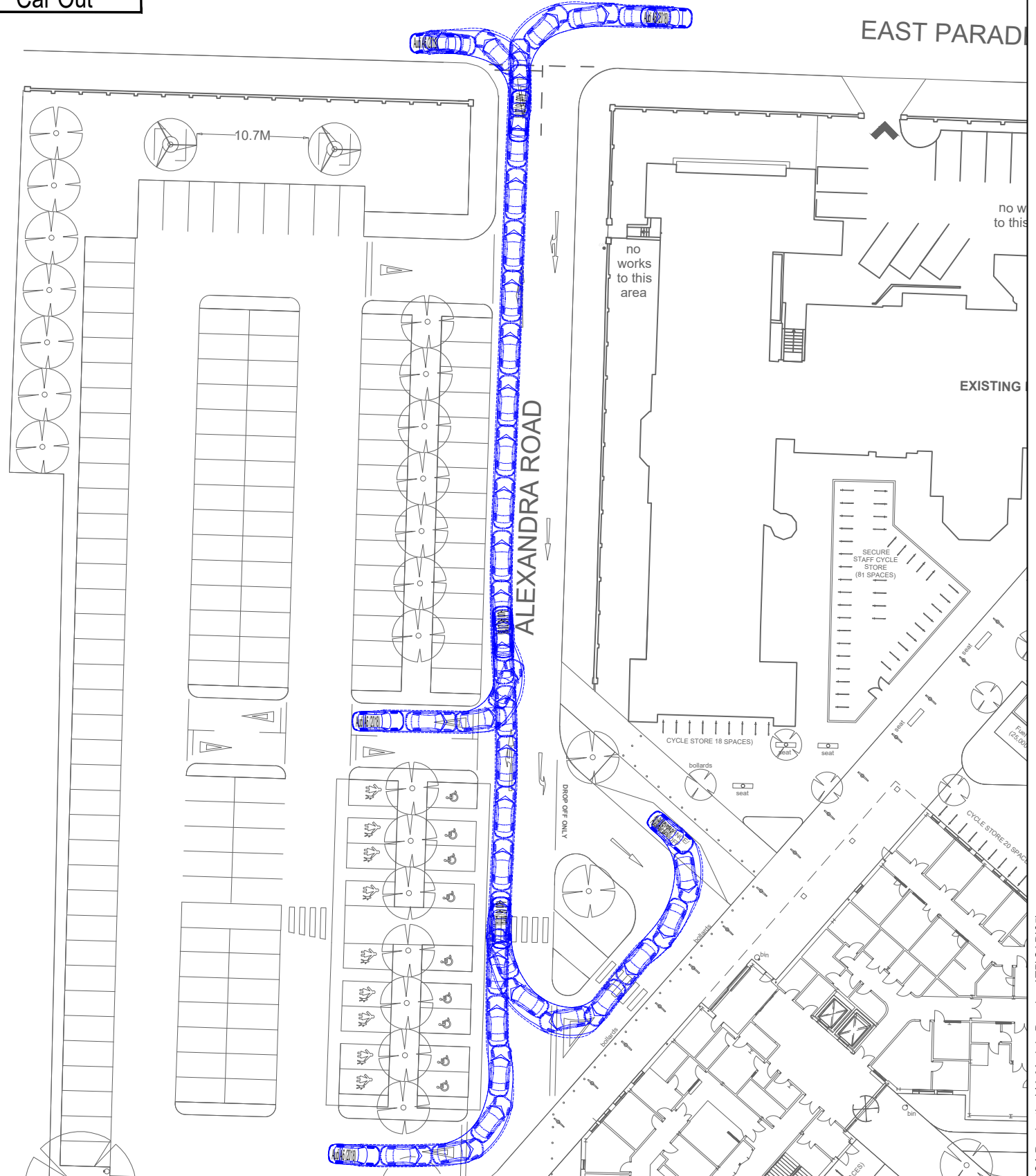
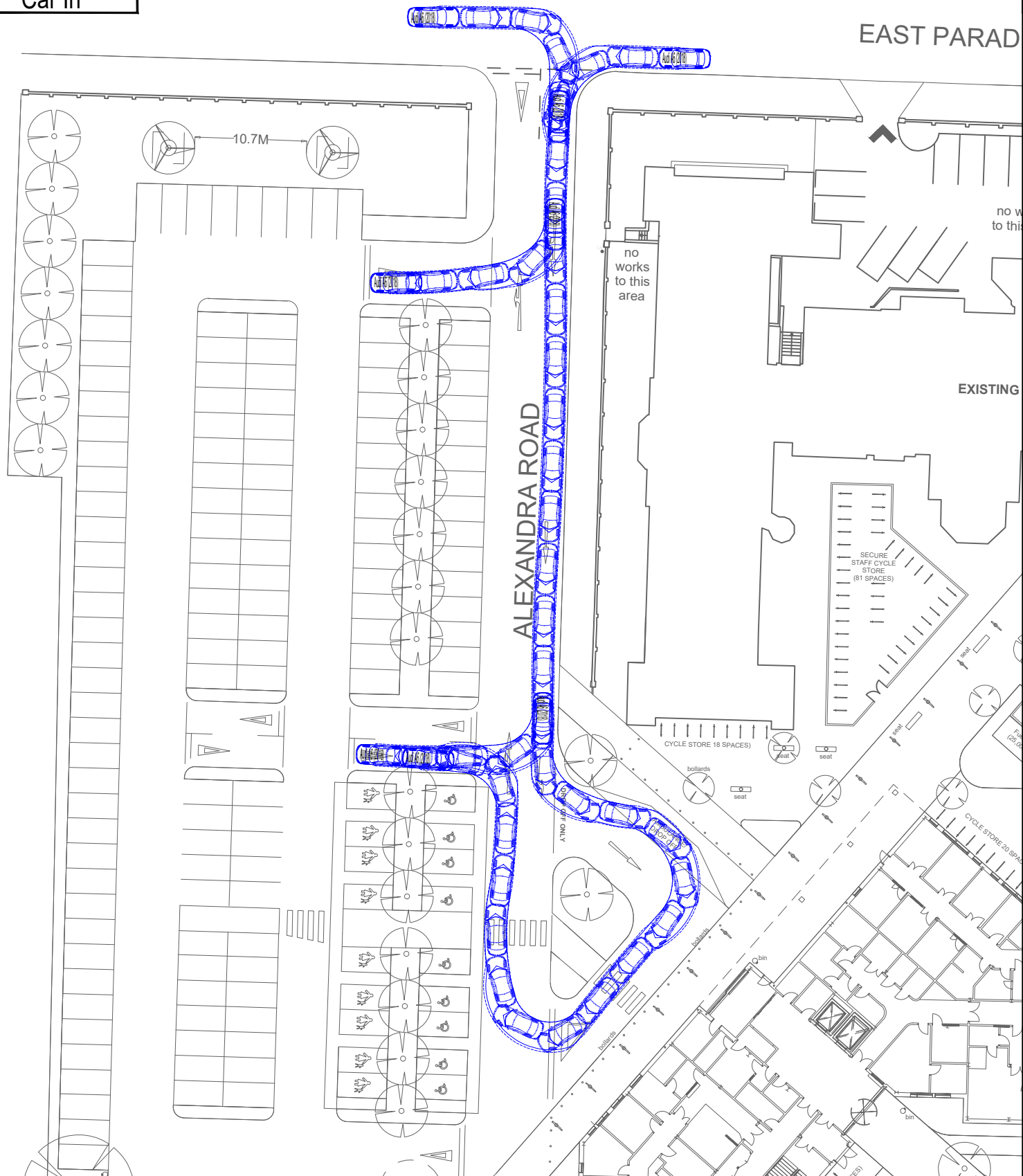
400m 

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## Drawings

Car In

Car Out



Audi A6 (2018)	
Overall Length	4.939m
Overall Width	2.114m
Overall Body Height	1.457m
Min Body Ground Clearance	0.142m
Max Track Width	1.875m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.950m



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Project:	Alexandra Hospital
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Drg Title: Swept Path Analysis:  
Large Car

Status: **PRELIMINARY**

Drawn By: DJ	Checked By: JA
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Designed By: -	Date: 04/04/20
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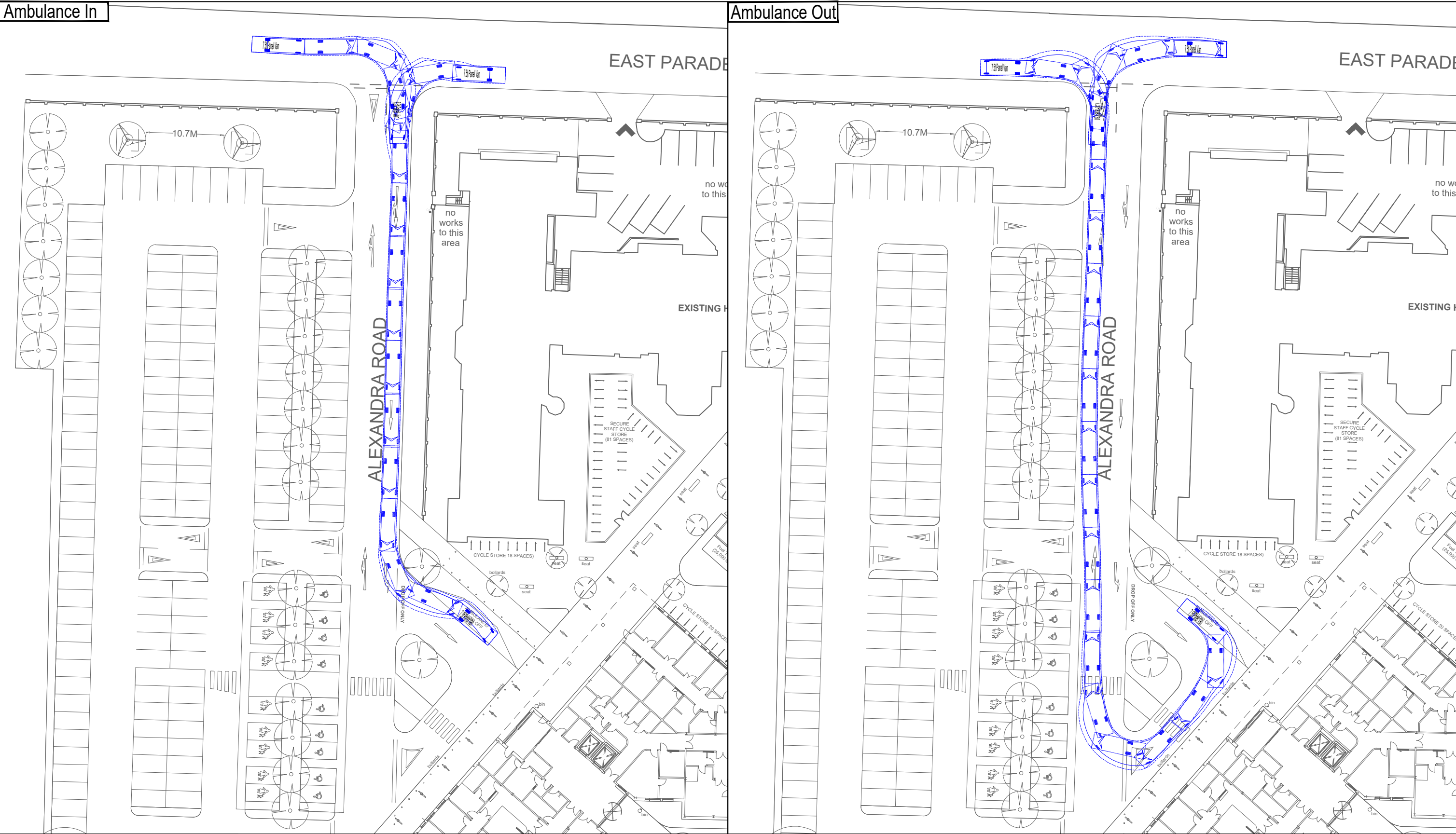
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074057 - CUR - 00 - XX - DR - TP - 05001 - P01
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GENERAL NOTES:

Rev:	Description:	Date:	By:	Chkd:
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7.5t Panel Van  
Overall Length 7.210m  
Overall Width 2.192m  
Overall Body Height 2.544m  
Min Body Ground Clearance 0.316m  
Track Width 1.865m  
Lock to lock time 4.00s  
Kerb to Kerb Turning Radius 7.400m

7.21  
0.92 4.25

GENERAL NOTES:

Rev:

Description:

Date:

By:

Chkd:



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Project: Alexandra Hospital

Drg Title: Swept Path Analysis: Ambulance

Project No: 074057 - CUR - 00 - XX - DR - TP - 05002 - P01

Status: PRELIMINARY

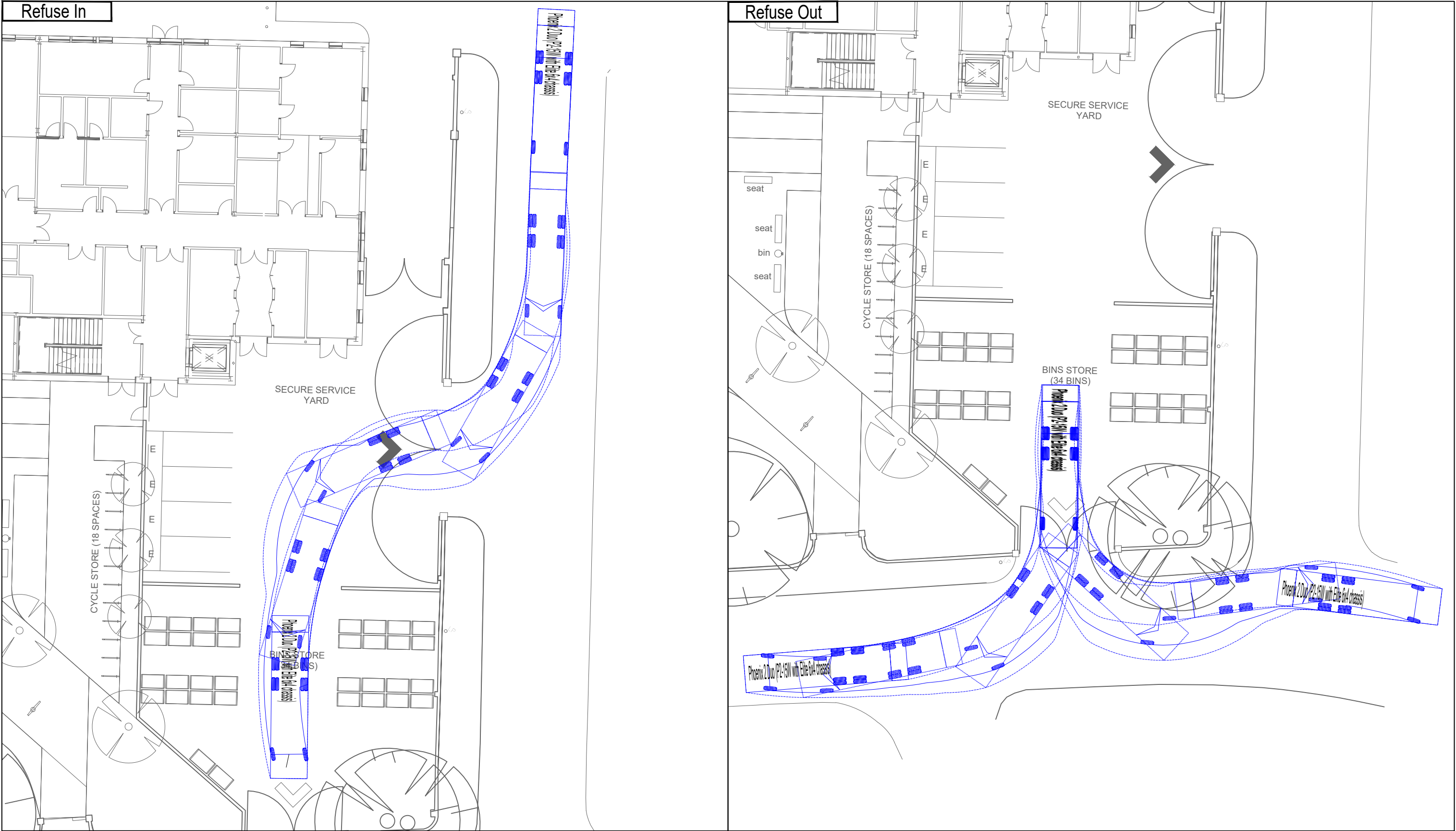
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Designed By: - Date: 04/04/20

Scale: 1:500

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

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Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	11.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

Rev:	Description:	Date:	By:	Chkd:

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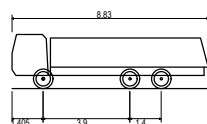
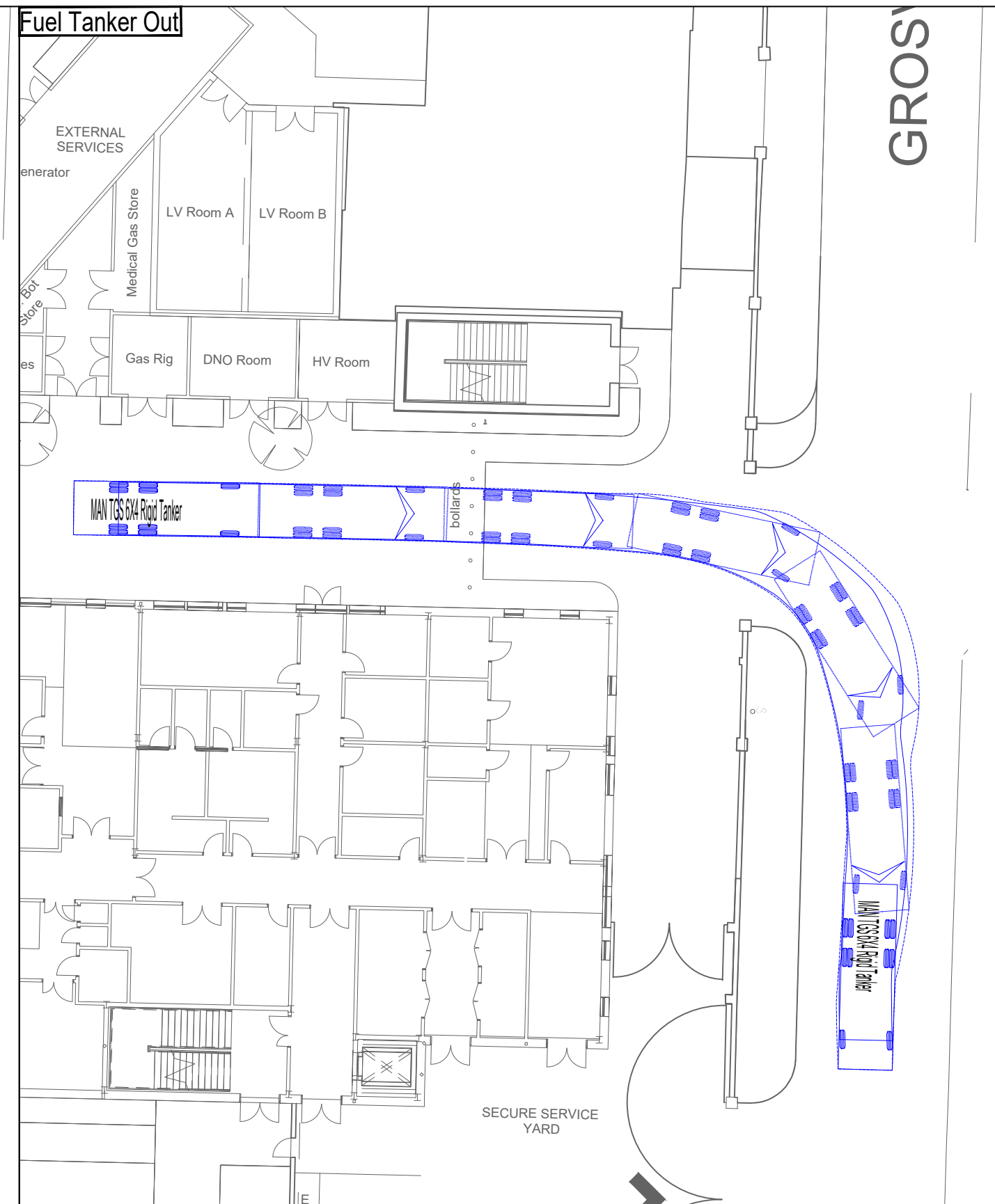
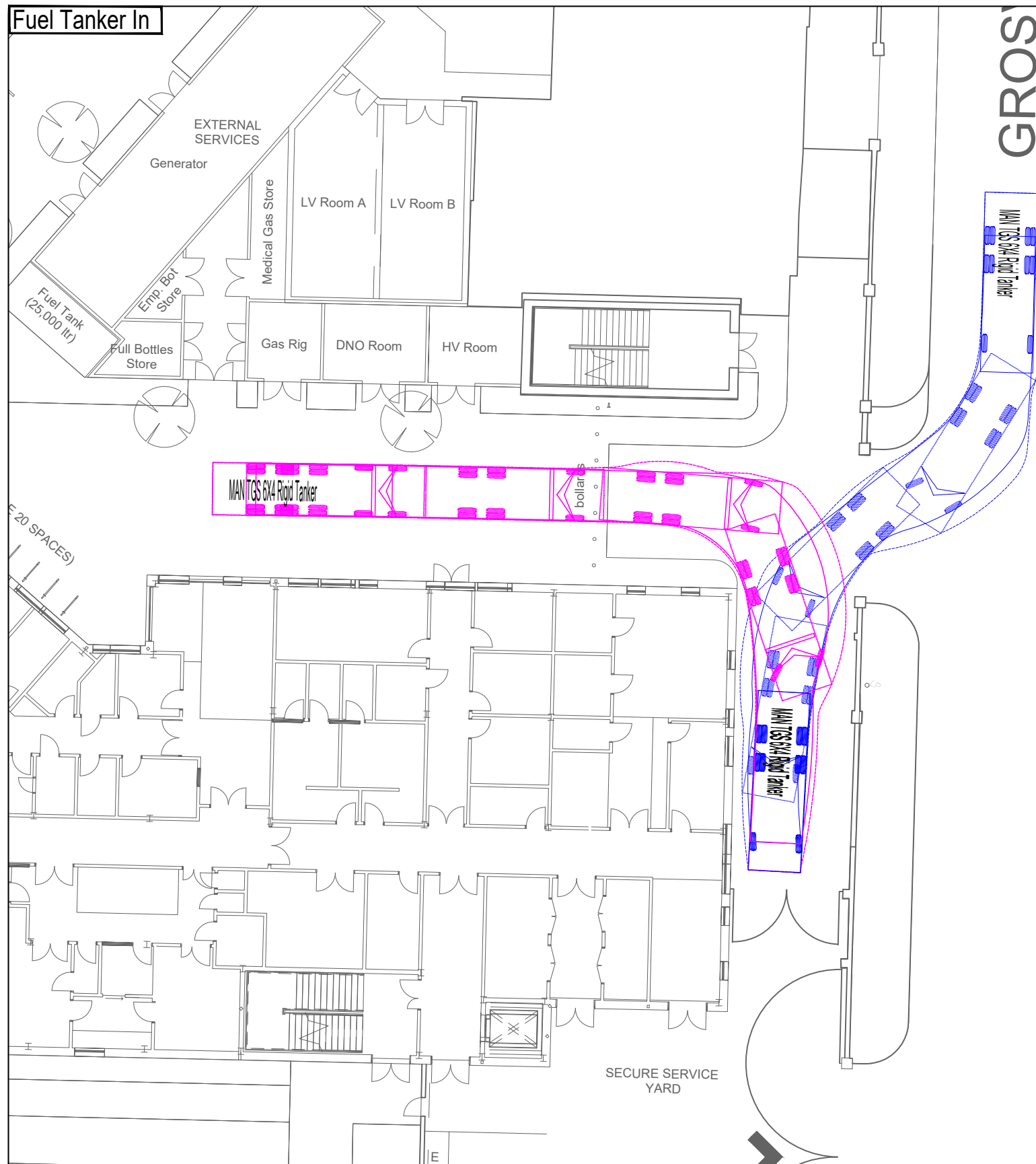
Project: Alexandra Hospital

Drg Title: Swept Path Analysis:  
11.2m Refuse

Status: PRELIMINARY

Drawn By: DJ	Checked By: JA
Designed By: -	Date: 04/04/20
Scale: 1:250	

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
074057 - CUR - 00 - XX - DR - TP - 05003 - P01							



MAN TGS 6X4 Rigid Tanker	
Overall Length	8.830m
Overall Width	2.570m
Overall Body Height	2.435m
Min Body Ground Clearance	0.601m
Track Width	2.490m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	8.250m

8.830m  
2.570m  
2.435m  
0.601m  
2.490m  
6.00s  
8.250m



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Project:	Alexandra Hospital
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Drg Title: Swept Path Analysis:  
8.8m Fuel Tanker

Status: **PRELIMINARY**

Drawn By: DJ	Checked By: JA
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Designed By: -	Date: 04/04/20
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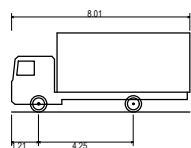
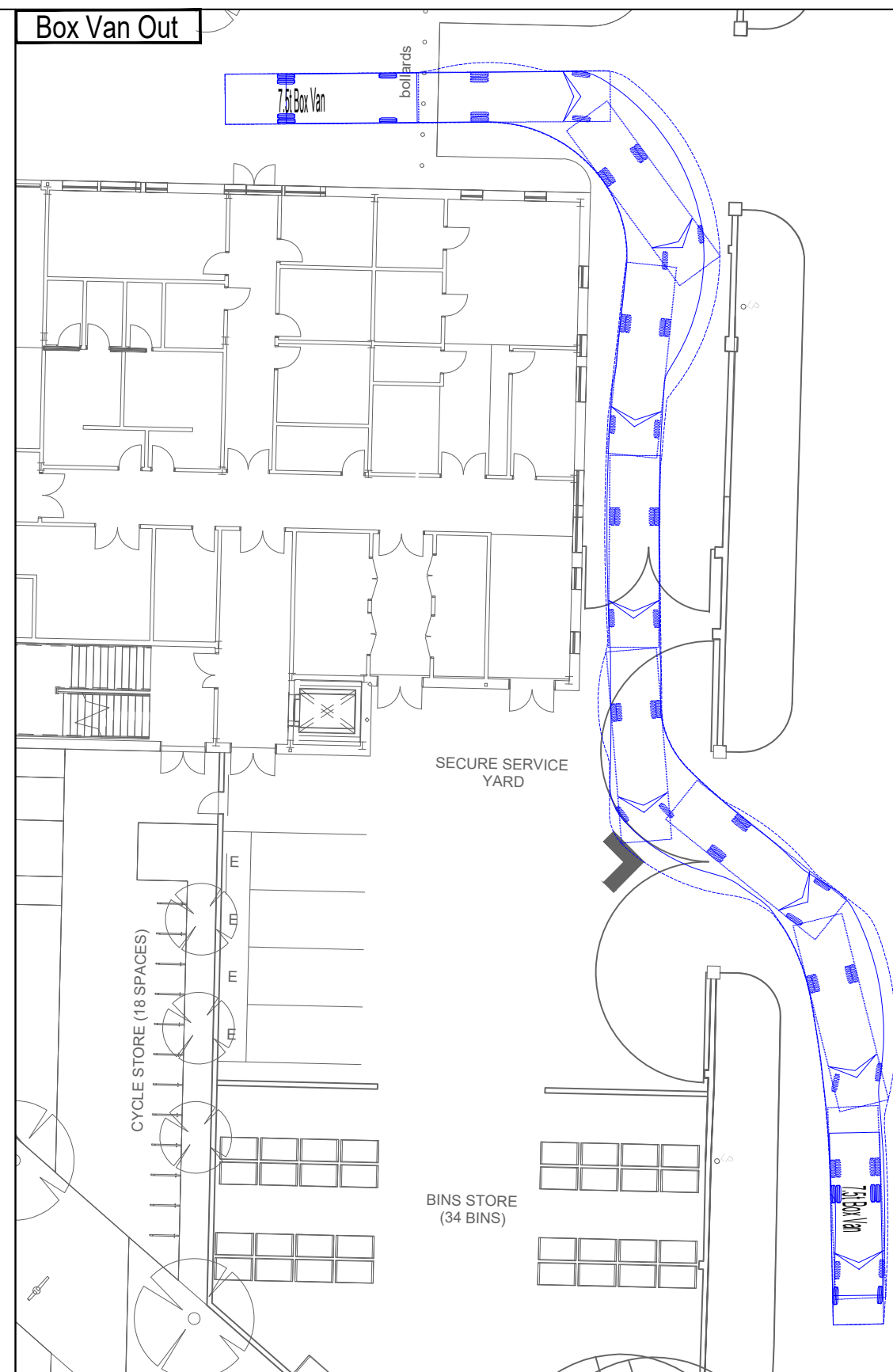
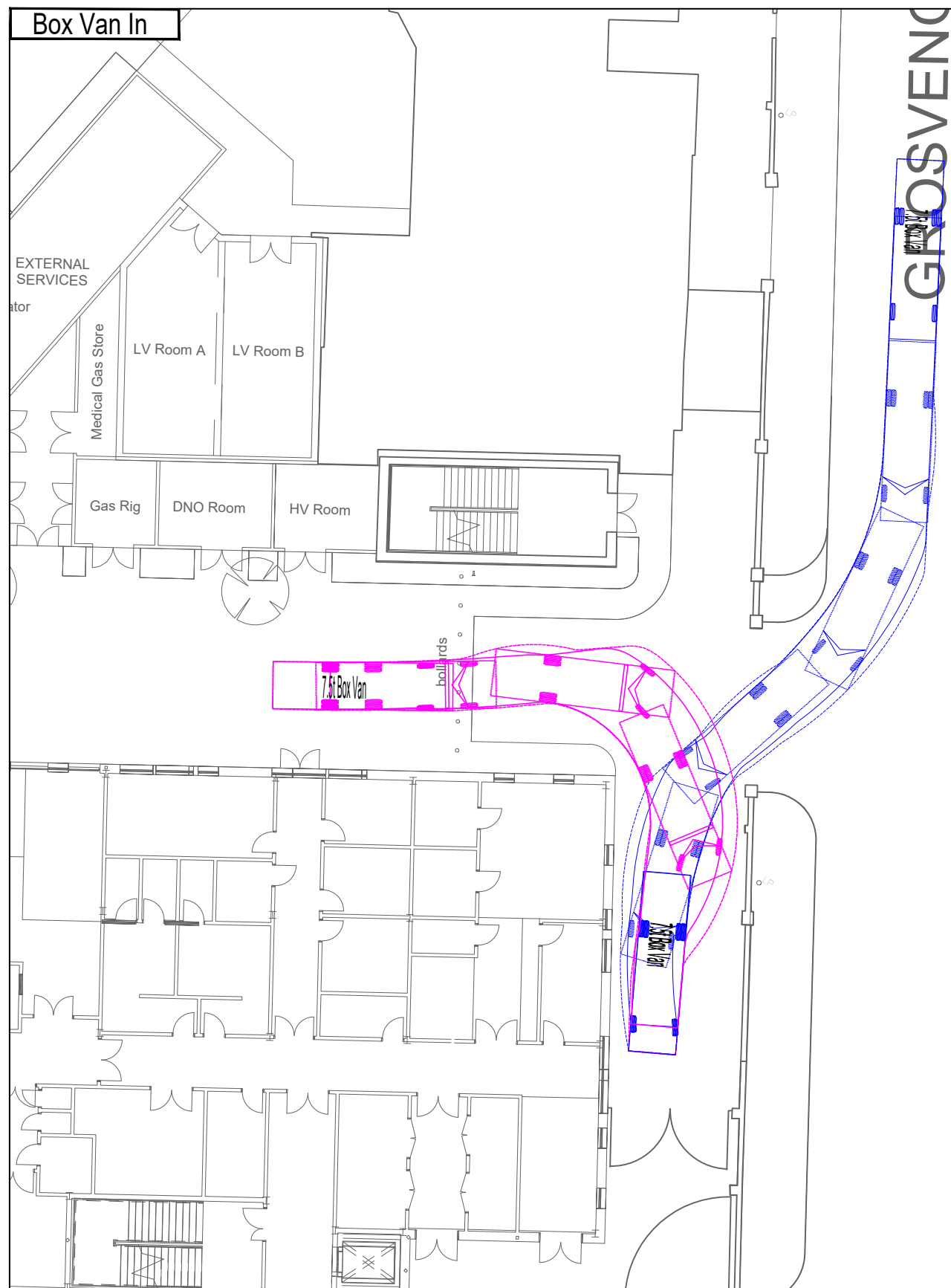
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074057 - CUR - 00 - XX - DR - TP - 05004 - P01

GENERAL NOTES:

Rev:	Description:	Date:	By:	Chkd:
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7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m



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Project:	Alexandra Hospital
Drg Title:	Swept Path Analysis 7.5T Box Van

Status: **PRELIMINARY**

Drawn By: DJ	Checked By: JA
--------------	----------------

Designed By: -	Date: 04/04/20
----------------	----------------

Scale: 1:250

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
-------------	-------------	---------	--------	-------	-------	--------------------	------

074057 - CUR - 00 - XX - DR - TP - 05005 - P01



EAST PARADE

43.00m

no works  
to this area

9.1m

no works  
to this area

43.00m

10.7M

43.00m PROPOSED VISIBILITY SPLAYS (2.4x 43m)



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Telephone 0151 726 2000  
Email Liverpool@curtins.com  
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Project: ALEXANDRA HOSPITAL

Drg Title: VISIBILITY SPLAYS

Status: PRELIMINARY

Drawn By:	HD	Checked By:	DJ
Designed By:	HD	Date:	06/04/20
Scale: 1:250			

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
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074057 - CUR - 00 - XX - DR - TP - 75001 - P01

GENERAL NOTES:

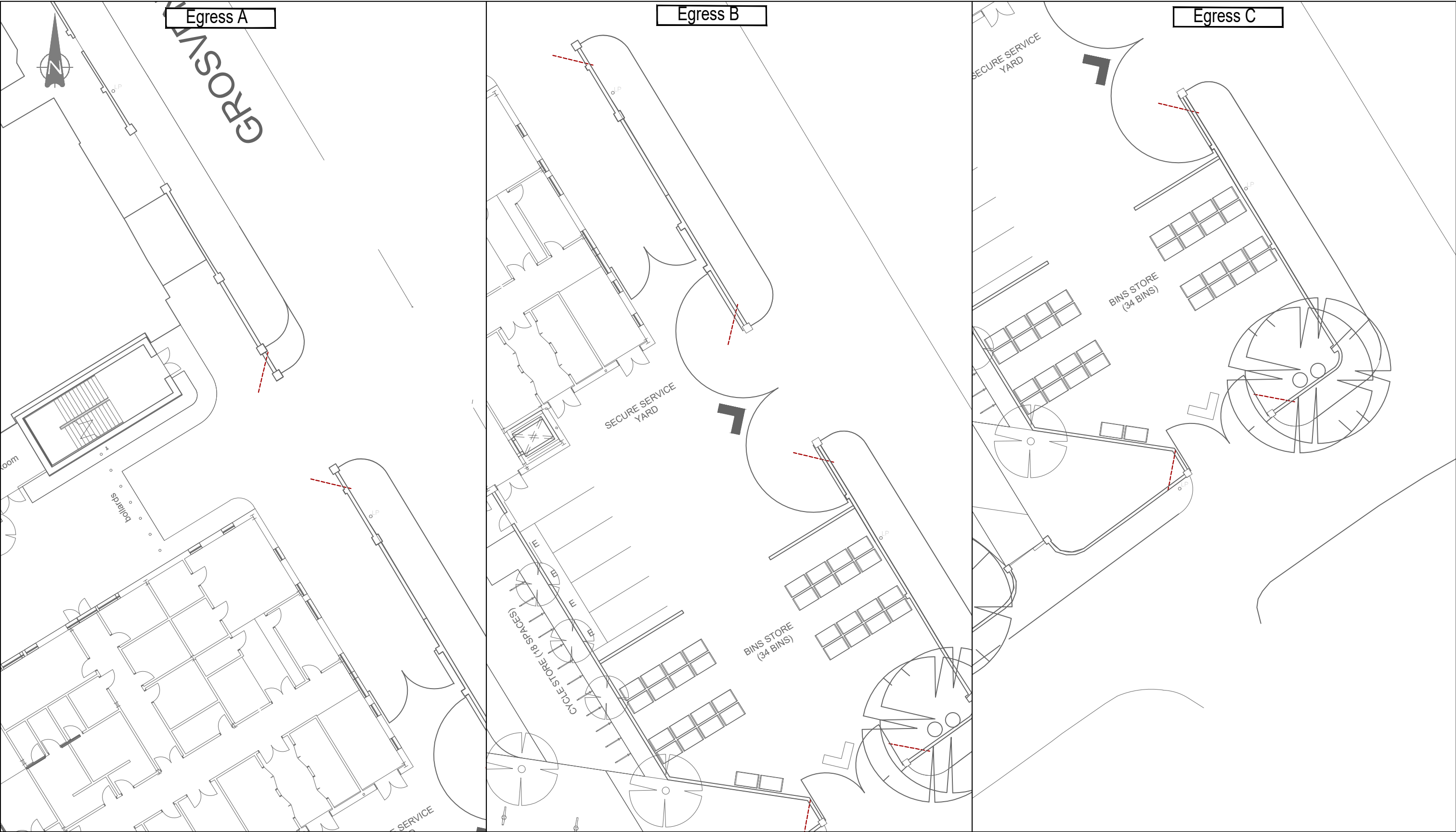
Rev:

Description:

Date:

By:

Chkd:



----- PEDESTRIAN VISIBILITY SPLAYS (2m x 2m)

GENERAL NOTES:		Rev:	Description:	Date:	By:	Chkd:
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Telephone 0151 726 2000  
Email Liverpool@curtins.com  
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Project: ALEXANDRA HOSPITAL					Status: PRELIMINARY	
Drg Title: PEDESTRIAN VISIBILITY					Drawn By: HD	Checked By: DJ
					Designed By: HD	Date: 06/04/20
					Scale: 1:250	
Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number: Rev:
074057 - CUR - 00 - XX - DR - TP - 75002 - P01						

## Appendix A – Proposed Site Layout

**PARKING PROVISION** - In accordance with Denbighshire Council's 'Supplementary Planning Guidance Note, Parking Requirements In New Developments'.

Cars	Proposed	70 no. parking spaces overall
	Existing	108 no. parking spaces based on 1 per 60sqm office space
	<b>Total Cars</b>	178 no. parking spaces (incl. 13 electric, 9 disabled & 9 family spaces)
Planning guidance states that the disabled requirement for existing buildings is 2% of total car park capacity and the requirement for new buildings is 5% of total parking capacity.		
Motorcycles		9 no. spaces (calculated as 5% of total overall spaces provided)

**Bicycles** - In accordance with BREEAM guidance

Existing	Staff - 49 secure staff spaces, calculated as 1 per 10 staff members. (Existing Building Staff No. = 326 full time & 168 part time)
	Visitors/building users - 50 visitor cycle spaces (to be confirmed) (calculated as 1 per 10 users (up to 500 users in total)
Proposed	Staff - 32 secure staff spaces, calculated as 1 per 10 staff members. (Proposed Building Staff No. = 320 TBC) Visitors/building users - 50 visitor cycle spaces, calculated as 1 per 10 users - up to 500 users in total. (no. of building users to be confirmed)

**SOFT & HARD LANDSCAPING KEY**

All specifications to be reviewed at RIBA Stage 4

- NB** All paving specified below has been selected from the Marshall's Commercial [www.marshalls.co.uk/commercial](http://www.marshalls.co.uk/commercial).
- Proposed Demolition**

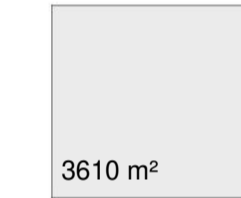
**Proposed New Build**

**Proposed Concrete**  
Concrete has been limited to the sprinkler compound and external services area only (430m²).

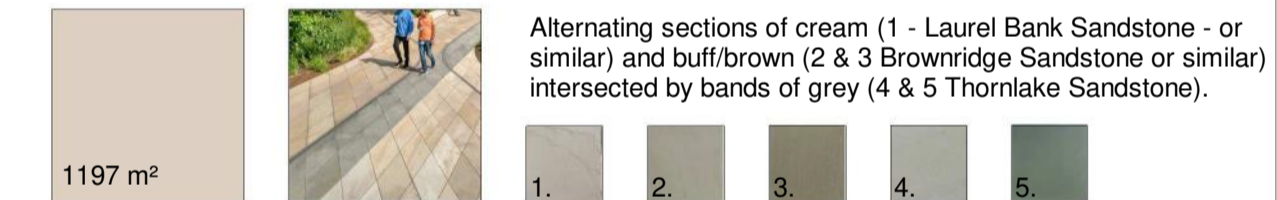
**Car Park Bays**  
Parking bays will be finished in Piora Permeable Block Paving or similar (1 & 2).



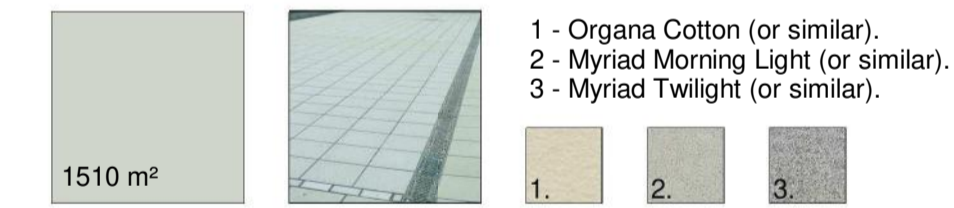
**Vehicular Routes**  
Vehicular access routes through the site will be finished in Tarmac or similar.



**Key Pedestrian Routes** - Natural Stone Paving  
The combination of natural stone paving indicated below provides an extremely attractive, hardwearing solution for the key pedestrian routes through the site. The use of natural stone has been limited in an effort to minimise costs.



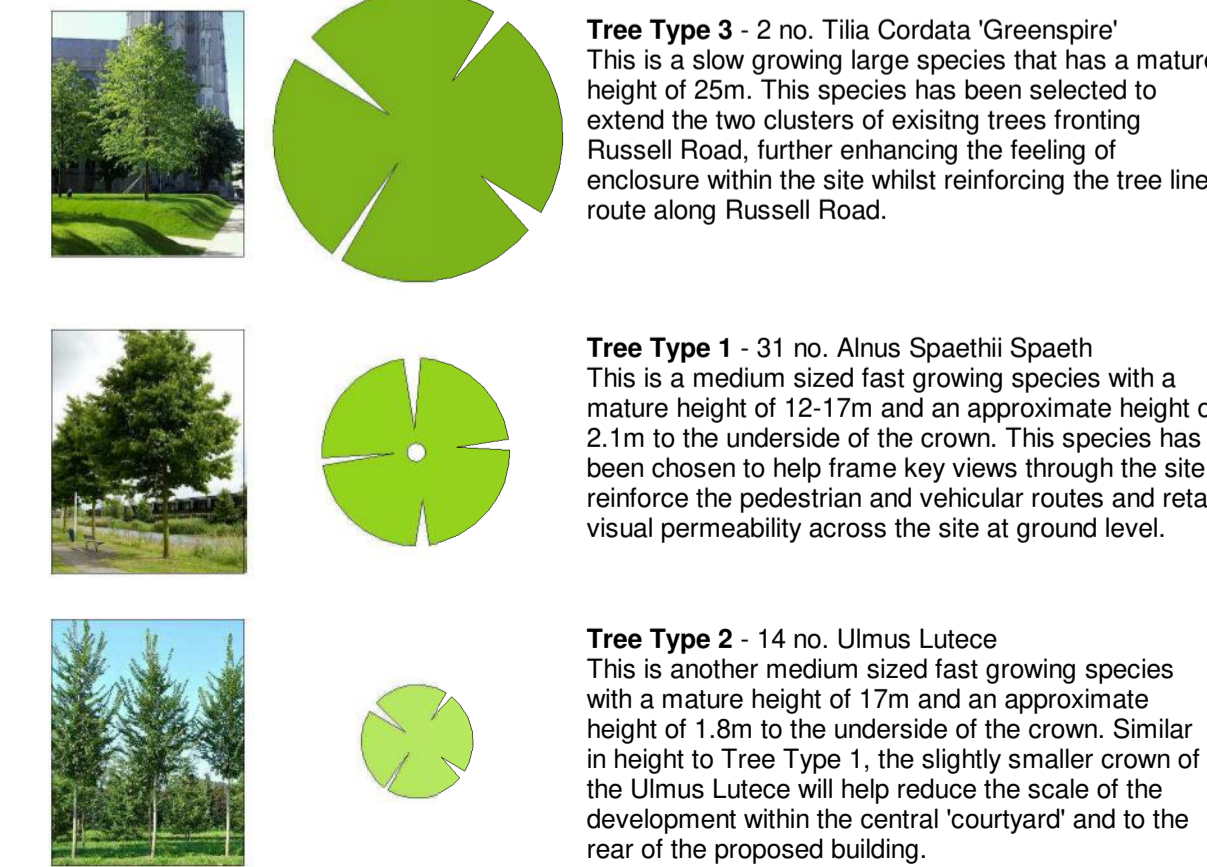
**Secondary Pedestrian Routes** - Concrete Paving  
Concrete paving slabs have been selected for the areas of hard landscaping branching off the key pedestrian routes, as a cost effective yet attractive alternative to the natural stone specified elsewhere.



**Soft Landscaping**  
All selected plants are of the coastal variety selected for their hardiness and low maintenance. Similar alternatives may be selected than those specified below.

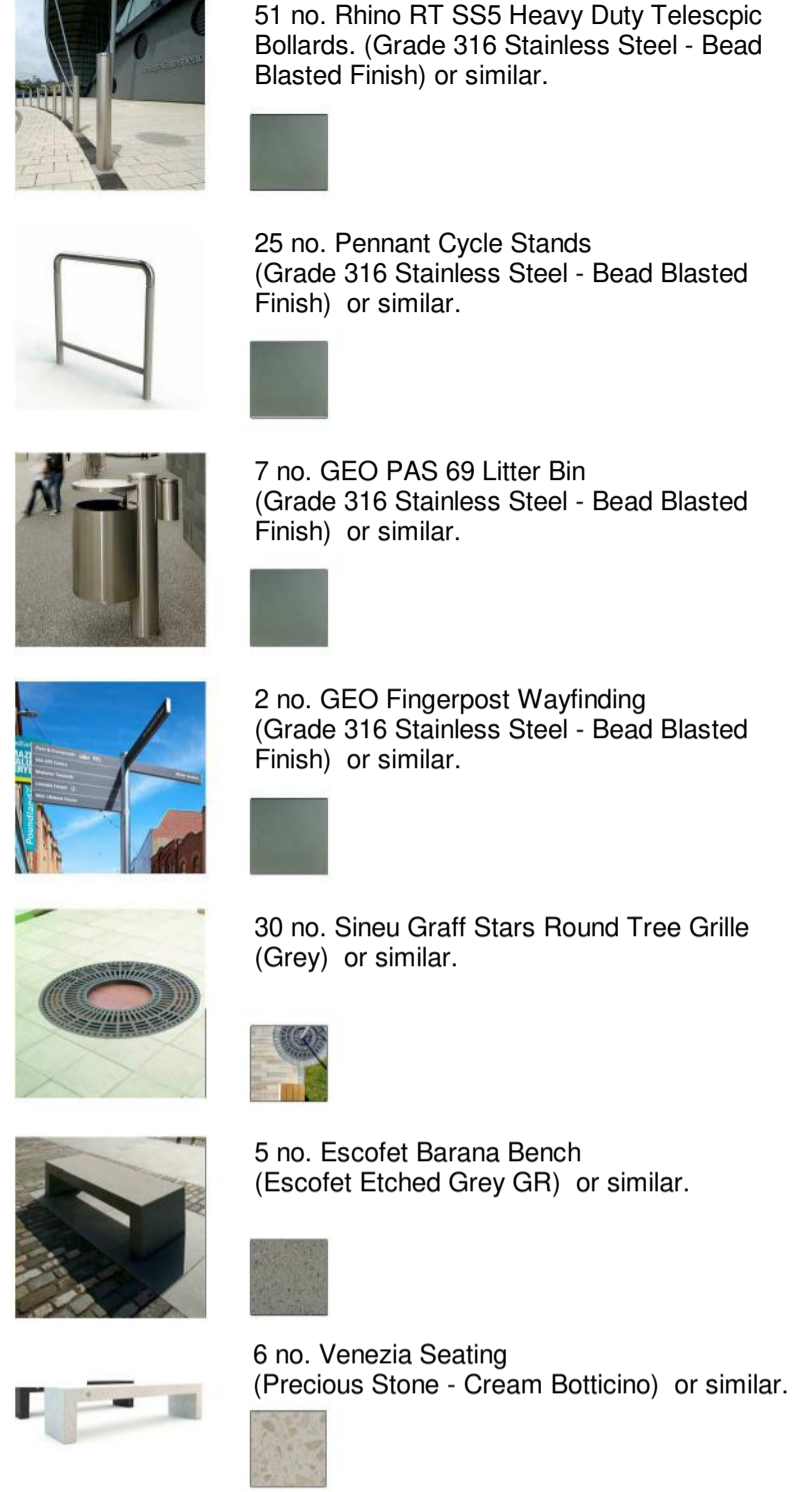


**Trees**  
Three different tree species have been carefully selected for specific reasons, all of which will thrive in Rhy's coastal environment and add structure. Two of the species are fast growers and will quickly add a level of maturity to the scheme while the third is a slow grower introduced to compliment and extend the clusters of existing trees fronting Russel Road.



**LANDSCAPE FURNITURE KEY**

All specifications to be reviewed at RIBA Stage 4



**NB** All materials indicated above have been carefully selected to minimise the corrosion & subsequently reduce maintenance. Both the grade 316 stainless steel and the reconstituted stone have a high resistance to corrosion. **All elements above have been specified from the Marshall's Commercial** [www.marshalls.co.uk/commercial](http://www.marshalls.co.uk/commercial)

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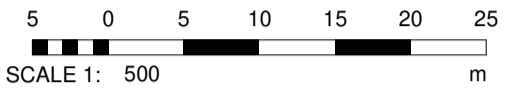
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**NB** SITE PLAN TO BE REVIEWED AGAINST PHASE 2 INVESTIGATION, ECOLOGY & ARBORICULTURAL REPORTS ON RECEIPT OF SURVEYS

P05	PK	Additional trees removed and walls to be demolished within proposed car park added.	31.03.20
P04	PK	Notation amended, paving specification to pedestrian routes amended, tree numbers reduced and cycle storage reconfigured, existing wall along Alexandra Road to be retained, existing areas to front and side of Alexandra Hospital to be retained as is.	30.03.20
P03	PK	Service vehicle access amended, car park reconfigured to increase numbers, cycle provision increased, fuel tank location and bollard positions amended, attenuation tank reconfigured and trees relocated.	27.03.20
P02	PK	Car park reconfigured, landscaping coordinated with drainage scheme, hatches & demolition line amended, parking/cycle provision split between existing & proposed & note related to removal of TPO trees added.	26.03.20
P01	SMc	Initial Issue	06/02/20
Rev	By	Description	Date



Client Name:  
KIER

Site Name:  
Royal Alexandra Hospital, Rhyl

Project Name:  
North Denbighshire Community Hospital

Drawing Title:  
LANDSCAPING & PARKING LAYOUT

Project No: 8356	Sheet Size: A1	Scale: As indicated	
Drawn by: PK	Checked by: VJ	Approved by: Approver	Revision: P05
Suitability: Work In Progress			Status: S0
Drawing Number: NDCH-GDA-00-ZZ-DR-A-10_35-0004			

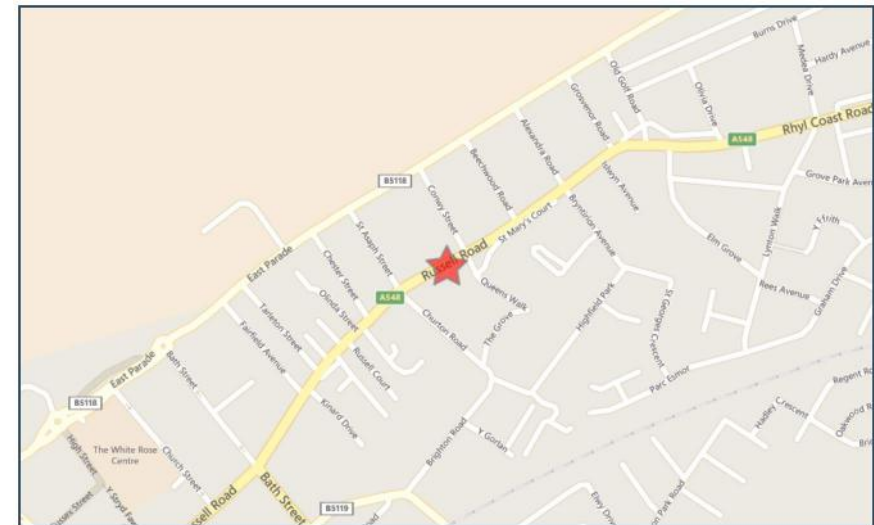
## Appendix B – CrashMap Outputs





crashmap.co.uk

<b>Crash Date:</b>	Friday, December 09, 2016	<b>Time of Crash:</b>	12:41:00 AM	<b>Crash Reference:</b>	201660U184742
<b>Highest Injury Severity:</b>	Serious	<b>Road Number:</b>	A548	<b>Number of Casualties:</b>	1
<b>Highway Authority:</b>	Denbighshire			<b>Number of Vehicles:</b>	1
<b>Local Authority:</b>	Denbighshire County			<b>OS Grid Reference:</b>	301317 381873
<b>Weather Description:</b>	Fine without high winds				
<b>Road Surface Description:</b>	Wet or Damp				
<b>Speed Limit:</b>	30				
<b>Light Conditions:</b>	Darkness: street lights present and lit				
<b>Carriageway Hazards:</b>	None				
<b>Junction Detail:</b>	Not at or within 20 metres of junction				
<b>Junction Pedestrian Crossing:</b>	No physical crossing facility within 50 metres				
<b>Road Type:</b>	Single carriageway				
<b>Junction Control:</b>	Not Applicable				



For more information about the data please visit: [www.crashmap.co.uk/home/Faq](http://www.crashmap.co.uk/home/Faq)  
To subscribe to unlimited reports using CrashMap Pro visit [www.crashmap.co.uk/Home/Premium\\_Services](http://www.crashmap.co.uk/Home/Premium_Services)



crashmap.co.uk

### Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 50cc and up to 125cc	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	Kerb	None

### Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

For more information about the data please visit: [www.crashmap.co.uk/home/Faq](http://www.crashmap.co.uk/home/Faq)

To subscribe to unlimited reports using CrashMap Pro visit [www.crashmap.co.uk/Home/Premium\\_Services](http://www.crashmap.co.uk/Home/Premium_Services)

## Appendix C – Review of Existing Parking Provision



Regular Spaces	Disabled Spaces
17	0
11	1
46*	0
50	11
23	4
23	3
27*	0
Sum = 197 regular bays, 19 disabled bays	
*Estimated count (informal parking)	

## Appendix D – TRICS Outputs

Calculation Reference: AUDIT-148301-200411-0453

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH  
 Category : B - GENERAL HOSPITAL - WITHOUT CASUALTY  
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BU BUCKINGHAMSHIRE	1 days
03	SOUTH WEST	
	SM SOMERSET	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*

## Primary Filtering selection:

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Gross floor area  
 Actual Range: 4100 to 21812 (units: sqm)  
 Range Selected by User: 1765 to 63720 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 21/11/12

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Tuesday	1 days
Wednesday	2 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Neighbourhood Centre (PPS6 Local Centre)	1

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	1
Village	1

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

## Secondary Filtering selection:

Use Class:

C2	3 days
----	--------

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

## Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
25,001 to 50,000	1 days
100,001 or More	1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	1 days
500,001 or More	1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

1.1 to 1.5	3 days
------------	--------

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

No	3 days
----	--------

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	3 days
-----------------	--------

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	BU-05-B-01	GENERAL HOSPITAL	BUCKINGHAMSHIRE
	QUEEN ALEXANDRA ROAD		
	HIGH WYCOMBE		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	21812 sqm	
	Survey date: WEDNESDAY	21/11/12	Survey Type: MANUAL
2	DL-05-B-01	GENERAL HOSPITAL	DUBLIN
	BLOOMFIELD AVENUE		
	DUBLIN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	12433 sqm	
	Survey date: TUESDAY	25/09/12	Survey Type: MANUAL
3	SM-05-B-01	COMMUNITY HOS.	SOMERSET
	BERNARD WAY		
	NEAR YEOVIL		
	SOUTH PETHERTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Gross floor area:	4100 sqm	
	Survey date: WEDNESDAY	11/07/12	Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

TRIP RATE for Land Use 05 - HEALTH/B - GENERAL HOSPITAL - WITHOUT CASUALTY  
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	12504	0.296	3	12504	0.104	3	12504	0.400
08:00 - 09:00	3	12504	0.624	3	12504	0.157	3	12504	0.781
09:00 - 10:00	3	12504	0.789	3	12504	0.269	3	12504	1.058
10:00 - 11:00	3	12504	0.525	3	12504	0.355	3	12504	0.880
11:00 - 12:00	3	12504	0.317	3	12504	0.333	3	12504	0.650
12:00 - 13:00	3	12504	0.325	3	12504	0.475	3	12504	0.800
13:00 - 14:00	3	12504	0.509	3	12504	0.461	3	12504	0.970
14:00 - 15:00	3	12504	0.557	3	12504	0.413	3	12504	0.970
15:00 - 16:00	3	12504	0.381	3	12504	0.557	3	12504	0.938
16:00 - 17:00	3	12504	0.253	3	12504	0.608	3	12504	0.861
17:00 - 18:00	3	12504	0.203	3	12504	0.680	3	12504	0.883
18:00 - 19:00	3	12504	0.171	3	12504	0.339	3	12504	0.510
19:00 - 20:00	2	7850	0.217	2	7850	0.197	2	7850	0.414
20:00 - 21:00	2	7850	0.076	2	7850	0.306	2	7850	0.382
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.243			5.254			10.497

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

Trip rate parameter range selected:	4100 - 21812 (units: sqm)
Survey date range:	01/01/12 - 21/11/12
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

# Our Locations

## **Birmingham**

2 The Wharf  
Bridge Street  
Birmingham  
B1 2JS  
T. 0121 643 4694  
[birmingham@curtins.com](mailto:birmingham@curtins.com)

## **Bristol**

Quayside  
40-58 Hotwell Road  
Bristol  
BS8 4UQ  
T. 0117 302 7560  
[bristol@curtins.com](mailto:bristol@curtins.com)

## **Cardiff**

3 Cwrt-y-Parc  
Earlswood Road  
Cardiff  
CF14 5GH  
T. 029 2068 0900  
[cardiff@curtins.com](mailto:cardiff@curtins.com)

## **Douglas**

Varley House  
29-31 Duke Street  
Douglas  
Isle of Man  
IM1 2AZ  
T. 01624 624 585  
[douglas@curtins.com](mailto:douglas@curtins.com)

## **Dublin**

39 Fitzwilliam Square  
Dublin 2  
Ireland  
T. 00353 1 507 9447  
[dublin@curtins.com](mailto:dublin@curtins.com)

## **Edinburgh**

1a Belford Road  
Edinburgh  
EH4 3BL  
T. 0131 225 2175  
[edinburgh@curtins.com](mailto:edinburgh@curtins.com)

## **Glasgow**

Queens House  
29 St Vincent Place  
Glasgow  
G1 2DT  
T. 0141 319 8777  
[glasgow@curtins.com](mailto:glasgow@curtins.com)

## **Kendal**

28 Lowther Street  
Kendal  
Cumbria  
LA9 4DH  
T. 01539 724 823  
[kendal@curtins.com](mailto:kendal@curtins.com)

## **Leeds**

Rose Wharf  
Ground Floor  
Leeds  
L29 8EE  
T. 0113 274 8509  
[leeds@curtins.com](mailto:leeds@curtins.com)

## **Liverpool**

Curtin House  
Columbus Quay  
Riverside Drive  
Liverpool  
L3 4DB  
T. 0151 726 2000  
[liverpool@curtins.com](mailto:liverpool@curtins.com)

## **London**

40 Compton Street  
London  
EC1V 0BD  
T. 020 7324 2240  
[london@curtins.com](mailto:london@curtins.com)

## **Manchester**

Merchant Exchange  
17-19 Whitworth Street West  
Manchester  
M1 5WG  
T. 0161 236 2394  
[manchester@curtins.com](mailto:manchester@curtins.com)

## **Nottingham**

56 The Ropewalk  
Nottingham  
NG1 5DW  
T. 0115 941 5551  
[nottingham@curtins.com](mailto:nottingham@curtins.com)