BAE SYSTEMS

Royal Ordnance Site, Bishopton

Park and Ride Demand Study

Report

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Report

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1 Introduction

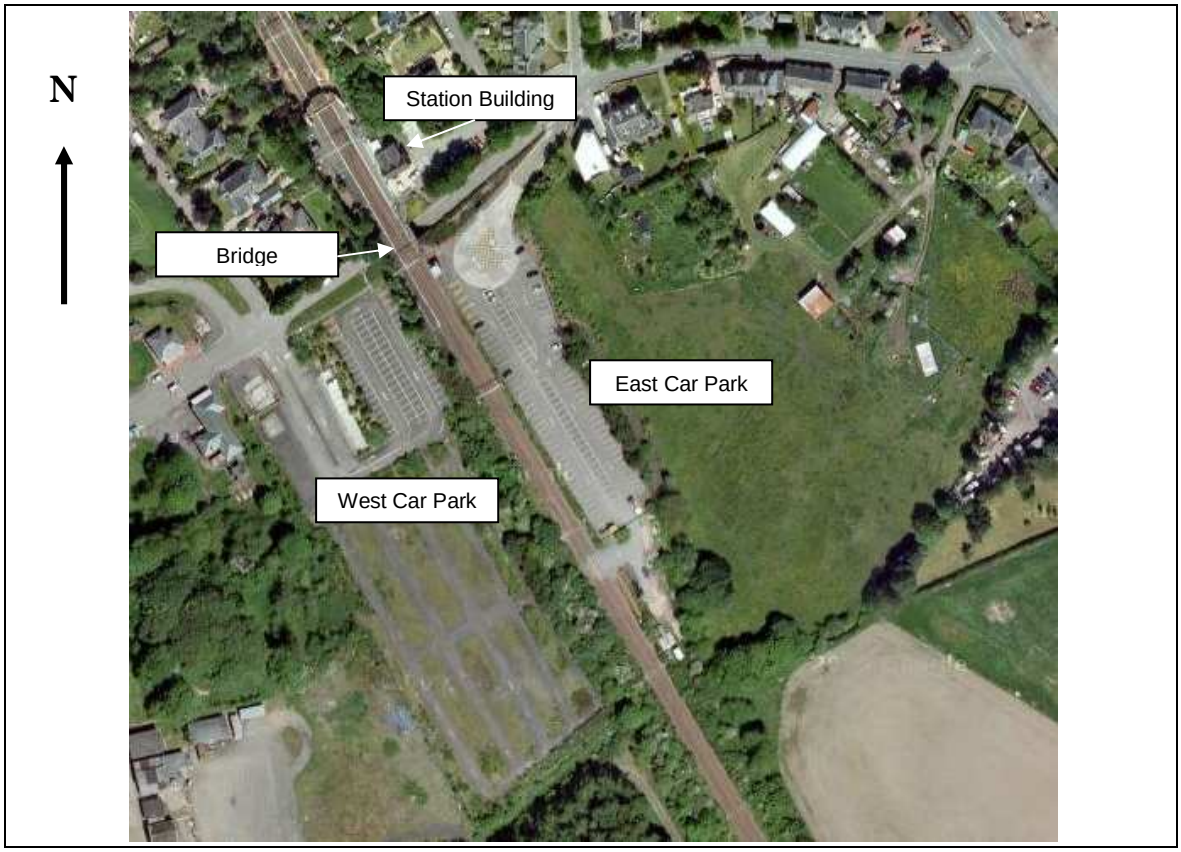
Background

1.1 The development proposals for the Royal Ordnance Factory site will result in an increasing demand for rail park and ride at Bishopton Station over time as house-building takes place provided that additional parking provision is made at the station. Demand will not reach a maximum until the planned completion of development in 2026/27. It is known that existing parking facilities at the station are well-used although not at capacity. There is also on-street parking in surrounding streets.

1.2 There is insufficient space available on the east side of the railway to allow expansion of the existing car park. In 2006 a new surfaced car park was provided on an area of land on the west side of the railway that formerly served as a car park for the Royal Ordnance Factory. This provided the extra car parking capacity needed to remove some of the on-street parking by rail users on Station Road and adjoining streets. In a further expanded form it would also, in due course, cater for new demand generated by the proposed development.

1.3 An aerial view of the current park and ride facilities is shown in **Figure 1.1** below.

Figure 1.1 Current Park and Ride facilities



Google/JMP

1.4 The benefit of providing further additional car-parking on the west side of the railway is that it enables residents of the proposed new housing development to drive to the station without placing additional traffic on the A8 Greenock Road or Station Road.

1.5 For those approaching from the east side it would be necessary to utilise the existing low and narrow railway bridge to allow those drivers unable to find a parking space in the east car park to access the west car park. A variable message sign and monitoring system could be used to inform motorists when the existing car park is full in order to avoid motorists circulating around it seeking a vacant parking space.

1.6 Pedestrian priorities would need to be reconciled with limited car access to enable users of both car parks to access both platforms. Ramps of an appropriate gradient with offsets and changes of direction compliant with guidance given in Railway Group Standards and Railway Safety Principles and Guidance will be needed to ensure that both platforms are accessible.

Planning Conditions & Section 75 Agreement

Planning Conditions

1.7 A number of the conditions attached to the planning consent of 10 August 2009 for 06/0605/PP directly or indirectly relate to the provision of public transport and associated facilities and impact on the provision of spaces and timing of provision at the proposed extension to the Park and Ride site. The directly relevant condition is number 55 which states:

> *Before any of the proposed development is occupied a bus and Park and Ride strategy shall be submitted to and agreed in writing by the Planning Authority. The strategy shall include measures for the phased introduction of bus services as referred to in Condition 13, details of bus infrastructure (including bus turning area/layover) and details of the phased construction of the Park and Ride facility. The development shall thereafter proceed in accordance with the approved strategy*

1.8 The bus service strategy is the subject of a separate report.

Section 75 Agreement

1.9 In addition to the planning conditions, a Section 75 Agreement is in place which has the following relevant clauses at Section 11.

> *11.1 Prior to completion of the 400th Residential Unit, the Landowner will provide the First Phase Park and Ride Facility within the Park and Ride Location to include 150 spaces and a bus turning and layover area.*
>
> *11.2 Prior to completion of the 1000th Residential Unit, the Landowner will provide the First Phase Park and Ride Facility within the Park and Ride Location to include a further 150 spaces and a bus turning and layover area.*

1.10 Due cognisance of the material within the Section 75 and Outline Planning Notice has been taken when undertaking this report. In addition the Public Transport Study has been used to understand the potential headway and bus service provision which may impact on the take up of the proposed Park and Ride Services.

Proposals

1.11 Road access to the expanded village will be via new northern and southern link roads. The existing road access beneath the railway will provide a direct, convenient link between the existing village hub and a section of the extended park and ride for vehicles and wider access for pedestrians and cyclists.

1.12 It is proposed to make this link into a single carriageway controlled by traffic lights. As well as reducing speeds and increasing traffic safety, this allows a safe pedestrian route to be provided beneath the bridge. This arrangement has the advantage of restricting the amount of traffic movement on Station Road, and creating a general traffic calmed environment in which pedestrian movement is both safer and more convenient. Similar single lane access arrangements to traditional urban centres work well, such as at Durham and Alnwick which are both much larger centres than Bishopton.

1.13 This approach is extended by creating a high quality public realm at Station Road extending to the station itself. This will reinforce and improve the existing 'hub' of local services. These environmental improvements will also make the approach to the station more attractive and could be combined with small-scale improvements to information and waiting facilities at the station.

1.14 The existing bus terminal and park and ride car park would be given a facelift, and pedestrian ramps and steps created or improved. Existing unkempt planted areas will be improved.

1.15 Station Road itself will remain much as it is at present, but with more clearly defined parking and passing places.

1.16 Having passed through the managed space under the railway bridge an expanded park and ride car park and bus terminal are proposed. This mirrors the facilities on the east side of the railway line, and is the most convenient location for access to the station. There will be no direct linkage between Station Road and the road network of the new development with a separate area of parking for demand from the development site.

Demand Study

1.17 This report examines the likely uptake for demand for parking at Bishopton Rail Station as a result of the Bishopton Park development provision of a new junction on the M8 and any latent demand which may be realised due to the provision of improved facilities at Bishopton Station.

1.18 The new motorway junction is to be constructed and brought into use prior to the occupation of the 451st residential dwelling or the occupation of employment space in excess of 50,000 square metres.

1.19 The report continues by laying out the methodology used for forecasting the potential demand for new facilities at the proposed Park and Ride site before providing an indication of the likely demand and the potential implementation of the parking areas to meet this demand.

2 Demand

2.1 This report forecasts likely demand for parking at Bishopton rail station as a result of the Bishopton Park development and provision of a new junction on the M8 and any latent demand for the surrounding area.

2.2 Demand for parking over and above current levels is anticipated to come from three main sources:

- Inhabitants of the residential units to be developed;
- Inhabitants of the existing Bishopton village and surrounding area; and
- People travelling to the Glasgow conurbation from Inverclyde, attracted to use this location for park & ride by the provision of a new junction on the M8 west of Bishopton.

These sources are considered in turn below.

2.3 Only limited new data has been made available in order to generate these forecasts. They therefore rely on reasonable assumptions transferred from previous studies and from the extensive experience JMP has gathered on previous Park and Ride schemes in similar locations.

Latent Demand

2.4 Bishopton Station already has a substantial car park. Network Rail reports that it has 192 spaces, 12 of which are designated to be for disabled people. These spaces are provided on two sites, one each side of the rail line. The public transport study[1] notes that (para 2.27)

> *"On a typical weekday, the station car parks are full and there is a substantial overflow of parking by train users on to the adjoining streets".*

2.5 This suggests that there is latent demand for parking at Bishopton Station, which would be realised if the availability of parking were increased. It would be considered good practice to ensure the availability of land for future expansion. Positive measures to increase the share of travel demand accounted for by public transport may also necessitate additional parking provision at the station.

2.6 The Passenger Demand Forecasting Handbook[2] (PDFH) indicates percentages of increased patronage at rail stations which occur with the provision of new facilities. These facilities include items such as Real Time Passenger Information (RTPI), shelters, lighting, increased public transport provision to the site and levels of parking.

2.7 Using the uplift figures within PDFH it would be anticipated that the new facilities which will be available at Bishopton Station, most notably the increase in parking provision, would lead to an increase usage of 10% in passenger numbers.

2.8 It would be assumed that the increase in passenger numbers would be reflected in an increase in users of the car park by the same amount and therefore it would be anticipated that there would be a requirement to provide in the region of 20 new spaces. The new facilities would help to release the latent demand which is in the surrounding area of Bishopton.

[1] Royal Ordnance Site, Bishopton. Public Transport Study. JMP. Draft dated 21 August 2011.
[2] The demand for public transport: a practical guide, TRL Report TRL593, 2004.

2.9 In addition it has been noted throughout the study and during site visits that there is a level of under provision of car park spaces currently prevalent at the station which has manifested itself in the form of on street parking in the vicinity of the existing parking provision.

2.10 The parking in the streets in the vicinity of the currently operating park and ride site at the station has been estimated to be in the region of 20 vehicles. These vehicles are in general arriving during the AM commuter peak and leaving during the PM commuter peak. It is noted that the surrounding streets are sometimes utilised by vehicles using the park and ride even when there are additional spaces available within the car park.

2.11 In order to accommodate the overspill demand it would be anticipated that an additional 20 spaces would need to be provided in order to encourage drivers to use the car park. This could be backed up by the promotion of roads orders in the surrounding streets which would restrict parking.

Summary

2.12 In order to accommodate the potential release of latent demand from the surrounding area and to accommodate users who currently park on the surrounding streets it would be anticipated that in the region of 40 new spaces would be required.

Bishopton Park

2.13 It has been assumed that the new demand for park and ride services generated from the proposed development will be purely from the residential element. It is assumed that the employment element of the proposed development will generate no additional demand for the park and ride site due to the proposal acting as a destination rather than an origin for the journey to work.

2.14 It should be noted that the passenger numbers at Bishopton Station are likely to increase with the provision of the anticipated level of employment land which may impact on the likely provision of public transport services linking to the station.

Residential Demand

2.15 The public transport study states (para 4.57)

> *"The existing population of Bishopton is approximately 5,150 (source: Renfrewshire Council Census 2001 Profile, Settlement 01 – Bishopton updated to July 2004). The proposal for 2,500 new houses on the former Royal Ordnance site would have a population of 6,802 if average household size is assumed to be 2.72. The development would therefore increase the population of Bishopton by 132%."*

2.16 Surveys reported in the public transport study suggest (para 2.32) that 40% of existing park and ride demand is from Bishopton residents (the remainder from residents of other settlements).

2.17 That study therefore concludes that

> *"If it is assumed that the number of car drivers parking their cars at the station as a result of development of the Royal Ordnance site will increase in proportion to the*

increase in population[3], the number of cars parked at the station by residents of Bishopton would increase by 90 vehicles".

2.18 The forecast demand for park and ride by residents of the new residential development will be in the region of 90 vehicles using this base assumption.

2.19 However, using the uplift factors contained within the PDFH and from additional studies, it is likely that the mode split may be more favourable towards park and ride as more people are inclined to change travel behaviour when they relocate. This is due to the fact that they are breaking an 'entrenched behaviour' by moving and therefore they are forced to make a new choice about their travel behaviour and in particular their journey to work.

2.20 It would be assumed, when examining the facilities which will be available at the Bishopton Station, increased bus service provision as detailed in the associated Public Transport Report and coupled with the congestion often witnessed on the M8, that a greater percentage of new residents will utilise the park and ride facilities than current residents.

2.21 In order to accommodate the potentially higher usage of the park and ride facility by new residents it would be considered that an additional 30 spaces would be required which would be an uplift of 10% from the current usage and is in line with the figures within the PDFH.

2.22 Although it would be anticipated that the potential uptake of the facilities at the park and ride may be more attractive to new users than existing users the associated public transport study highlights the new linkages which will be created when the development is operating. In association with the travel plan and the promotion of the new services it would be hoped that new users would use the new bus services to access the station rather than the private vehicle. It could be considered that a monitoring regime is set up as part of the travel plan to determine if the forecast higher uptake of the park and ride facilities from new users has materialised.

Summary

2.23 In order to accommodate the potential usage from the Bishopton Park development and to accommodate a higher uptake of the facilities it would be anticipated that in the region of 90 to 120 new spaces would be required where the 30 space difference is based on an assumed higher uptake of the services from new residents.

Capture from the M8

2.24 The provision of a new junction on the M8 west of Bishopton will enhance the attractiveness of Bishopton station as a park and ride location for people wishing to travel to Glasgow and other locations east of Bishopton from those parts of Inverclyde readily accessible to the M8.

2.25 It is often the case that the expansion of park and ride facilities at one station will abstract a large proportion of demand from others on the same route. This is relatively unlikely in this case, as the nearby competing stations (Port Glasgow, Woodhall, Langbank and the Paisley stations) lack either ready access from the strategic road network or convenient parking provision. The provision of the new junction would therefore only offer the potential to attract new park and ride trips to rail rather than a transfer of users form other locations.

[3] This assumption is felt to be reasonable, as average travel distances from home location to the station for residents of the new development will be similar to trips by existing Bishopton residents, hence mode share for journeys to the station can also be assumed to be similar.

2.26 It should be noted that no information on the origins and destinations of existing trips on the M8 has been available to us in the development of these forecasts. However, average AM peak hour two-way flow of all vehicles was 2,139[4]. Of the AM peak flow, we assume that two-thirds of traffic is eastbound (i.e. 1,426 vehicles) and that 87% of all eastbound traffic is cars/vans. We therefore estimate that there are 1,240 eastbound cars/vans at this location in the peak hour. Additionally, we estimate that total traffic in the AM peak period is twice the level of the peak hour: 2,480 cars/vans eastbound. Due to the prevalence of an elongated 2 hour peak period on traffic movements along the M8.

2.27 It is assumed that park and ride demand will be generated only from people travelling to central Glasgow as trips to any other destination are relatively unattractive to make by rail in comparison with car. Of all flows generated by the new development at Bishopton, 586 out of 2,070 trips (i.e. 28%) are forecast to be to Glasgow[5]. Applying this factor to flows on the M8 suggests that around 700 cars/vans are heading for Glasgow in the morning peak.

2.28 No more than half of these vehicles will be in scope for transfer to park and ride (which relies on the driver being able to transfer to public transport and heading for a destination that is conveniently located near a Glasgow station). This is also in relation to the fact that there is readily available public car parking in Glasgow and that a significant amount of the employment locations within the Glasgow conurbation are outwith the recommended walking distances from a convenient railway station.

2.29 It is, therefore, estimated that 350 vehicles may be in scope to transfer to the expanded park and ride service. Of these, 26% are forecast to park and ride at Bishopton[6]. This therefore suggests that for the 1 hour window when the potential to utilise the park and ride to access Glasgow for standard working hours (0800 - 0900) in the AM peak period demand for park and ride at Bishopton will be around 90 vehicles.

2.30 Demand for park and ride from M8 traffic in the interpeak period will be limited, as low levels of traffic congestion undermines a key rationale for changing modes. Any demand in the evenings can be accommodated in spaces that will have been vacated during the day and therefore only limited additional spaces would be required to accommodate the potential for park and ride services outwith the AM peak.

2.31 The forecast model suggests that only around 2% of interpeak trips would make use of the new expanded park and ride and therefore only around 10 additional parking spaces will be required for interpeak demand.

Summary

2.32 In order to accommodate the potential usage capture of traffic and mode shift from users of the M8 it would be anticipated that in the region of 100 new spaces would be required.

Overall Demand

2.33 Using the figures calculated above it would be anticipated that there would be an overall new demand at Bishopton Station for park and ride services in the region of 230 to 260 additional spaces. The anticipated make up of the users of these spaces is indicated in Table 2.1 below.

[4] Transport Scotland website. Accessed w/c 10 October 2011.
[5] Transport Assessment.
[6] Assumptions underlying this forecast are contained in the spreadsheet model in Appendix A.

Table 2.1 Anticipated breakdown of users at the park and ride

User	Number
Latent Demand	40
New Residents	90 - 120
Capture from the M8	100

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2.34 It is recognised that the total number of 230 to 260 new spaces would be above the provision contained within the Section 75 which totals 220 new spaces.

2.35 It is understood that the spaces would be allocated in such a manner that users originating from the Bishopton development and those from the east side of the railway will be separated within the proposed new facilities. The additional demand captured from the M8 will have an the opportunity to either use existing routeing via Station Road or by way of the Southern Access Road. The travel distances are such that it is likely that Station Road will remain the preferred route for demand 'external' to the Bishopton Park development. This report will continue by proposing how and when the facilities should be provided and the potential split in the provision of the spaces.

3 Location and Provision of Spaces

3.1 It is recognised that within the planning conditions that the new junction onto the M8 will only be provided before the build out of the 451st dwelling and that contained within the Section 75 agreement, as indicated in Section 1 of this report, there are other 'trigger points' for the provision of additional spaces at the extended park and ride site.

3.2 It is noted that the expansion of the park and ride facilities will be solely on the west side of the railway. Within the expansion the car park will be split into north and south sections which cannot access each other in order to prevent the creation of a 'rat run' between Bishopton Park and the existing village.

3.3 It would be anticipated that the majority of the spaces on the northern section of the expansion would be, predominantly, for latent demand, existing demand and on street car parking. The southern section of the west car park would be, in the majority, used by residents of the proposed new development.

3.4 It is likely that the majority of users captured from the M8 would continue along the A8 to Station Road and utilise the northern car park extension although there would be a minority would utilise the longer route and park in the southern section of the car park, especially if the availability of spaces was greater in the southern section. It would be anticipated that the split would be in the region of 80/20 in favour of the northern section.

3.5 It is also recognised that the potential demand for new spaces at the park and ride has the potential to be in excess of the provision required from within the S75 Agreement. Using the S75 agreement a proposed strategy is indicated for each of the phases and then an alternative strategy is indicated which would accommodate the anticipated demand.

First Phase

3.6 Using the demand calculations from within this report it would anticipated that the first tranche of spaces required by the S75 (increasing the number of available parking spaces on the west side of the railway to 150), before the build out of the 401st dwelling, would be in the majority for usage by new Bishopton residents and the capture of some traffic from the M8.

3.7 It would be anticipated that the split of these spaces would be a pro rata provision on the west side of the railway for the amount of units anticipated to be build out before the completion of the second phase of expansion which will take . This would be in the order of 45 spaces in the southern section on the west side of the railway, which is derived from the anticipated demand from 1000 residential units within Bishopton Park.

3.8 It is also recognised that the junction to the M8 will be provided before the build out of the 451st dwelling and therefore there is potential for the demand from the capture off the M8 to be realised before the second phase of expansion at the car park. There would be a tangible risk that the level of demand from the M8 would negate any benefits to the existing and new residents as the available spaces would be fully utilised by captured demand.

3.9 In order to comply with the S75 agreement it would be anticipated that all the 70 additional spaces to be delivered during the first phase would service the new development and captured demand from the M8. The split for the 70 spaces should be 45 for the new development in the southern section of the west car park and 5 for the capture from the M8. In addition an extra 20 spaces should be created in the northern section of the car park to accommodate additional captured

demand. Any latent demand and dealing with the on street car parking should be addressed during the second phase.

Second Phase

3.10 The second phase of 150 additional spaces which will be provided before the build out of the 1001st dwelling would be servicing the remainder of the capture from the M8, additional demand from Bishopton Park, the latent demand and addressing the issue of cars parked on street.

3.11 It would therefore be anticipated that of the 150 spaces extension 75 should be for demand from the M8 with 60 located in the northern car park and 15 in the southern car park. An additional 35 spaces for newly generated demand from the proposed development should be added to the southern section of the west car park. These figures represent the remainder of the demand forecasted from these developments which have not been provided for within the first phase expansion. An additional 40 spaces would be provided in the northern section of the park and ride site to accommodate the latent demand and to address the on street car parking issue.

3.12 There is the potential that when creating the buffer area between the northern and southern sections of the newly expanded western car park that it is designed in such a manner that it would leave sufficient capacity to expand to accommodate any of the forecast provision.

Risk and Alternative Strategy

3.13 It should be noted that there is a potential risk involved with the provision of spaces in accordance with the timetable set out in the S75 as it is based on different 'trigger points' to the planning conditions and may not fully accommodate the potential demand for spaces at the park and ride site.

3.14 It would be anticipated that it may be more beneficial to the park and ride site if the first phase would be an additional 150 spaces. This would consist of 95 spaces in the northern section of the car park to partially accommodate the anticipated capture from the M8 (55 spaces) and 40 to accommodate latent demand and address the issue of on street parking. In addition there would be 55 spaces created in the southern section of the car park which would be made up of 45 spaces for the proposed new development and an additional 10 spaces for M8 traffic user the longer route.

3.15 The second phase would then consist of an additional 110 spaces. These spaces would be split as follows:

- 75 additional spaces for the new residents in the southern section of the west car park; and
- 35 additional spaces for capture from the M8 which would be split 30 in the northern section and 5 in the southern section.

3.16 The advantage to this strategy is that it would allow for the full forecast demand for the park and ride facility and would also allow usage surveys to be undertaken to determine actual usage which could then potentially shape the second phase. This approach could potentially be accommodated within the car park design by the allocation of landscaped areas that could be converted should demand be shown to meet the space requirements indicated by this strategy.

Park & Ride Car Park Layout

3.17 Preliminary layouts for the Park and Ride Facility are contained in Appendix B.

4 Summary

4.1 The proposed development at the Royal Ordinance Site is likely to increase the demand for park and ride services at the existing Bishopton Railway Station. This demand is likely to come from 3 main sources:

- Inhabitants of the residential units to be developed;
- Inhabitants of the existing Bishopton village and surrounding area; and
- People travelling to the Glasgow conurbation from Inverclyde, attracted to use this location for park & ride by the provision of a new junction on the M8 west of Bishopton.

4.2 Using traditional demand forecasting techniques it would be forecast that the demand would total 260 spaces split as shown in Table 2.1.

4.3 It is recognised that there are existing S75 agreements and planning conditions in place which indicate 'trigger points' for the delivery of infrastructure and the expansion of the park and ride. It is also noted that an expected level of expansion of 220 additional spaces is set out within the S75 agreement and this is below the forecast level of demand.

4.4 Using the S75 agreements and taking due cognisance of the timings for delivery of the infrastructure, most notably the new junction onto the M8, a two phase strategy has been drawn up as indicted in Table 4.1 below. It should be noted that this does not fully service the forecast demand.

Table 4.1 S75 Strategy

	Phase 1		Phase 2	
	North Section	South Section	North Section	South Section
Demand from M8	20	5	60	15
New Residents	-	45	-	35
Latent Demand	-	-	40	-

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4.5 An alternative Strategy has been forwarded within the report which will fully match the forecast demand but is not contained within the S75 agreement in place. The alternative strategy is also based over two phases with the same 'trigger points' as defined in the S75 i.e. first phase before the 401st dwelling to be built and second phase before the 1001st dwelling to be built. The alternative strategy is detailed in Table 4.2 below. The car park layout should be designed to accommodate a potential expansion to this level of demand.

Table 4.2 Alternative Strategy

	Phase 1		Phase 2	
	North Section	South Section	North Section	South Section
Demand from M8	55	10	30	5
New Residents	-	45	-	75
Latent Demand	40	-	-	-

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Appendix A

Spreadsheet Model

	Number of cars	AM peak	Off peak
1	City centre destinations	1	1
2	Average vehicle occupancy	1.3	1.3
3	Proportion paying for parking	*40%*	*40%*

Coefficients

Assumed values	AM peak Car vs P&R	Off peak Car vs P&R
Access / egress time	-0.0256	-0.075600
Waiting time	-0.0356	-0.077400
In-vehicle time	-0.0168	-0.041400
Money cost	-0.2271	-0.928200
Constant	-0.298800	-1.090800

Implied valuations	
AM peak Car vs P&R	Off peak Car vs P&R
1.523809524	1.826087
2.119047619	1.869565
0.073976222	0.044602
17.785714	26.347826

P&R journey characteristics

4	In car time to P&R (minutes)	*20*	*20*			
5	Parking charge (£)	£ -	£ -			
6	Train fare (£)	£ 3.50	£ 3.50			
7	Site access time (minutes)	2	2			
8	Perceived interchange penalty (minutes)	19	12			
9	Rail Journey Time (minutes)	21	21			
10	HS running Bus Journey Time Savings	0	0			
11	In train time to city centre (minutes)	21	21			
12	Walk time to destination (minutes)	9.94	9.94			
13	Train frequency (per hour)	5	4			
				Number of km	rceived cost per km (£)	
14	Motoring costs	£0.48	£0.48	*13.6*	£0.036	

Using perceived cost for average car in Transport Economic Note

Car journey characteristics

15	Parking charge (£)	£6.28	£3.30			
16	Congestion factor	0	0			
17	Walk time to destination (minutes)	4.97	4.97			
18	In vehicle time to city centre (minutes)	45	40			
				Number of km	rceived cost per km (£)	
19	Motoring costs	£1.19	£1.19	*33.6*	£0.036	

Using perceived cost for average car in Transport Economic Note

20	20 Year Growth Factor	32%	32%			

Other Park and Ride characteristics

26%		3%	
	Off Street Season	**Off Street Season**	
	Excl VAT	Excl VAT	Average
	£ 199.15	£ 617.36	
Days	65	65	
Per day	£ 3.06	£ 9.50	£ 6.28

400 m			**800 m**		
Walking speed	3	mph	Walking speed	3	mph
Distance in metres	4828	metres ph	Distance in metres	4828	metres ph
Metres per min	80.47	metres per min	Metres per min	80.47	metres per min
Time to walk 400m	4.97	mins	Time to walk 500m	9.94	mins

AM Peak

Car	In vehicle time to city centre	-1.0
	Parking charge	-1.4
	Walk time to destination	-0.2
	Motoring cost	-0.3
	Total GC	-2.8
P&R	In car time to P&R	-0.44
	Site access time	-0.07
	Wait time	-0.28
	Perceived interchange penalty	-0.88
	Parking charge	0.00
	Train fare	-1.03
	In train time to city centre	-0.46
	Walk time to destination	-0.33
	Motoring cost	-0.11
	Constant	-0.2988
	Total GC	-3.89
	Proportion (P&R)	26%

Off Peak

Car	In vehicle time to city centre	-2.15
	Parking charge	-3.06
	Walk time to destination	-0.49
	Motoring cost	-1.11
	Total GC	-6.81
P&R	In car time to P&R	-1.08
	Site access time	-0.20
	Wait time	-0.80
	Perceived interchange penalty	-1.21
	Parking charge	0.00
	Train fare	-4.22
	In train time to city centre	-1.13
	Walk time to destination	-0.98
	Motoring cost	-0.45
	Constant	-0.2988
	Total GC	-10.36
	Proportion (P&R)	3%

AM Peak Hours	1
Off Peak Hours	1

	AM Peak	Off Peak
Total market (cars)	0.4	0
Proportion captured by P&R	26%	3%
Total parking demand	0	0

Total daily parking demand - current year	0
Total daily parking demand - 2022	0

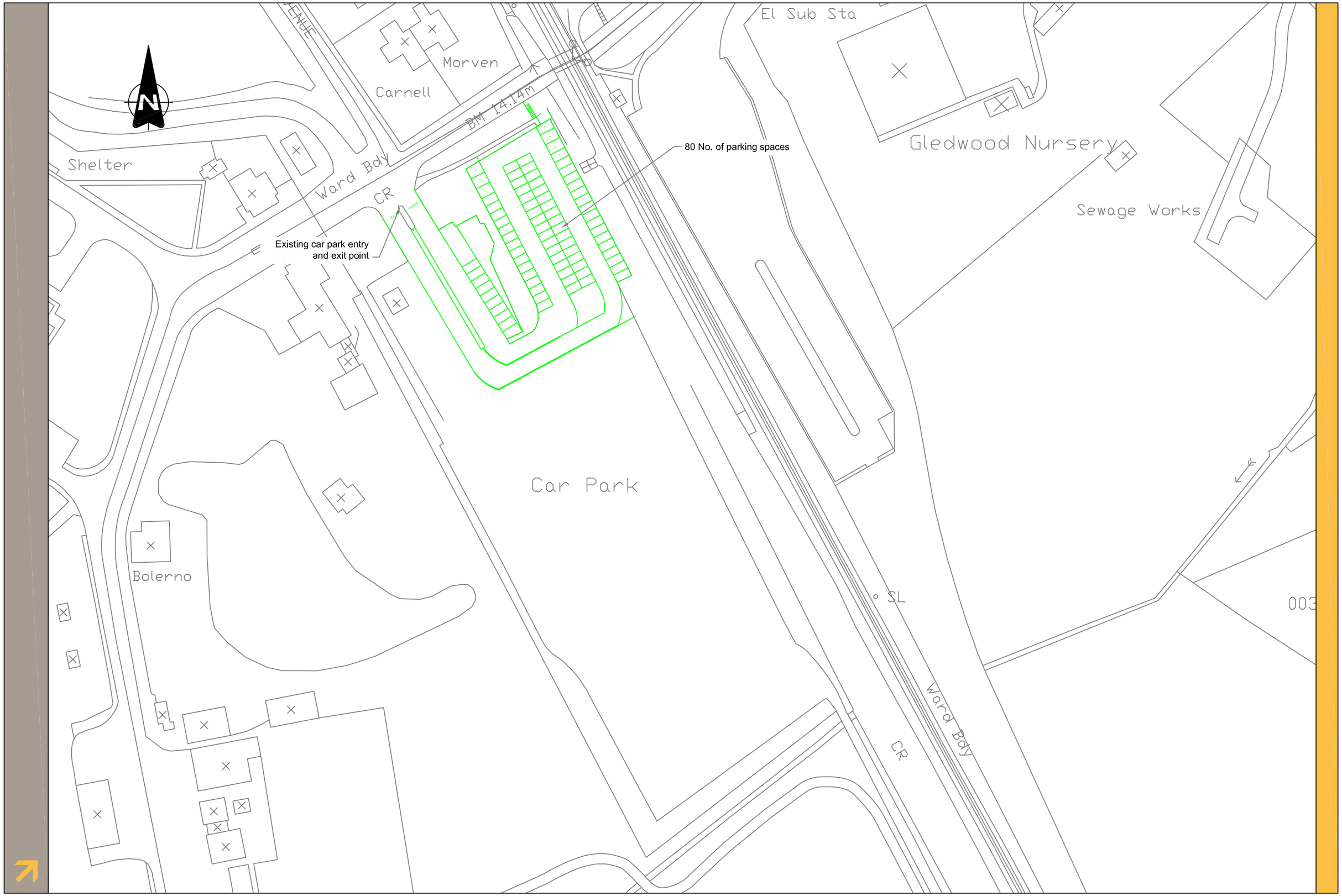
AM Peak Hours	1
Off Peak Hours	1

	AM Peak	Off Peak
Total market (cars)	0.4	0
Proportion captured by P&R	26%	3%
Total parking demand	0	0

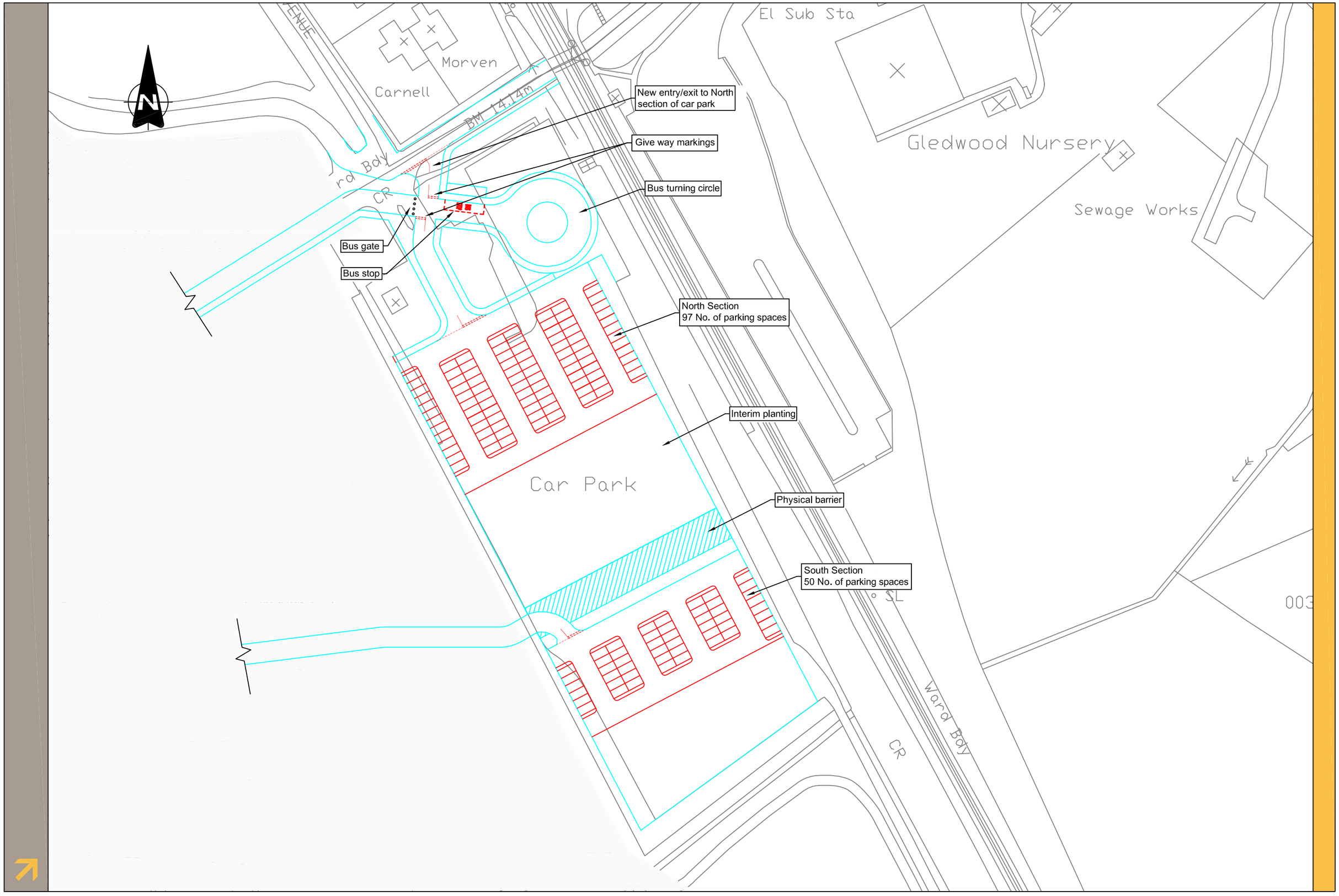
Total daily parking demand - current year	0
Total daily parking demand - 2022	0

Appendix B

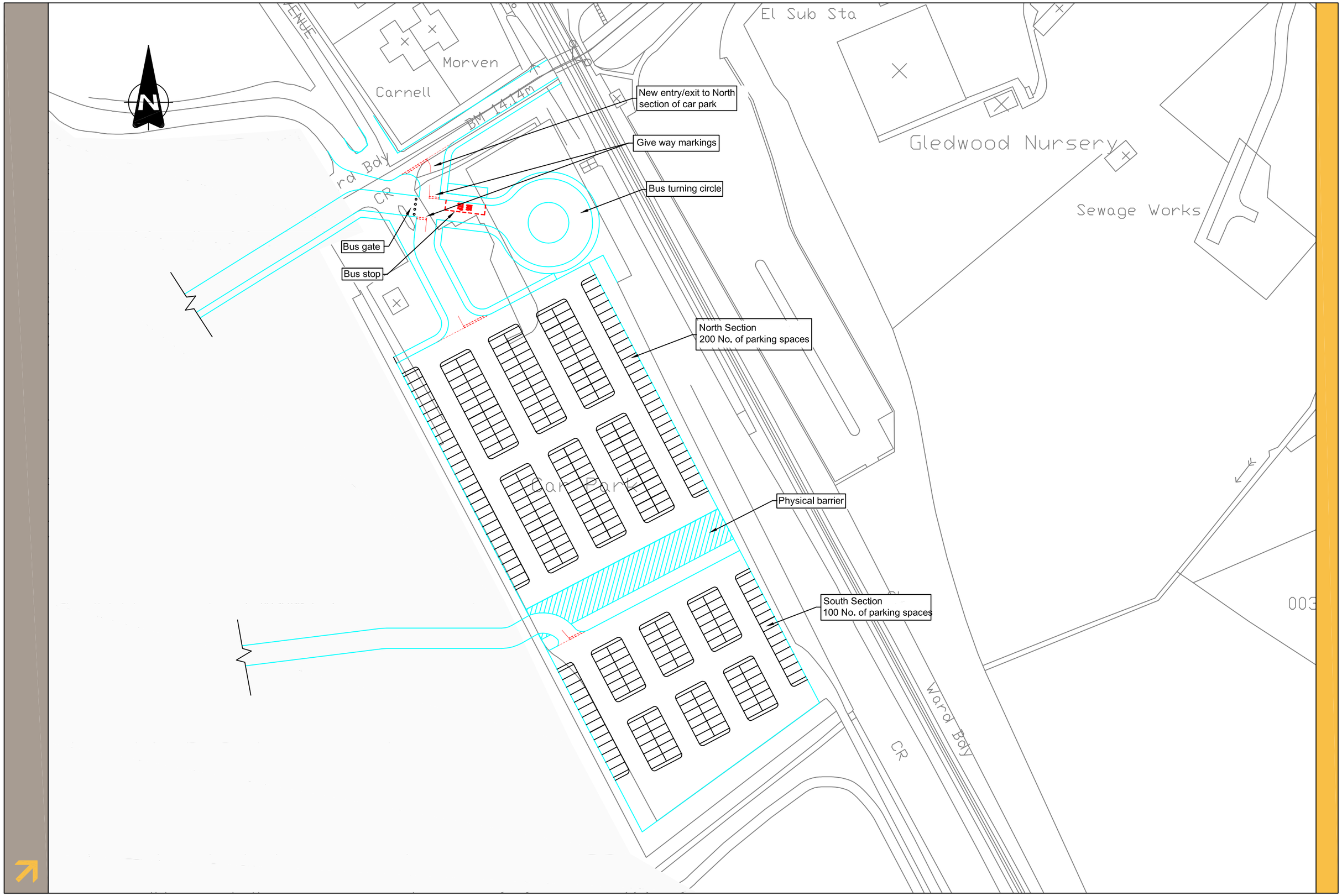
Preliminary Car Park Layouts



Bishopton Train Station Park and Ride: Existing Figure 1.1



Bishopton Train Station Park and Ride: Phase 1 Figure 1.2



Bishopton Train Station Park and Ride: Phase 2 Figure 1.3