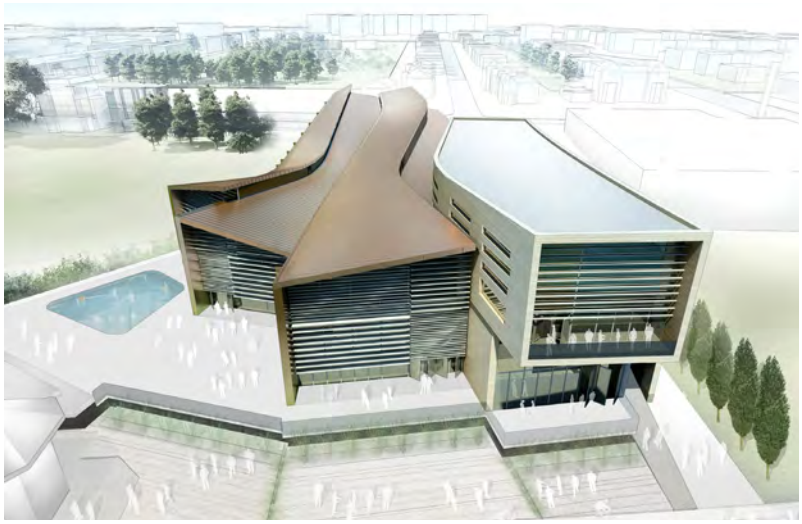

Worthing Aquarena

Appendix:

Transport Assessment & Travel Plan (Draft)

June 2010

Prepared by: 

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Worthing Swimming Pool

Rev No	Comments	Checked by	Approved by	Date
1				

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1 Introduction

1 Introduction

1.1 Introduction

The proposed swimming pool in Worthing will create a landmark development and will play a role in the regeneration of the Worthing Seafront. The development proposals are for a new swimming pool containing a competition pool and a leisure pool, in addition to ancillary facilities such as a health and fitness centre on the site.

The proposed development is located directly to the west of the existing swimming pool and will be erected such that the existing pool can remain open while construction is taking place. Following the completion of the construction phase, the existing pool will subsequently close.

The proposed site is located approximately 800 metres to the east of Worthing town centre and 1.5km to the south east of Worthing rail station. Brighton Road provides access to numerous bus services as well as direct pedestrian links to the town centre, with further pedestrian and cycle links along the seafront.

1.2 Scope of Work

A Transport Assessment has been undertaken to assess the impact of the Aquarena development on the adjacent highway network. The proposed scheme will result in a minimal impact on the peak hour road network. The development proposals result in an increase in GFA and subsequently will result in a net impact on trips. However, leisure facilities encounter peak hours outside the network morning and evening peak periods and as such will not significantly impact on the road network. The peak periods tend to occur early in the mornings, later in the evenings and on weekends. In addition it is envisaged that the location of the site close to the town centre and the seafront and the Travel Plan measures proposed in this report will help to further offset the impact of the development on the local highway network.

The scope of work in progressing the Transport Assessment has covered the following;

- Review the site location in the context of national and local transport policies, particularly with regard to accessibility for non car modes;
- Review the existing transport networks and services and the potential for service improvements;
- Consider the development proposals and estimate the likely impacts of the proposed development, relative to existing activity, considering the likely number of movements, by mode;
- Review the access, servicing and set down / pick up arrangements and consider measures to accommodate pedestrian movements and minimise potential pedestrian / vehicular conflict;
- Assess the likely parking demand against parking provision in the surrounding area;
- Review personal injury accidents in the vicinity of the site;
- Access and Movement Strategy – in terms of facilities for pedestrians and cyclists the development proposals we have considered the proposed access points including the general form and scale of access junctions and developed preliminary access proposals.
- Review the ability of the local and strategic highway network to accommodate forecast development traffic flows and undertake an assessment of the impacts of the development proposals at the new proposed access junction on Brighton Road;

A Travel Plan has also been prepared which aims to reduce the number of private vehicle trips to the site with an associated rise in the mode share for sustainable travel such as walking, cycling and public transport. Mode of travel surveys have been obtained from the managers of the existing development. The following key tasks have been undertaken;

- Consider initiatives to increase travel awareness, encourage visitors and staff to use sustainable travel modes, reduce car trips and car parking, increase the choice of travel modes available and improve road safety;
- Identify green travel initiatives to encourage alternative modes of travel to the site other than the private motor car;
- Consider measures to maximise the impact of the Plan and establish measures to assist in the delivery of the Plan including the setting of targets to achieve the key objectives of the Plan;
- Establish an appropriate programme for implementation, monitoring and review of the Plan;

1.3 Contents of this report

Following this introduction, section 2 reviews policy issues on a local, regional and national scale. The existing usage is detailed in Section 3, with existing accessibility to the site reviewed in Section 4. Section 5 considers the development proposals while Section 6 considers the trip generation and distribution of trips from the proposed development. Section 7 provides an assessment of the impacts from the development. A Framework Travel Plan is provided in Section 8 with the summary and conclusion provided in Section 9.

2 Policy Review

2 Policy Review

2.1 National Policy Context

The Government's White Paper "A New Deal for Transport: Better for Everyone" was published in 1998. The main focus of the white paper was the development of a transport strategy integrated with land use planning, "which makes it practical to live in a more environmentally sustainable way, with less noise, pollution and traffic congestion".

National policies relating to transport are detailed in the Planning Policy Guidance (PPG) Note 13. The policies and key aims of PPG13 are well versed, with the overall objective of reducing both the number and duration of private car trips and encouraging travel to be undertaken by alternative modes. The first revision to PPG13 was published in March 2001 and builds upon the previous version, promoting better integration between planning and transport and achieving a more consistent implementation of the existing policy approach.

In order to assist in promoting the use of more sustainable modes of travel, PPG13 also suggests significantly reducing the amount of parking in new developments, and particularly that local authorities "should not require developers to provide more (parking) spaces than they themselves wish". Central to this objective is the integration between land use planning and transportation planning, ensuring that new developments are located where access is achievable and practical by modes other than the private car.

PPG13 requires all major development applications to be supported by a Transport Assessment and Travel Plan (TP), which demonstrate that the proposed development is sustainable in transport terms. A sustainable development is one, which reduces the need to travel by virtue of the developments location, minimises reliance on the private motor car, and can be adequately accessed by non car modes and public transport in particular. A TP is a package of measures designed to reduce the impact of traffic generated by a development. It is an important element of the Government's Integrated Transport White Paper, which aims to increase personal travel choice by improving infrastructure and services that enable more people to use sustainable modes of transport, such as walking, cycling and public transport. A TP will normally include a number of measures to improve travel choice, reduce reliance on the car and reduce the environmental impact of travel. The plan may incorporate a range of measures, including public transport initiatives, car sharing, cycle and pedestrian facilities, and travel information.

In response to increasing environmental concerns, the Government has recently published new Guidance on Transport Assessment. Far greater emphasis is placed on the integration of land use and transport in the early stages of the planning process – allowing planning authorities to identify development schemes which achieve a more sustainable and environmentally friendly outcome. In preparing a Transport Assessment, the following should be addressed:

- Encouraging environmental sustainability;
- Making best use of existing transport infrastructure;
- Mitigating residual impacts.

Measures should be sought which reduce the need to travel, especially by car – with the ultimate goal of minimising greenhouse gases. The Implications for development include:

- The need to be involved at the earliest stages of the planning process – to influence the transport needs of an area;
- Requirement to consider the 5 key Government transport objectives of Environment, Safety, Economy, Accessibility and Integration – including environmental impacts such as noise and air quality;
- Greater promotion and implementation of realistic and deliverable Travel Plan initiatives – and associated financial support.

2.2 Regional Policy Context

2.2.1 South East Plan (2006)

The Draft South East Plan (2006-2026) sets out the regional strategy for planning and development to the year 2026. This focuses on the key issues of transport, the environment and the economy of the region. Its vision for 2026 is for a more sustainable region with a robust and dynamic economy.

The region is divided into subsections within the plan, with Worthing falling into the Sussex Coast sub-region. The aims for this sub region are detailed below:

- To improve accessibility within the region by building upon and helping to deliver major improvements to the strategic transport network;
- Reduce inter-regional disparities and help bring the performance of the sub regional economy up to the South East average;
- Protect the sub-region's high environmental quality and promote excellence in the design of new developments in recognition of their importance to economic success and quality of life.

The plan proposes a regional network of town centres, for which Worthing is included. These town centres are intended to be the focus of major retail, large scale leisure and office developments as well as other land uses which attract a large number of people.

2.2.2 Sussex Coastal Sub-Regional Strategy (2004)

The Sussex Coastal Sub-Regional Strategy covers the towns of Chichester in the west to Rye in the east. This aims to reduce economic disparities within the region by promoting the Sussex Coastal sub-region for new developments and investment decisions.

The Strategy also aims to establish high quality designs within new developments, ensuring a quality high quality within the sub-region. In addition, all new developments must come accompanied with improvements to the adjacent infrastructure, services and facilities within the community. These impacts need to be matched at the start of the development process to ensure that the developments have a minimal impact on the surrounding environment.

2.2.3 West Sussex Structure Plan 2001-2016

The Plan sets out our Vision for West Sussex to 2016 and beyond, promoting economic health, social progress and environmental protection within West Sussex. Three key aims are detailed within the plan:

- To meet the diverse needs of our communities and businesses;
- To protect the distinctive character of our towns and villages, countryside and coast;
- To protect the environment and use our natural resources and assets wisely.

Policy on new leisure developments is contained in Policy NE12, stated that new leisure developments should be permitted provided that they meet the following criteria:

- They are Located within built area boundaries;
- The development is of a scale and nature which meets the needs of local people or increases the range and improves the quality of attractions and experiences for tourists and day visitors in the County;
- The development does not adversely affect the vitality and viability of any nearby centre as a whole;
- The development is within built-up areas, a sequential approach has been applied which gives priority to suitable sites or buildings within or adjacent to established town, village, district or neighbourhood centres;
- The development does not result in the loss of an important cultural resource unless a new resource is provided which is of at least equivalent value.

2.2.4 West Sussex Local Transport Plan 2006-2016

The West Sussex Local Transport Plan was produced in 2006 with the vision of achieving a safe, less congested transport networks which contribute to improved access to services, jobs and housing. This has subsequent aims of improving the economy and environment within the County.

Proposals for Worthing are detailed within the Coastal area of the LTP. The Plan acknowledges that Worthing is one of a number of towns in the area with particular trunk road problems requiring local action plans. To attempt to solve these problems, the following aspirations are detailed in the plan:

- To achieve a less congested and more reliable A27 past Chichester, Worthing and Arundel;

- Completion of the south coast cycle route;
- Strategic park and ride schemes for Chichester and Worthing.

2.2.5 West Sussex Transport Assessment Methodology (2007)

The West Sussex Council Transport Assessment Methodology was produced in line with government guidance on PPG13 and the production of Transport Assessments. This aims to ensure a standardised methodology for the production of Transport Assessments in the County. The advice detailed within the document has been used to structure this Transport Assessment.

2.3 Local Policy

2.3.1 Worthing Local Plan 2003

The Worthing Local plan was produced in 2003 and contains a framework of policies to guide and encourage development in the Borough up to 2007. The Plan contains the following seven aims:

- To ensure that the development or use of land meets present needs, whilst not reducing opportunities available to future generations;
- To maintain and strengthen those factors which give Worthing its particular physical character;
- To conserve and enhance the natural and built environment of the Borough;
- To foster a sense of place, identity and community both for local areas and for Worthing as a whole;
- To maintain and improve the social well-being of those who live or work in the Borough;
- To improve accessibility and the choice of transport in a safe and sustainable way;
- To promote and enable development and economic activity that will meet the employment needs of the Borough and contribute to a strong local economy.

The 2003 Local Plan outlined the following Transportation policies:

- Appropriate funding contributions will be sought in the context of development proposals, towards traffic calming schemes which result in environmental improvements for residents, pedestrians and cyclists and safety improvements for all road users;
- Major non-residential development should be accompanied by a Transport Assessment and a Travel Plan;
- Where appropriate development will be required to provide safe and attractive facilities for pedestrians and cyclists, both within the site and in the form of links to the surrounding area;
- Provision shall also be made for parking facilities for cycles. Where suitable opportunities arise, as a result of new development, improvements will be sought to existing pedestrian and cycle links and parking facilities for cycles throughout the town;
- For developments which are accessible to the public where it is practical and reasonable, planning permission will only be granted if access arrangements meet the needs of people with special mobility requirements as well as the able bodied;
- The consideration of the need for on-site parking provision will be based on the standards in operation at the time of submission of the planning application.

The adopted Local Plan covered the period from September 2003 to September 2007. The Planning & Compulsory Purchase Act 2004 made provision for existing Local Plan Policies to remain in force for three years following commencement of the Act. This three year period elapsed on the 27th September 2007; therefore the Worthing Local Plan 2003 is no longer applicable to the Borough in its entirety. A list of saved policies was detailed in 2007 which includes two transport policies.

2.3.2 Worthing Core Strategy – Consultation Document (2009)

The Core Strategy forms a part of Worthing's Local Development Framework, aimed at creating a clear vision for the area, identifying where Worthing aims to be by 2026. This intends to continue urban regeneration and revitalise the town centre with a mix of developments.

The Core Strategy identifies that Worthing suffers from road congestion during peak periods, specifically on the A27 to the north of the town and on the A259 connecting Worthing to neighbouring coastal settlements such as Shoreham-by-Sea and Littlehampton. The public transport service in Worthing is identified as being good, with frequent rail connectivity to London and surrounding settlements and a number of regular bus services operating throughout the town. This is aided through a Quality Bus Partnership with two local operators and West Sussex County Council

The Seafront is acknowledged as a key area in the town where that provides the greatest potential to offer economic benefits. However, despite its potential, it offers little in the way of high quality indoor and informal activities and change is required to meet the needs of visitors and residents. The Core Strategy intends to deliver the aspirations of transforming the Seafront as a high quality visitor destination and a local leisure resource. This is detailed in Strategic Objective 2 which focuses on revitalising the town centre and Seafront. Key outcomes of this include:

- A distinctive, attractive and safe urban environment with high quality public realm is created;
- Bringing forward mixed use developments on key sites including the Aquarena;
- New, high quality and more flexible retail and leisure space is created which helps to deliver a more competitive urban centre

The Aquarena itself is further is listed as the second 'Area of Change' in the document. The site is acknowledged as being central to delivering the regeneration of the Seafront area. This intends to revitalise the development by creating a landmark building acting as a catalyst for the regeneration of other areas of the town, while enhancing the public realm and improving the outdoor play areas.

2.3.3 Worthing Area Transport Plan

The Worthing Area Transport Plan was created in line with the West Sussex Transport Plan (2006-2016), aimed at efficiently delivering better local public transport by focusing on a number of key transport priorities. The Plan acknowledges that existing congestion is an issue on roads in Worthing, particularly along the A27. During peak periods, this can also lead to congestion on the A259 along the Seafront as this acts as an overspill route when problems occur on the A27. The local bus network is identified as being extensive but is prone to suffering from delays caused by congestion on the roads during peak periods. In addition, parking is identified as a key issue within the town, caused by insufficient areas of car parking and a lack of co-ordination of on and off street parking.

The plan aims to continue to work towards the following:

- Survey existing car park facilities to assess the level of demand;
- Investigate park and ride schemes;
- Promote alternative methods of transport to reduce the demand on parking facilities;
- Seek better integration of bus and rail services;
- Improve public transport infrastructure;
- To improve links from the A27 to key areas along the A259 to improve access, road safety and help reduce congestion to support the local economy.

2.3.4 Worthing Seafront Strategy (2007)

The Worthing Seafront Strategy has been produced to create a vision for the area as a vibrant destination to appeal to residents, visitors, investors and businesses. The report identifies the following key problems within the area:

- Limited quality and range of activities and facilities along the seafront;
- Safety and security, particularly after dark;
- Concerns over the provision of facilities for cyclists along the seafront;
- The lack of leisure facilities to meet the needs of young people

To overcome these issues, the Strategy outlines a number of key objectives for the Seafront, these include:

- Re-establish the seafront as a high quality visitor destination and local resource;

- Improve the range and quality of the visitor experience by attracting new facilities and attractions;
- Encourage activities and investment that broaden the appeal to new market segments;
- Balance the needs for commercial facilities with the protection and enhancement of existing space;
- Improve connectivity and linkages and the quality of the pedestrian environment along the seafront and between the seafront and the town centre;
- Promote sustainable modes of transport including walking and cycling.

The Aquarena is identified as a key development site within the proposals. The plan promotes two options for the Aquarena. The first is the development of a new swimming pool adjacent to the existing pool. This would be an iconic building with associated outdoor leisure facilities. The second option is the relocation of the swimming pool away from the seafront, being replaced by outdoor leisure facilities and a mixed use developments. The document was produced at a time when the Councils were in discussion over the selection of the options.

2.3.5 Worthing Town Centre & Seafront Masterplan (2006)

The Worthing Town Centre & Seafront Masterplan aims to regenerate the area and provide a clear vision for the future of Worthing. This provides a co-ordinated strategy, aimed at making it a prosperous town, attractive to residents and visitors. As part of this plan, it is acknowledged that integrated transport, movement and public realm strategy is crucial to developing Worthing over a 15-20 year period.

The Aquarena is identified within the seafront area of the Masterplan, which states that strategies for the Masterplan must also consider the seafront and town centre comprehensively, not independently like previous studies. The plan identifies the Aquarena as one of seven key landmarks and icons within Worthing. The Masterplan divides the seafront and town centre into different development areas. The seafront is divided into five zones, of which the Aquarena is contained within the 'Active Leisure and Sports' area. The proposals in this area aim to provide integrated leisure and tourist facilities including establishing an active beach zone, improving access between the seafront and the green space around Beach House Gardens and provision of a new seafront hotel within the Aquarena re-development.

Public realm improvements are also core to the Masterplan proposals, with the Aquarena development identified as one of a number of key areas where improvements should be targeted. Between the beach and Aquarena, decking onto the beach is discussed, which could host sporting activities such as volleyball courts and children's sand pits. New beach huts are also proposed in front of the Aquarena site to replace those currently located between the promenade and Beach House Gardens.

A number of existing key transportation issues are identified in the Masterplan. These include high levels of car usage, high level of through traffic in the town centre, pool legibility and signage and the poor quality of pedestrian links between the town centre, station and seafront. The Masterplan aims to reduce congestion within the town centre and provide a more accessible town with priority for pedestrians, cyclists and public transport. Relevant proposals to the Aquarena development include the following:

- Improvement to the signal junction of High Street / Brighton Road;
- Improved bus services during evening and weekend periods in particular;
- Real time information should be installed at signalised junctions at High Street / Brighton Road;
- Provision of high quality pedestrian and cycle links connecting the station, town centre and seafront.

2.3.6 Worthing Town Centre and Seafront Masterplan - Transport Issues and Strategy Supporting Document (March 2005)

Prior to the Worthing Town Centre & Seafront Masterplan, the Transport Issues document aims to provide a summary of existing transport provision within Worthing and propose future strategies for transportation and access within Worthing.

The plan acknowledges the existing key issues within Worthing. The town suffers from peak hour congestion, making access into and out of Worthing difficult. This is further exasperated with the railway crossings which result in additional congestion. It is also acknowledged that signage to the town centre and seafront in particular and the existing one way

system leads to confusion. Additionally the public transport network is acknowledged as being limited in the evening and on weekends.

In recognition of the key issues listed above, a number of objectives have been set out in the document. These focus on reducing car use in the town centre, particularly by discouraging east-west travel through the town centre. Public transport improvements in the town are targeted for improvement, as well as creating a pedestrian and cycle friendly town.

Improvements to the town centre road network are proposed by removing unnecessary vehicle movements. This is aimed at reducing congestion and pollution, while still maintaining while still maintaining economic vitality and accessibility. This aims to restrict local traffic movements and reduce the east-west movement through the town centre. The Council also aims to restrict the number of new parking areas provided given that there is spare capacity in existing car parks. Public transport proposals are not specific but they aim to improve frequency of the bus network at off peak periods (evenings and weekends) and continue to improve services. A Fastway project within the town is discussed which would provide a long distance, high frequency and quality east-west route corridor through the town. Also discussed are the requirements for bus priority measures such as bus lanes, priority at traffic signals and real time information at bus stops. Improvements to pedestrian and cycle routes are part of a whole objective aimed at changing perceptions and travel behaviours. The Council intends to continue to improve safe and accessible pedestrian routes, particularly in the town centre and along the seafront.

3 Existing Development

3 Existing Development

3.1 Site Location

The existing Worthing Swimming Pool (Aquarena) is located approximately 800 metres to the east of Worthing town centre and 1.5km south west of Worthing Rail Station. The A259 Brighton Road runs along its northern boundary, with Merton Road to the east, the promenade and seafront to the south and a park to the west. The site is within walking distance of the town centre and is well connected to existing bus services within Worthing. It also has linkage to the Seafront cycle lanes to the south of the site which run from the east and connect to the seafront and Worthing town centre.

The main site entrance is directly off Brighton Road, The site location is displayed in Figure 3.1.

3.2 Existing Development

The existing site is occupied by the Aquarena swimming pool, which offers a range of leisure facilities, including:

- A 33 metre main swimming pool;
- A smaller teaching pool;
- An aerobics / table tennis studio;
- A sauna / steam room;
- A fitness suite;
- An open air paddling pool (open May – September).

The site is open from 7am – 10pm. The existing development has approximately 330,000 visitors per annum with the peaks in visitors numbers observed to be in April, July and August in particular.

The site is currently available for public use and is also acts as a base for local swimming clubs. The Aquarena currently holds 6-8 swimming galas per year with typical average attendances of 300 per event. Club events are usually held on Saturday evenings (1830-2130) and schools events on Wednesday afternoons (1300-1600).

120 staff are currently employed at the Aquarena. This is composed of 40 Full Time Equivalents (FTEs) on two shifts and 80 casual staff.

3.3 Parking

3.3.1 On-Site Parking

Existing car parking is provided in a double decked car park accessible off Merton Road to the east of the site. Merton Road forms a T-junction with the A259 Brighton Road and is a residential road with on-street parking on the eastern side. Access into the swimming pool is via a controlled barrier accessing the lower car deck. There are currently approximately 68 parking spaces on the site which is free to park.

3.3.2 Cycle Parking

Formal cycle parking is provided in the form of Sheffield stands. 6 Sheffield stands are provided at the front of the site along Brighton Road. A further 6 Sheffield cycle stands are located to the rear of the site, adjacent to Merton Road. In addition, on a site visit to the development it was observed that some informal cycle parking occurred at the front of the site, with three bicycles observed to chained to guard rails next to the pedestrian crossing.

3.4 Coach Access

Coach access into the existing site is accessible off the A259 Brighton Road. This is located to the west of the site. Coaches enter via the access opposite Madeira Avenue and proceed through the lay-by. This subsequently leads into the existing National Car Park (NCP) Beach House East site where coaches can subsequently egress.

3.5 Servicing

The existing servicing provision at the site is via the north west corner, accessible off the A259 Brighton Road. A servicing bay is accessible prior to the coach access for the site. Vehicles reverse into the bay and drive out in forward

gear onto the A259. Based upon the information provided by the Aquarena, the site is typically serviced by a 7.5 Tonne lorry, typically 4-5 times per week.

4 Site Location and Accessibility

4 Site Location and Accessibility

4.1 Site Location

The site is located approximately 0.8km to the east of the town centre, and 1.5km from Worthing rail station. The existing development includes a 33 metre main pool, a smaller teaching pool, a health and fitness suite, an aerobics centre and an outdoor paddling pool. The site is accessible by all modes with the main pedestrian access provided via A259 Brighton Road, which connects from the town centre to East Worthing and beyond. Controlled pedestrian crossing points are provided to the east and west with footway build-outs to minimise crossing distance. Existing cycle lanes run along the seafront towards the town centre. Bus stops are located in close proximity to the site along Brighton Road to the east, with additional routes along Lyndhurst Road to the north. The main vehicular access is currently provided via Merton Road, with a barrier controlled double decked car park. We understand some 70 spaces are currently provided.

4.2 Pedestrian Accessibility

The pedestrian access into the existing site is located along the A259 Brighton Road. This serves as the front entrance to the site, accessible up a flight of stairs. Existing disabled access is available to the left of the main site access. The site access along the A259 Brighton Road is displayed in Photograph 1.

There is a good connectivity of footpaths within the vicinity of the site, providing pedestrian access to key destinations such as the town centre and the rail station. Footway widths in the vicinity of the site are generally in excess of 2 metres, with street lighting available along the footways.

A controlled pedestrian crossing is provided directly in front of the site access, allowing pedestrian movements into the site from areas to the north and east of the development. In addition a controlled pedestrian crossing is also located approximately 150 metres to the west of the existing swimming pool. This allows for the movement of pedestrians accessing the site from key destinations to the west such as the town centre and Worthing rail station.

Safe pedestrian routes connect the swimming pool and the local bus stops to the east of the site, as well as the bus stop along Lyndhurst Road connect to the north of the site.

Pedestrian links are also available along the seafront. This runs across the complete length of Worthing seafront, providing a scenic route into the development. Footway widths range in size but are typically between 3 and 4 metres with lighting in place along the route.

Walking isochrones within 10 and 20 minutes from the site are displayed in Figure 4.1.

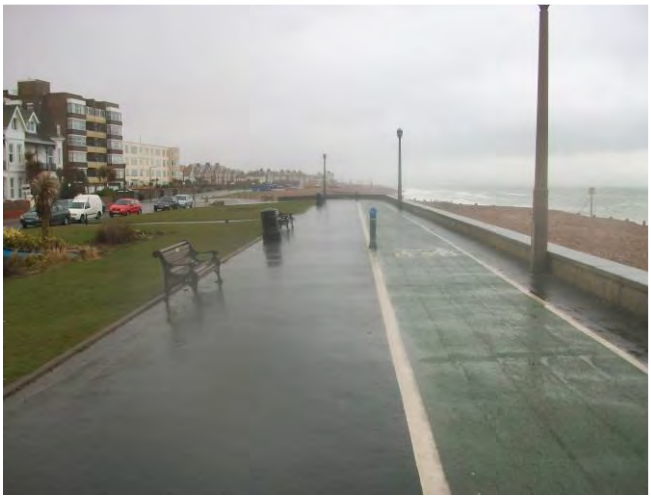
4.3 Cycling Accessibility

There is a good provision of cycle facilities within the vicinity of the site. The National Cycle Network Route 2 runs to the south of the site along the seafront. This is a long distance cycle route which when completed will link Dover to the south east of England to St Austell in the south west. According to Sustrans, part of the route is currently under development, however the route is in place between Dover and Worthing. This is an off road cycle road along the beach front which would provide a safe and scenic route for cyclists to access the site if travelling from local settlements along the coast such as Lancing, Shoreham-by-sea and Littlehampton upon completion of the route). The seafront cycle lane in the vicinity of the site is displayed in Photograph 2.

Wider cycle access in Worthing is generally provided on the roads. Key routes in the vicinity of the town centre (and along Brighton Road) are generally one lane in each direction which would make them suitable routes for cyclists.

Cycling isochrones within 15 minutes from the site are shown in Figure 4.1, while Figure 4.2 shows the seafront cycle lane in the vicinity of the site, this is also displayed in Photograph 2.

Photograph 1 – *Existing Site Access*



Photograph 2 – *Seafront Cycle Lane*

4.4 Public Transport Accessibility

4.4.1 Bus Services

Bus services within Worthing are primarily operated by Stagecoach, with additional services run by Metrobus, Compass Travel and Brighton & Hove. These bus services cover routes within Worthing as well as inter urban routes, providing connectivity to surrounding settlements such as Brighton, Lancing, Chichester and Littlehampton.

In the vicinity of the site, bus stops are located approximately 150 metres from the proposed development, to the east of the Farncombe Road junction with Brighton Road. These are served by routes 2 and 7 services which run from Worthing – Brighton.

There is a good pedestrian network connecting the development to the Brighton Road bus stops. The eastbound bus stop is available using the signalised pedestrian crossing over Brighton Road and subsequently crossing the T-junction with Farncombe Road which a quiet residential road. To access bus services heading west, passengers cross Merton Road which is a quiet residential road where traffic flows were observed to be low. The aforementioned bus stops are in a good condition, with the stops consisting of flags, hard standing areas and timetables.

An additional four services are within 400 metres (approximately 5 minute walk) of the site. These are located along Lyndhurst Road to the north of the site, which is served by the number 9, 16, 106 and Pulse routes. These cover local and inter urban routes, with the Pulse service offering a loop around Worthing, with the other services covering Lancing, Littlehampton and Steyning. The Lyndhurst Road bus stops are accessible along Madeira Avenue to the north of the site. The pedestrian crossing directly in front of the site access provides a safe route for pedestrians. Madeira Avenue is a relatively quiet residential road with street lighting and footways widths of approximately 2 metres on both sides.

In addition, all routes serving Worthing pass through Worthing bus station. This is located approximately 800 metres to the west of the development and would offer a realistic distance to walk for users of the swimming pool.

A summary of bus services in the vicinity of the Worthing Swimming Pool site are listed in Table 4.1 below. Public transport accessibility within the vicinity of the site is displayed in Figure 4.3.

Table 4.1 - Bus Services in the vicinity of Worthing Swimming Pool (Frequencies per hour)

No.	Route	Weekday			Weekend	
		Peak	Daytime	Evening	Saturday	Sunday
Brighton Road						
2	Worthing – Shoreham - Brighton	0	0	1	0	0
700	Brighton – Worthing - Littlehampton	5	6	2	6	2
Lyndhurst Road						
9	Worthing - Littlehampton	1	1	1	1	0
16	Worthing – South Lancing	1	1	0	1	Every 2 hours
106	Worthing - Henfield	1	Every 2 hours	0	Every 2 hours	0
Pulse	Worthing - Lancing	6	6	2	6	1

4.4.2 Rail Services

It is envisaged that only a small proportion of visitors to the Swimming Pool will use rail however consideration is given to the existing provision of services.

Worthing station is the closest rail station to the development, located approximately 1.5km to the north west of the site, and serves settlements on the south coast such as Brighton, Southampton and Littlehampton, while also connecting to London. Six trains per hour in each direction typically pass through Worthing station.

A summary of the rail services from Worthing and East Worthing stations are provided in Table 4.2 below:

Table 4.2- Rail Services from Worthing

Route	Frequency (trains per hour)
Brighton - Worthing	2
London Victoria – Littlehampton	2
Brighton – Southampton Central	1
Brighton – Portsmouth Harbour	1

4.5 Vehicular Access

4.5.1 Highways Access

Existing vehicle access is located off Merton Road to the east of the site. This forms a T-junction with the A259 Brighton Road. Merton Road is a relatively tight two way road, approximately 5.5 metres in width (inclusive of 5 on street parking bays on the eastern extents). Vehicles entering the swimming pool subsequently undertake a 180 degree right turn into the barrier controlled car park.

The A259 is a key east-west route, running from Folkestone in the east, through the coastal settlements of Hastings, Brighton, Worthing, Littlehampton, and terminating in the west by Havant. This provides significant vehicle access to the development from the major settlements around Worthing

To the east of the development, the A259 also connects to the A2025 which runs in a north east direction towards Lancing. This connects to the A27, running parallel to the A259 between Eastbourne in the east and Portsmouth in the west where it connects to the M27. To the west of the site, A27 connects to the A24 in the town centre and provides access to the key residential areas within Worthing.

The existing vehicle access off Merton Road and existing car park layout from the A259 Brighton Road are displayed in Photographs 3 and 4 respectively:

Photograph 3 – *Existing Car Park Access*

Photograph 4 – *Existing Car Park Layout from Brighton Road*

4.5.2 Controlled Parking Zones (CPZs)

CPZs are in place on the roads surrounding the site, with zone entry / exit signage for each CPZ confirming the hours during which parking is controlled. During these hours, parking is only permitted in designated parking bays (marked by white lines).

Roads to the east of Farncombe Road and Merton Road (inclusive of) are within CPZ D. This is primarily for permit holders however contains some free parking spaces within a maximum stay of two hours. This CPZ is in operation between 1000-1100 and 1400-1500 Monday – Saturday. Along Merton Road, there are approximately 5 parking spaces, and along New Parade (which connects to Merton Road to the east), there is space for approximately 25 vehicles. On-street parking is sporadically located along Brighton Road to the east of the site in CPZ D. There is space for approximately eight vehicles up to the junction with Seldon Road.

In the vicinity of the site, roads to the west of Madeira Avenue (inclusive of) are contained within Controlled Parking Zone C. This includes the stretch of the A259 Brighton Road. This CPZ allows permit holders and pay and display parking (for a maximum of 2-4 hours) to park on the roads. This is enforced 0900-1800 on Monday – Saturday. To the west of the site in CPZ C, Brighton Road has space for 16 vehicles up to the Park Road junction, a distance of roughly 200 metres.

The CPZs in the vicinity of the site are displayed in Figure 4.4.

4.5.3 Off Street Car Parking

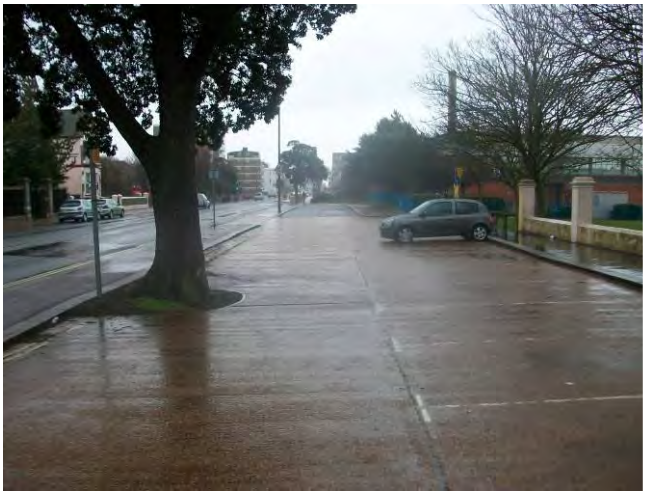
Worthing Council identifies a total of nine public car parks within the town centre. The off street car parks could provide additional capacity during peak periods and for special events at the Aquarena such as swimming galas. The location and number of spaces for each is detailed in Table 4.3 below while Figure 4.4 displays the location of these:

Table 4.3- Off-Street Car Parks in Worthing

Car Park	Number of Spaces	Approximate Distance from the Aquarena (km)
Beach House (East and West)	67	0.1
Lyndhurst Road (East and West)	59	0.4
High Street Multi Storey	644	0.5
High Street Surface	48	0.7
Montague Centre	112	0.8
Union Place	145	0.8
Grafton Multi Storey	450	1.1
Civic Centre	180	1.1
Buckingham Road Multi Storey	288	1.3

Table 4.3 indicates that there is ample parking within Worthing town centre close to the Aquarena. Based upon a standard walking speed of 4.8km per hour, the Beach House and Lyndhurst Road car parks are accessible within a 5 minute walk from the site, with the High Street Multi Storey accessible in just over five minutes. These car parks would provide added overspill parking for the development at times of peak demand.

The Beach House East and West car parks adjacent to the site are displayed in Photographs 5 and 6 respectively;



Photograph 5 – *Existing Beach House East Car Park*

Photograph 5 – *Existing Beach House West Car Park*

4.5.4 Existing Traffic Flows

Traffic surveys were undertaken in May 2010 to provide an assessment on the baseline traffic conditions in the vicinity of the Aquarena. An Automated Traffic Count (ATC) was conducted along Brighton Road, approximately 50 metres to the west of the proposed redevelopment, from 1st – 7th May. Car park entry and exit counts were also recorded at the existing Beach House car park and at the entrance to the Aquarena car park. In addition, Manual Classified Counts (MCCs) were undertaken at the A259 Brighton Road junction with the A259 High Street and The Steyne to the west of the development.

The car park entry and exit counts and MCC were undertaken on Saturday 1st May from1000-1200 and on Wednesday 5th May from 0700-1000 and 1600-1700. The surveys aim to cover both the development and road network traffic peaks in the vicinity of the site. On a Saturday, the swimming pool stated that 1000-1200 was their busiest period. The surveys indicated that at the Aquarena and on the A259, the Saturday peak period is 1000-1100. This will be used as the Saturday peak hour for this Transport Assessment.

The surveys were undertaken over the May bank holiday weekend and as such should provide a robust assessment of peak usage at the site as usage is expected to increase during holiday periods. Tables 4.4-4.6 below provide a summary of the traffic survey data. Traffic flows along the A259 Brighton Road are busier in a westbound direction during all periods. This represents dominate movements into Worthing town centre. During the AM peak, the total two-way vehicle flow is approaching 900 vehicles, with almost 500 vehicles travelling westbound and short of 400 vehicles travelling eastbound. During the PM peak, the total vehicle movements were 751, with 325 travelling eastbound and 427 heading westbound. During the Saturday survey, 1000-1100 was approximately 40% busier than 1100-1200, with in excess of 1,000 vehicles travelling along the A259 in the vicinity of the site.

Table 4.4 – A259 Brighton ATC Data Summary

Time Period	A259 Brighton Road Eastbound	A259 Brighton Road Westbound	Two-Way Traffic Flow
Weekday AM Peak (0800-0900)	383	494	877
Weekday PM Peak (1700-1800)	325	427	751
Saturday (1000-1100)	472	611	1,083
Saturday (1100-1200)	343	424	767

Table 4.5 – Beach House East and West Car Parks Entry and Exit Counts

Time Period	In	Out
Weekday AM Peak (0800-0900)	4	4
Weekday PM Peak (1700-1800)	9	13
Saturday (1000-1100)	60	32
Saturday (1100-1200)	40	37

This parking area is close to the seafront and typically used for leisure parking. This is reflective in the totals, where the AM and PM peak periods were very quiet at the car park, with a total vehicle flow of 8 in the AM peak and 22 in the PM peak. During the Saturday survey period, traffic flows rose significantly, with 100 vehicles entering during the two hour period and 69 departing.

The Steyne junction is located to the west of the site and was observed to be continually busy throughout the surveyed periods. The dominant movement at the junction is for vehicles entering from the Steyne. This is a one way approach leading northbound onto the A259 High Street and westbound onto the A259 Brighton Road. A total of 1,492 and 1,298 passed through the junction during the weekday AM and PM peak hours respectively. During the surveyed Saturday period, a total of 1,372 passed through the junction during the period 1000-1100 and 1,452 from 1100-1200.

Table 4.6 – A259 / The Steyne Junction Traffic Counts

Time Period	A259 Brighton Road	A259 High Street	The Steyne	Total Junction Flow
Weekday AM Peak (0800-0900)	329	303	860	**1,492**
Weekday PM Peak (1700-1800)	471	224	603	**1,298**
Saturday (1000-1100)	442	282	648	**1,372**
Saturday (1100-1200)	474	274	704	**1,452**

Figure 4.5 details the existing traffic flows in the vicinity of the site for the weekday AM, PM and Saturday peak period.

4.5.5 Accident Data

As part of this Transport Assessment, up to date accident data was obtained from West Sussex County Council for the most recent 5 year period. This data includes accidents that occurred between 01 April 2005 and 31 March 2010. During this period, there were a total of 57 PIAs, of which 54 were classified as slight and one was classified as serious. No incidents were fatal. Figure 4.6 shows the location of the accidents, and full details of the accidents are provided in Appendix A.

Table 4.7 below presents a summary of the personal injury accidents by mode and severity. This allows for the analysis of key trends, in particular identifying vulnerable road users in the vicinity of the site. Cars are by far the most dominant cause of accidents within the vicinity of the site, being involved in 54 of the 57 accidents. Motorcyclists and cyclists were involved in a total of accidents of ten and sixteen accidents respectively, primarily involving cars failing to acknowledge their presence when emerging from or entering junctions. Pedestrians were only involved in a total of six of the accidents.

Table 4.7 - Summary of Personal Injury Accidents by Mode and Severity

Mode of transport	Slight	Serious	Fatal	Total
Pedestrian	4	2	0	6
Cyclist	15	1	0	16
Motorcyclist	10	0	0	10
Car	50	4	0	54
Bus / Coach	1	1	0	2
Goods < 3.5 Tonne	6	0	0	6

The accident data has also been analysed by location to identify any spatial patterns within the data. Table 4.8 below presents a summary of this analysis:

The closest junctions to the proposed redevelopment access will be along Madeira Avenue and Park Road. No accidents were recorded at these locations during the five year period. A total of nine accidents occurred during the five year at the junction with the A259 Brighton Road / Selden Road / Merton Road. Merton Road is currently the existing vehicle access point to the site and is located just to the east of the development. . Eight of these were classed as slight, with one serious accident. From the accident data, seven of these were identified as being associated with Farncombe Road, with the remaining two relating to Merton Road. Five of the incidents were caused by drivers failing to give way at the junction resulting in a collision. On one of these accidents, the driver claimed that the sunny conditions had dazzled his view. Two of the incidents were caused by a rear end shunt on vehicles waiting to turn and the remaining accidents were caused by a cyclist failing to give way and dark conditions causing a vehicle to collide with a cyclist. The accident pattern over the five year period suggests there may be issues with the give way movement for vehicles turning around this junction. However the vast majority of the accidents related to Farncombe Road with only two accidents caused on the Merton Road junction arm. In addition, the proposed redevelopment will remove swimming pool traffic from Merton Road.

Along Brighton Road, there are two main junctions close to the development. These are the signalised junction with the B2223 Ham Road to the east and the priority controlled junction with the A259 High Street and The Steyne to the west. Within the five year, a total of five accidents were recorded at the junction with the B2223 Ham Road, of which one was serious. Two of the accidents indicate potential design faults at the junction in June and October 2009. Both were caused with vehicles approaching the junction from the B2323 Ham Road. On both occasions, the driver believed they had a green light as the green light on the Brighton Road arm was not properly enclosed, resulting in the Ham Road traffic entering the junction while the Brighton Road arm was on green. It is unclear whether this fault has been addressed since the incidents occurred. The remaining incidents were unrelated, caused by rear end shunt, a passenger falling on a bus and a cyclist losing control in bad weather. Only two accidents were recorded at the A259 Brighton Road / High Street / The Steyne junction. These were unrelated incidents, caused by a driver hitting a cyclist and a vehicle pulling off while the passenger had not fully exited the vehicle. To the east of the site is the Brighton Road / Selden Road / Merton Road junction, three accidents occurred at Brighton Road / Selden Road. These were each caused by different factors. The first was driver error, failing to give way at the junction, the second caused by a rear end shunt and the third caused through a pedestrian crossing the right on the blind side of a vehicle. To the west of the swimming pool, four accidents were recorded at the A259 Brighton Road junction with Warwick Road, of which all were classified as slight. There was no clear pattern of accidents at the junction. Two were the result of reversing manoeuvres, one along Brighton Road and the other Warwick Road which resulted in hitting a cyclists and pedestrian respectively. The remaining two accidents were the result of drive error when overtaking and a drink driving accident. The Lyndhurst Road / Park Road junction to the north west of the site experienced a total of seven accidents, all classified as slight. It is envisaged that this will not be a major access route to the site however there may be a small number of pedestrians and cyclists accessing the site from this area. Three of the accidents at this location were caused by drivers failing to acknowledge a cyclist or a motorcyclist resulting in a collision. The remaining incidents were caused by a driver failing to give way, a rear end shunt, a driver losing control and a drink driving accident.

The Lyndhurst Road / Farncombe Road junction will also be a minor access to the site, however there may be a small number of pedestrians using this route for access to the bus stops along Lyndhurst Road. At this junction, six accidents were recorded, all detailed as slight. These were unrelated accidents, caused by a combination of failing to observe vulnerable road users, a rear end shunt and vehicles not giving way at the junction.

After consultation of the five year accident data, there appears to be no consistent trends of accidents at junctions that would indicate serious design faults. The majority of the incidents were unrelated and were consistently caused by driver error and a lack of observations at junctions opposed to design issues with the road layout.

Table 4.8 - Summary of Personal Injury Accidents by Location and Severity

Location	Slight	Serious	Fatal	Total
A259 Brighton Road / Farncombe Road / Merton Road	8	1	0	9
A259 Brighton Road / Selden Road	3	0	0	3
A259 Brighton Road / Navarino Road	3	0	0	3
A259 Brighton Road / B2223 Ham Road	4	1	0	5
A259 Brighton Road / Warwick Road	4	0	0	4
A259 Brighton Road / / High Street	2	0	0	2
Lyndhurst Road / Park Road	7	0	0	7
Lyndhurst Road / Farncombe Rood	6	0	0	6
Other Locations	20	2	0	22
Total	57	4	0	57

5 Proposed Development

5 Proposed Development

5.1 Development Proposals

The proposed swimming pool in Worthing will create a landmark development and will play a role in the regeneration of the Worthing Seafront. The development proposals are for a new swimming pool containing a competition pool and a leisure pool, in addition to ancillary facilities as well as a health and fitness centre on the site. The full development proposals are listed below:

- Approximately 800m^2 GFA Competition Pool Area;
- Approximately 580m^2 GFA Leisure Pool Area;
- Approximately 900 m^2 GFA Health & Fitness Centre;
- Ancillary facilities including a lobby, reception, café and steam room / sauna

The development is located directly to the west of the existing swimming pool and will be erected such that the existing pool can remain open while construction is taking place. Pending the completion of the construction phase, the existing pool will subsequently close.

5.2 Site Access Arrangements

The site access arrangements have been designed to accommodate all users of the site. Given the location of the site close to the town centre, it is considered that a significant number of visitors will be able to arrive by non car modes. Therefore a large area to the front of the site has been retained for public realm space to ensure it is a pedestrian friendly site.

An initial review of the current access arrangements identified the following key issues:

5.2.1 Pedestrian Access and Public Realm Improvements

Given the location of the site close to the town centre, it is considered that a significant number of visitors will be able to arrive by non car modes. The most prominent desire lines to the site are likely to be from the town centre to the west, and via the bus stops and pedestrian crossing located on Brighton Road to the east. Accordingly there is a significant opportunity to create an improve pedestrian environment between the new main entrance and the existing pedestrian crossing to the east with the area of public realm extending between the new swimming pool development, the future development to the east and the Brighton Road.

The current intention is for the existing site to remain open during the construction phase. The proposals are to create a new access road / drop off between the site and the A259 Brighton Road with public realm improvements between site, the road and existing site .

5.2.2 Site Access Arrangements

The development is currently accessible from a number of vehicle access points along the A259 Brighton Road and via Merton Road. The intention is to consolidate access arrangements to reduce the impact on the A259 Brighton Road. The proposed site access arrangements propose a one way access road opposite the main entrance with separate entry and exit points. This area will also provide access for servicing vehicles, occasional coach drop offs and vehicles accessing a separate car parking areas. Vehicle swept path assessments have confirmed the feasibility of the current designs.

5.2.3 Drop off and Coach Parking

At the main site access along the A259 Brighton Road, the access arrangements include a drop off loop to allow visitors to drop off passengers at the site. This area also includes provision for coach parking and deliveries, which is discussed in further detail below. It is presumed that occasional vehicle drop off and / or parking arrangements are likely to be required for mini buses and coaches. Based on advice from the existing leisure operators, provision has been made for minimum of one coach drop off space in the vicinity of the site entrance. Given the shape of the site, a parallel drop off space via the access loop road is proposed.

The proposed site access arrangements are displayed in Figure 5.1.

5.3 Parking Requirements

5.3.1 Car Parking

Parking standards for Worthing are located in the 2005 Supplementary Planning Guidance (SPG). For leisure developments, a maximum of 1 parking space is permitted per 10m^2 of pool area. The proposed pool area is 138m^2; which equate to a maximum of 138 parking spaces permitted on the site. Disabled parking provision requires 1 space per disabled staff plus 6% of the total parking spaces. For the development, this results in a minimum of 8 spaces.

The proposals are for 139 parking spaces, of which 12 are for disabled users. Seven of these are directly to the north of the site and are the only parking spaces designated specifically for development traffic. Some 28 car parking spaces are proposed in the existing Beach House east car park. The existing Beach House west car park would accommodate 70 vehicles, with a further parking area is proposed to the south of this location in a currently disused tennis court that would provide space for an additional 34 vehicles. The current proposals are 132 of the parking spaces (exclusive of the seven development parking spaces) to double up as public seafront parking, with direct access available to the promenade from the proposed car park. This provides justification as to why the car parking totals are in excess of the maximum Worthing parking standards for swimming pools.

The proposed car parking layout for the site is displayed in figure 5.1.

5.3.2 Cycle Parking

The 2005 SPG states that for land use D2 (Leisure), 1 cycle parking space should be provided for every 4 members of staff, in addition to cycle parking for visitors. Further within the SPG, it states that 1 cycle space should be provided for every 8 car parking spaces. The proposed level of cycle parking provision for the site is currently unknown; however the provision will be based upon 40% Factor Forecasts and will be in line with the required standards to ensure that cycling is a viable and attractive mode of transport to the site.

5.3.3 Motorcycle Parking

The SPG states that 1 motorcycle parking space shall be provided for every 30 parking spaces. This would result in a total of approximately 5 motorcycle parking spaces required. As with the cycle parking, the level of proposed provision is currently unknown however it will be in line with local standards and 40% Factor Forecasts for the development.

5.3.4 Coach Access

Provision will be made at the front of the site for one coach drop off space. The coach bay will be provided at the front of the site, along the southern extents of the pick up / drop off area. Swept path analysis for the coach bay has been undertaken which demonstrates that a Monaco 12 coach (12 x 2.5 metres) can access the bay. This is shown in Figure 5.2.

5.4 Servicing and Deliveries

As with the existing situation, servicing will occur at the front of the site. The proposals will be designed to incorporate a servicing bay for a 7.5 Tonne lorry. The bay will accessible to the east of the coach bay at the front of the site. Swept path analysis has been undertaken for this servicing bay which indicates that a 7.5 Tonne lorry (8.0 x 2.1 metres) can access the servicing bay without impeding the operation of the car parking spaces or the coach bay. This is displayed in Figure 5.3 It is envisaged that servicing trips at the site will occur approximately 4-5 times per week. Servicing trips to the site will primarily cater for the delivery of chemicals for the swimming pool and catering and it is envisaged that will lead to a minimal impact on the operation of the site.

6 Trip Generation, Modal Split and Parking Demand

6 Trip Generation, Modal Split and Parking Demand

6.1 Introduction

This section details the methodology used to calculate the predicted trip generation for the proposed development. Existing travel surveys from the site will be incorporated into the analysis to provide a multi modal assessment of trips associated with the redevelopment.

6.2 Existing Activity, Seasonal Variation and Modal Splits

The existing site does not result in a significant impact on the peak hour road network, although the development proposals are likely to result in an intensification of use and subsequently will result in a net increase in trip generation the existing and proposed leisure uses tend to have activity peaks early in the mornings, at lunchtimes, later in the evenings and at weekends. In addition it is envisaged that the location of the site close to the town centre and the seafront together with Travel Plan initiatives will help to minimise the impact of the development on the local highway network.

Following a meeting with the facility manager, the following was noted with regard to existing activity levels;

- Existing visitors – 330,000 per annum with peaks in seasonal demand occurring during the holiday periods
- There are currently 6-8 swimming galas per year with typical average attendances of 300 per event. Club events are usually held on Saturday evenings (1830-2130) and schools events on Wednesday afternoons (1300-1600).
- Existing staff numbers were confirmed as 120 employees (40 FTEs on 2 shifts and 80 casual staff)
- The design should allow for 1 coach drop off space and 1 servicing bay for a 7.5T lorry with the anticipated servicing demand of the order of 4/5 vehicles per week being similar to existing

Traffic surveys have been undertaken on Saturday 1 May 2010 and Wednesday 5 May 2010 to confirm the existing vehicular activity associated with the existing development on the traditional AM and PM peaks and at for the development peak on Saturday mornings. Entry and Exit counts are summarised in Table 6.1. Car park counts were previously undertaken at the Aquarena car park which indicated that the car park is busiest during the PM and Saturday peaks. Peak hour vehicle flows were relatively low - during the weekday AM peak, 15 vehicles entered the car park and 21 departed. During the PM, 51 vehicles entered and 30 departed. During the Saturday survey, 68 vehicles arrived and 77 departed during the 2 hour period.

Table 6.1 – Existing Aquarena Vehicle Entry and Exit Counts

Time Period	In	Out
Weekday AM Peak (0800-0900)	15	21
Weekday PM Peak (1700-1800)	51	30
Saturday (1000-1100)	36	46
Saturday (1100-1200)	32	31

In order to establish current mode shares to and from the swimming pool, a travel survey was conducted in October 2009 by the reception staff coordinated by the leisure centre management. A total of 399 responses were recorded. In terms of those arriving by private car, only total car trips were recorded, accordingly a typical car occupancy level of 1.5 has been assumed to derive car drivers. A summary of the observed modal splits is provided in Table 6.2 below. The survey results indicate that private car journeys are the dominant form of mode share to the site, accounting for 69% of the responses from the survey. As discussed above a car passenger ratio of 1.5 has been assuming allocating the trips between 46% driving and 23% as passengers. In terms of sustainable modes of transport, 13% of respondents walked to the Aquarena, with 7% cycling. Public transport accounted for 6% of the responses, with 4% using the train and 1% using the train. The remaining 7% travelled to the site via motorbike.

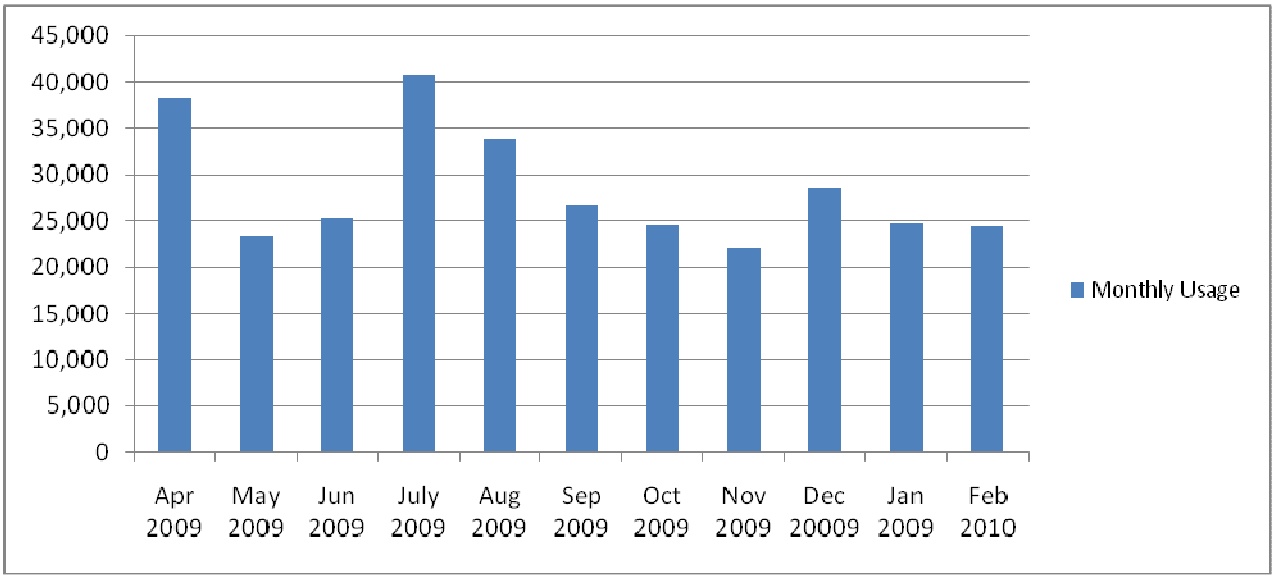
Table 6.2 –Worthing Swimming Pool Existing Mode Shares (October 2009)

Mode	Responses (Number)	Mode Share (Percentage)
Car Driver	183	46%
Car Passenger	92	23%
Walk	52	13%
Cycle	27	7%
Motor bike	24	6%
Bus	16	4%
Train	6	2%
Total	399	100%

The Aquarena is subject to significant variation in its usage throughout the year. Data has been obtained from the Aquarena on the existing usage patterns at the site throughout the year. The existing usage figures are based upon visitors to the swimming pool (inclusive of all lessons, courses, clubs, schools and leisure visitors), fitness facilities and all other ancillary uses on the site. The data double counts visitors, if for example they visit the pool then subsequently use the fitness suite on site. This therefore means that they cannot be used as a basis for trip generation calculations, however they provide an indication of seasonal variation.

Figure 6.1 below illustrates the total usage at the Aquarena by month for a period from April 2009 – February 2010. Figure 6.1 indicates that the busiest month is July, with in excess of 40,000 visitors to the Aquarena. April is the second busiest month with approximately 37,500 visitors, with August the third busiest just under 35,000 visitors. These months typically coincide with the Easter and summer school holidays, which results in a greater number of visitors. However the additional trips in peak periods are likely to occur outside the network AM and PM peaks.

Figure 6.1 – Monthly Usage at the Aquarena: April 2009 – February 2010



6.3 Forecast Trip Generation

It is understood that a detailed business case report is currently being prepared that will identify the potential future demand of the proposed facility. In preparing this assessment, future year forecast by use were not yet available and were not broken down to derive potential impacts by day and by hour. However the likely uplift in demand, relative to existing usage has been discussed in detail with the management of the facility.

Accordingly In order to prepare forecasts of future trip generation, two alternative approaches have been undertaken;

- Approach 1 – In the absence of detailed usage forecasts for future years, discussions with the leisure centre manager have indicated a likely uplift in demand of 30-40% following the completion of the proposed development. Accordingly existing trips have been factored by 35% to derive likely future demand;
- Approach 2 – An alternative approach has been undertaken using the TRICS database trip generation forecasts to derive the potential trip generation of the development proposals based on similar sites elsewhere. This approach is considered robust, particularly for the Saturday, where activity at the comparable sites much higher than expected.

The TRICS database (2009(b)) has been interrogated to assess obtain predicted trip generations for the proposed development. Swimming pools come under Land Use 7 (Leisure), Category C and contained a total of 23 sites. To obtain similar sites to the Aquarena, the following criteria were applied to the TRICS data:

- Only edge of town centre and suburban area sites were selected;
- Only site surveyed on a Monday – Thursday were included;
- Only sites with a similar level of public transport provision were included (i.e. no London sites close to tube lines);
- Only sites with a similar provision of ancillary facilities were included (e.g. health and fitness centre on site);

This resulted in six similar sites to the Aquarena development on a weekday and none on a Saturday. Therefore to obtain an indication on the profile of Saturday trips, the search was widened to include edge of town sites in the trip criteria. This resulted in one site being available within the database. Out of town sites are likely to result in a higher number of vehicle trips which result in higher trip rates than would actually occur at the site. However the use of this site will present a worst case, robust methodology. A full summary of the TRICS data can be found in Appendix B.

The results of the TRICS trip rates (per 100m^2) and subsequent trip generation based on the 4,822m^2 floor area for the proposed development are displayed in Table 6.3 below. The TRICS data indicates that the weekday AM peak will be relatively quiet with a total of 53 vehicle trips. The PM network peak is fairly similar to the TRICS peak hour in terms of trip generation, generating 153 and 167 vehicle trips respectively. Given the similarity of the PM network peak and PM TRICS peak hour, the 1700-1800 TRICS data will be used going forward with this assessment.

As discussed the Saturday peak hour for this Transport Assessment is 1000-1100 and according to the TRICS data is predicted to generate 223 two-way vehicle trips. The TRICS data indicates that the Saturday peak hour would be 1400-1500 and would result in 255 two-way vehicle trips. Given this similarity, 1000-1100 will be retained as the Saturday peak period in line with existing and predicted swimming pool data.

However as discussed previously, there was only site surveyed on a Saturday available within TRICS that was not reflective of the proposed development in Worthing. This is therefore likely to result in an overestimation of trips to and from the site.

Table 6.3 – Predicted TRICS Vehicle Trip Rate for the Proposed Aquarena Redevelopment

Day	Time Period	Trip Rate			Trip Generation		
		Arriving	Departing	Two Way	Arriving	Departing	Two Way
Weekday	AM Peak (0800-0900)	0.55	0.56	1.11	26	27	53
	PM Peak (1700-1800)	1.49	1.69	3.18	72	81	153
	TRICS Peak (1800-1900)	1.68	1.79	3.47	81	86	167
	Daily Total	14.20	14.35	28.54	685	692	1,376
Saturday	TA Peak (1000-1100)	2.74	1.88	4.62	132	91	223
	TRICS Peak (1400-1500)	2.82	2.47	5.29	136	119	255
	Daily Total	22.22	21.63	43.85	1,071	1,043	2,114

To validate the TRICS data, indicative forecasts have been provided, based upon predicted revenues associated with the redevelopment. These indicate that the new site is likely to result in a 30-40% rise in visitors. A worst case of this predicted figure has been used to assess trip generations from the site by factoring the existing Aquarena car park surveys by 40%. The results of this are displayed in Table 6.4 below:

Table 6.4 – Predicted Vehicle Trip Generation for the Proposed Aquarena Redevelopment based upon 40% Factor Forecasts

Day	Time Period	Arriving	Departing	Two Way
Weekday	AM Peak (0800-0900)	21	29	50
	PM Peak (1700-1800)	40	42	113
Saturday	Peak (1000-1100)	50	64	115

The 40% Factor Forecasts have been compared to the TRICS trip generations to provide a robust assessment. Table 6.4 below provides a comparison of the predicted demand forecasts and TRICS vehicle trip generations for the site.

Table 6.3 indicates that based upon a 40% rise in vehicle traffic to the site, 21 vehicles will arrive during the AM peak and 29 will depart, resulting in 50 two-way trips. In the PM peak, 40 will arrive and 42 will depart, while from 1000-1100 on Saturday, 50 vehicles are expected to arrive and 64 vehicles will depart.

Based upon the information received from the Swimming Pool, this is expected to reflect a typical day at the site. The data displayed in Table 6.1 is based upon surveys undertaken in May. Figure 6.1 indicates that May is a relatively average month in terms of usage of the site. Although as discussed previously, the data is Figure 6.1 represents single bookings of the centre and does not account visitors who use more than one facility upon visiting the site and so may not be reflective of vehicle trips to the site.

The additional visitor numbers in peak leisure periods such as August will occur when children are off school, with the increase primarily relating to usage of the Aquarena throughout the course of weekdays (1000-1600). As such, changes in total monthly usage at the centre are not predicted to result in significant changes to the network AM, PM and Saturday peaks. The traffic surveys were also conducted over a Bank Holiday weekend in May which is likely to be a peak time for visitors.

Table 6.5 indicates a strong correlation between 40% Factor Forecasts and the TRICS data for the AM peak, with only a difference of three vehicles in the total two-way trip generation. For the PM peak, the predicted arrivals only differ by one vehicle however the predicted TRICS departure rate is almost 100% (39 vehicles) higher than the 40% Factor Forecasts. The Saturday data exhibits the largest difference, with 82 additional arrivals and 26 additional departures. As discussed the site used in TRICS was not representative of the Aquarena site and so this is likely to result in an overestimation of vehicle trips.

Table 6.5 – Comparison of Forecast (40% Factor) and TRICS Vehicle Trip Generations

Time Period	Method	Arrivals	Departures	Total
AM Peak (0800-0900)	TRICS	26	27	53
	Forecast (40% Factor)	21	29	50
	Difference	+5	-2	+3
PM Peak (1700-1800)	TRICS	72	81	153
	Forecast (40% Factor)	71	42	113
	Difference	+1	+39	+40
Saturday (1000-1100)	TRICS	132	91	223
	Forecast (40% Factor)	50	64	115
	Difference	+82	+26	+108

6.4 Forecast Trip Generation – All Modes

To generate predicted mode shares from the development, the vehicle trip generations detailed in the previous section have been factored using current modal splits. The forecast trip generations for all modes are detailed below for both the 40% Factor Forecasts and TRICS analysis. The TRICS and 40% Factor Forecasts result in minimal variation for the AM peak, with 116 and 110 person trips respectively throughout the hour. The PM peak displays more significant differences between the two methodologies, with 248 person trips predicted using the 40% Factor Forecasts and 335 using the TRICS data. The Saturday peak hour displays vast differences between the data, with 251 trips predicted by

the 40% Factor Forecasts and 487 through the TRICS methodology. However as discussed previously, it is envisaged that the actual Saturday totals will be closer to those predicted using the 40% Factor than the TRICS data

Table 6.6 – Forecast Peak Hour Trip Generation – All Modes

Mode	AM Peak (0800-0900)		PM Peak (1700-1800)		Saturday Peak (1000-1100)	
	TRICS	Forecast (40% Factor)	TRICS	Forecast (40% Factor)	TRICS	Forecast (40% Factor)
Car Driver	53	50	153	113	223	115
Car Passenger	27	25	77	57	111	57
Walk	15	14	44	32	63	33
Cycle	8	7	23	17	33	17
Motor bike	7	7	20	15	29	15
Bus	5	4	13	10	20	10
Train	2	2	5	4	7	4
Total Person Trips	116	110	335	248	487	251

6.5 Existing and Forecast Car Parking Demand

Vehicle parking standards for Worthing are contained within the 2005 Supplementary Planning Guidance. This indicates that for leisure facilities, a maximum of 1 space per 10m2 of pool area is permitted. Given that the development currently proposes 1381m2 of pool area, this equates to a potential maximum provision of 138 parking spaces, of which a minimum of 6% (8) are required to be for disabled users. The current proposals are for the provision of 7 car parking spaces, adjacent to the site entrance with a further 133 public car parking spaces to be provided on adjacent land to the west of the site, possibly to be shared with other uses.

Car park usage data for the existing Aquarena was provided by the leisure centre manager for the weeks commencing 13 and 20 February 2006. Occupancy counts were undertaken every two hours between 0700 and 2100 hours. Full details are provided in the appendices. The surveys indicated that the existing 70 space car park was well utilised throughout the day with average occupancies ranging from 64 to 77 percent. Usage of the car park approached capacity on occasions during the week (lunchtime and late PM peak) and midday Saturdays.

Similar to the approach to trip generation forecasts, in order to prepare forecasts of future car parking demand, two alternative approaches have been undertaken;

- Approach 1 – In the absence of detailed usage forecasts for future years, discussions with the leisure centre manager have indicated a likely uplift in demand of 30-40% following the completion of the proposed development. Accordingly existing observed car park occupancies have been factored by 40% to derive likely future car parking demand;
- Approach 2 – An alternative approach has been undertaken using the TRICS database trip generation forecasts to derive the potential car parking accumulation of the development proposals based on similar sites elsewhere. This approach is considered robust, particularly for the Saturday, where activity at the comparable sites much higher than expected

A summary of the existing and forecast parking demands for an average week day and Saturday is provided in Table 6.7 and illustrated in Figures 6.2 and 6.3.

The current site has 68 on-site car parking spaces which are available free of charge to users of the facility. Further parking is available on-street and in the adjacent public car parks. Under the development proposals seven on-site parking spaces will be provided opposite the site entrance, with a further 132 car parking spaces to be provided in the extended public car park, giving a potential total of 139 off-street car parking spaces in the vicinity of the site.

Informal surveys of the current car parks adjacent to site suggest that there would be ample spare capacity during the week. Whilst the majority of these spaces would not be allocated solely for users of the development, it is considered that during the week there would be more than sufficient capacity to accommodate likely parking demand. It has been previously identified that Parking demand is likely to peak on Saturday mornings, particularly when a swimming gala is being held. Parking demand for the adjacent public car parks is also likely to be higher at the weekend. Assuming an uplift in parking demand of 40 % it is considered that the majority of parking demand could be accommodated in the extended car parking areas adjacent to the development. However, the worst case TRICS analysis indicates that at certain times, parking demand could exceed supply

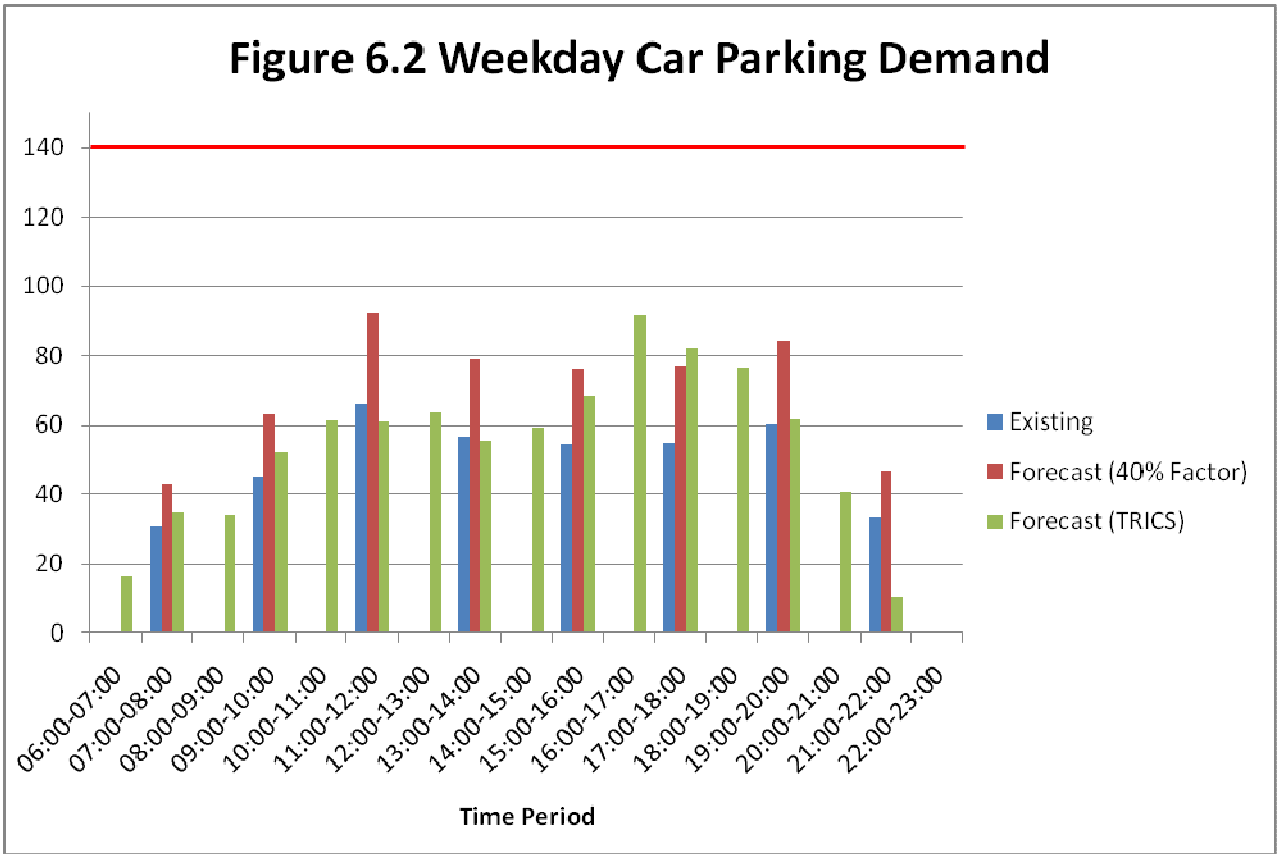
The town centre is adequately provided for in terms of car parking with car parking provided throughout the town centre, both close to the seafront and to the retail core. It is understood that none of the existing car parks operate at full capacity with spare spaces around the town centre throughout the day. Aside from the car parking adjacent to the site, there are further spaces available on-street and a further 644 public off street spaces within 0.5km of the site and a further 1223 public off street spaces within 1.3km of the site.

Accordingly it is considered that there is sufficient car parking capacity within the vicinity of the site to accommodate typical demand with sufficient provision nearby to accommodate potential peaks in demand.

Table 6.7 – Existing and Forecast Car Parking Demand

Time	Weekday Car Parking Demand			Saturday Car Parking Demand		
	Existing	Proposed 40% Factor	Proposed TRICS	Existing	Proposed 40% Factor	Proposed TRICS
07:00-08:00	31	43	35	38	53	47
08:00-09:00			34			104
09:00-10:00	45	63	52	56	78	104
10:00-11:00			61			146
11:00-12:00	66	93	61	68	95	172
12:00-13:00			64			166
13:00-14:00	57	79	56	45	63	168
14:00-15:00			59			185
15:00-16:00	54	76	69	46	65	206
16:00-17:00			92			149
17:00-18:00	55	77	82	31	43	95
18:00-19:00			77			28
19:00-20:00	60	85	62	0	0	28
20:00-21:00			41			28
21:00-22:00	33	47	11	0	0	28

Capabilities on project:
Transportation



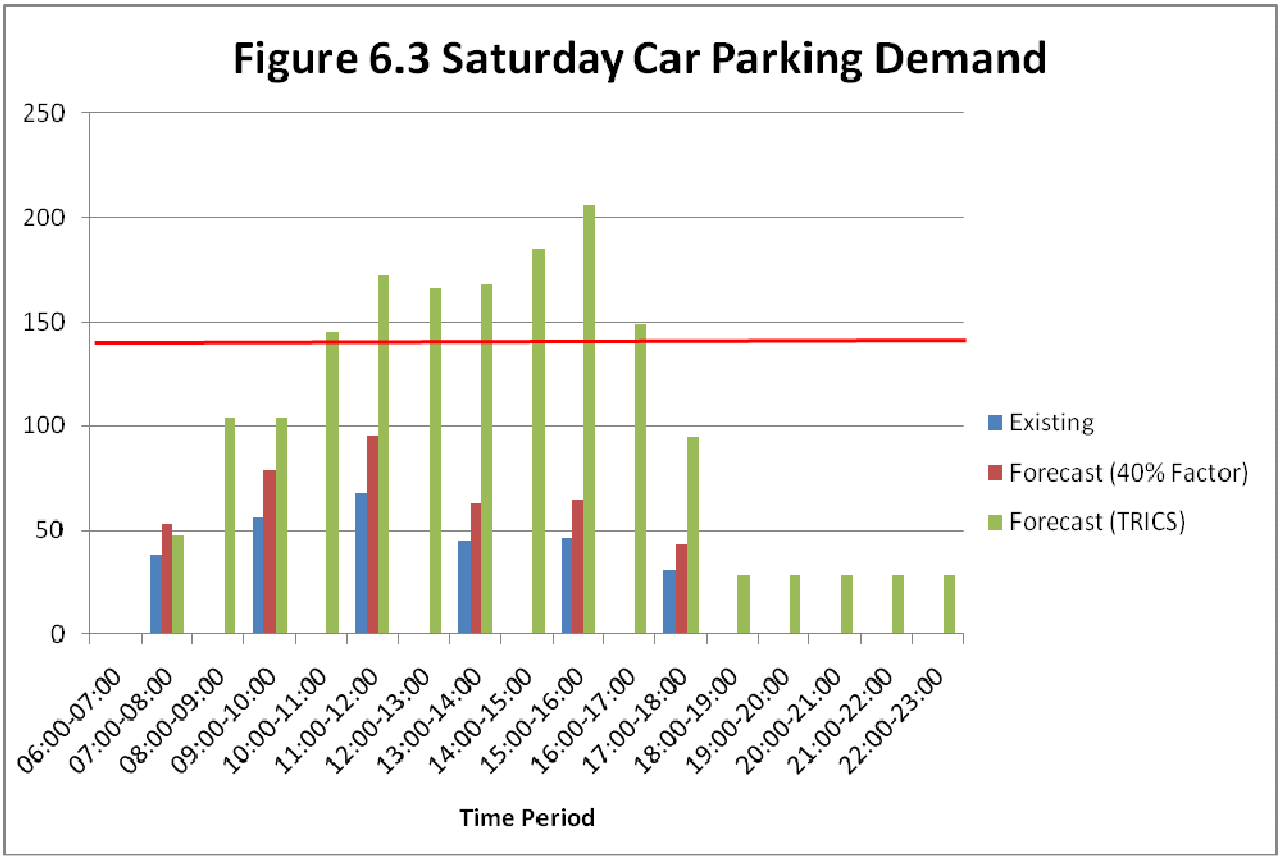


Figure 6.3 Saturday Car Parking Demand
250
200
150
100
50
0
06:00-07:00
07:00-08:00
08:00-09:00
09:00-10:00
10:00-11:00
11:00-12:00
12:00-13:00
13:00-14:00
14:00-15:00
15:00-16:00
16:00-17:00
17:00-18:00
18:00-19:00
19:00-20:00
20:00-21:00
21:00-22:00
22:00-23:00
Time Period
Existing
Forecast (40% Factor)
Forecast (TRICS)

7 Assessment of Impacts

7 Assessment of Impacts

7.1 Introduction

The trip generations discussed in Section 6 form the basis of the traffic impact assessment for the Worthing Aquarena assessment. However to fully assess the impact of the development on the local highway network, the trip generation for each of the peak periods will be assigned onto the road network. Traffic impact modelling will subsequently be undertaken in PICADY for the site access junction.

The following scenarios are being assessed as part of this transport assessment;

- 2010 Existing Traffic Flows; Weekday AM (0800-0900), Weekday PM (1700-1800) and Saturday peak (1000-1100)
- 2013 Base Traffic Flows; Weekday AM (0800-0900), Weekday PM (1700-1800) and Saturday peak (1000-1100)
- Forecast Development Traffic Flows; Weekday AM (0800-0900), Weekday PM (1700-1800) and Saturday peak (1000-1100)
- 2013 Base + Development Traffic Flows; Weekday AM (0800-0900), Weekday PM (1700-1800) and Saturday peak (1000-1100)

7.2 Net Impacts

To assess the impact of the proposed redevelopment of the Aquarena on the local highway network, the predicted vehicle trip generations detailed in Section 6 have been compared to the base traffic counts conducted at the Aquarena car park in May 2010.

Tables 7.1 and 7.2 below present the net traffic impacts of the existing and proposed development for the TRICS data and 40% factor forecasts respectively. The TRICS data will provide a robust assessment of trip at the proposed redevelopment however the 40% factor forecasts are likely to provide a more representative assessment of typical day future activity at the site.

The TRICS data indicates varying rises in the predicted development traffic compared to the existing totals. The AM peak would again see a minimal increase with an additional 11 vehicles arriving and 6 departing. In the PM peak, 21 additional vehicles would arrive at the site 51 departing. The greatest difference is associated with the Saturday data. As discussed throughout this TA, only one Saturday site was available within TRICS which was unrepresentative of the site and as such will not be reflective of the vehicle trip generation at the proposed site. The Saturday data predicts an additional 96 vehicles arriving and 45 departing during the period 1000-1100.

Table 7.1 – Net Traffic Impacts of the TRICS Data on the Proposed Aquarena Redevelopment

Time Period	Existing Aquarena Trips		Proposed Redevelopment Trip		Net Impact		% Change	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
AM Peak (0800-0900)	15	21	26	27	+11	+6	+75%	+29%
PM Peak (1700-1800)	51	30	72	81	+21	+51	+41%	+171%
Sat Peak (1000-1100)	36	46	132	91	+96	+45	+267%	+97%

Table 7.2 is based upon the 40% Factor Forecasts that visitors to the Aquarena will increase by 40% with the construction of the proposed development. This leads to consistent increases in vehicle trips for all time periods. The AM would result in 6 additional vehicles arriving and 8 departing. The largest increase evident would be in the PM peak with an additional 20 vehicle arriving, while an additional 12 would depart the site. The Saturday peak period would result in 14 extra vehicles arriving and 18 departing the site.

Table 7.2 – Net Traffic Impacts of the 40% Factor Forecast Data on the Proposed Aquarena Redevelopment

Time Period	Existing Aquarena Trips		Proposed Redevelopment Trip		Net Impact		% Change	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
AM Peak (0800-0900)	15	21	21	29	+6	+8	+40%	+40%
PM Peak (1700-1800)	51	30	71	42	+20	+12	+40%	+40%
Sat Peak (1000-1100)	36	46	50	64	+14	+18	+40%	+40%

7.3 Traffic Distribution and Assignment

The Aquarena is located along the A259 Brighton Road, which is a key route for local and regional traffic through Worthing and to the adjacent seaside resorts. Along vehicles entering and existing the site will travel along the A259 Brighton Road. To the east of the site, the A259 leads to east Worthing, Lancing, Shoreham and Brighton. To the west the A259 leads to Worthing town centre and subsequently connects to other local A-roads and Littlehampton and Bognor Regis. In the vicinity of the site, there are smaller residential roads leading off the A259, however for the purposes of this report a worst case is assumed where all traffic will remain on the A259 Brighton Road.

In order to assess the respective percentage split along the A259 east and A259 west, travel survey data from Worthing swimming pool has been used. The travel survey conducted in October 2009 also detailed the postcodes of swimming pool users. Of the 399 responses to the travel survey, a total of 270 listed their postcode, of which 257 were entered in the correct format and could be mapped within the MapInfo software. This data has been subsequently analysed in MapInfo, to help identify the distribution and assignment of existing trips. It is acknowledged that given the expansion of the swimming pool and incorporation of enhanced leisure facilities that the catchment area may increase. However the postcode data should provide an indication on the assignment of trips.

The postcode data revealed the following about trip origins:

- Approximately 33% of users originate from area to the east of the site;
- Approximately 67% of users originate from areas to the west of the site.

Therefore for the purposes of this TA, 33% of traffic will be allocated along the A259 Eastbound and 67% of traffic will be allocated along the A259 westbound. In addition, catchment areas been identified to the west of the site access junction to identify the proportion of this traffic that would travel along through the A259 High Street / A259 Brighton Road / A259 Steyne junction. As The Steyne is a one-way road, all traffic departing the site travelling along the A259 West will continue onto the A259 High Street. However, for vehicles arriving at the site, the following assumptions have been made for vehicles travelling along the A259 west:

- 80% of users will travel along the A259 High Street to access the eastbound A259 Brighton Road ;
- 20% of users will travel along The Steyne to access the eastbound A259 Brighton Road;

The assignment and distribution of traffic flows is displayed in Figure 7.1, with the 2013 base traffic flows displayed in Figure 7.2. The development and base plus development scenarios for the TRICS methodology are displayed in Figures 7.3 and 7.4 respectively. This is replicated for the 40% forecast flows in Figures 7.5 and 7.6.

7.4 Impact Analysis

7.4.1 Link Analysis

The 2010 traffic surveys provided ATC data on the level of existing traffic flow along the A259 Brighton Road. In order to calculate the impact on link capacities along Brighton Road, the Design Manual for Roads and Bridges (Volume 5, Section 1, Part 3, TA 95/99, page 11) has been used. This displays indicative capacities for urban roads. Brighton Road has an indicative hourly capacity flow of 1,300 vehicles in each direction.

The predicted net impact traffic flows have been added to the ATC data to provide an assessment of the link capacity along Brighton Road for scenarios with and without the development. As the existing Aquarena traffic will already be on the network, only the net development impacts have been added. TEMPRO (Version 6.2) and the Department for Transport (DfT) National Traffic Model Forecasts (NTMF) have been used to factor the base data up to the 2013 opening year. This produced growth factors of 1.067, 1.065 and 1.063 for the AM, PM and Saturday peak periods respectively. The link impact analysis is displayed in Tables 7.3 and 7.4 below for the TRICS and 40% Factor Forecasts respectively.

A worst case has been assumed where all development traffic has been added to the A259 Brighton Road traffic. For example vehicles entering from the A259 eastbound and vehicles departing to the eastbound would not travel along the link at the same time. However for the purposes of this assessment they have simultaneously added to the east or westbound link flow.

Developments resulting in less than a 5% impact on the surrounding road network are typically seen as having a minimal impact on the adjacent highway infrastructure.

When analysed for the TRICS forecasts, the net development traffic leads to a minimal impact on the A259 Brighton Road link capacities during the AM peak. In the PM time period, the development impact is approaching 5% for the A259 westbound movement, however the impact on the two-way flow is below 5%. For the Saturday peak, the A259 westbound movement would lead to an increase slightly in excess of 5%, with the two-way flow increase at 5%. However the links still operates well within capacity and as discussed the Saturday TRICS data is likely to present a worst analysis of trips to the site.

Table 7.3 – A259 Link Capacity – TRICS Forecasts

Time Period	Link	Capacity (Vehicles)	2013 Base		2013 Base + Development		% Change
			Flow	Capacity (%)	Flow	Capacity (%)	
AM Peak (0800-0900)	A259 E'bound	1300	408	31%	10	1%	418
	A259 W'bound	1300	527	41%	8	1%	535
	Two-way total	2600	935	36%	17	1%	953
PM Peak (1700-1800)	A259 E'bound	1300	346	27%	31	2%	377
	A259 W'bound	1300	455	35%	41	3%	496
	Two-way total	2600	800	31%	72	3%	873
Sat Peak (1000-1100)	A259 E'bound	1300	502	39%	79	6%	581
	A259 W'bound	1300	649	50%	62	5%	711
	Two-way total	2600	1151	44%	141	5%	1292

The impact analysis indicates that the net development 40% Factor forecasts would have a minimal impact on the existing A259 capacity. The net impact would is calculated to be under 5% during all time periods, leading to a marginal impact on traffic flows along the A259 Brighton Road.

Table 7.4 – A259 Link Capacity – 40% Factor Forecasts

Time Period	Link	Capacity (Vehicles)	2013 Base		2013 Base + Development		% Change
			Flow	Capacity (%)	Flow	Capacity (%)	
AM Peak (0800-0900)	A259 E'bound	1300	408	31%	7	1%	415
	A259 W'bound	1300	527	41%	8	1%	534
	Two-way total	2600	935	36%	14	1%	950
PM Peak (1700-1800)	A259 E'bound	1300	346	27%	18	1%	363
	A259 W'bound	1300	455	35%	15	1%	469
	Two-way total	2600	800	31%	32	1%	833
Sat Peak (1000-1100)	A259 E'bound	1300	502	39%	16	1%	517
	A259 W'bound	1300	649	50%	17	1%	666
	Two-way total	2600	1151	44%	33	1%	1184

7.4.2 Site Access Junction

As discussed in Section 5, the access proposals to the site are via two separate car park access points located to the west of the Aquarena. As a worst case, a PICADY assessment has been modelled for a site access junction where all traffic would enter / exit via a single access along Brighton Road. This will model the impact of all Aquarena traffic on the 2013 road network, where in reality the impact will be spread over the existing two access points. The 40% Factor Forecast and TRICS data have both been used to detail how the junction would work with the addition of the development traffic flow. The development traffic flow data will be compared to a 2013 base case where the Beach House (West) car park is retained.

The results of the PICADY assessment are summarised in Table 7.5 below. Full details of the PICADY analysis are displayed in Appendix C.

The PICADY results indicate that the proposed development will not lead to a significant impact on the A259 Brighton Road. Both the TRICS data and 40% Factor Forecasts indicate that there will be no significant issues with RFC or queuing at the junction during any of the peak periods. The highest RFC predicted is during the Saturday peak for vehicles exiting the site. However this is only 24% of the capacity based upon the TRICS trip generation. In addition, should any queuing occur, this will be happen in the site car park and not on the highway network.,

It should again be stressed that this PICADY assessment presents a worst case where all traffic enters and exits the development via a single access point. Even with this scenario, the site access junction operates well within capacity for the base plus development scenario.

Table 7.5 – Site Access Junction PICADY

Time Period	Arm	2013 Base		2013 Base + Dev TRICS		2013 Base + Dev 40% Factor Forecast	
		RFC	Q (Vehicles)	RFC	Q (Vehicles)	RFC	Q (Vehicles)
AM Peak (0800-0900)	Site Access – A259	0%	0	6%	0	7%	0
	A259 West – Site Access	0%	0	4%	0	3%	0
PM Peak (1700-1800)	Site Access – A259	2%	0	17%	0	9%	0
	A259 West – Site Access	1%	0	9%	0	9%	0
Sat Peak (1000-1100)	Site Access – A259	5%	0	24%	0	16%	0
	A259 West – Site Access	6%	0	19%	0	7%	0

7.4.3 A259 Brighton Road / A259 High Street / The Steyne

The impact of the proposed development has also been assessed on the A259 Brighton Road / A259 High Street / The Steyne junction. This is located approximately 300 metres to the west of the site and is a key junction linking the development to Worthing town centre and areas to the north and west of the site. As with the A259 link capacity assessment, only the net development trips have been added to the network as the existing Aquarena traffic will already be on the network.

The impact analysis assumes a worst case where all traffic heading west out of the site travel to the A259 Brighton Road / A259 High Street / The Steyne junction. In reality, a proportion of the traffic will travel along the minor roads off the A259 Bright Road westbound prior to the junction, however this provides a robust and worst case assessment of the development traffic impact.

The impact of the development on the 2013 traffic flows has been analysed in Table 7.6 and 7.7 below for the TRICS and 40% Factor Forecasts respectively:

The TRICS data results in a similar impact to the 40% Factor Forecasts for the AM peak,. However during the PM peak, traffic flow is predicted to increase by 15% along the A259 Brighton Road arm. This is reflective of the increase in departures in the PM peak generated by the TRICS data compared to the 40% Factor Forecasts. However the increase on the total junction flow remains under 5%. For the Saturday peak, the data indicates a 12% increase in traffic flow along the A259 High Street arm and an 11% increase of the A259 Brighton Road arm. This results in an increase of 7% on the total junction flow. As discussed, this is a worst case scenario where all traffic travelling to and from the site from the west is assumed to pass through the junction.

Table 7.6 – A259 Brighton Road / A259 High Street / The Steyne Junction Impacts – TRICS Forecasts

Time Period	Arm	2013 Base	2013 Base + Development	Difference	% Change
AM Peak (0800-0900)	A259 High Street	329	335	+6	+2%
	A259 Brighton Road	303	307	+4	+1%
	The Steyne	860	862	+2	0%
	Total	1492	1504	+12	+1%
PM Peak (1700-1800)	A259 High Street	471	482	+11	+2%
	A259 Brighton Road	224	258	+34	+15%
	The Steyne	603	606	+3	0%
	Total	1298	1346	+48	+4%
Sat Peak (1000-1100)	A259 High Street	442	493	+51	+12%
	A259 Brighton Road	282	312	+30	+11%
	The Steyne	648	661	+13	+2%
	Total	1372	1466	+94	+7%

The 40% Factor Forecast development trips will only lead to a minimal impact at the A259 Brighton Road / A259 High Street / The Steyne junction. In the AM peak, the net traffic would only lead to a marginal impact on junction traffic flows. During the PM and Saturday peak, flows are predicted to be approaching a 5% increase in net traffic on the A259 Brighton Road arm. However both this movement are the impact on total junction flow are predicted to be below 5%, which is typically viewed as a threshold for development traffic impacts on the local highway network.

Table 7.7 – A259 Brighton Road / A259 High Street / The Steyne Junction Impacts – 40% Factor Forecasts

Time Period	Arm	2013 Base	2013 Base + Development	Difference	% Change
AM Peak (0800-0900)	A259 High Street	329	332	+3	+1%
	A259 Brighton Road	303	309	+6	+2%
	The Steyne	860	861	+1	+0%
	Total	1492	1502	+10	+1%
PM Peak (1700-1800)	A259 High Street	471	482	+11	+2%
	A259 Brighton Road	224	232	+8	+4%
	The Steyne	603	606	+3	+0%
	Total	1298	1320	+22	+2%
Sat Peak (1000-1100)	A259 High Street	442	450	+8	+2%
	A259 Brighton Road	282	294	+12	+4%
	The Steyne	648	650	+2	+0%
	Total	1372	1394	+22	+2%

8 Travel Plan

8 Travel Plan

8.1 Introduction

A Travel Plan is a package of measures designed to reduce the amount and impact of traffic generated by a development. It is an important element of the Government's Transport White Paper, "The Future of Transport", published in July 2004, which aims to increase personal travel choice by improving infrastructure and services that enable more people to use sustainable modes of transport, such as walking, cycling and public transport. Travel Plans should also discourage people from using the private car for journeys through the implementation of demand management measures, such as stricter parking controls.

A Travel Plan will normally include a number of measures to improve travel choice, reduce reliance on the car and reduce the environmental impact of travel. The plan may incorporate a range of measures, including public transport initiatives, car sharing, improvements to cycle and pedestrian facilities, and the distribution of publicity and marketing information.

A travel plan is a requisite as part of planning applications for larger schemes and those that are identified as potentially having a significant impact on the transport network. This requirement is set out in national policy guidance in the form of PPS13, as well as in local planning guidance. West Sussex County Council, the local highway authority for the proposed site, refer to the Department for Transport for Guidance on the creation of Travel Plans.

Travel plans have the potential to provide significant benefits if successfully implemented. These include:

- Minimising unnecessary journeys and the cost associated with them;
- Improving the number and quality of the transport options available to employees
- Increasing the accessibility of the site and therefore its attractiveness to occupiers;
- Reducing the likelihood of congestion around the site and the associated noise and air pollution;
- A positive, environmentally friendly image of the development with the associated public relations value;
- A reduction in the need to provide developable land for car parking; and
- Compliance with national, regional and local policy.

8.2 Existing Conditions

Worthing Swimming Pool is located approximately 800 metres to the east of Worthing town centre and 1.5km south west of Worthing Rail Station. The A259 Brighton Road runs along its northern boundary, with Merton Road to the east, the promenade and seafront to the south and a park to the west.

Given its location close to the town centre, there is a good public transport provision in the proximity of the site. Two bus services operate along the A259, providing regular connectivity to settlements to the east and Worthing town centre to the west. In addition, a further four services operate along Lyndhurst Road to the north of the site.

The site is within walking distance of the town centre and has good pedestrian routes in the vicinity of the site, with controlled pedestrian crossings located close to the east and west of the site access. This provides a safe route for pedestrians to cross the A259 Brighton Road. It also has linkage to the Seafront cycle lanes to the south of the site which run from the east and connect to the seafront and Worthing town centre.

Vehicular access is via a T-junction with Merton Road and the A259 Brighton Road. Merton Road is a relatively tight two way road, approximately 5.5 metres in width inclusive of 5 on street parking bays on the eastern extents. Vehicles entering the swimming pool subsequently undertake a 180 degree right turn into the barrier controlled car park. There are currently around 68 car parking spaces available within the car park.

8.3 Current Travel Patterns

8.3.1 Travel Surveys

In order to establish current travel patterns to and from the swimming pool, a travel survey was conducted in October 2009. A total of 399 responses were recorded. Only information on total car trips was provided, therefore a car passenger ratio of 1.5 has been assumed. This produces the results detailed in Table 8.1 below:

Table 8.1 –Swimming Pool Travel Survey Mode Share

Mode	Responses (Number)	Mode Share (Percentage)
Car Driver	183	46%
Car Passenger	92	23%
Walk	52	13%
Cycle	27	7%
Motor bike	24	6%
Bus	16	4%
Train	6	2%
Total	399	100%

The survey results indicate that private car journeys are the dominant form of mode share to the site, accounting for 69% of the responses from the survey. As discussed above a car passenger ratio of 1.5 has been assuming allocating the trips between 46% driving and 23% as passengers. In terms of sustainable modes of transport, 13% of responses walked to the Aquarena, with 7% cycling. Public transport accounted for 6% of the responses, with 4% using the train and 1% using the train. The remaining 7% travelled to the site via motorbike.

8.3.2 Postcode Data Analysis

The travel survey conducted in Oct0ber 2009 also detailed the postcodes of swimming pool users. Of the 399 responses to the travel survey, a total of 270 listed their postcode, of which 257 were entered in the correct format and could be mapped within the MapInfo software. This data has been subsequently analysed in MapInfo, to help identify clusters of postcodes from where swimming pool users travel from. It is acknowledged that given the expansion of the swimming pool and incorporation of enhanced leisure facilities that the catchment area may increase. However the postcode data provides information on the existing user profiles at the swimming pool.

The postcode data could help to reduce the number of single occupancy vehicle trips generated by the development. For example, the information can be used by the swimming pool to help identify potential opportunities for users living in close proximity to public transport connections to access existing bus and rail services. It will also help to identify existing swimming pool users living within close proximity of existing pedestrian and cycle links around the Aquarena.

There is also potential to identify groupings of individuals in less accessible locations who could car share. It should however be noted that given the diverse nature of user profiles for leisure developments, car sharing would be difficult to implement.

Figure 8.1 displays the postcode data for users of the Aquarena and Table 8.2 displays a summary of these results:

Table 8.2 – Total Travel Survey Respondents Living in Worthing

Origin	Number of responses
Worthing	163
Total Responses	257
Proportion from Worthing	63%

This reveals that 63% of swimming pool users originate from Worthing. This is well within a 5km distance and represents a realistic journey time for staff and visitors to use sustainable modes of transport such as cycling and the bus. A large number of the postcodes are still within 2km of the site and this would represent a realistic maximum to users to walk to the Aquarena.

8.4 Sustainable Transport Impacts Mitigation Measures

The Travel Plan will aim to offset the number of vehicle trips generated by the development by promoting the use of sustainable modes such as walking, cycling and public transport. As such, this will lead to associated impacts on the pedestrian, cycle and public transport infrastructure networks. To mitigate this impact, as detailed in Section 2 Worthing Council are proposing a range of measures to improve transport links in the vicinity of the site. The seafront area is seen as a key regeneration area within Worthing to appeal to residents, visitors, investors and business. The following measures are discussed as part of a package of improvements in the town centre and seafront area:

8.4.1 Pedestrian Infrastructure Improvements

Improvements to the pedestrian infrastructure are one of the key aspirations to regenerate the area as an attractive location. As part of this, the following improvements are discussed in the vicinity of the Aquarena site as part of the wider Seafront strategy:

- Improved connectivity, linkage and quality of the pedestrian environment along the seafront between the seafront and the town centre;
- Public realm improvements around the Aquarena site;
- Improved safe and accessible pedestrian routes.

8.4.2 Cycle Infrastructure Improvements

Recent improvements to the cycle infrastructure have resulted in seafront cycle lane being extended into Worthing from the east. Given the local catchment of a large number of Aquarena users, cycling could be a key mode of transport to access the development. Within the vicinity of the site, Worthing Council discussed the following measures in the Seafront Strategy and Town Centre & Seafront Masterplan:

- Provision of high quality cycle routes from the rail station the town centre and Seafront;
- A key strategy within the two documents was the provision of the seafront cycle way, which has subsequently been created and will aid cycle trips to the development.

8.4.3 Public Transport Improvements

There is a good public transport infrastructure in the vicinity of the site. Improvements to the infrastructure will further support sustainable travel to the site. As part of the Seafront strategy in the vicinity of the site, the following measures were identified by Worthing Council in the Seafront Strategy and Town Centre & Seafront Masterplan:

- Improved bus services during evening and weekend periods in particular;
- Real time information should be provided at signalised junctions at High Street / Brighton Road

8.5 Travel Plan Objectives

A Travel Plan is a package of measures designed to reduce the amount and impact of traffic generated by a development. It is an important element of the Government's Transport White Paper "The Future of Transport", published in July 2004, which aims to increase personal travel choice by improving infrastructure and services that enable more people to travel by sustainable modes of transport, such as walking, cycling and public transport. Travel Plans should also discourage people from using the private car for journeys through the implementation of demand management measures, such as stricter parking controls.

A successful Travel Plan is likely to encompass the following;

- Clear aims and objectives;
- An assessment of the existing conditions and travel patterns;
- Identification of SMART (Specific, Measureable, Achievable, Realistic, Time-Based) targets;
- Identification of measures and initiatives to encourage walking and cycling, public transport use and car sharing;
- Identification of infrastructure improvements;
- Raising awareness through marketing and maximising the impact of the Travel Plan.

The Travel Plan for the proposed redevelopment of the Worthing Swimming Pool will aim to encourage more sustainable travel choices by both users and employees of the sites. The key objectives of the Travel Plan are as follows:

- To deliver a long term commitment to changing travel habits of swimming pool users and employees away from private car use;
- To encourage the use of sustainable modes of transport, in particular public transport, walking and cycling, by making these viable and attractive means of access to the Aquarena;
- To improve safety in the vicinity of the Aquarena for pedestrians, cyclists and motorcyclists as well as offering a healthier travel choice;
- To minimise the CO2 emissions and environmental pollution caused primarily by vehicle trips to the site;

8.6 Travel Plan Initiatives

Sustainable travel options will be a focal point in the development of the site layout, aimed at reducing the reliance of private car journeys for staff and visitors. The development of the Travel Plan in conjunction of the Transport Assessment ensures that effective strategies can be implemented in the planning process for the proposed redevelopment. A range of initiatives are proposed as part of the Travel Plan, these are detailed below.

8.6.1 Car Use

8.6.1.1 Car Parking

The existing parking supply is 68 spaces on site, located in a decked car park to the east of the existing site. The proposed provision of spaces for the redevelopment is 139.

Parking standards for Worthing are located in the 2005 Supplementary Planning Guidance (SPG). For leisure developments, a maximum of 1 parking space is permitted per $10m^2$ of pool area. Given that the proposed pool area is $1381m^2$, this would result in a maximum of 138 parking spaces permitted on the site. This parking is also currently identified for public parking and not exclusively for swimming pool use. This explains why the car parking totals are in excess of the maximum Worthing parking standards for swimming pools.

If the proposal is retained where the parking is also available for public users, it will demonstrate restraint in terms of the number of parking spaces on site. During peak periods, the parking bays would be utilised by the public, reducing the number available to Aquarena staff and visitors. Limiting the amount of parking space available at a development is the key driver to reduce private car journeys to a development.

8.6.1.2 Car Park Management

During peak periods there may be times when there is a shortage of car parking at the proposed development. The proposed Aquarena is due to open in 2013, with the existing East and West Beach House NCP sites leased until 2014. The Beach House will account for a large majority of the proposed Aquarena car parking and as such this may lead to parking overspill between development traffic and public users of the car park.

It is hoped that the proposed travel plan measures introduced at the site will reduce the number of vehicle generated by the site and minimise potential car parking conflicts. However during peak periods, car parking overspill is likely to be inevitable at the development. To mitigate this, the following measures could be recommended;

- There is large amount of on and off street parking available in the vicinity of the site. During peak periods when parking demand is expected to be high, information should be supplied to visitors on the location of these and subsequent access routes to the site.

8.6.2 Car Sharing

Despite efforts to reduce the number of private car journeys, it is acknowledged that car trips to the site are inevitable and that in some situations they may be the only viable mode of transport. However car sharing offers significant benefits not only for the environment but also financially for individuals. Given the diverse nature of leisure developments, car sharing may be difficult to implement, however the following car sharing initiatives could be implemented for the proposed development;

- The proposals are for 45 full time employees on two shifts and 80 casual staff. This could provide a realistic base for care sharing. It is recommended that attempts are made for either employees to organise an internal car sharing database or for staff to register with an existing car sharing website. An internal database could be created for staff to register their intentions to car share, as well as origins and weekly shift patterns. Alternatively it is recommended that the development promotes the use of the West Sussex Car Sharing Club; http://www.westsussexcarshare.com. This will link staff with existing car sharers with the County. The implementation of either scheme will aid in the reduction of vehicle trips to the site;
- Upon signing up to classes at the Aquarena, visitors could be asked if they would consider car sharing with another class member. Given that a number of this classes will occur regularly (e.g. a set time each week), this should ensure a consistent base of users and as such may allow for car sharing initiatives to be implemented;
- Currently swimming clubs events are usually held on Saturday evenings (1830-2130) and schools events on Wednesday afternoons (1300-1600). It is recommended that local swimming clubs using the swimming pool promote car sharing as a main mode of access to the Aquarena. Awards could be given to the club who utilise the least number of vehicles to access the site.

8.6.3 Public Transport

The bus service in the vicinity of the site is fairly extensive, providing both local and regional connectivity. Bus stops are located along Brighton Road and Lyndhurst Road to the north as well as Worthing town centre bus station being located approximately 1km to the west. Despite this, the results of the travel survey displayed in Table 8.1 indicate that the existing bus mode share to the site is relatively low at 4%.

Additionally according to the travel survey, the rail mode share accounts for only 2% of trips to the site. Worthing rail station is located approximately 1.5km to the north-west, so it is unlikely this mode share will rise significantly through the implementation of Travel Planning Measures

To improve the attractiveness of public transport travel to the development, the following measures are proposed:

- Interest free loans to be offered to members of staff to promote the use of public transport travel to the site. This could be made available for the purchase of monthly and primarily annual season tickets to ensure a sustained commitment towards the use of public transport;
- Up-to-date public transport information to be made available at the Aquarena;

- Public transport information to be made available on the Aquarena website;
- Marketing information on the Aquarena to contain information on how to access the site by public transport;
- New leisure club members to receive information on how to access the site by public transport.

8.6.4 Cycling

Cycling offers a realistic mode of transport to access the Aquarena. There are designated cycle lanes along the Seafront as well as a number of roads within Worthing being suitable for cyclists to cycle on the road. Table 8.1 indicates that the existing mode share from the survey data is 7%. The implementation of Travel Planning measures therefore offers realistic potential for this mode share to increase. For this to occur, the following initiatives are proposed at the site;

- Secure cycle parking will be provided at the Aquarena. There are currently 12 Sheffield stands available at the existing site. The proposals at the development are for cycle parking spaces to be provided at in line with parking standards and the predicted levels of demand at the site. This will be a well lit area, safe, sheltered and secure location, which would help to encourage cyclists;
- As part of the development proposals, showers, changing rooms and storage facilities will be made available to staff cycling to the site. This could either be available in a separate section or in the public facilities area. Visitors of the site cycling will utilise the showers and lockers on site.
- The Aquarena is located close adjacent to NCN Route 2 which runs along the Seafront. This route will be promoted both at the swimming pool and on the Aquarena website, providing a link to the NCN route which is available at www.sustrans.co.uk;
- The Aquarena could offer staff the opportunity to purchase cycles, safety equipment and accessories at a discounted rate through a Cycle to Work or similar scheme;
- Basic bike maintenance equipment to be kept on site and made available to anyone cycling to / from the site if required in an emergency; i.e. puncture repair kits, waterproof coats etc;
- Make cycling information available to users of the site via the internet and notice boards, including cycle plans and information on the above measures.

8.6.5 Walking

Walking offers a realistic mode share for both and visitors to the Aquarena. The site is located close to the town centre, with large areas of residential land use within close proximity. The travel survey indicates that 13% of those surveyed chose walking as their main mode of transport to access the site. To help to improve this mode share further, the following is proposed at the site;

- The proposed redevelopment will be pedestrian friendly, with wide areas of public realm space to encourage pedestrian activity in and around the site;
- Pedestrian connectivity is planned between the front of the site and Seafront, creating a connected pedestrian network;
- Walking routes will be made available to users of the sites via the internet and information boards around the site. This will include plans of walking routes and the location of bus stops and Worthing town centre.

8.6.6 Coach Access

Coach access is likely to be the primary form of access for schools using the swimming pool, and may also be used when large galas take place at the Aquarena. It is important that consideration is given to the proposed access for coaches as they consolidated the number of vehicle trips generated by the site. As such, it is proposed that one coach drop off space will be provided on the site. This will be located at the front of the site, creating a safe and convenient route for passengers to depart the vehicle and access the Aquarena.

8.6.7 Servicing and Deliveries

The proposed redevelopment would be used by servicing vehicles, requiring access to the front of the site. This is specifically required for servicing vehicles to supply chemicals required for the up keep of the swimming pool. These are anticipated to occur between 4-5 times per week, and be undertaken by a 7.5 Tonne lorry.

It is considered important to avoid these larger vehicles conflicting with the AM and PM peak hour traffic associated with both the network and development peak hours. This will aim to avoid conflict with vehicles accessing the site as well as pedestrians utilising the public realm space. As a result, it is considered that service vehicles should pre book site visits wherever possible and not be permitted to access the site during the following time periods:

- 0800-0900 on weekday mornings;
- 1600-1800 on weekday evening; and
- 1000-1200 on Saturdays.

8.6.8 Promotion and Marketing

As mentioned throughout Section 8.5, publicity and marketing will be a focal point of Travel Plan, ensuring that both staff and visitors to the site are familiar with sustainable modes of access to the Aquarena. Up-to-date travel information on walking, cycling and public transport routes should be provided at the site on Green Travel notice boards and on promotional leaflets.

In addition, new members of staff and members of the Aquarena should be provided with a welcome pack. This could provide a copy of the Travel Plan and / or how to access the site by sustainable transport modes.

Finally, consideration could be placed on the running of Green Travel Days to try and encourage employees and visitors not to travel to the Aquarena by private cars on certain days on the year. As mentioned this could be linked into club or gala events, with additional prizes presented to the club who travelled by the most sustainable mode. This would help to highlight the benefits of sustainable modes of travel as well as highlighting the positive impacts of the TP and effective marking can have on the Aquarena.

8.6.9 Event Management Strategy

There are currently 6-8 galas per year at the Aquarena, with the figure potentially increasing with the proposed development. The events will typically generate 300 visitors to the site at one time. The Galas are likely to occur on weekday evenings and will account for the vast majority of traffic generated by the site in this time period.

These are infrequent events that will result in a large number of trips to the development within a short space of time. Therefore it is crucial that these events are effectively managed to ensure that the demand profiles are sustainable and that the events have do not lead to significant impacts on the adjacent infrastructure.

To management large events at the Aquarena and to aim to reduce the number of vehicle trips associated with these, the following could be considered at the site:

- Encourage each club to travel to the Aquarena by either mini bus or coach. This would significantly reduce the number of vehicle trips;
- Provide travel packs to attendees of the event. These should include information on sustainable travel routes to the site as well as information on overspill parking areas within the town centre.

8.7 Travel Plan Targets

The general objectives of the Travel Plan have been developed into specific targets, to work towards with the proposed redevelopment of the site. Targets are the measurable goal of the TP, set in order to monitor progress and assess whether the objectives of the plan have been achieved.

The travel plan initiatives detailed in the Travel Plan will aim to influence the modes of transport visitors and staff use to access the site. However given the nature of the development as a swimming pool, it is acknowledged that car use will still represent the dominant movement to and from the site. Car sharing for leisure developments is difficult to implement. It must also be considered that the development will be used by a large number of children undertaking swimming classes and as such will require parents to travel with them to the site.

Given the variable nature of trips to the site, it is important that travel plan targets are not too prescriptive and there is flexibility within the targets. As such, an initial targets have been set. There is a good sustainable transport infrastructure in the vicinity of the site and the proposed initiatives should result in a positive increase in these mode shares.

The headline targets and existing and targeted mode shares are detailed in Table 8.3 below for visitors:

Headline Targets (Visitors):

- To reduce private car drivers numbers by 10 percent
- To increase visitors arriving by cycle or on foot by 15 percent
- To increase visitors arriving by public transport by 10 percent

Table 8.3 – Visitor Mode Share Targets

Mode	Existing Mode Shares	Target Mode Share
Car Driver	46%	41%
Car Passenger	23%	24%
Walk	13%	15%
Cycle	7%	8%
Motor bike	5%	6%
Bus	4%	4%
Train	2%	2%
Total	100%	100%

In the absence of available survey data, the existing staff modal shares have been estimated using national journey to work statistics for the Worthing areas. The headline targets and existing and targeted mode shares are detailed in Table 8.4 below for staff:

Headline Targets (Staff):

- To reduce private car drivers numbers by 10 percent
- To increase staff arriving by cycle or on foot by 20 percent
- To increase staff arriving by public transport by 10 percent

Table 8.4 – Visitor Mode Share Targets

Mode	Number of Staff (FTEs and Part Time)	Existing Mode Shares	Target Mode Share
Car Driver	81	67%	60%
Car Passenger	7	6%	8%
Walk	17	14%	17%
Cycle	5	5%	5%
Motor bike	1	1%	1%
Bus	5	5%	5%
Train	3	2%	3%
Total	120	100%	100%

8.8 Monitoring and Review

8.8.1 Travel Plan Co-ordinator

For the Travel Plan to be a success, co-ordination, monitoring and review procedures are all required. This will aim to ensure that the objectives of the Travel Plan are being met. To help achieve this, a Travel Plan Co-ordinator (TPC) will be nominated, who will oversee the development, implementation and management of the TP, and ensure that targets and objectives are achieved.

The responsibilities of the TPC will include the following:

- Co-ordinate the delivery of the TP;
- Developing the TP strategy and its day to day operation;
- Creating and updating the TP notice boards around the Aquarena;
- Being the primary point of contact for employees and visitors on all TP related matters;
- Creating and distributing TP packs to employees and new leisure members;
- Marketing and raising awareness of new initiatives relating to the TP;
- Promoting national travel campaigns as appropriate;
- Maintaining regular contact with Worthing Borough Council and West Sussex County Council;
- Arranging employee and visitor travel surveys for monitor the TP progress in line with the targets;
- Maintaining and updating the TP document, including reviewing objectives and setting targets.

For the Travel Plan to be a success, it is important that it is effectively promoted and that all users of the site have a role in its development. The views of staff and visitors are pivotal to the success of Travel Plan and that these views are carefully considered. The TPC will have a crucial role in this consultation to ensure that there is a sense of 'joint ownership' of the plan.

8.8.2 Monitoring

The TPC will monitor the progress of the Travel Plan through employee and visitor travel surveys. It is envisaged that the first of these surveys will occur approximately six months after the completion of the development. This will allow staff and visitors time to establish travel patterns and will establish a surveyed base for future modelling to be assessed against.

Following this initial survey, it is recommended that the TPC organises annual surveys at the Aquarena. This will provide sufficient time for the TP measures and initiatives to be further established and provide an indication into which TP measures are more successful in bringing about a change in modal shift away from private car journeys.

In addition to the travel survey, it is envisaged that further data collection methods will be undertaken to obtain a wider perspective on the effect of the TP initiatives. This will include spot counts on the car and cycle parking usage and assessments into the level of staff signed up to car sharing sites. Further work could also be undertaken to monitor the use of the cycle links in the vicinity of the site and public transport patronage data. These aspects are likely to be picked by the travel surveys however it provides a more complete assessment on the success of travel initiatives and may also cover travel patterns not recorded in the survey.

Following the annual survey, the TPC will produce a monitoring report which will detail the progress of the TP. This will identify how the survey results are progressing compared to those outlined in the TP, which initiatives are successful and where there is room for improvement. In addition, potential new TP ideas and initiatives for the Aquarena will be discussed within the report.

The monitoring report will be issued to Worthing Borough Council and West Sussex County Council. This will form the basis of discussions for the review and potential alteration of the TP. If the targets of the TP are not met, the TPC and highway authority will review the existing initiatives in place to assess how best to further encourage a positive modal shift away from private car journeys.

The TP will also be displayed on the Green notice board within the Aquarena and on the internet site. This will aim to inform and ensure the continued involvement of all stakeholders and help to ensure a continued commitment towards the progression of the TP.

9 Summary & Conclusions

9 Summary & Conclusions

The proposed swimming pool in Worthing will create a landmark development and will play a role in the regeneration of the Worthing Seafront. The development proposals are for a new swimming pool containing a competition pool and a leisure pool, in addition to ancillary facilities such as a health and fitness centre on the site.

The development is located directly to the west of the existing swimming pool and will be erected such that the existing pool can remain open while construction is taking place. Pending the completion of the construction phase, the existing pool will subsequently close.

Worthing Swimming Pool is located approximately 800 metres to the east of Worthing town centre and 1.5km south west of Worthing Rail Station. The A259 Brighton Road runs along its northern boundary, with Merton Road to the east, the promenade and seafront to the south and a park to the west.

Given its location close to the town centre, there is a good public transport provision in the proximity of the site. Two bus services operate along the A259, providing regular connectivity to settlements to the east and Worthing town centre to the west. In addition, a further four services operate along Lyndhurst Road to the north of the site.

The site is within walking distance of the town centre and has good pedestrian routes in the vicinity of the site, with controlled pedestrian crossings located close to the east and west of the site access. This provides a safe route for pedestrians to cross the A259 Brighton Road. It also has linkage to the Seafront cycle lanes to the south of the site which run from the east and connect to the seafront and Worthing town centre. Vehicular access is via a T-junction with Merton Road and the A259 Brighton Road.

The proposed swimming pool in Worthing will create a landmark development and will play a role in the regeneration of the Worthing Seafront. The development proposals are for a new swimming pool containing a competition pool and a leisure pool, in addition to ancillary facilities as well as a health and fitness centre on the site. The full development proposals are listed below:

- Approximately 800m2 GFA Competition Pool Area;
- Approximately 580m2 GFA Leisure Pool Area;
- Approximately 900 m2 GFA Health & Fitness Centre;
- Ancillary facilities including a lobby, reception, café and steam room / sauna

The development is located directly to the west of the existing swimming pool and will be erected such that the existing pool can remain open while construction is taking place. Pending the completion of the construction phase, the existing pool will subsequently close.

A full assessment of the existing and forecast trip generation of the development has been undertaken along with an assessment of the net impacts by mode The proposed scheme is not likely to result in a significant impact on the peak hour road network, although the development proposals are likely to result in an intensification of use and subsequently will result in a net increase in trip generation. However, the proposed leisure facilities such as swimming pools and health and fitness centres tend to have peak occupancy early in the mornings, lunchtimes, later in the evenings and at weekends. In addition it is envisaged that the location of the site close to the town centre and the seafront together with Travel Plan initiatives will help to minimise the impact of the development on the local highway network.

The development proposals are for a new swimming pool containing a competition pool and a leisure pool, in addition to ancillary facilities as well as a health and fitness centre on the site. The development proposals include 139 car parking spaces with the provision for cycle parking to be allocated in line with the demand profiles at the site.

In order to prepare forecasts of future trip generation and parking demand, two alternative approaches have been undertaken;

- Approach 1 – In the absence of detailed usage forecasts for future years, discussions with the leisure centre manager have indicated a likely uplift in demand of 30-40% following the completion of the proposed development. Accordingly existing trips have been factored by 35% to derive likely future demand;

Capabilities on project:
Transportation

- Approach 2 – An alternative approach has been undertaken using the TRICS database trip generation forecasts to derive the potential trip generation of the development proposals based on similar sites elsewhere. This approach is considered robust, particularly for the Saturday, where activity at the comparable sites much higher than expected.

These assessed the impact of the proposed development on the 2013 base traffic flows for the weekday AM (0800-0900), PM (1700-1800) and Saturday peak hour (1000-1100) at the site. Traffic impact analysis indicates that the predicted trip generation will not lead to a significant impact on the adjacent highway network. Link impact analysis has been conducted for the A259 Brighton Road which suggests that the development will have a minimal impact on the link capacity of the road. The development traffic has also been added to the A259 High Street / A259 Brighton Road / The Steyne junction to the west of the site. This is a key junction from the site into Worthing town centre. The impact analysis suggests that the development will not affect the operational efficiency of the junction. A PICADY assessment was also conducted for the site access junction with Brighton Road. This indicated that for all time periods, the junction operated well within capacity.

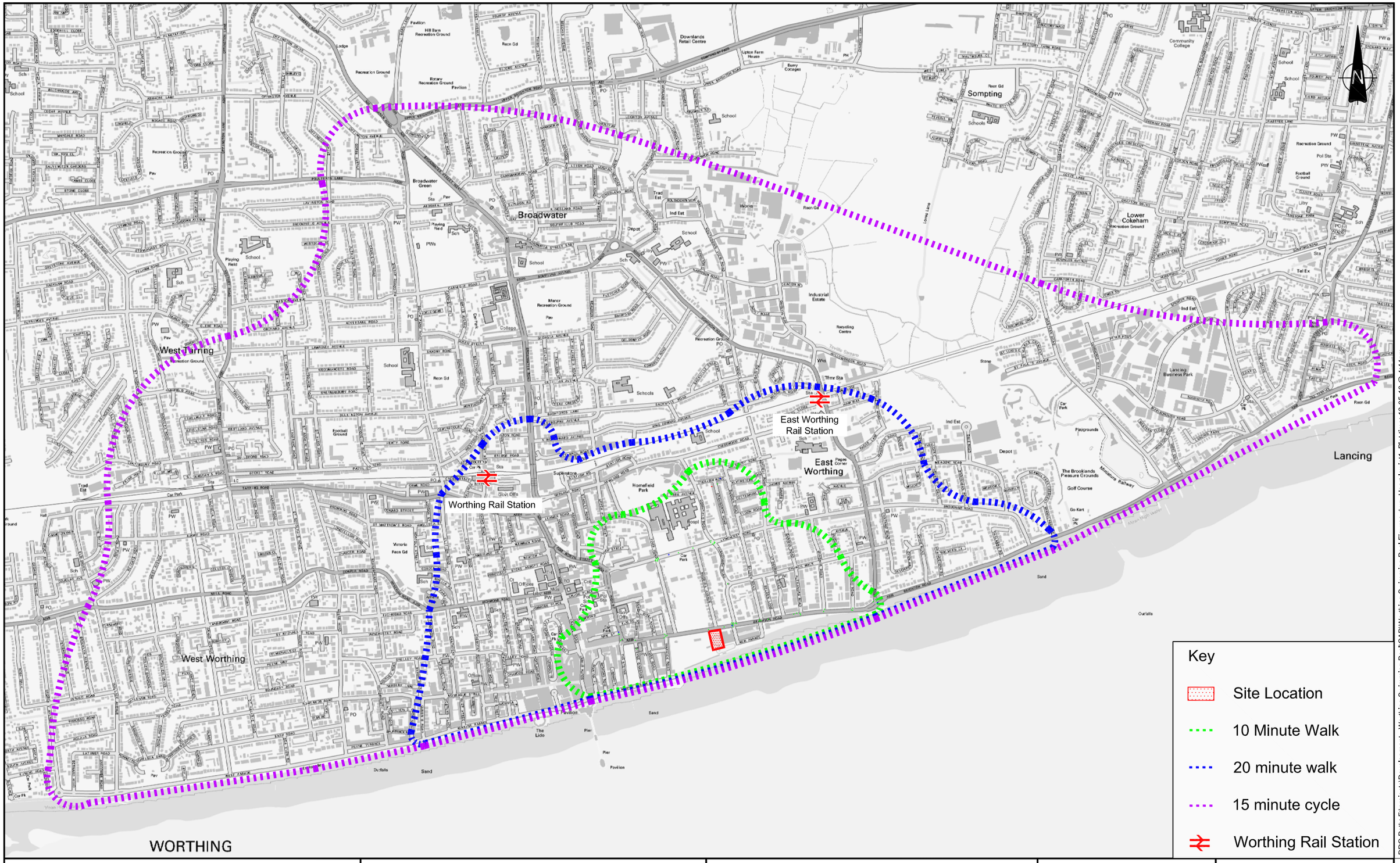
The proposals involve the redevelopment of the existing Beach House east and west car parks to provide additional car parking. These car parks are currently identified for use by both Aquarena visitors and by the general public. Parking accumulation assessments have been undertaken based upon the forecasted development parking accumulation and existing parking demand. These indicate that on a typical weekday there will be more than sufficient parking supply to accommodate the additional development traffic. For the Saturday peak however, there may be an overspill of car parking where demand outstrips the supply. The town centre is adequately provided for in terms of car parking with car parking provided throughout the town centre, both close to the seafront and to the retail core. It is understood that none of the existing car parks operate at full capacity with spare spaces around the town centre throughout the day. Aside from the car parking adjacent to the site, there are further spaces available on-street and a further 644 public off street spaces within 0.5km of the site and a further 1223 public off street spaces within 1.3km of the site. Accordingly it is considered that there is sufficient car parking capacity within the vicinity of the site to accommodate typical demand with sufficient provision nearby to accommodate potential peaks in demand.

A Travel Plan has also been produced in conjunction with the Transport Assessment. A package of measures has been developed which seeks to reduce the number of private vehicle trips generated by the Aquarena and to encourage visitors and staff to use sustainable modes of transport to access the site. The Travel Plan also details mode share targets for the development for both visitors and staff.

Figures

DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\Worthing Swimming Pool Figures.dwg User: lewist1 Plot time: 13-05-10 @ 4:35pm

Client: Worthing Council	Title: Site Location	AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	Design: RM / CAD: RM Chk'd: MSF / App'd: MSF Date: March 2010 / Scale: NTS No. Figure 3.1 Rev: A4
Project: Worthing Swimming Pool			cm



Client: Worthing Council	Title: Walking & Cycling Isochrones	AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	Design: RM / CAD: RM Chk'd: MSF / App'd: MSF Date: March 2010 / Scale: NTS No. Figure 4.1 / Rev:
Project: Worthing Swimming Pool			A3

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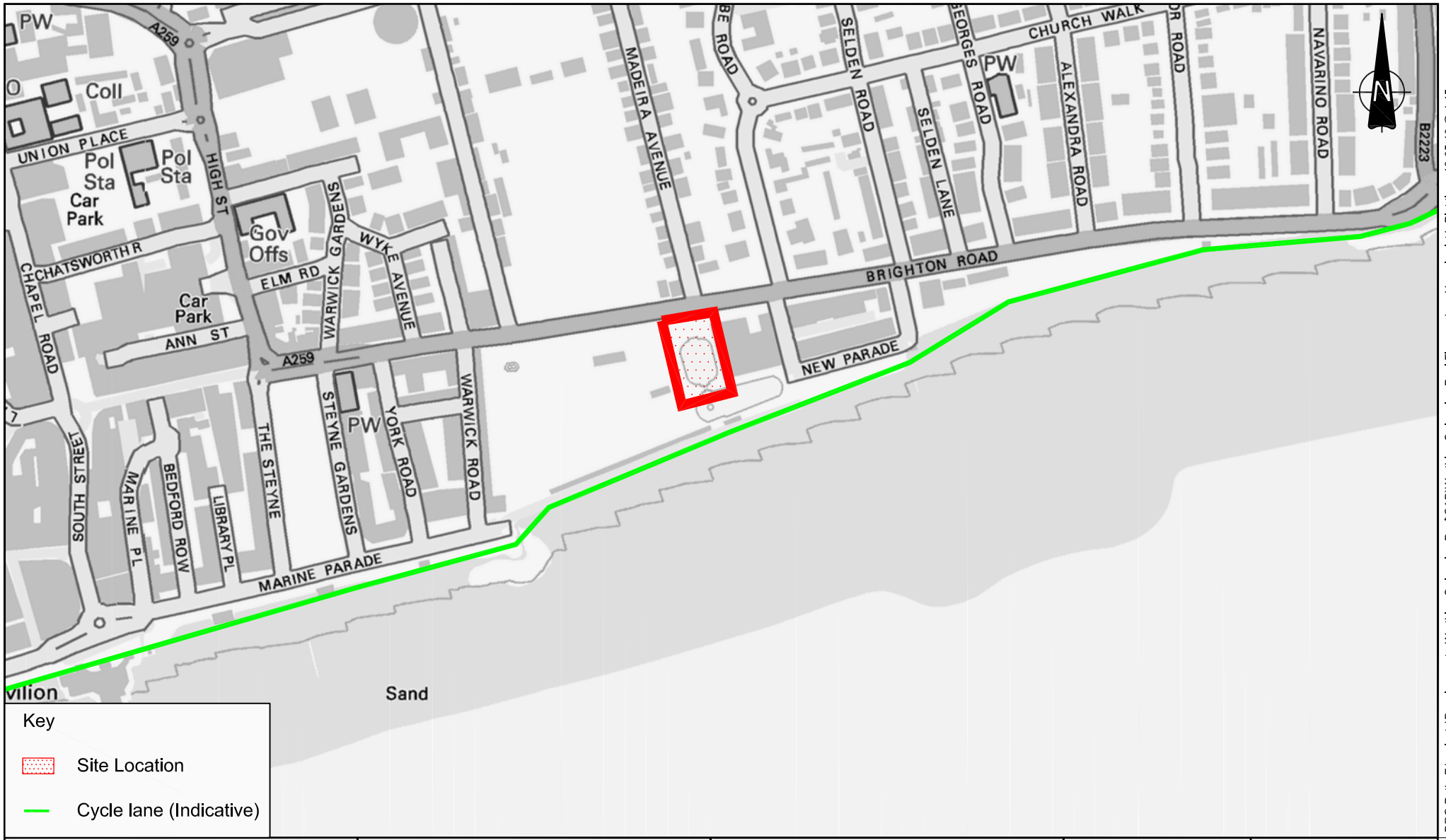

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Project: Worthing Swimming Pool			Chk'd: MSF / App'd: MSF
			Date: March 2010 / Scale: NTS
			No. Figure 4.2 / Rev:

AECOM House
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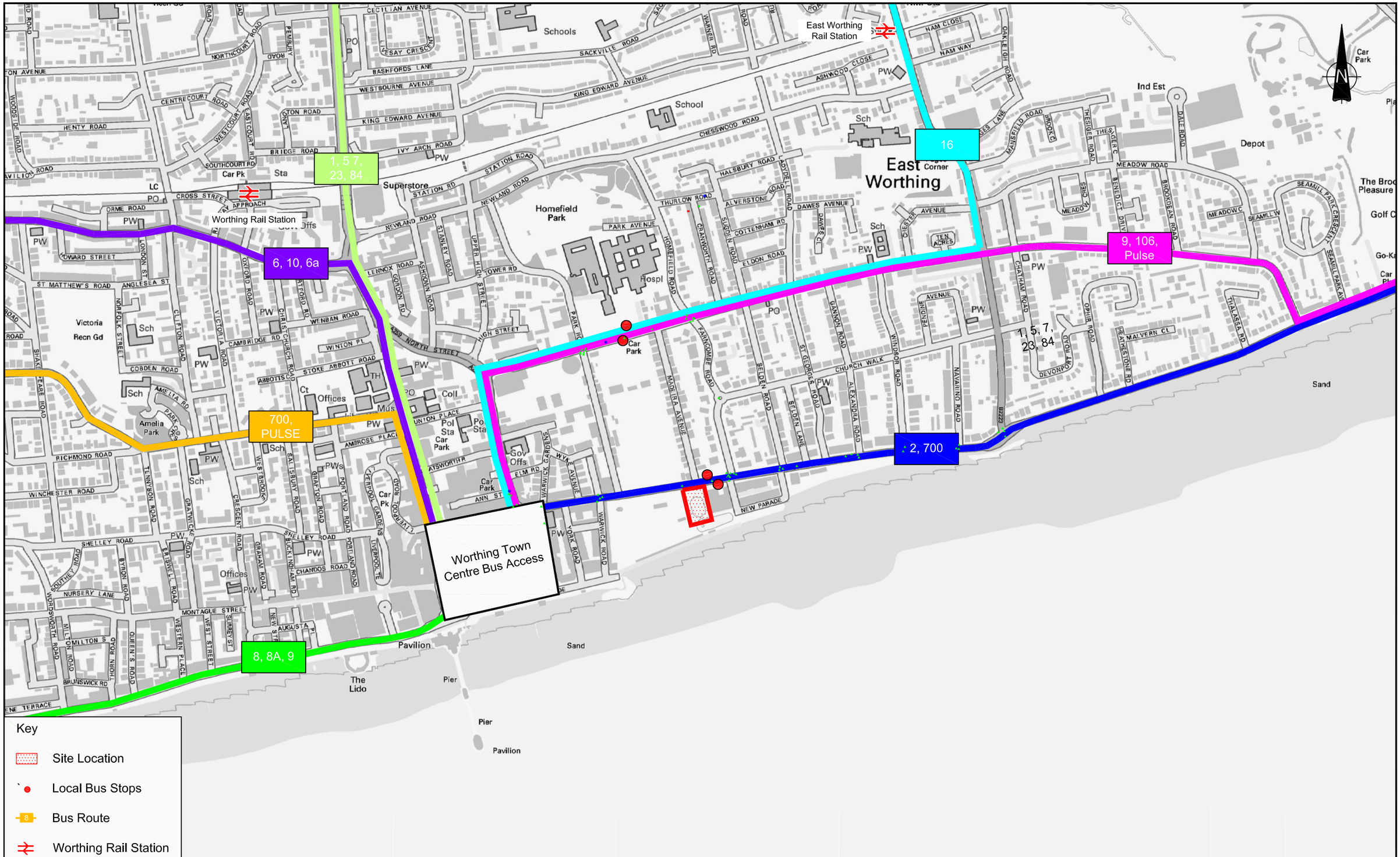

Client: Worthing Council	Title: Public Transport Accessibility	AECOM	Design: RM / CAD: RM
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	Chk'd: MSF / App'd: MSF Date: March 2010 / Scale: NTS No. Figure 4.3 / Rev: A3

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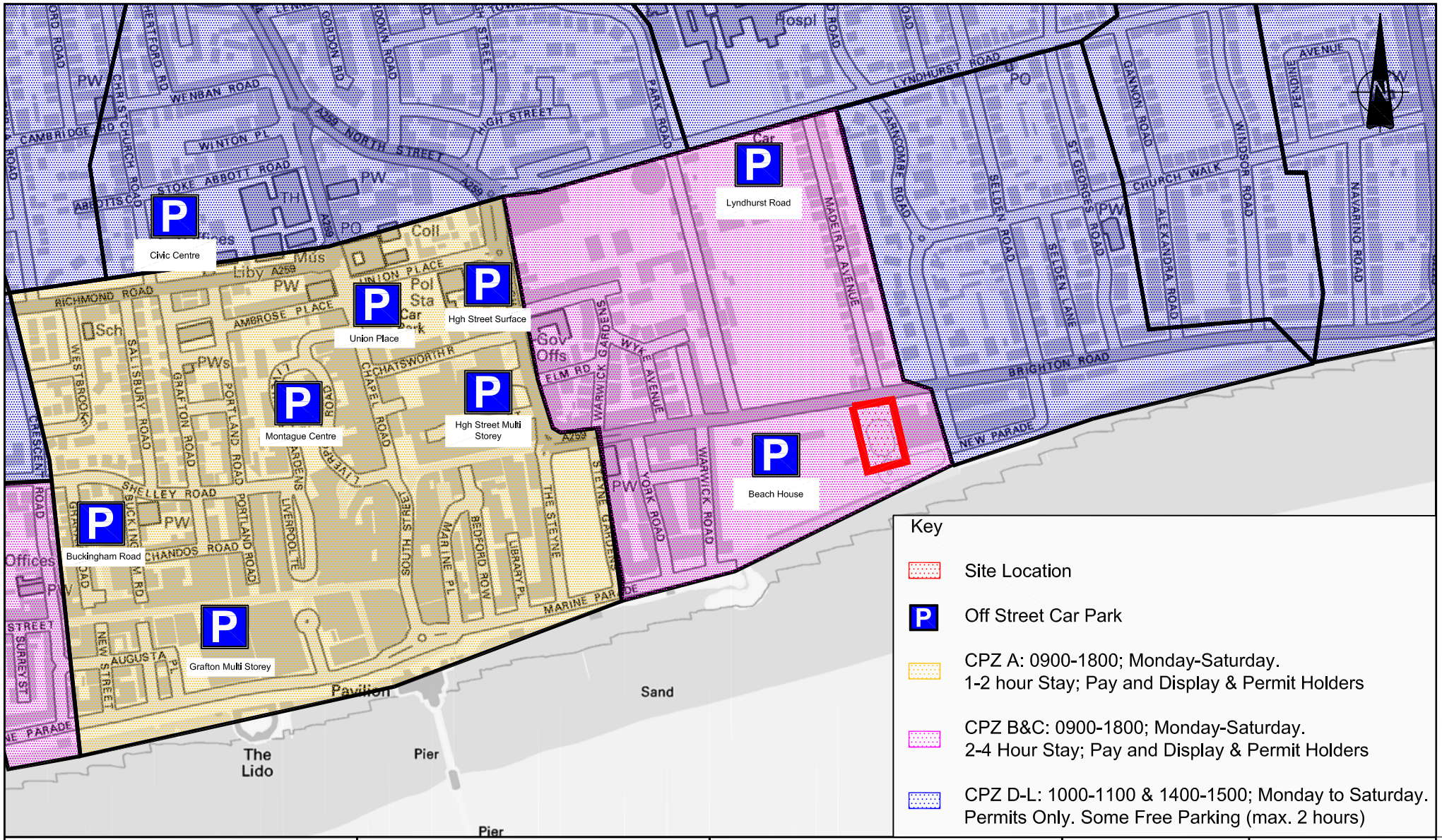
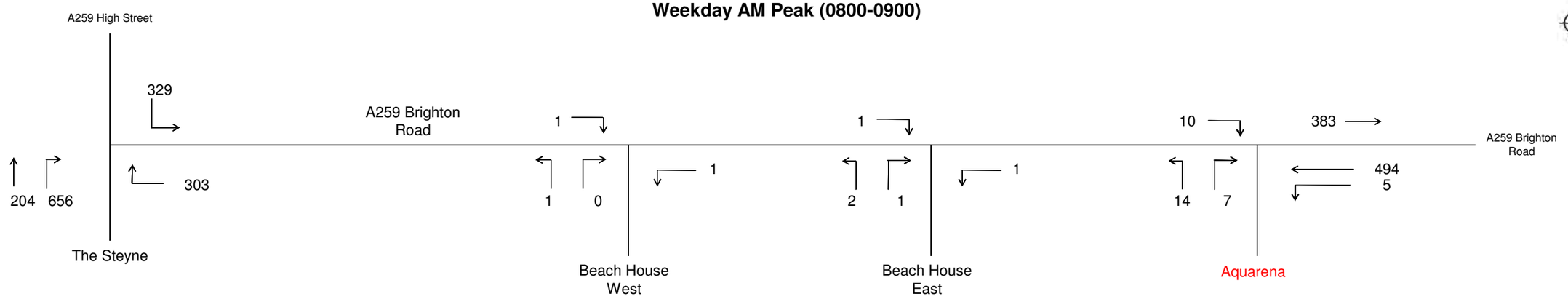


Client: Worthing Council	Title: Worthing Town Centre Controlled Parking Zones (CPZs) and Off Street Car Parks	AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	Design: RM / CAD: RM Chk'd: MSF / App'd: MSF Date: April 2010 / Scale: NTS No. Figure 4.4 Rev: A4
Project: Worthing Swimming Pool			

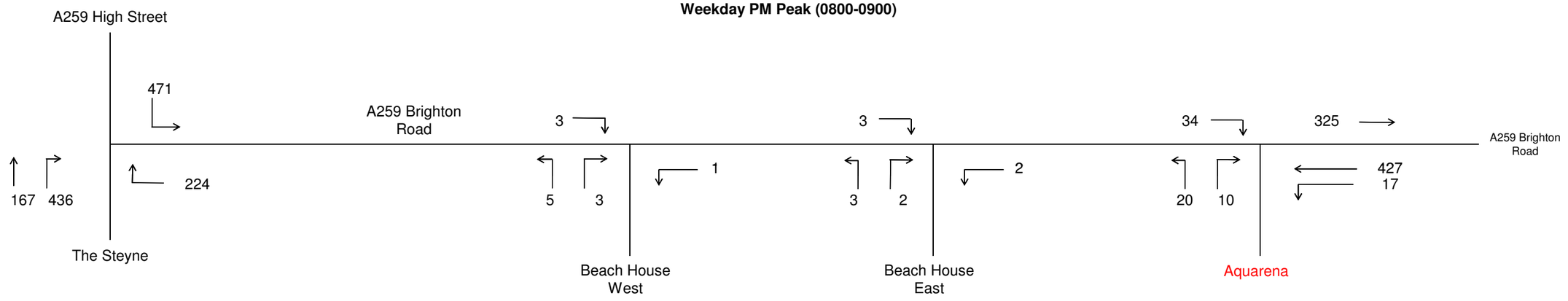
DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\Worthing Swimming Pool Figures.dwg User: lewist1 Plot time: 13-05-10 @ 4:48pm

cm

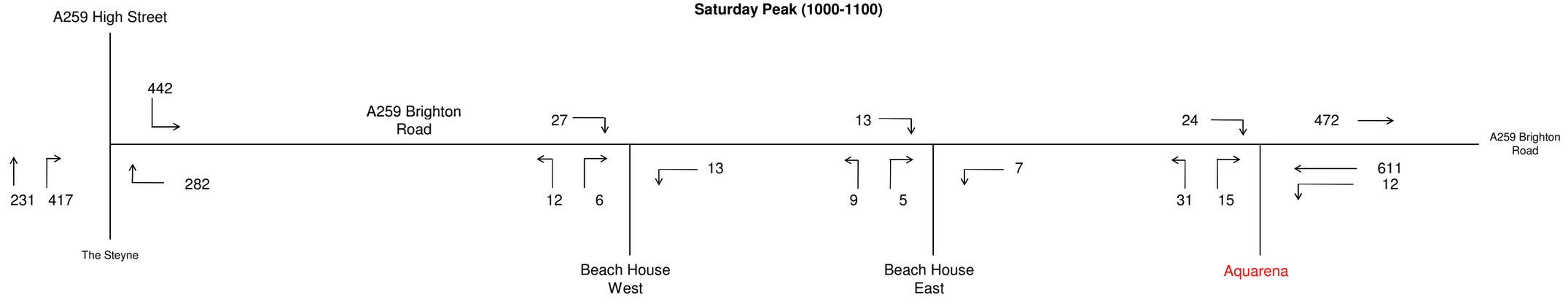
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)



Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

Client: Worthing Council	Title: Local Highway Network 2010 Traffic Flows	AECOM	Design: RM / Calc: RM
Project: Worthing Swimming Pool			Chk'd: MSF / App'd: MSF
			Date: May-10 / Scale: NTS

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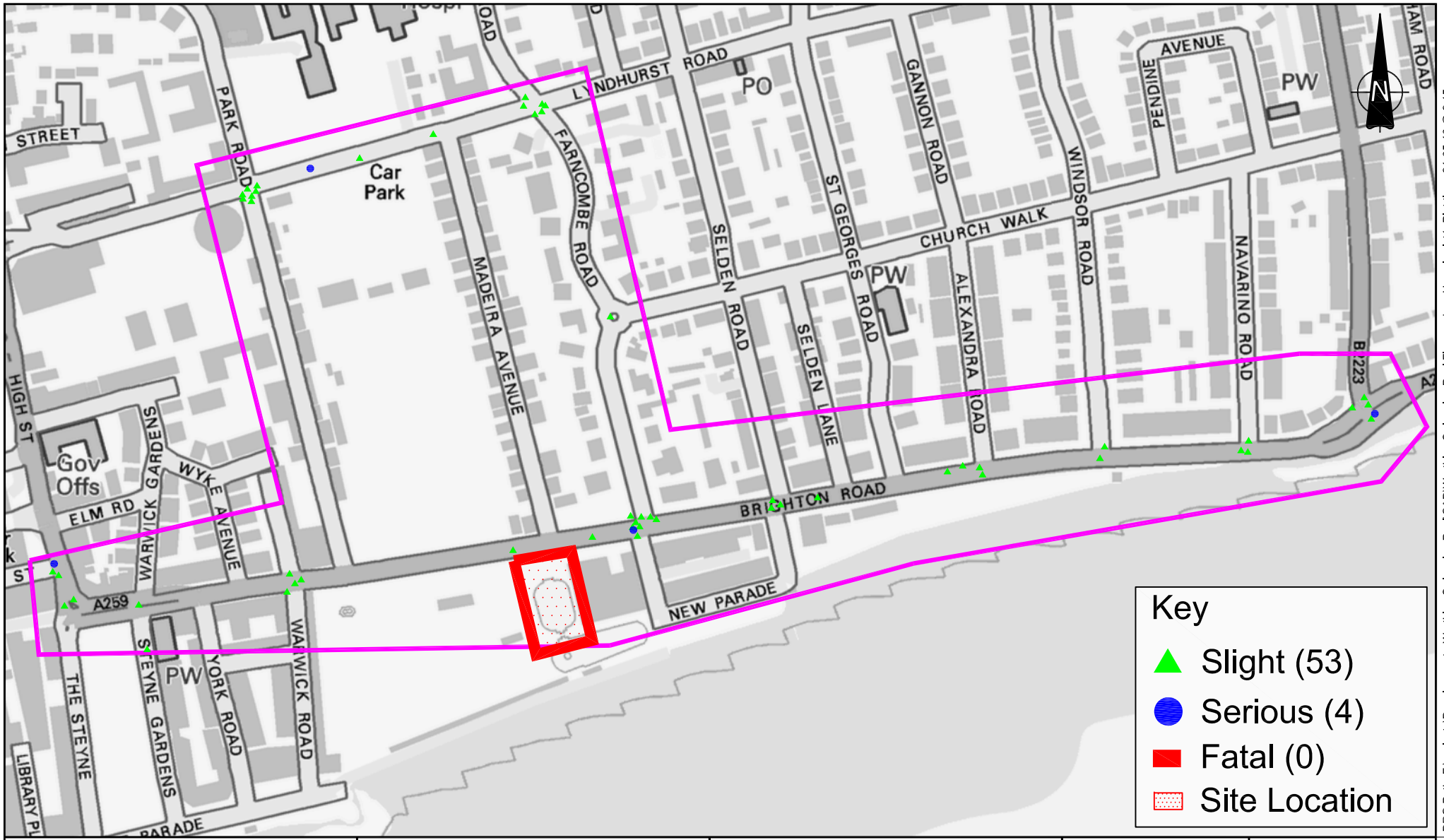
Figure 4.5



DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\Worthing Swimming Pool Figures.dwg User: lewist1 Plot time: 21-05-10 @ 2:15pm

Client: Worthing Council	Title: Location of Recorded Traffic Accidents April 2005 - March 2010	AECOM	Design: RM	CAD: RM
Project: Worthing Swimming Pool			Chk'd: MSF	App'd: MSF
			Date: April 2010	Scale: NTS
			No. Figure 4.6	Rev:

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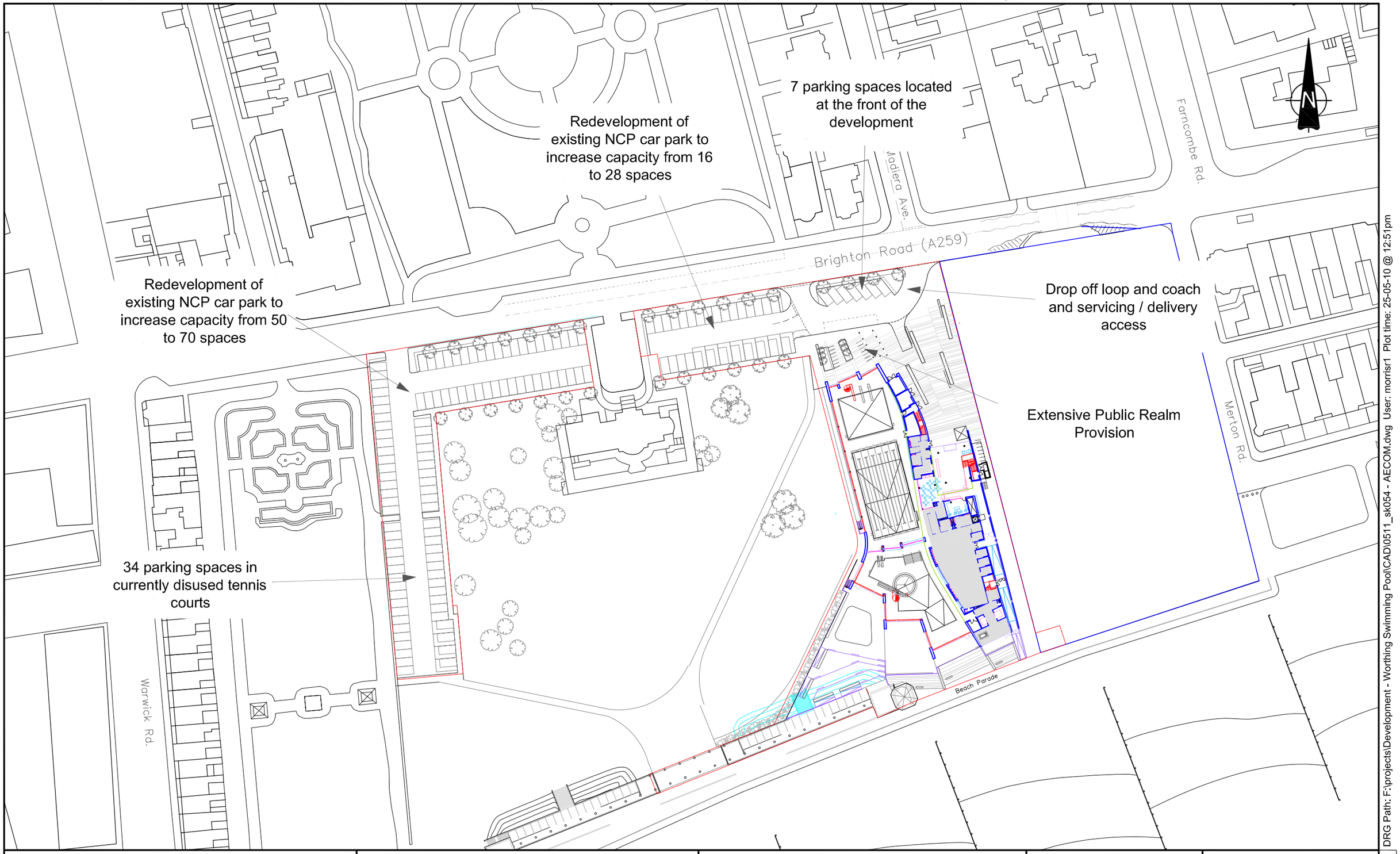
cm

A4



DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\0511_sk054 - AECOM.dwg User: morrisr1 Plot time: 25-05-10 @ 12:51pm

Client: Worthing Council	Title: Proposed Access Arrangements	AECOM	Design: RM / CAD: RM
Project: Worthing Swimming Pool			Chk'd: MSF / App'd: MSF
			Date: May 2010 / Scale: 1:1,000
			No. Figure 5.1 / Rev:
			A3

AECOM House
63-77 Victoria Street
St Albans, Herts AL1 3ER

Tel: +44 (0)1727 535000
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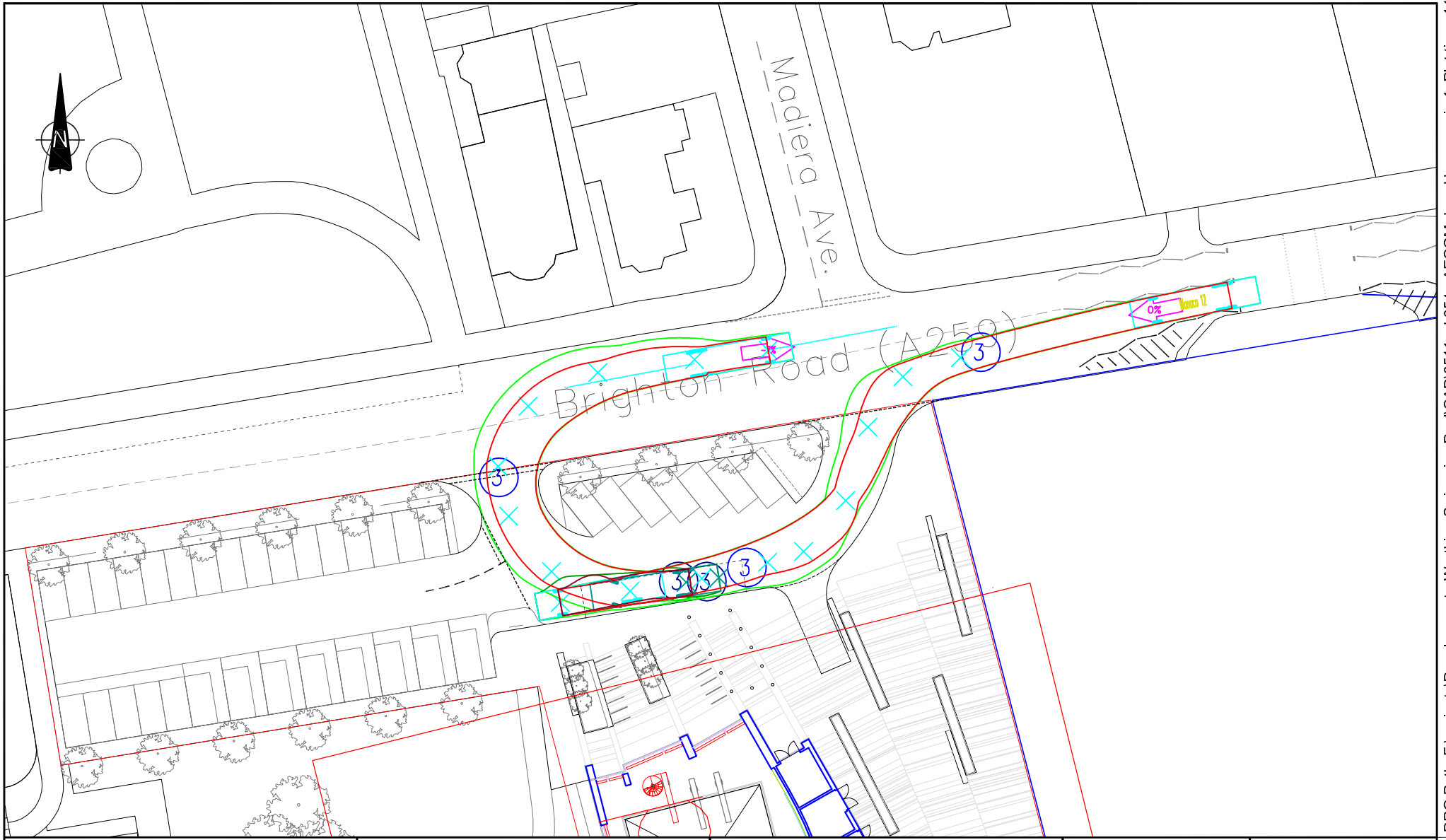
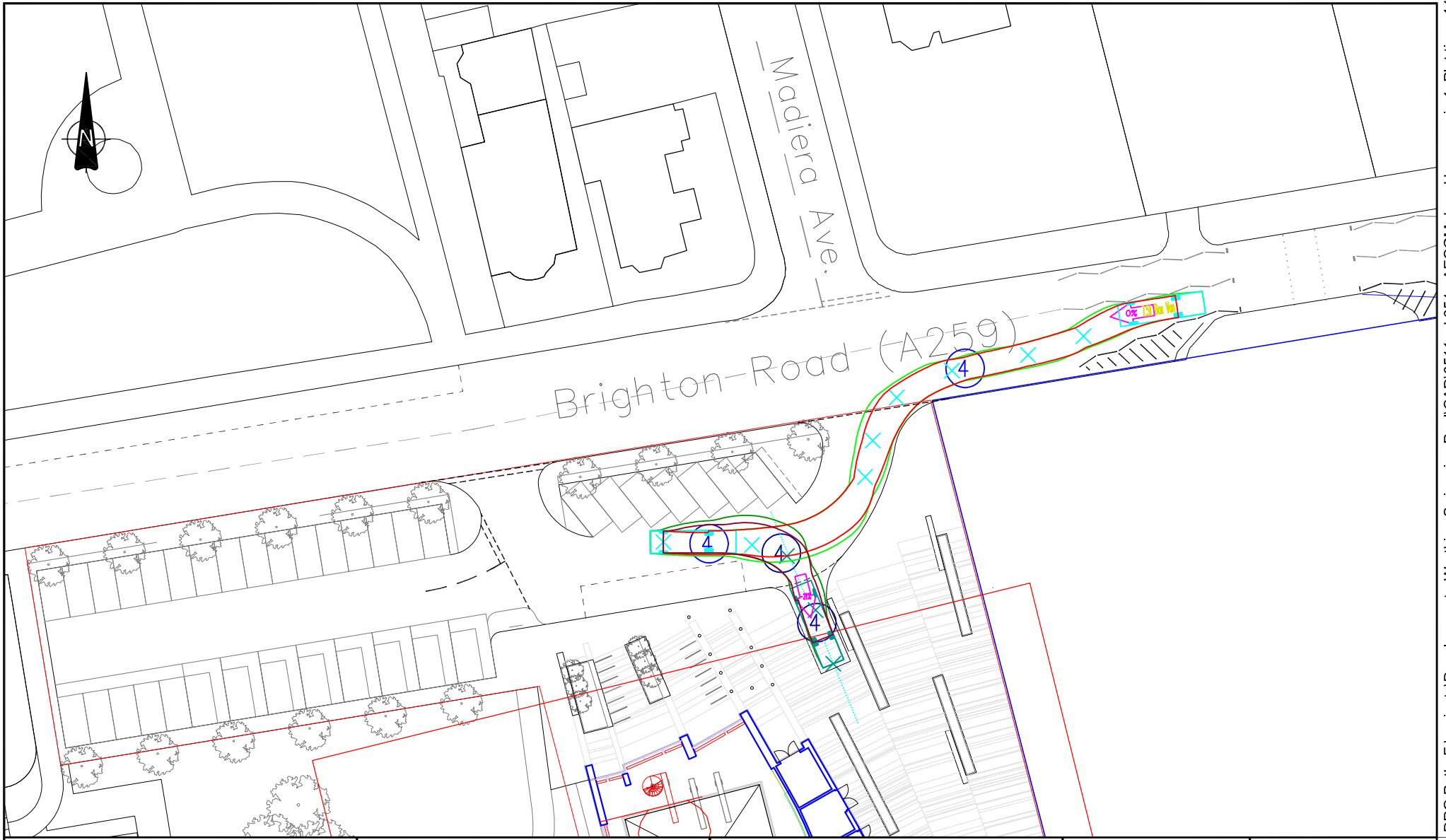
cm



DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\0511_sk054 - AECOM.dwg User: morrisr1 Plot time: 14-05-10

Client: Worthing Council	Title: Proposed Development Layout Monaca 12 Coach (12 x 2.5m) Swept Path Analysis	AECOM	Design: RM / CAD: RM / Chk'd: MSF / App'd: MSF / Date: May 2010 / Scale: 1:500 / cm
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	No. Figure 5.2 / Rev: / A4



Client: Worthing Council

Project: Worthing Swimming Pool

Title: Proposed Development Layout 7.5T Box Van (8.0 x 2.0m) Swept Path Analysis

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Design: RM	CAD: RM
Chk'd: MSF	App'd: MSF
Date: May 2010	Scale: 1:500

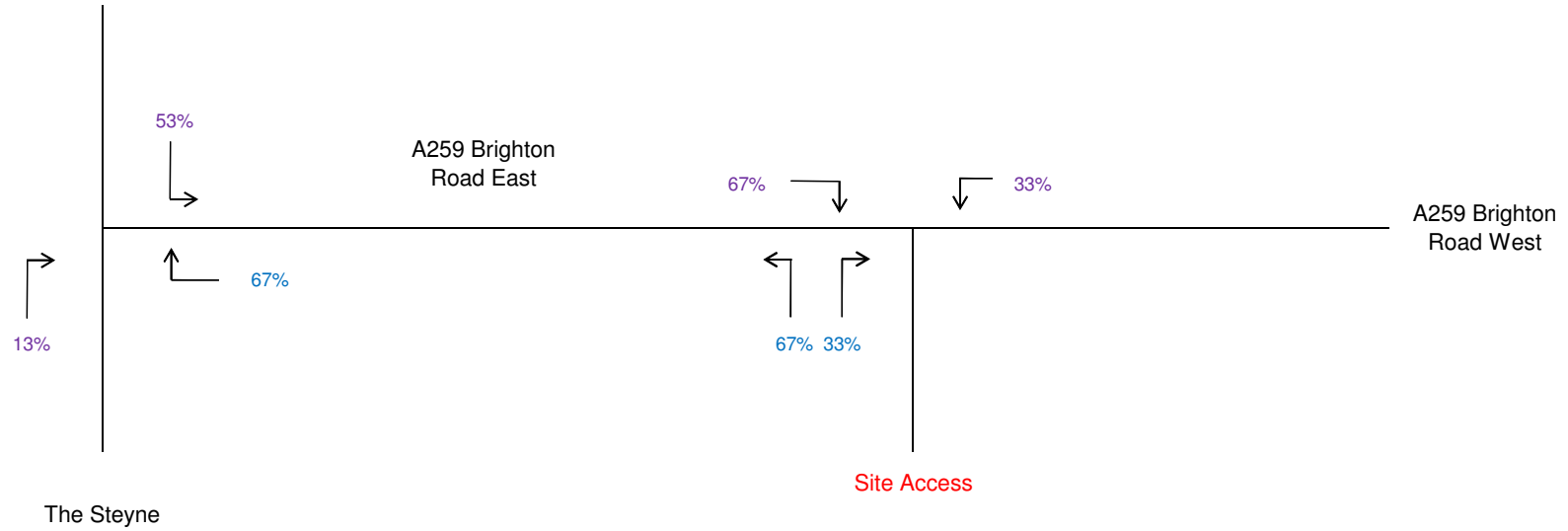
No. Figure 5.3

Rev:

A4

cm

DRG Path: F:\projects\Development - Worthing Swimming Pool\CAD\0511_sk054 - AECOM.dwg User: morrisr1 Plot time: 14-05-10



Key

100% Departures

100% Arrivals

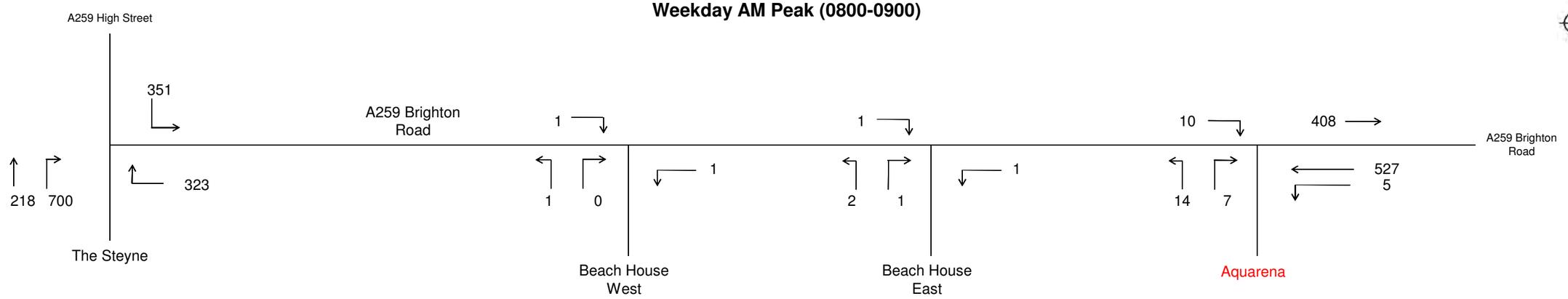
LV = Light Vehicles

HV = Heavy Vehicles

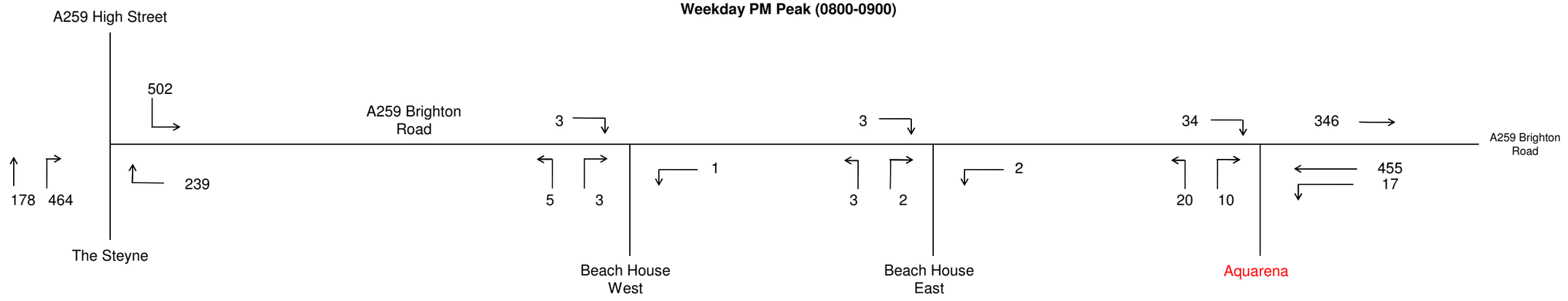
Source: ATC Data 2010 and Aquarena Transport Assessment 2010

Client: **Worthing Council**	Title: **Development Traffic Assignment & Distribution**	AECOM	Design: RM	Calc: RM	
Project: **Worthing Swimming Pool**			Chk'd: MSF	App'd: MSF	
			Date: May-10	Scale: NTS	
		AECOM House 63-77 Victoria Street St Albans, Herts AL1 3ER	Tel: +44 (0)1727 535000 Fax: +44 (0)1727 535099 www.aecom.com	**Figure 7.1**	

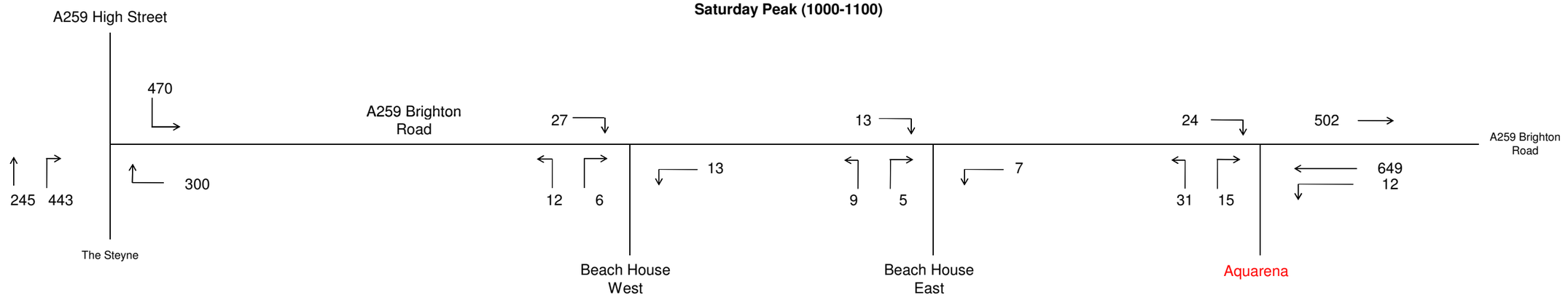
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)

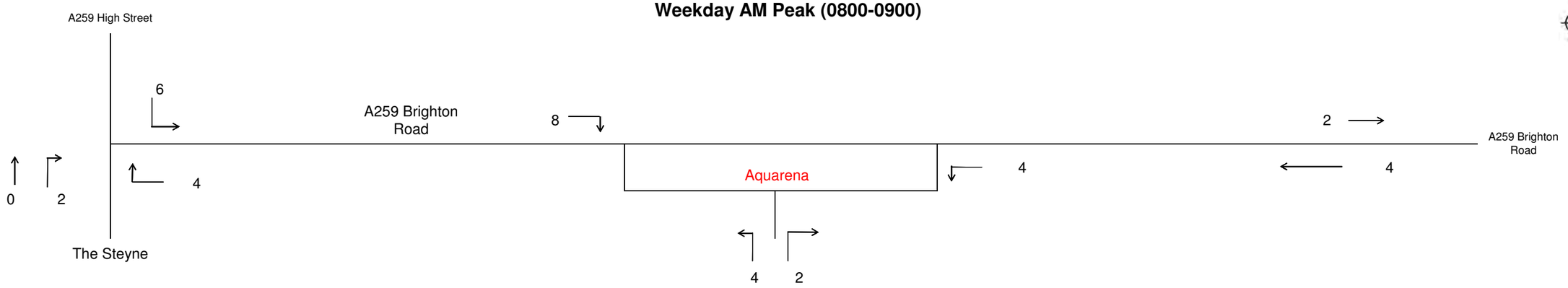


Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

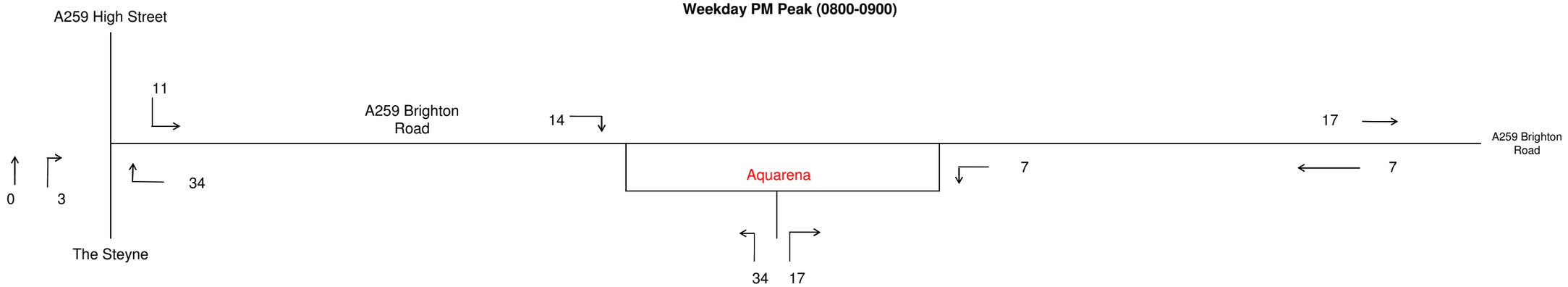
Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

Client: Worthing Council	Title: Local Highway Network 2013 Base Traffic Flows	AECOM	Design: RM / Calc: RM / Chk'd: MSF / App'd: MSF / Date: May-10 / Scale: NTS
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER : +44 (0)1727 535000 : +44 (0)1727 535099 www.aecom.com	Figure 7.2

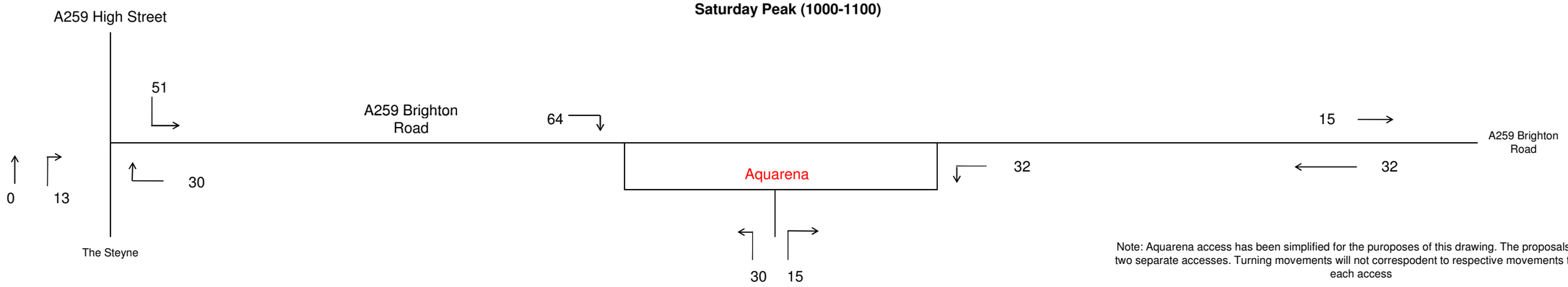
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)



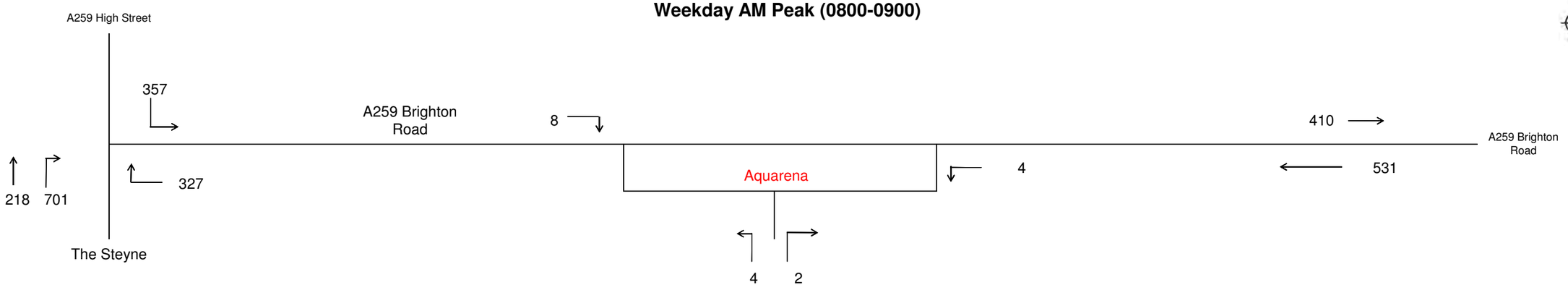
Note: Aquarena access has been simplified for the puroposes of this drawing. The proposals are for two separate accesses. Turning movements will not correspodent to respective movements to / from each access

Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

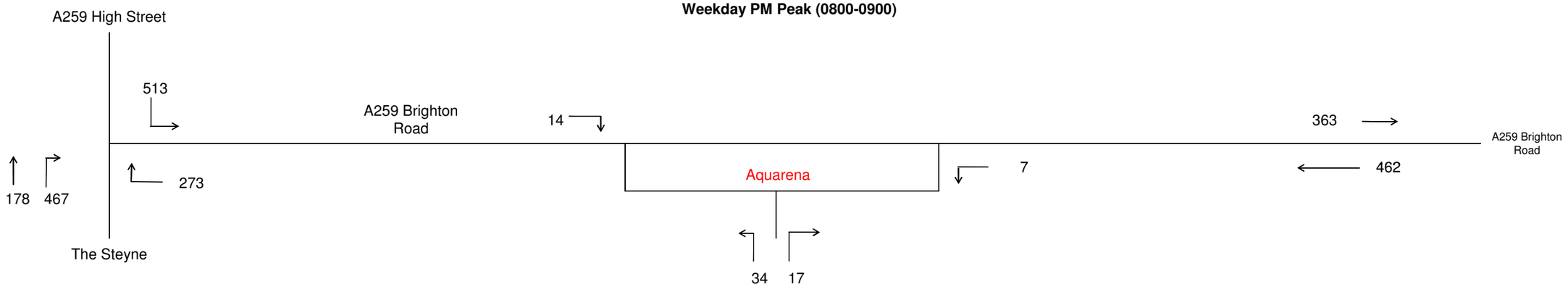
Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

Client: Worthing Council	Title: Local Highway Network Net Development Traffic (TRICS)	AECOM	Design: RM / Calc: RM Chk'd: MSF / App'd: MSF Date: May-10 / Scale: NTS
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER : +44 (0)1727 535000 : +44 (0)1727 535099 www.aecom.com	Figure 7.3

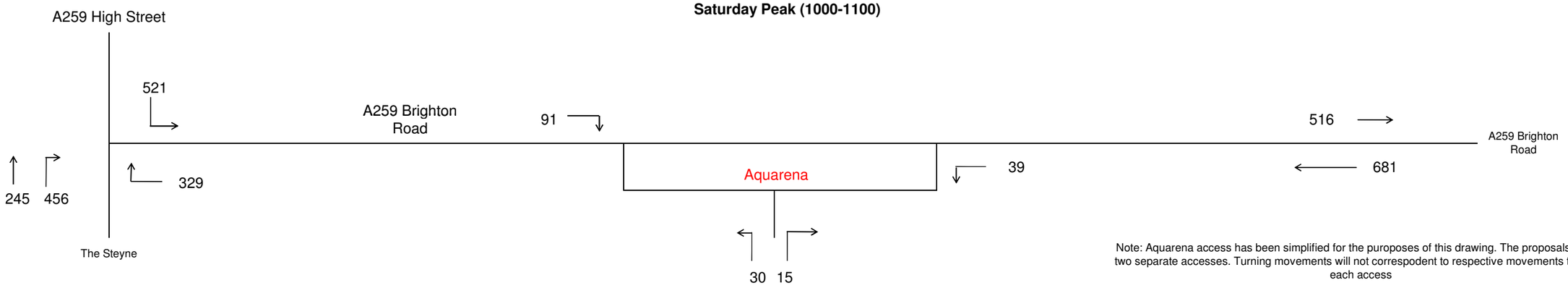
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)



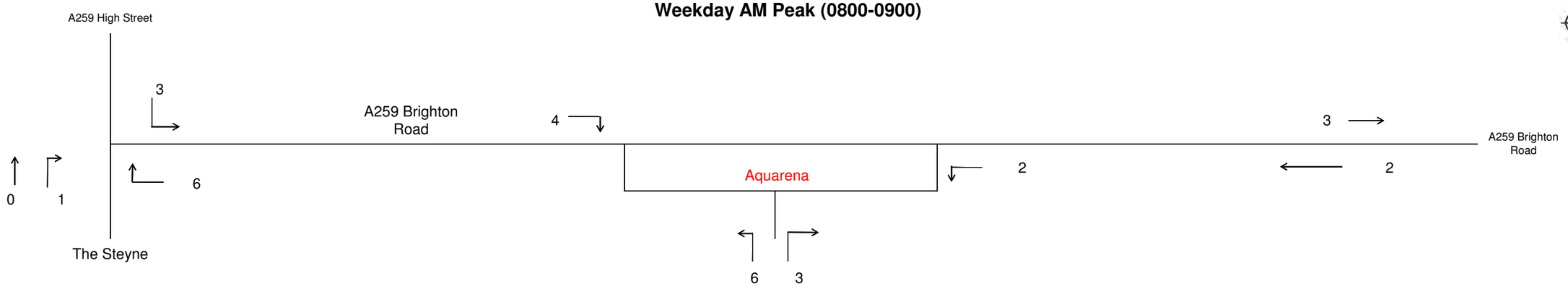
Note: Aquarena access has been simplified for the puroposes of this drawing. The proposals are for two separate accesses. Turning movements will not correspodent to respective movements to / from each access

Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

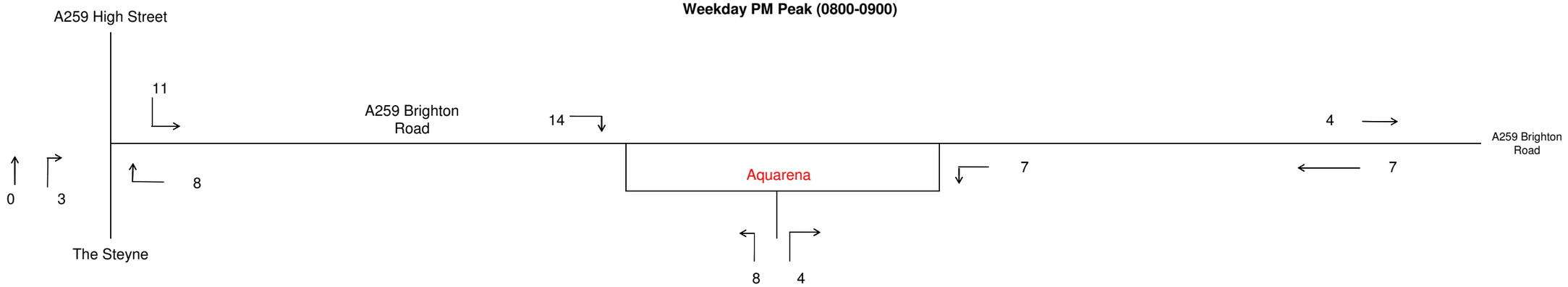
Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

Client: **Worthing Council**	Title: **Local Highway Network** **2013 Base + Net Development (TRICS)**	AECOM	Design: RM · Calc: RM Chk'd: MSF · App'd: MSF Date: May-10 · Scale: NTS
Project: **Worthing Swimming Pool**		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER : +44 (0)1727 535000 : +44 (0)1727 535099 www.aecom.com	**Figure 7.4**

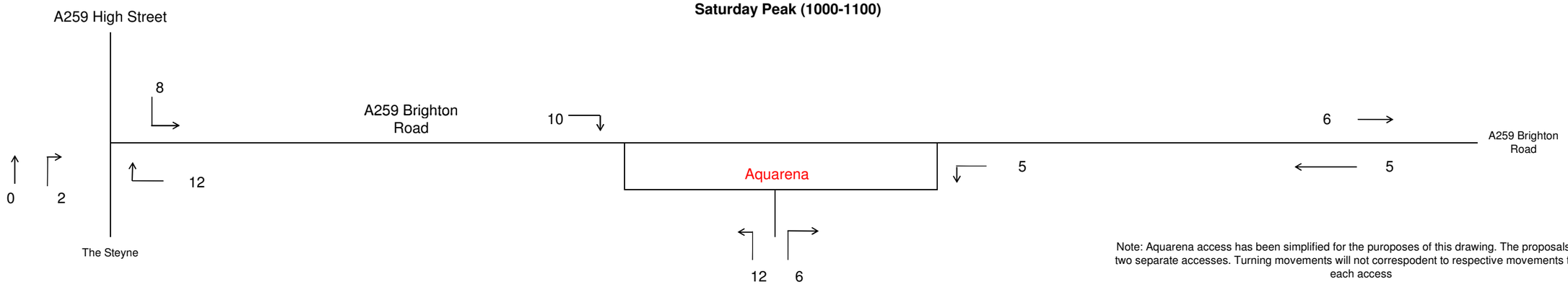
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)



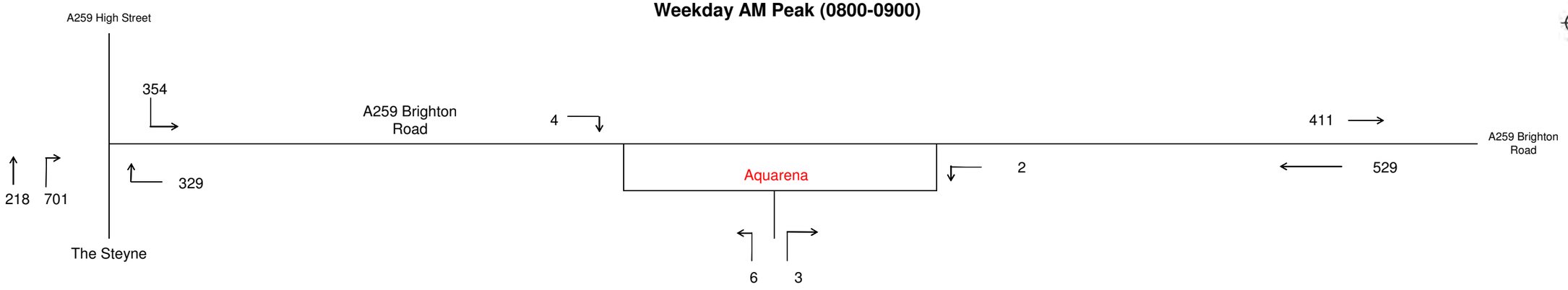
Note: Aquarena access has been simplified for the puroposes of this drawing. The proposals are for two separate accesses. Turning movements will not correspodent to respective movements to / from each access

Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

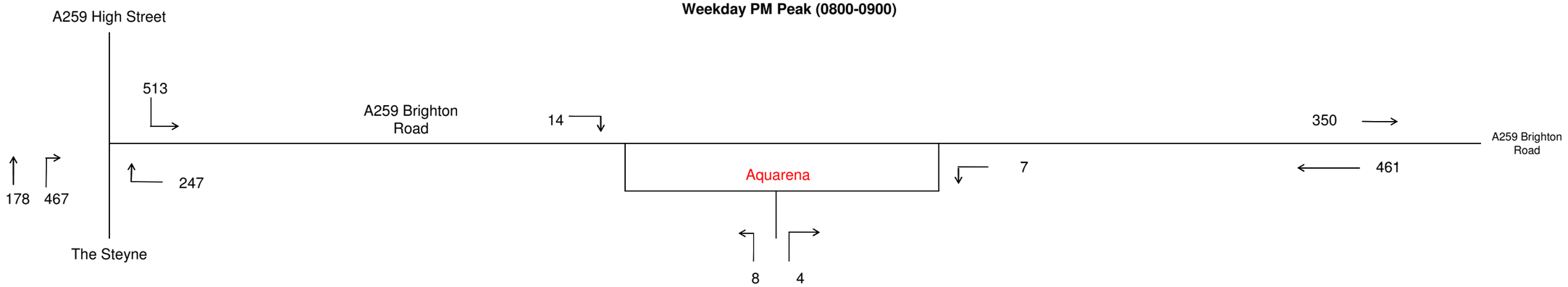
Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

Client: Worthing Council	Title: Local Highway Network Net Development Traffic (40% Growth Factor)	AECOM	Design: RM / Calc: RM Chk'd: MSF / App'd: MSF Date: May-10 / Scale: NTS
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER : +44 (0)1727 535000 : +44 (0)1727 535099 www.aecom.com	Figure 7.5

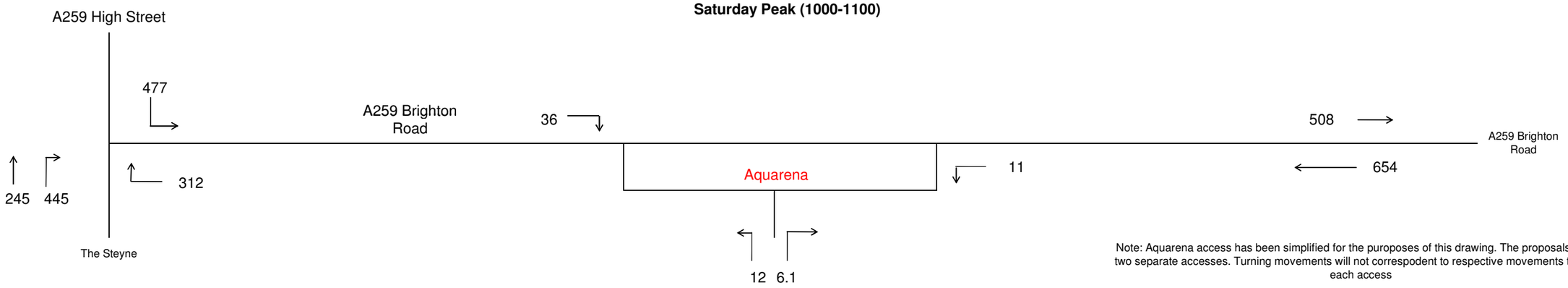
Weekday AM Peak (0800-0900)



Weekday PM Peak (0800-0900)



Saturday Peak (1000-1100)

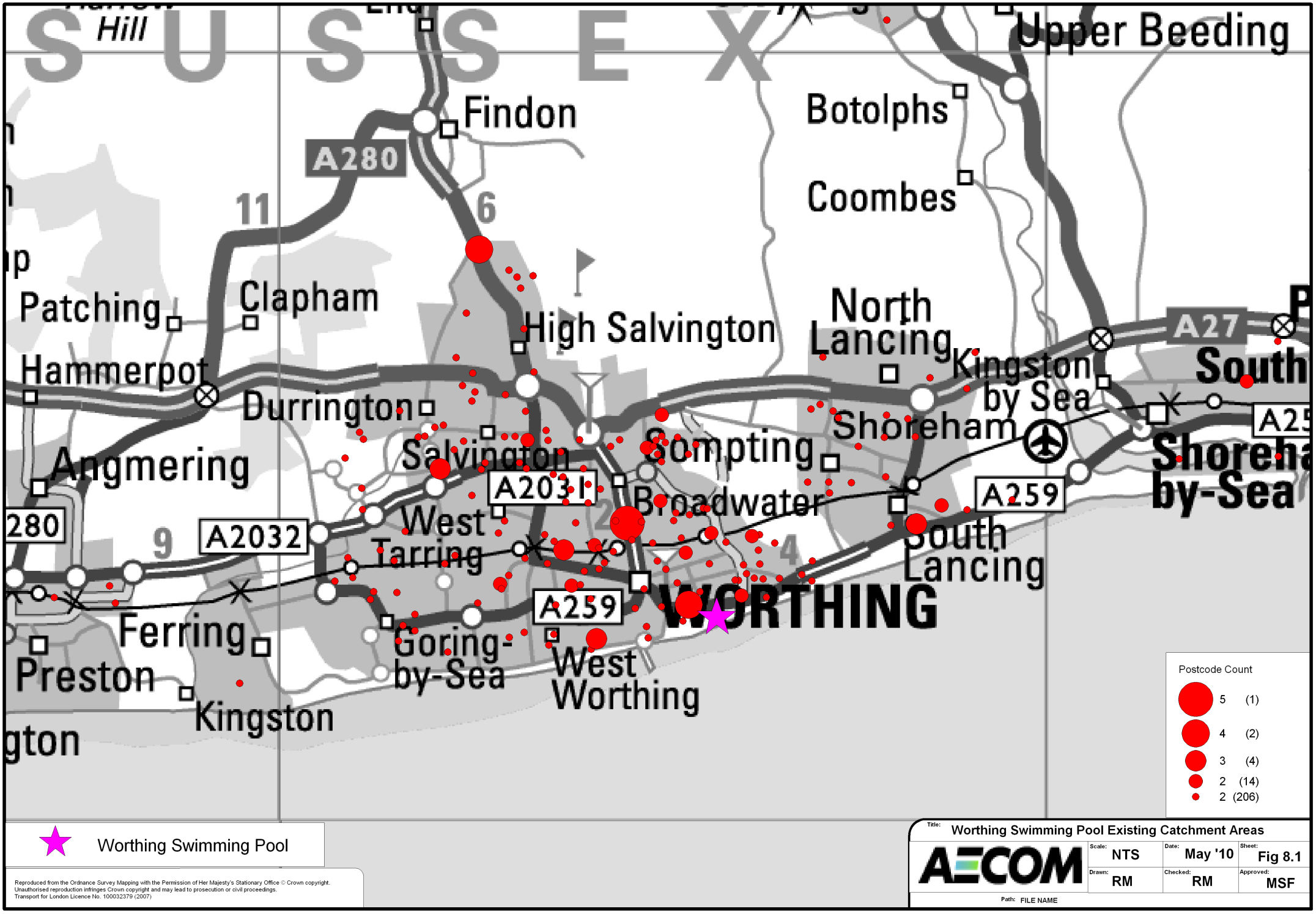


Note: Aquarena access has been simplified for the puroposes of this drawing. The proposals are for two separate accesses. Turning movements will not correspodent to respective movements to / from each access

Note: Traffic flows do not correlate between the A259 Brighton Road to the east of the site and The Steyne junction flow due to additional junctions along this route where traffic is lost / gained

Source: 2010 Traffic Count Data and 2010 Aquarena Transport Assessment

Client: Worthing Council	Title: Local Highway Network 2013 Base + Net Development (40% Growth Factor)	AECOM	Design: RM / Calc: RM Chk'd: MSF / App'd: MSF Date: May-10 / Scale: NTS
Project: Worthing Swimming Pool		AECOM House, 63-77 Victoria Street, St Albans, Herts AL1 3ER : +44 (0)1727 535000 : +44 (0)1727 535099 www.aecom.com	Figure 7.6



Title: Worthing Swimming Pool Existing Catchment Areas

AECOM

Scale:	Date:	Sheet:
NTS	May '10	Fig 8.1
Drawn:	Checked:	Approved:
RM	RM	MSF

Path: FILE NAME

Appendix A Accident Data Analysis

Appendix A

Title Summary of Accident Analysis
Location: Selected Roads - Worthing
From - To (date): 01/04/2005 to 31/03/2010
Data Provider: West Sussex CC

RTAs broken down by Classification of Injury		
No. of Fatal RTAs:	0	0.0%
No. of Serious RTAs:	4	7.0%
No. of Slight RTAs:	53	93.0%
Total	57	100.0%

RTAs broken down by cause (total no. of causes):		
Rear Shunt	11	19.3%
Red Light	0	0.0%
Excess Speed	2	3.5%
Lost Control	2	3.5%
Skidding / Weather Conditions	4	7.0%
Weaving / Overtaking	3	5.3%
Failure to Give Way	16	28.1%
Right / Left Turn	9	15.8%
Ped without due care	2	3.5%
Alcohol/Illness/Fatigue	2	3.5%
Unknown	0	0.0%
Road layout	2	3.5%
Other	2	3.5%
Reversing	2	3.5%
Total	57	100.0%

RTAs broken down by mode (total no. of causes):		
Pedestrians	6	6.4%
Cyclists	16	17.0%
Motorcyclists	10	10.6%
Car	54	57.4%
Heavy Goods Vehicle	2	2.1%
Other Goods Vehicles	0	0.0%
Public Service Vehicle	0	0.0%
GV <3.5	6	6.4%
GV 3.5<7.5	0	0.0%
Total	94	100.0%

RTAs broken down by Month		
January	2	3.5%
February	2	3.5%
March	8	14.0%
April	5	8.8%
May	3	5.3%
June	3	5.3%
July	0	0.0%
August	8	14.0%
September	9	15.8%
October	6	10.5%
November	5	8.8%
December	6	10.5%
Total	57	100.0%

RTAs broken down by Year		
2005	18	31.6%
2006	8	14.0%
2007	9	15.8%
2008	7	12.3%
2009	12	21.1%
2010	3	5.3%
Total	57	100.0%

RTAs broken down by Light Conditions		
Light	50	87.7%
Dark	7	12.3%
Total	57	100.0%

Appendix A

Accident Anaylsis - Worthing Swimming Pool
April 2005 - March 2010

Reference							Road User									Casualties			Cause of Accident												
Ref	RTA Number	Cat	Weather	Light	Year	Month	Peds	Pcyc	M/C	Cars	HGV	O. VEH	PSV	<3.5	3.5<7.5	Fatal	Serious	Slight	Rear Shunt	Red Light	Excess Speed	Lost Control	Skidding / Weather Conditions	Weaving / Overtaking	Failure to Give Way	Right / Left Turn	Ped without due care	Alcohol/Illness/ Fatigue	Unknown	Road layout	Other	Reversing
1	0502552	SLIGHT	Fine	Light	2005	April	1			1								1							1							
2	0502921	SLIGHT	Fine	Light	2005	April	1			1								1													1	
3	0504010	SLIGHT	Fine	Light	2005	May				1								1	1													
4	0505153	SLIGHT	Fine	Light	2005	June		1		1								1						1								
5	0505674	SLIGHT	Fine	Light	2005	June		1		1								1								1						
6	0506534	SLIGHT	Fine	Light	2005	August		1		1								1								1						
7	0506825	SLIGHT	Rain	Light	2005	August			1	1								1								1						
8	0506916	SLIGHT	Fine	Light	2005	August				1								1	1													
9	0507383	SLIGHT	Fine	Light	2005	September			1	1								1								1						
10	0507377	SLIGHT	Fine	Light	2005	September		1		1								1													1	
11	0507560	SLIGHT	Fine	Dark	2005	September			1	1								1							1							
12	0507626	SLIGHT	Rain	Light	2005	September				1								1							1							
13	0507848	SLIGHT	Fine	Light	2005	September				1								3	1													
14	0510495	SLIGHT	Fine	Light	2005	November		1		1								1							1							
15	0509879	SLIGHT	Fine	Light	2005	November		1		1								1								1						
16	0510137	SLIGHT	Fine	Light	2005	November				1								1							1							
17	0510412	SLIGHT	Fine	Dark	2005	December		1		1								1							1							
18	0600120	SLIGHT	Fine	Light	2005	December				1								1							1							
19	0602780	SLIGHT	Fine	Light	2006	March				1								1							1							
20	0602764	SLIGHT	Fine	Light	2006	April			1									1				1										
21	0602966	SLIGHT	Fine	Light	2006	April			1	1								1						1								
22	0603263	SLIGHT	Fine	Light	2006	April				1								1	1													
23	0608205	SLIGHT	Fine	Light	2006	September				1								1				1										
24	0608638	SLIGHT	Fine	Light	2006	October				1								1							1							
25	0609143	SERIOUS	Fine	Light	2006	October	1			1								2							1							
26	0611256	SLIGHT	Fine	Light	2006	December	1			1								1														1
27	0701511	SLIGHT	Fine	Light	2007	February		1		1								1														1
28	0702440	SLIGHT	Fine	Light	2007	March					1							1									1					
29	0702394	SLIGHT	Fine	Light	2007	March				1								1							1							
30	0703655	SLIGHT	Fine	Light	2007	MAy				1				1				1			1											
31	0707146	SLIGHT	Fine	Light	2007	August				1								1	1													
32	0707867	SLIGHT	Rain	Dark	2007	September				1								1					1									
33	0708124	SLIGHT	Fine	Light	2007	September		1		1								1							1							
34	[0708892	SLIGHT	Fine	Light	2007	October		1		1								1							1							
35	0710004	SLIGHT	Fine	Light	2007	November				1								2	1													
36	0800199	SLIGHT	Fine	Dark	2008	January		1		1								1								1						
37	0802376	SLIGHT	Fine	Light	2008	March				1								3										1				
38	0804143	SLIGHT	Rain	Light	2008	May		1		1								1					1									
39	0807098	SLIGHT	Fine	Light	2008	September			1					1				1						1								
40	0808381	SLIGHT	Fine	Light	2008	October			1	1								1							1							
41	0808420	SLIGHT	Fine	Dark	2008	November				1								2										1				
42	0809982	SLIGHT	Fine	Dark	2008	December			1	1								1					1									
43	0900543	SERIOUS	Fine	Light	2009	January				1								1							1							
44	0901773	SERIOUS	Fine	Light	2009	March		1		1								1								1						
45	0901938	SLIGHT	Fine	Dark	2009	March	1			1								1			1											
46	0904503	SERIOUS	Fine	Light	2009	June				1	1						2													1		
47	0905838	SLIGHT	Fine	Light	2009	August				1				1				1	1													
48	0905883	SLIGHT	Fine	Light	2009	August				1				1				1								1						
49	0906132	SLIGHT	Fine	Light	2009	August			1	1								1	1													
50	0906223	SLIGHT	Fine	Light	2009	August		1		1								1	1													
51	0907671	SLIGHT	Fine	Light	2009	October				1				1				2	1													
52	0908119	SLIGHT	Fine	Light	2009	October				1								1													1	
53	1000597	SLIGHT	Fine	Light	2009	December		1		1								1								1						
54	0909286	SLIGHT	Fine	Light	2009	December		1		1								1							1							
55	1000903	SLIGHT	Fine	Light	2010	February				1				1				1					1									
56	1001718	SLIGHT	Fine	Light	2010	March			1	1								1	1													
57	1001694	SLIGHT	Fine	Light	2010	March	1			1								1									1					

Data supplied by West Sussex County Council

Appendix B – TRICS Data

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : D - SWIMMING POOLS
VEHICLES

Selected regions and areas:

04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	NR	NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	CB	CUMBRIA	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 2500 to 6800 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 25/11/09

Selected survey days:

Monday	2 days
Tuesday	3 days
Wednesday	1 days

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	1

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	5

LIST OF SITES relevant to selection parameters

1 CA-07-D-01 SWIMMING POOL, CAMBRIDGE CAMBRIDGESHIRE
POOL WAY
COLDHAM'S COMMON
CAMBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 2925 sqm

2 CB-07-D-01 SWIMMING POOL, CARLISLE CUMBRIA
JAMES STREET

CARLISLE
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2650 sqm

3 GM-07-D-03 SWIMMING POOL, MANCHESTER GREATER MANCHESTER
BOOTH STREET

MANCHESTER
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 6800 sqm

4 NR-07-D-01 SWIMMING POOL, NORTHAMPTON NORTHAMPTONSHIRE
UPPER MOUNTS

NORTHAMPTON
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2500 sqm

5 NT-07-D-03 SWIMMING POOL, MANSFIELD NOTTINGHAMSHIRE
BATH STREET
TITCHFIELD PARK
MANSFIELD
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2970 sqm

6 WO-07-D-01 SWIMMING POOL, WORCESTER WORCESTERSHIRE
SANSOME WALK

WORCESTER
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2695 sqm

TRIP RATE for Land Use 07 - LEISURE/D - SWIMMING POOLS
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	2	2948	0.356	2	2948	0.017	2	2948	0.373
07:00 - 08:00	5	3569	0.616	5	3569	0.230	5	3569	0.846
08:00 - 09:00	6	3423	0.545	6	3423	0.560	6	3423	1.105
09:00 - 10:00	6	3423	0.813	6	3423	0.443	6	3423	1.256
10:00 - 11:00	6	3423	0.842	6	3423	0.652	6	3423	1.494
11:00 - 12:00	6	3423	0.789	6	3423	0.798	6	3423	1.587
12:00 - 13:00	6	3423	0.798	6	3423	0.740	6	3423	1.538
13:00 - 14:00	6	3423	0.789	6	3423	0.954	6	3423	1.743
14:00 - 15:00	6	3423	0.662	6	3423	0.589	6	3423	1.251
15:00 - 16:00	6	3423	0.944	6	3423	0.750	6	3423	1.694
16:00 - 17:00	6	3423	1.709	6	3423	1.227	6	3423	2.936
17:00 - 18:00	6	3423	1.490	6	3423	1.689	6	3423	3.179
18:00 - 19:00	6	3423	1.675	6	3423	1.792	6	3423	3.467
19:00 - 20:00	6	3423	1.310	6	3423	1.621	6	3423	2.931
20:00 - 21:00	6	3423	0.730	6	3423	1.159	6	3423	1.889
21:00 - 22:00	5	3578	0.095	5	3578	0.721	5	3578	0.816
22:00 - 23:00	1	2970	0.034	1	2970	0.404	1	2970	0.438
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			14.197			14.346			28.543

Parameter summary

Trip rate parameter range selected:	2500 - 6800 (units: sqm)
Survey date date range:	01/01/02 - 25/11/09
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	6

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : D - SWIMMING POOLS
VEHICLES

Selected regions and areas:
02 SOUTH EAST
HC HAMPSHIRE 1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 2552 to 2552 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 25/11/09

Selected survey days:
Saturday 1 days

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

Selected Locations:
Edge of Town 1

Selected Location Sub Categories:
Out of Town 1

LIST OF SITES relevant to selection parameters

1 HC-07-D-02 SWIMMING POOL, ROMSEY HAMPSHIRE
SOUTHAMPTON ROAD

ROMSEY
Edge of Town
Out of Town
Total Gross floor area: 2552 sqm

TRIP RATE for Land Use 07 - LEISURE/D - SWIMMING POOLS
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	1	2552	1.646	1	2552	0.666	1	2552	2.312
08:00 - 09:00	1	2552	1.450	1	2552	0.274	1	2552	1.724
09:00 - 10:00	1	2552	2.194	1	2552	2.194	1	2552	4.388
10:00 - 11:00	1	2552	2.743	1	2552	1.881	1	2552	4.624
11:00 - 12:00	1	2552	1.920	1	2552	1.371	1	2552	3.291
12:00 - 13:00	1	2552	1.607	1	2552	1.724	1	2552	3.331
13:00 - 14:00	1	2552	1.881	1	2552	1.842	1	2552	3.723
14:00 - 15:00	1	2552	2.821	1	2552	2.469	1	2552	5.290
15:00 - 16:00	1	2552	2.508	1	2552	2.077	1	2552	4.585
16:00 - 17:00	1	2552	1.254	1	2552	2.429	1	2552	3.683
17:00 - 18:00	1	2552	1.215	1	2552	2.351	1	2552	3.566
18:00 - 19:00	1	2552	0.980	1	2552	2.351	1	2552	3.331
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			22.219			21.629			43.848

Parameter summary

Trip rate parameter range selected:	2552 - 2552 (units: sqm)
Survey date date range:	01/01/02 - 25/11/09
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	1
Number of Sundays:	0
Surveys manually removed from selection:	0

Appendix C – PICADY Data

Capabilities on project:
Transportation

Electronic copies of the PICADY data available upon request