

BOGNOR REGIS PROPOSED GOLF COURSE

Transport Assessment

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1 INTRODUCTION

Report Brief

- 1.1 RPS has been commissioned by Hallam Land Management to prepare a Transport Assessment (TA) to support a new 18-hole par 4 and 9 hole par 3 course on land to the south of A259 Grevatt's Lane. The proposed golf course will be the replacement for the existing Bognor Regis golf course currently located on land to the north of Golf Links Road, Felpham which will be redeveloped for housing.
- 1.2 The site is located approximately 6.1km east of Bognor Regis town centre and to the south of A259 Grevatt's Lane. The development site falls within the local planning authority (LPA) of Arun District Council and local highway authority (LHA) of West Sussex County Council (WSCC).
- 1.3 This TA provides details of the proposed site location and surrounding highway network, together with the opportunities for travel by modes of transport other than the private car.
- 1.4 The base traffic data used in this assessment is from observed traffic surveys and for the future scenarios includes committed and allocated developments. The traffic movements associated with the proposed residential development scheme at the existing Golf Course Site have been included as part of the future assessment work, these movements have been obtained from the TA accompanying the residential application.
- 1.5 This TA has been prepared following pre-app discussions with WSCC.

Report Format

- z Section 2 of the report describes the existing site location and details of the travel mode characterises to golf clubs. Details of the existing highway network, existing traffic flows and road collision data is included within this section.
- z Section 3 of the report describes how accessible the site is to sustainable modes of travel. This includes walking and cycle facilities and access to public transport;
- z Section 4 of the report provides a review of the relevant central government and local government land use and transport planning policies and guidelines;
- z Section 5 of the report provides details of the proposed development including access arrangements for both vehicles and pedestrians / cyclists;
- z Section 6 details the likely vehicular traffic generation of the site and distribution.
- z Section 7 considers the impact on the local highway network; and
- z Section 8 provides a summary of the transport assessment and conclusions.

2 EXISTING TRANSPORT CHARACTERISTICS

Introduction

- 2.1 This section of the report considers the context of the site, the demographics of the area and provides details of the local highway network and how the site is connected to the local area.

Site Context

- 2.2 The site is located approximately 6.1km east of Bognor Regis town centre and to the south of A259 Grevatt's Lane. Bognor Regis is a town within the county of West Sussex, located to the west of Brighton and east of Portsmouth.
- 2.3 The site will be accessed from A259 Grevatt's Lane and is bound by agricultural lands to the west and east, A259 Grevatt's Lane to the north and residential properties to the south.
- 2.4 The location of the existing Golf Course and the proposed re-location of the golf course is shown in Figure 1. A site location plan provided at Appendix 1.

Figure 1: Site Context Plan



Local Road Network

- 2.5 A259 Grevatt's Lane is a single carriageway forming the northern boundary of the site and runs between a junction with B2132 to the west and a junction with B2233 to the east. The road passing the site is subject to a speed limit of 60mph.
- 2.6 A259 Grevatt's Lane joins A259 Worms Lane and Flansham Lane which extends west and forms a roundabout junction with B2259. The A259 continues west along the northern extent of Bognor Regis joining the A29 via a roundabout junction arrangement. The A259 along this section

provides access to several destinations including Flansham village and residential areas to the northeast of Bognor Regis and to the west of the site as well as Climping and Littlehampton to the east.

- 2.7 To the west of the site, B2132 Yapton Road/ Bilsham Road is a single carriageway which forms a priority junction with A259 Grevatt's Lane with ghost island right turn lanes and continues north towards Yapton village. This road is subject to a speed limit of 40mph.
- 2.8 B2233 Yapton Road, a single carriageway situated to the east of the site. The road runs from a priority junction with A259 Grevatt's Lane again with ghost island right turn lanes and provides access to Yapton village. The road is also subject to a speed limit of 40mph.

Road Traffic Collision Analysis

- 2.9 Personal Injury Accident (PIA) data has been obtained from Sussex Police for the latest five-year period from November 2016 to October 2021 covering the Grevatt's Lane between the junction with B2233 and the junction with B2132 to the north of the site. A copy of the Accident Data is included in Appendix 2.
- 2.10 During the latest five-year period a total of 21 injury were recorded along the Grevatt's Lane, one of which was serious, and the rest were slight.
- 2.11 Among the slight accidents, 16 incidents involved only cars, two accidents involved cars and motorbikes and three accidents involved cars and goods vehicles. The causation factors for the slight accidents were identified as failed to look properly, aggressive driving, careless/reckless/in a hurry, failed to judge other persons path or speed, disobeyed give way or stop sign or markings, poor turn or manoeuvre, following too close, driver using a mobile phone, dazzling sun, junction overshoot, impaired by alcohol and stationery or parked vehicle.
- 2.12 One serious accident occurred in the daylight and resulted from a collision between two cars. The causation factor was identified as sudden braking. The weather condition was fine without high winds.
- 2.13 The review of the accident data shows that the incidents that have occurred are down to driver error and not considered to be as a result of the existing road layout. It is therefore considered that there are no highway layout issues that need to be addressed as part of this application.

Existing Base Traffic Data

- 2.14 In order to assess the impact of the proposed development traffic on the local road network an Automatic Traffic Counter was put down on Grevatt's Lane between 14 September to 20 September 2021 and 05 October to 11 October 2021 recording directional movements, full classifications and speeds.
- 2.15 Details of the ATC survey data is included in Appendix 3.

Summary

- 2.16 The existing golf club is to be re-located on land to the south of Grevatt's Lane (A259) east of its existing location. The A259 passing the site is subject to the national speed limit and is an unlit road. PIA analysis identifies that a total of 21 incidents have occurred within the study area over a five-year period although only one was identified as serious. All incidents that have occurred are considered to be down to the road users' error and not related to the existing highway layout.
- 2.17 Data of the existing traffic movements along A259 have been obtained from an Automatic Traffic Counter positioned close to the site over a two-week period.

3 ACCESSIBILITY

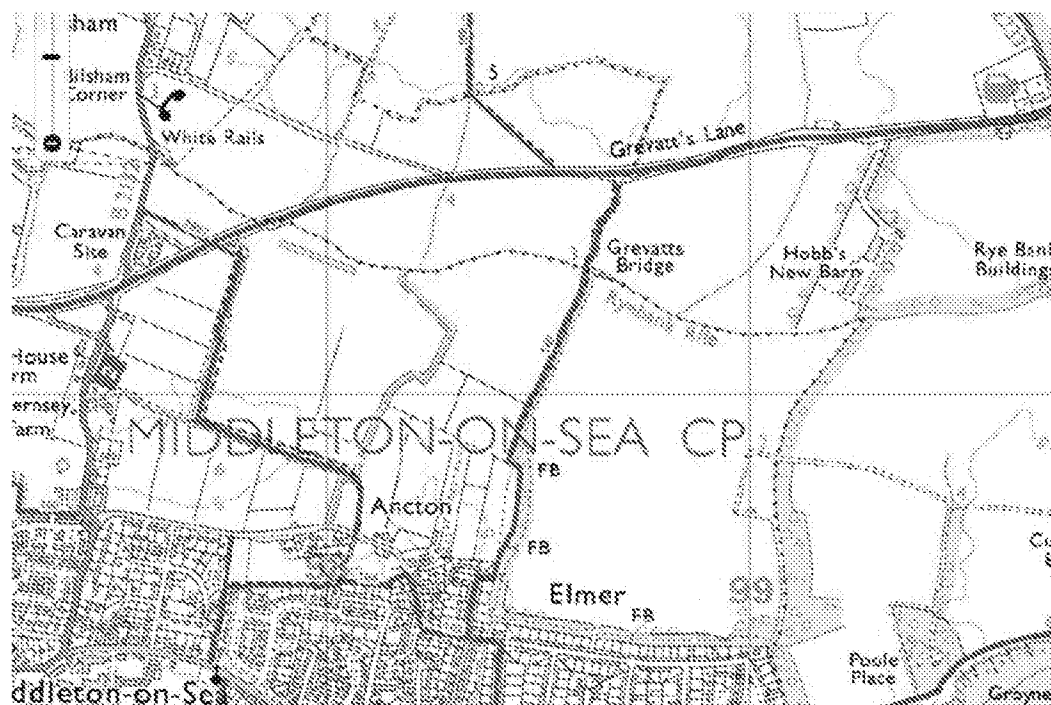
Introduction

- 3.1 This section of the report considers the sustainability of the site in terms of accessibility to public transport infrastructure as well as opportunities for cycling and walking.

Walking and Cycling

- 3.2 The site is situated to the south of A259 Grevatt's Lane along which there is a shared walking / cycling route on the northern side of the road, which form part of the National Cycle Network Route 2 continuing to Littlehampton to the east and residential areas to the northeast of Bognor Regis.
- 3.3 PRoW route 165 dissects the northern section of the site area and continues along the western side of the site, the route starts approximately 25m south of Grevatt's Lane and continues south to join Sunny Mead Close and existing residential area of Middleton-On-Sea to the south. An extract of West Sussex map is provided in Figure 2 below.

Figure 2: PRoW Map



- 3.4 The local residential roads to the south of the site are accessible via the PRoW and benefit from a good provision of footways which in turn link to the centre of Middleton-On-Sea village.

Bus

- 3.5 The nearest bus stop (The Oystercatcher) is located circa 1.2 Kilometres to the east of the site access on A259 Grevatt's Lane. The bus stop is served by bus routes 69 and 700, Table 3.1 below summarises the bus routes and frequency of services available.

Table 3.1: Bus Route and Frequency

Route No.	Route	Average Frequency (per hour)				
		Mon - Fri			Saturday	Sunday
		AM Peak	Off Peak	PM Peak		
69	Wick - Pagham	-	1	-	1	1
700	Flansham Park - Portsmouth	2	2	2	2	2

- 3.6 It is evident from Table 3.1 that there is a good number of bus services. Although they are a 15min walk from the site for many this is not considered an unreasonable distance to walk especially for staff commuting and leisure trips. These services connect the site with several destinations including Littlehampton, Pagham, Chichester and Portsmouth.

Rail

- 3.7 Littlehampton Rail Station is located approximately 4.2 kilometres (12-13min cycle) to the east of the site access. Littlehampton Rail Station is managed by Southern. Bus route 700 provides direct access to the rail station from The Oystercatcher bus stop with a journey time of seven minutes.
- 3.8 Littlehampton Rail Station provides services to a range of locations including London Victoria, Bognor Regis and Portsmouth. Table 3.2 outlines the frequency of services from Littlehampton Rail Station.

Table 3.2: Littlehampton Rail Station Services Frequency

Route	Average Frequency (per hour)				
	Mon - Fri			Saturday	Sunday
	AM Peak	Off Peak	PM Peak		
London Victoria	2	2	2	2	1
Bognor Regis	1	1	1	1	1
Portsmouth	1	1	1	1	1

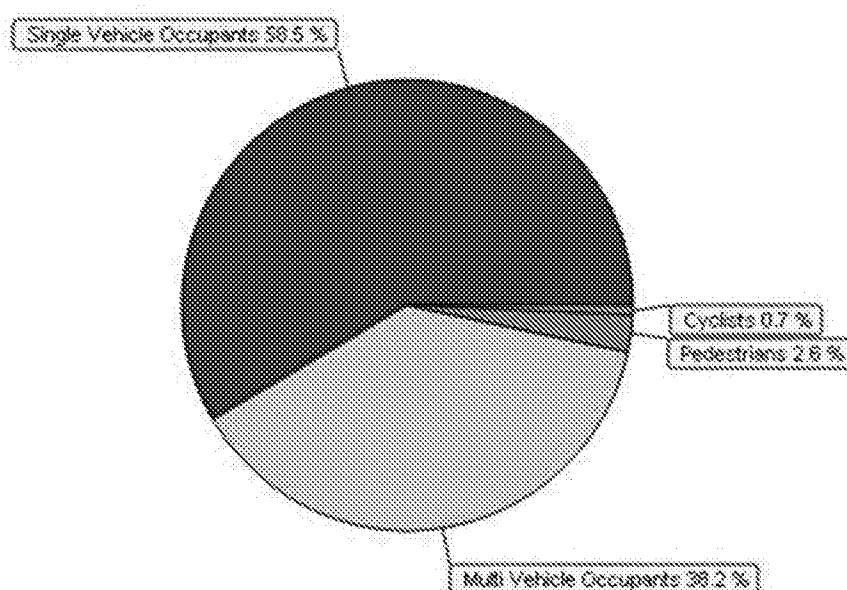
- 3.9 Table 3.2 demonstrates that there is a regular service operating from Littlehampton Rail Station throughout the day providing access to a number of destinations including London, Portsmouth and Bognor Regis.

Travel Characteristics

- 3.10 To establish the typical modes that people use in travelling to golf clubs, a review of the TRICS database has been made. Below is a Modal Split pie chart from various golf courses within the UK.

Figure 3: TRICS Modal Split - Private Golf Clubs

Modal Split Percentages



- 3.11 As can be seen, typically 96% of people drive to golf clubs and only 3% walk and 1% cycle. This is likely to be due to the nature of the site as golfing ranges tend to be located in rural areas and also because many will need to transport golfing equipment which would be impracticable by Public Transport or cycle. The above also shows that of those that travel by car around 38% car share.

Summary

- 3.12 In terms of sustainability, the nature of the proposed development will see a high proportion of movements made to the site by car although the majority of these will not be single occupancy vehicles.
- 3.13 The site benefits from being adjacent to an existing National Cycle Route No. 2 and the nearest bus stops will be within 1.2Km of the site (15min walk) which is not considered unreasonable for staff as a commuter trip. The nearest bus service also provides a direct link with Littlehampton Railway Station.
- 3.14 The use of non-car modes and car sharing will be promoted through the provision of a workplace Travel Plan that has been submitted as a separate document as part of this planning application.

4 PLANNING POLICY

Introduction

4.1 This section of the report evaluates the development proposal against the appropriate national and local land use and transport planning policies:

- ⌄ National Planning Policy Framework (NPPF) (July 2021);
- ⌄ Planning Practice Guidance (NPPG) :Travel Plans, Transport Assessments and Statements in Decision-Taking~(March 2014);
- ⌄ Arun District Council Local Plan 2011-2031 (July 2018);
- ⌄ Arun District Design Guide Supplementary Planning Document (January 2021);
- ⌄ West Sussex County Council Local Transport Plan 2011-2026;
- ⌄ Yapton Neighbourhood Plan; and
- ⌄ Clymping Neighbourhood Plan.

National Planning Policy Framework (July 2021)

4.2 The current National Planning Policy Framework (NPPF), updated in July 2021, replaces the previous Framework published in March 2012 as revised in July 2018 and updated in February 2019.

4.3 The NPPF sets out several transport objectives designed to facilitate sustainable development and contribute to a wider sustainability by giving people a wider choice about how they travel, in particular Section 9 :Promoting Sustainable Transport~

4.4 Paragraph 110 states:

~In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- ⌄ appropriate opportunities to promote sustainable transport modes can be ~ or have been ~ taken up, given the type of development and its location;
- ⌄ safe and suitable access to the site can be achieved for all users;
- ⌄ the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and
- ⌄ any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree._

4.5 Paragraph 111 continues that:

~Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe._

- 4.6 In terms of planning applications NPPF states at paragraph 112(a) that development should:
- ‘Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas, and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use.’
- 4.7 Paragraph 113 covers the need for Travel Plans and Transport Statements / Assessments for all developments which generate significant amounts of movement.
- 4.8 Regarding parking, Paragraph 107 of the NPPF states that:
- ‘In setting local parking standards for residential and non-residential development, policies should take into account:
 - a. The accessibility of the development;
 - b. The type, mix and use of development;
 - c. The availability of and opportunities for Public Transport;
 - d. Local car ownership levels; and
 - e. The need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.’
- 4.9 Paragraph 108 states that:
- ‘Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with Chapter 11 of this Framework) ũ
- Planning Practice Guidance (NPPG): Travel Plans, Transport Assessments and Statements in Decision-Taking (March 2014)**
- 4.10 This Guidance provides advice on when Travel Plans, Transport Assessments and Statements are required, and what they should contain. The Guidance is regularly updated, with the last update being 28 July 2017.
- 4.11 Transport Assessments and Statements are ways of assessing the potential transport impacts of developments, and they may propose mitigation measures to promote sustainable developments. Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a ‘lighter-touch’ evaluation to be used where this would be more proportionate to the potential impact of the development.
- 4.12 Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be ‘severe’, which may be a reason for refusal, in accordance with NPPF.

- 4.13 Travel Plans are long-term management strategies for integrating proposals for sustainable travel into the planning process. They are based on evidence of the anticipated transport impacts of development and set measures to promote and encourage sustainable travel.

Arun District Council Local Plan 2011-2031 (July 2018)

- 4.14 The document was adopted in July 2018 and sets out the vision for Arun to 2031 and beyond. The purpose of the Local Plan is to encourage sustainable development and manage future growth whilst ensuring that change across the District is appropriate to meet local need.

- 4.15 The document sets out the strategic objectives for transport which are:

- ⌄ Reduce the need to travel and promote sustainable forms of transport;
- ⌄ Plan for climate change and work in harmony with the environment to conserve natural resources and increase biodiversity;
- ⌄ Create vibrant, attractive, safe and accessible towns and villages that build upon their unique characters to provide a wide range of uses and which are a focus for quality shopping, entertainment, leisure, tourism and cultural activities;
- ⌄ Promote strong, well-integrated and cohesive communities, through the promotion of healthy lifestyles, provision of good quality accessible community facilities and a safe environment, which delivers an enhanced quality of life to all. This includes meeting the needs of a growing elderly population; and
- ⌄ Strengthen Arun's economic base and provide local job opportunities by increasing, diversifying and improving the quality of employment within the District through the provision of appropriate employment sites, better infrastructure, including road and rail access, quality affordable accommodation and the development of business support and partnerships.

- 4.16 Policy T SP1 states that the council will support transport and development which:

- ⌄ Is designed to reduce the need to travel by car by identifying opportunities to improve access to public transport services and passenger transport services whilst making provision for safe access to the highway network through improvements to the existing road network and the promotion of vehicles which use low-carbon energy;
- ⌄ Is incorporated into the District's green infrastructure network and gives priority to pedestrian and cycle movements;
- ⌄ Protects committed and indicative lines of major road schemes from development and, where applicable, contributes towards new road schemes which improve north-south links between Bognor Regis and Littlehampton and the A27, to ensure that they are delivered in line with strategic growth in the District;
- ⌄ Incorporates appropriate levels of parking in line with West Sussex County Council guidance on parking provision and the forthcoming Arun Design

Guide taking into consideration the impact of development upon on-street parking; and

- ¿ Is supported by an effective and deliverable Transport Assessment which demonstrates that the transport effects of development on the local and strategic road network can be satisfactorily mitigated and a Travel Plan, which is effective and deliverable;
- ¿ Explains how the development has been designed to:
 - accommodate the efficient delivery of goods and supplies;
 - give priority to pedestrian and cycle movements and have access to high quality public transport facilities;
 - create safe and secure layouts for traffic, cyclists and pedestrians whilst avoiding street clutter;
 - incorporate facilities for charging electric and plug-in hybrid vehicles (where charging facilities are to be omitted from the development, evidence of market demand and viability must be provided); and
 - consider the needs of people with disabilities by all modes of transport; and
- ¿ Provides improved crossing points over the railway line to improve transport links between the coast and the A27, in particular at Ford.

4.17 With respect to sustainable travel, Policy T DM1 states that proposals for all new development must:

- ¿ Be located within easy access of established public transport service(s), existing pedestrian and cycle networks, the committed and aspirational cycle networks and the green infrastructure network which links the development with key destinations including places of work, education, leisure and town centres;
- ¿ Where applicable, contribute to the extension of public transport services to serve the development and community transport services to ensure that a wide range of transport services are available to all residents;
- ¿ Make provision for cycling and pedestrian facilities to meet the County Council Parking Standards, including cycle storage, convenient and secure cycle parking in association with retail and educational uses and sufficient secure parking and changing/showering facilities at places of work;
- ¿ Contribute towards the provision of a joined up cycle network and Public Rights of Way network, taking into account the aspirational cycle network, which provides convenient, accessible, safe, comfortable and attractive routes for pedestrians and cyclists and; where appropriate, horse riders, both within the development and in the form of links between the development and:
 - places of work, education, leisure and food retail;
 - the South Downs National Park,

- along the coast particularly between Bognor Regis and Littlehampton,
- along the coast to Chichester,
- Bognor Regis to Arundel, and
- Littlehampton to Goring._

Arun District Design Guide Supplementary Planning Document (January 2021)

- 4.18 This supplementary planning document was adopted in January 2021. The aim of the Design Guide is to:

“provide detailed information that supplements the design policies of the Arun Local Plan, raising the design standard across the District and setting out Arun District Council’s expectations on how the distinctive character and qualities of the District should be respectfully improved and enhanced through development.”

Arun District Council – Parking Standards Supplementary Planning Document (January 2020)

- 4.19 Within the ADC Parking Standard, the following is written with respect to non-residential parking provision.
- 4.20 The amount of parking in commercial developments should be based on:
- ¿ the developments land-use;
 - ¿ Trip rate associated with the development (including base and forecast mode share); and
 - ¿ The user group of staff / visitors of the site (including shift patterns).
- 4.21 The proposed Golf Course Land use is F2 and there are no standards provided for this use, therefore reference is made to West Sussex Parking Standards detailed below.

West Sussex County Council Local Transport Plan 2011-2026

- 4.22 The West Sussex Local Transport Plan provides a strategic direction for transport within West Sussex, but aligns itself with other major strategies, such as the County Strategy and Local Communities Strategies. The key objectives of the plan are:
- 4.23 The objectives of the LTP3 are as follows:
- ¿ “Promoting economic growth;
 - ¿ Tackling climate change;
 - ¿ Providing access to services, employment and housing; and
 - ¿ Improving safety, security and health._

4.24 In addition, the key measures that are identified that are applicable to the proposed development include:

- ¿ Ensure an appropriate amount of parking is provided at new residential development and that parking space is provided at non-residential development in line with our agreed parking standards;
- ¿ Ensuring that new employment and residential developments are accessible by sustainable modes of transport;
- ¿ Continuing to secure travel plans for new residential and employment developments; and
- ¿ Encouraging home working and the promotion of home delivery services through SIDD, to design new facilities and services which meet customer needs.

West Sussex County Council – Guidance for New Developments – September 2020

4.25 In terms of car and cycle parking, there are no specific standards for golf courses, although the use class is F2 and WSCC Guidance sets out the following vehicle and cycle parking standards for this use which are included in Table 4.1 below:

Table 4.1 WSCC Parking Standards

Use Class	Vehicular	Cycle
F2 Shop no larger than 280sqm (selling mostly essential goods and at least 1km from another similar shop); community hall, outdoor sport/recreation area, indoor or outdoor swimming pool, skating rink	1 space per 14sqm	1 space per 100sqm for staff and 1 space per 100sqm for customers

4.26 Of the spaces provided a minimum of 20% will be provided with Electric Charging facilities, and the remainder will have the appropriate infrastructure provided to enable electric charging facilities to be provided in the future.

Yapton Neighbourhood Plan

4.27 The Yapton Neighbourhood Plan 2011 – 2031 provides a guide to development within the parish and provides topic areas that are of considerable importance to Yapton. The vision and objectives of the plan that relate to highways and transportation include the following;

Infrastructure

- ¿ Minimise the impact of commercial traffic movements through the village;
- ¿ Encourage the use of public transport and retain and strengthen existing bus services;
- ¿ Reduce congestion outside Yapton CE Primary School (North End Road);

- ¿ Promote, maintain and extend the existing network of cycle paths, footpaths and pavements; and
 - ¿ Improve road safety in Yapton.
- 4.28 In terms of PRoW improvements that are applicable to the site, the Yapton Neighbourhood Plan states that contributions towards the following should be provided:
 - ¿ 'Safe designated crossing point for all users over the A259 between paths 166 and 165
 - ¿ Open Grevatt's Lane West to A259 for use by walkers, cyclists and horse riders._

Clymping Neighbourhood Plan

- 4.29 Clymping Neighbourhood Plan 2015 - 2030 sets out a vision of the future of the parish and contains policies covering themes of Community Leisure and Wellbeing, Employment and Tourism, Environment, Sustainability and Design and Roads and Transport, which reflect views of the community.
- 4.30 The objectives specific to highways and transportation include:
 - 'Roads and Transport
 - Objective: To reduce traffic impact, including that from HGVs on the local community and its environment and improve accessibility and safety for travel around the parish for drivers, pedestrians and cyclists._
- 4.31 Policy CPN 14 Traffic and the Environment
 - 'Development which will have a detrimental impact on highway safety and the living conditions of residents will be resisted. Consideration will be given towards securing planning obligations which meet the national policy guidance in NPPF paragraph 204, in relation to increasing highway capacity, traffic management and traffic calming measures which will make the development acceptable.
 - Wherever possible, the mitigation measure should be put in place before the development itself is permitted to be used.
 - Priorities for Clymping are:
 - ¿ Increasing and enhancing pedestrian and cycle networks
 - ¿ Safe crossing points for pedestrians, cyclists and equestrians to reduce the severance
 - ¿ effect of the A259, traffic calming measures on local roads whilst retaining their
 - ¿ essentially rural character
 - ¿ Measures that reduce the impact of heavy goods vehicles on local roads such as:
 - restrict commercial traffic to designated routes;

- provide a signing strategy to ensure that only the most appropriate roads are used
- and unsuitable traffic is kept away from residential areas;
- control traffic speeds to improve road safety and reduce environmental impact.

Summary

- 4.32 The key transportation policy is to ensure that new developments are in locations which are or can be made sustainable. Future development should be in accessible locations, which can reduce the need to travel for employment, leisure and education and encourage the use of sustainable transport modes such as walking, cycling and public transport.
- 4.33 In terms of sustainability, the site is considered to be within a reasonable walking distance of a good level of existing bus services which also connect to local rail services. The location of the site is accessible by foot and cycle. Whilst the type of use on the site will result in the car being the primary mode the site's location does provide employees with the opportunity to use modes other than the private car.

- 5.5 The proposed access arrangement includes 3.5m wide through lanes either side of a 3m wide ghost island right turn lane. The access leading into the site is 6m wide at its junction with Grevatt's Lane narrowing as it continues into the site.
- 5.6 To facilitate pedestrians and cyclists the access arrangement includes a centre refuge island which is 3m in depth to ensure there is sufficient room for a cyclist to wait. Sustrans Design Guidance identifies that the depth of refuge islands to accommodate cyclists should be a minimum of 2.4m, however given the speed of the road a width of 3m will ensure that a cycle can be safely accommodated on the island.
- 5.7 To address points raised by the Road Safety Auditor, an additional Traffic Island is proposed in advance of the right turn lane to protect vehicles waiting to turn right. Both islands will include reflective bollards and lighting. Additional lighting can be provided subject to comments provided from the local highway authority.
- 5.8 As part of the access arrangements a new 3m wide footway/cycleway will be provided on the southern side of Grevatt's Lane between the site access and the proposed refuge island. At the site access a dropped kerb will be provided to allow cyclists to continue on road into the site, pedestrians will be able to walk into the site along the PRow. The proposed pedestrian/cycle access is shown on the proposed arrangement included in Appendix 5.
- 5.9 The existing PRow that continues on a north-south alignment through the northern section of the site and along the western boundary of the southern section of the site. The section of PRow that continues through the northern section of the site will be improved to be 3m in width and a bound gravel type surface.
- 5.10 The access road leading into the site will be on the eastern side of the PRow and the car parking area will be provided on the western side which will involve a new access road being provided across the PRow. To ensure that this proposed crossing point is safe for all users, it is proposed that appropriate measures are put in place to slow vehicle speeds and ensure that there is sufficient intervisibility between users. Details of this arrangement are included as part of the planning submission and also included in Appendix 5.
- 5.11 In order to ensure that the site access is fit for purpose, the AutoTRACK computer software has been used to track vehicles entering and exiting the site. The vehicles used include a large refuse vehicle, a 12m long rigid truck and a 16m coach. A copy of the swept path analysis is included in Appendix 5.

Stage 1 Road Safety Audit

- 5.12 The proposed access arrangement has been reviewed by an independent road safety auditor and a copy of the audit and designer's response are included in Appendix 6.
- 5.13 All matters raised in the Audit have been addressed as part of this arrangement of identified to be reviewed at the detail design stage.

Parking

- 5.14 The level of parking proposed on the site will be a total of 241 spaces on the site which includes 12 spaces for the maintenance area, 7 spaces in front of the club house (2 of which will be disabled), and 222 within the car park and overflow area (including 4 disabled spaces).

- 5.15 The existing Golf Course has approximately 110 spaces for visitors and members with an additional 10 spaces for staff, although this level of parking especially on weekends is often exceeded and parking occurs on the local residential roads. The addition of a 9-hole course is also likely to result in the duration of stay being greater than currently experienced, therefore, to ensure that there is sufficient parking available, the level identified has been considered by the club to be sufficient to meet the development's needs.
- 5.16 There are no specific parking standards that relate to Golf Clubs and therefore this approach is considered acceptable. Details of the parking layout are provided as part of the planning submission drawings.
- 5.17 Of the parking spaces provided 6 spaces will be dedicated for disabled use and 20% will include Electric Charging facilities. All other spaces will have the appropriate infrastructure provided to be able to accommodate electric charging facilities as and when they are required in the future.
- 5.18 The Department of Transport's recommendation for disabled parking for Leisure uses is 3 bays or 6% of the total parking whichever is the greatest, this would in turn require a provision of 13 disabled spaces, however given the type of use it is considered that the number of disabled users will be less than other leisure facilities and therefore a provision of 6 disabled spaces will be sufficient to meet the development's needs.
- 5.19 The TRICS data in Section 2 suggests that less than 1% of trips to Golf Courses are made by cycle, however in order to encourage this mode the site will include a total of three cycle stands located close to the Golf Club entrance which will accommodate up to 6 cycles. These racks will be in a lit and sheltered location.

Summary

- 5.20 The development proposal will include a new 18-hole par 4 and 9-hole par 3 course including practice facilities. Access to the site will be provided from A259 Grevatt's Lane in the form of a priority junction arrangement with a ghost island right turn lane designed to conform to the DMRB standards.
- 5.21 The proposed access has been reviewed by an independent road safety auditor and swept path analysis of vehicles accessing the site has been undertaken to ensure that a safe and suitable arrangement is provided.
- 5.22 As part of the access arrangement a new pedestrian refuge island will be provided to allow pedestrians and cyclists to be able to cross the A259 more easily. A new 3m wide shared footway/cycleway will also be provided along the south side of A259 between the site access and the new pedestrian refuge island. Within the site cyclists can continue on road and pedestrians can continue along the existing PRow.
- 5.23 The existing PRow that continues on a north-south alignment through the northern section of the site and along the western side of the southern section of the site. The surface of the PRow will be improved along the section that dissects the northern part of the site.
- 5.24 The access to the car parking area will be provided further south into the site on the western side of the PRow which will involve an access road being constructed across the PRow. To ensure that this section is safe for all users, it is proposed that appropriate measures are put in place to slow vehicle speeds and ensure that there is sufficient intervisibility between users.

-
- 5.25 Parking on site will include a total of 241 spaces of which 222 will be within the main car park, 7 in front of the club house and 12 within the maintenance areas, this also includes 6 wider disabled spaces. In accordance with ADC standards, 20% of the spaces will include electric charging facilities with infrastructure provided for all spaces to be upgraded to electric charging points in the future.
- 5.26 Cycling to the site is considered to be low however to encourage this mode a total of 3 cycle racks will be provided which will accommodate up to 6 cycles.

6 TRIP GENERATION AND DISTRIBUTION

Introduction

- 6.1 This section of the TA considers the likely trips that the proposed golf course would be expected to generate.

Predicted Trip Generation

- 6.2 The trips predicted to be generated by the new Golf Course Site are considered to be similar to those that are currently generated by the site. The observed movements to and from the existing golf course are identified in Table 6.1 below.

Table 6.1: Existing observed Traffic Flows from Bognor Regis Golf Club

	Arrivals No. Trips	Departures No. Trips	Two-Way No. Trips
Weekday AM Peak (08:00-09:00)	32	1	33
Weekday PM Peak (17:00-18:00)	3	18	21

- 6.3 To provide a comparison, The TRICS database has been used to obtain trip rates from other similar developments in terms of size, and location.
- 6.4 To ensure that the sites selected are comparable to the proposed golf course development, the following selection parameters have been applied as follows:
- z Land use: Golf;
 - z Category: Private 18 Hole Courses;
 - z Number of Holes: Range 18; and
 - z Location: Free Standing

- 6.5 Table 6.2 summarises the peak vehicle trip rates obtained from the TRICS database, the total number of holes will be 27 (18 Hole Par 4 and 9 Hole Par 3), the trips identified have therefore been based on 27 holes. A copy of the TRICS output is provided in Appendix 7 of this report.

Table 6.2: Predicted Vehicle Trip Generation - Golf Course Use (Trip Rate per 18 Holes)

	Arrivals		Departures		Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Weekday AM Peak (08:00-09:00)	9.000	14	2.800	4	11.800	18
Weekday PM Peak (17:00-18:00)	8.600	13	11.60	17	20.200	30
Daily Movements (24hr)	141.383	211	136.767	205	278.150	416

Source: TRICS Database 7.8.3

- 6.6 Based on the TRICS vehicle trip rates, a typical free standing private golf course is likely to generate around 19 and 30 two-way trips in the AM and PM Peak hours respectively. The AM Peak is less than that surveyed at the existing golf course but comparable in the PM Peak. It is therefore considered that use of the existing trips is appropriate for the new site.

Distribution

- 6.7 The distribution of traffic movements to and from the proposed site has been based on Postcode information provided by the Golf Course of existing members. Based on this information 85% are predicted to access the site from the west and 15% from the East.
- 6.8 Details of the existing and proposed Golf Course Trips are provided in Appendix 8.

Summary

- 6.9 The traffic movements to the site have been based on the existing site as the movements recorded which identify 19 two-way in the AM Peak and 30 two-way in the PM Peak. These trips are greater than those obtained from TRICS in the AM Peak and comparable in the PM Peak so considered appropriate to use.
- 6.10 Distribution of the traffic movements has been based on postcode information of member obtained from the Golf Club which predicts that 15% will travel east of the site and 85% west of the site.

7 TRAFFIC IMPACT

Introduction

- 7.1 This Section considers the potential impact of the proposed Golf Course on the local highway network in terms of traffic movements.

Assessment Parameters

Study Area

- 7.2 The traffic generated by the proposed Golf Course has been based on the existing trips re-distributed onto the local highway network, the number of trips in the network peak periods will be no greater than 33 two-way at the access and no more than 28 two-way flows on the local road network, it should also be noted that a proportion of these trips will be already on the local road network.
- 7.3 It has been agreed with WSCC as part of pre-app discussions that traffic movements of 30 two-way trips or less will have no material impact on the local road network therefore the assessment of impact beyond the site access is not considered necessary.

Assessment Scenarios

- 7.4 The assessment years include 2026 which is the predicted opening year of the new Golf Course, and 2031. The 2031 assessment year has been carried to include the full occupation of the new residential development on land at the existing Golf Course site. Both assessment years include background growth from TEMPRO and committed / allocated developments as follows:

2026

- 7.5 TEMPRO Growth for the local area between 2021 and 2026 is 3% and 4% in the AM and PM Peaks respectively.
- 7.6 In addition to this background growth, the following development trips have been added to the base 2026 flows as committed developments;
- ⌘ App Ref: Y/91/17/OUT - 250 Dwellings Land at Bilsham Road, Yapton;
 - ⌘ App Ref: AL/87/21/PL - 11,412sqm Employment Use at Oldlands Farm, Bognor Regis;
 - ⌘ App Ref: Y/92/17/OUT - 300 Dwellings, Land South of B2233 Main Road, Yapton; and
 - ⌘ App Ref: F/4/20/OUT - 1,200 Dwellings, Ford Airfield (50% Occupation).
- 7.7 The inclusion of Application Ref: F/4/20/OUT has included 50% of the predicted flows as the application was only submitted in 2020 and not, at the time of writing this report, approved. Therefore, it is considered that at most 50% of the development could be occupied by 2026.

2031

- 7.8 TEMPRO Growth for the local area between 2021 and 2031 is 7% and 8% in the AM and PM Peaks respectively.
- 7.9 In addition to this background growth and the above committed development the following additional development trips have been added to the base 2031 flows;
- ⌘ App Ref: F/4/20/OUT - 1,200 Dwellings, Ford Airfield (100% Occupation);
 - ⌘ Strategic Development - Land West of Bersted (2,500 dwellings + Employment);
 - ⌘ Strategic Development - Land at Barnham, Eastergate & Westergate (3,200 dwellings and employment); and
 - ⌘ Proposed Development at Bognor Regis Golf Course - up to 500 Dwellings.
- 7.10 For the 2031 scenario, it was proposed to use data from the SATURN Modelling from WSCC. However, they have advised that it is not possible to use the District Model at the time of writing this report, as the new A259/Arun District Model is under development and not ready to be used at the time of completing this report. WSCC have also advise that the interim model also does not provide sufficient information in respect of the traffic movements on the B2259 where the predominant impact of the development traffic will occur. The modelling undertaken in 2015-2016 for the adopted Arun Local Plan is at a strategic level and again does not go into sufficient detail local to the site. Furthermore the data is also now out of date.
- 7.11 On the above basis, as at the time of writing this report, the applications for the strategic development sites have not been submitted, the assessment of traffic movements has been based on the trip rates used as part of the Bognor Regis Golf Club residential development application and the distribution based on the 2011 Workplace Census Data. It is considered that by using the trip rates assigned to a smaller level of development for a larger strategic development which also includes local facilities and primary schools provides a suitably robust analysis.
- 7.12 Applying background growth as well as the committed and allocated developments will be robust and there will be an element of double counting.
- 7.13 Details of the base traffic flows are included in Appendix 8. These flows cover a wider network as they are the base flows used as part of the residential application on the existing Bognor Regis Golf Course Site.
- 7.14 The Grevatt's Lane / proposed site access priority junction has therefore been tested for the following scenarios during the morning and evening peak hours:
- ⌘ 2026 Base + Committed Development + Proposed Development; and
 - ⌘ 2031 Base + Committed Development + Proposed Development.
- 7.15 The Proposed traffic flows with the new Golf Course are included in Appendix 8.

Capacity Assessment

- 7.16 The junction analysis has been undertaken using industry standard Junctions 9 for priority junctions.

- 7.17 Copies of the assessment outputs and junction dimension drawing are included in Appendix 9 of this report, the summary of the analysis work is provided in the following tables.

Grevatt's Lane / Proposed Site Access Priority Junction

- 7.18 The proposed site access will form a new priority junction arrangement. This junction arrangement has been assessed using J junctions 9 and the results are summarised in the table below.

Table 7.1: Proposed Site Access Arrangement

Scenario	Proposed Site Access		Grevatt's Lane	
	RFC	Q	RFC	Q
AM Peak				
2026 Base + Committed + Proposed	0.00	0.0	0.05	0.1
2031 Base + Committed + Proposed	0.00	0.0	0.06	0.1
PM Peak				
2026 Base + Committed + Proposed	0.04	0.0	0.01	0.0
2031 Base + Committed + Proposed	0.11	0.1	0.01	0.0

- 7.19 The above results show that this junction will operate well within its design capacity and will not affect the traffic movements on Grevatt's Lane.

Summary

- 7.20 The assessment of impact has been undertaken for the proposed site access using the industry standard modelling software including the opening year of 2026 and future year 2031 which includes both allocated and committed developments. The results of the analysis shows that the junction will operate well within its design capacity.

8 SUMMARY AND CONCLUSION

- 8.1 This TA has been prepared on behalf of Hallam Land Management to support the development of a new 18-hole par 4 and 9 hole par 3 golf course on land to the south of A259 Grevatt's Lane. The proposed golf course will be the replacement for the existing golf course currently located on land to the north of Golf Links Road, Felpham which is proposed to be redeveloped for housing.
- 8.2 The site is located approximately 6.1km east of Bognor Regis town centre, to the south of A259 Grevatt's Lane. Bognor Regis is a town within the county of West Sussex, located to the west of Brighton and east of Portsmouth.
- 8.3 The A259 passing the site is subject to the national speed limit and is an unlit road. PIA analysis identifies that a total of 21 incidents have occurred within the study area over a five-year period although only one was identified as serious. All incidents that have occurred are considered to be down to the road users' error and not related to the existing highway layout.
- 8.4 Data of the existing traffic movements along A259 have been obtained from an Automatic Traffic Counter positioned close to the site over a two-week period.
- 8.5 In terms of sustainability, the nature of the proposed development will see a high proportion of movements made to the site by car although the majority of these will not be single occupancy vehicles.
- 8.6 The site benefits from being adjacent to an existing National Cycle Route No. 2 and the nearest bus stops will be within 1.2Km of the site (15min walk) which is not considered unreasonable for staff as a commuter trip. The nearest bus service also provides a direct link with Littlehampton Railway Station.
- 8.7 The use of non-car modes and car sharing will be promoted through the provision of a workplace Travel Plan that has been submitted as a separate document as part of this planning application.
- 8.8 Access to the site will be provided from A259 Grevatt's Lane in the form of a priority junction arrangement with a ghost island right turn lane designed to conform to the DMRB standards.
- 8.9 The proposed access has been reviewed by an independent road safety auditor and swept path analysis of vehicles accessing the site has been undertaken to ensure that a safe and suitable arrangement is provided.
- 8.10 As part of the access arrangement a new pedestrian refuge island will be provided to allow pedestrians and cyclists to be able to cross the A259 more easily. A new 3m wide shared footway/cycleway will also be provided along the south side of A259 between the site access and the new pedestrian refuge island. Within the site cyclists can continue on road and pedestrians can continue along the existing PRoW.
- 8.11 The existing PRoW that continues on a north-south alignment through the northern section of the site and along the western side of the southern section of the site. The surface of the PRoW will be improved along the section that dissects the northern part of the site to provide a gravel bound type of surface.

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- 8.12 The access to the car parking area will be provided further south into the site on the western side of the PRow which will involve an access road being constructed across the PRow. To ensure that this section is safe for all users, it is proposed that appropriate measures are put in place to slow vehicle speeds and ensure that there is sufficient intervisibility between users.
 - 8.13 Parking on site will include a total of 241 spaces of which 222 will be within the main car park, 7 in front of the club house and 12 within the maintenance areas, this also includes 6 wider disabled spaces. In accordance with ADC standards, 20% of the spaces will include electric charging facilities with infrastructure provided for all spaces to be upgraded to electric charging points in the future.
 - 8.14 Cycling to the site is considered to be low however to encourage this mode a total of 3 cycle racks will be provided which will accommodate up to 6 cycles.
 - 8.15 The traffic movements to the site have been based on the existing site as the movements recorded which identify 19 two-way in the AM Peak and 30 two-way in the PM Peak. These trips are greater than those obtained from TRICS in the AM Peak and comparable in the PM Peak so considered appropriate to use.
 - 8.16 Distribution of the traffic movements has been based on postcode information of member obtained from the Golf Club which predicts that 15% will travel east of the site and 85% west of the site.
 - 8.17 The assessment of impact has been undertaken for the proposed site access using the industry standard modelling software including the opening year of 2026 and future year 2031 which includes both allocated and committed developments. The result of the analysis shows that the junction will operate well within its design capacity.
 - 8.18 This TA demonstrates that a safe and suitable access arrangement can be provided for the new golf course and that the impact of the traffic on the local road network will not be severe. The TA also identifies the opportunities for access to the site by modes other than the private car although accepting that the type of use is likely to see a higher level of car use than other leisure sites. A Travel Plan has been prepared to encourage staff and visitors to the site to car share or modes other than the private car.

Appendices

Appendix 1 ~ Site Location Plan



Appendix 2 ~ Collision Data

A259 – Middleton-on-Sea – RPS

Collision report 01/11/2016 – 31/10/2021

Date produced
16 November 2021

This report is marked as **Official – Sensitive**

- The information included in this report is provided for analysis purposes and is for the exclusive use of the applicant, the information must only be used for the purposes for which it has been obtained.
- The data has been provided by Sussex Police and should not be transmitted to any other person without their consent, including reports for the general public.
- Be aware that any improper disclosure, copying, distribution or use of the contents of this information is prohibited and criminal proceedings may follow.

Sussex Safer Roads
PARTNERSHIP

Safer Roads
Safer Communities
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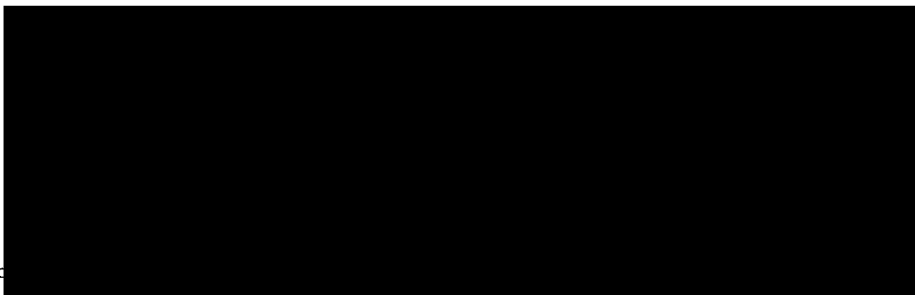
Produced by Sussex Safer Roads Partnership on behalf of Sussex Police

Data regarding personal injury collisions is recorded by Sussex Police in accordance with the DfT Stats 19 requirements. The data is subsequently used by Sussex Safer Roads Partnership for monitoring and planning. While every effort is made to ensure that this data is accurate, it is subject to change should further information become available.

This data may not be fully validated and while every effort is made to ensure its accuracy any statistics provided may not match those published elsewhere.

Sussex Safer Roads Partnership does not hold collision data either where there are no recorded casualties or the incident has not been reported to Sussex Police.

For further information:



Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1705009 Thursday A259 GREVATTS LANE YAPTON Veh 1 Car Going ahead E to W Dri F 40 Slight
27/04/2017 400M WEST OF B2233 YAPTON ROAD Veh 2 Car Stopping E to W
R1: A 259 1406hrs Veh 3 Car Stopping E to W
Daylight:street lights present
E 499,059 Dry
N 101,586 Fine without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

V1 FAILED TO SEE SLOWER MOVING TRAFFIC IN FRONT AND COLLIDED INTO REAR OF V2 PUSHING IT INTO V3. MINOR INJURY TO DRIVER OF V1.

1800722 Thursday B2233 YAPTON ROAD Veh 1 Car Turning right N to W
08/02/2018 LITTLEHAMPTON AT JUNCTION OF Veh 2 M/C > 500 cc Going ahead E to W Dri M 46 Slight
R1: B 2233 0738hrs A259 CROOKTHORN LANE OUTSIDE
R2: A 259 Daylight:street lights present
E 499,736 Dry
N 101,678 Fine without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

V1 EXITING YAPTON ROAD TO TRAVEL WEST BOUND, HIT V2 IN MAIN CARRIAGEWAY WHICH WAS TRAVELING WEST BOUND. CYCLIST LEFT THE ROAD AND LANDED IN A BUSH, CAUSING MINOR INJURIES.

1800972 Monday A259 GREVATT'S LANE CLIMPING Veh 1 Car Going ahead W to E
19/02/2018 120M WEST OF B2233 YAPTON ROAD Veh 2 Car Going ahead W to E
R1: A 259 0944hrs Veh 3 Car Going ahead W to E Dri M 23 Slight
Daylight:street lights present
E 499,404 Wet/Damp
N 101,630 Raining without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Aggressive driving

Vehicle 1

Possible

2nd: Careless/Reckless/In a hurry

Vehicle 1

Possible

A WHITE HATCHBACK (VEHICLE 1) HIT VEHICLE 2 ON THE REAR WHICH THEN LEAD TO VEHICLE 2 TO HIT THE REAR OF VEHICLE 3. VEHICLE 1 FAILED TO STOP.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1802525 Wednesday A259 CROOKTHORN LANE Veh 1 Car Going ahead E to W
09/05/2018 LITTLEHAMPTON AT JUNCTION OF Veh 2 Taxi Wait go ahead held E to W RSP M 13 Slight
R1: A 259 0800hrs A2233 YAPTON ROAD
R2: A 2233 Daylight:street lights present
E 499,773 Dry
N 101,695 Fine without high winds
40 mph

V2 HAS SLOWED DOWN DUE TO ONGOING TRAFFIC. V1 HAS DRIVEN INTO THE REAR OF V2. BOTH DRIVERS EXCHANGED DETAILS AT THE SCENE.

1804930 Saturday A259 WORMS LANE YAPTON AT Veh 1 Car Turning right N to SW
25/08/2018 JUNCTION OF B2132 YAPTON ROAD Veh 2 Car Turning right N to SW
R1: A 259 1301hrs Veh 3 Car Going ahead NE to SW FSP M 27 Slight
R2: B 2132 Daylight:street lights present
E 497,545 Dry
N 101,277 Fine without high winds
50 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to judge other persons path or speed

Vehicle 1

Very Likely

V1 WAS TOWING V2 FROM YAPTON ROAD ONTO THE A259. V3 TRAVELLING W/B WAS IN COLLISION WITH V2 WHILST IT WAS BEING TOWED.

1806283 Wednesday A259 CROOKTHORN LANE Veh 1 Car Turning right N to W Dri F 43 Slight
14/11/2018 CLIMPING AT JUNCTION OF B2233 Veh 2 Car Going ahead W to E Dri M 66 Slight
R1: A 259 1846hrs YAPTON ROAD Veh 3 Car Going ahead E to W
R2: B 2233 Darkness: street lights present a
E 499,736 Dry
N 101,684 Fine without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Disobeyed Give Way or Stop sign or markings

Vehicle 1

Very Likely

2nd: Failed to judge other persons path or speed

Vehicle 1

Very Likely

3rd: Failed to look properly

Vehicle 1

V2 TRAVELLING EASTBOUND ON MAIN CARRIAGEWAY. V1 APPROACHES JUNCTION AND COMMENCES EDGING INTO CARRIAGEWAY. V3 TRAVELLING WESTBOUND FLASHES HEADLIGHTS. V1 ASSUMES THIS MEANS MOVE SO MOVES FURTHER INTO CARRIAGEWAY. V2 ONLY SEES V1 AT LAST MINUTE AND ATTEMPTS TO SWERVE AND AVOID V1 BUT THEY COLLIDE. V1 AND V2 SUSTAINED DAMAGE. V3 DIDN'T STOP. DRIVER OF V1 AND V2 SUSTAINED MINOR INJURY.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1806380	Sunday	A259 CROOKTHORN LANE	Veh 1	Car	Going ahead	W to E	Dri	M	91	Slight
	18/11/2018	LITTLEHAMPTON 30M EAST OF	Veh 2	Car	Wait go ahead held	W to E	FSP	F	28	Slight
R1: A 259	1200hrs	B2233 YAPTON ROAD	Veh 2	Car	Wait go ahead held	W to E	Dri	F	53	Slight
	Daylight:street lights present		Veh 3	Car	Wait go ahead held	W to E	Dri	M	30	Slight
E 499,770	Dry		Veh 3	Car	Wait go ahead held	W to E	FSP	F	28	Slight
N 101,705	Fine without high winds									
	40 mph									

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

VEHICLES 2 & 3 HEADING EAST ALONG A259 HAVING PULLED OUT OF THE B2233 YAPTON ROAD JUNCTION. VEHICLES HAD CLEARED SAME WHEN THEY SLOWED FOR CONGESTION AHEAD AND VEH 1 COLLIDED INTO THE REAR OF VEH 2, CAUSING A SHUNT, AND THEN VEH 2 COLLIDED INTO THE REAR OF VEH 3.

1901063	Saturday	A259 WORMS LANE YAPTON AT	Veh 1	Car	Turning right	N to W				
	23/02/2019	JUNCTION OF B2132 YAPTON ROAD	Veh 2	Goods < 3.5t	Going ahead	W to E	Dri	M	54	Slight
R1: A 259	1510hrs									
R2: B 2132	Daylight:street lights present									
E 497,544	Dry									
N 101,281	Unknown									
	50 mph									

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry

Vehicle 1

Very Likely

2nd: Poor turn or manoeuvre

Vehicle 1

Very Likely

3rd: Failed to look properly

Vehicle 1

V1 ATTEMPTED TO NEGOTIATE JUNCTION AND DROVE IN THE PATH OF AN ON COMING VEHICLE.

0846203	Sunday	CROOKTHORN LANE (A259) AT	Veh 1	Car	Starting	N to SW	Dri	M	56	Slight
	09/06/2019	JUNCTION WITH YAPTON ROAD	Veh 2	Car	Going ahead	W to E	Dri	M	61	Slight
R1: A 259	0935hrs	(B2233)	Veh 2	Car	Going ahead	W to E	FSP	F	58	Slight
R2: B 2233	Daylight:street lights present									
E 499,734	Dry									
N 101,681	Fine without high winds									
	40 mph									

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry

Vehicle 1

Very Likely

2nd: Failed to look properly

Vehicle 1

Very Likely

3rd: Following too close

Vehicle 1

V1 TRAVELLING SOUTHBOUND ON YAPTON ROAD NEXT TO OYSTER CATCHER. V2 TRAVELLING EASTBOUND ON A259 FROM BOGNOR REGIS. V1 HAS PULLED OUT FOLLOWING BEHIND 2 NON-INVOLVED VEHICLES AND V2 HAS NOT HAD TIME TO STOP.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

0854406 Thursday GREVATTS LANE (A259) Veh 1 Goods < 3.5t U turn W to W
04/07/2019 Veh 2 Car Stopping E to W Dri F 50 Slight
R1: A 259 1755hrs Veh 3 Goods < 3.5t Stopping E to W
Daylight:street lights present
E 497,985 Dry
N 101,448 Fine without high winds
60 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly
2nd: Following too close
3rd: Driver using mobile phone

Vehicle 3 Very Likely
Vehicle 3 Very Likely
Vehicle 3

VEHICLE 1 WAS A FORD TRANSIT OR SMALLER, TRAVELLING EAST ON A259, WAS DOING A U TURN IN THE ROAD TO CHANGE TO WESTBOUND CARRIAGEWAY. VEHICLE 2 WAS TRAVELLING WESTBOUND, BRAKED FOR VEHICLE 1 TURNING IN THE ROAD, WAS HIT BY VEHICLE 3, TRAVELLING BEHIND HER. DRIVER OF VEHICLE 3 BELIEVED BY DRIVER 2 TO HAVE BEEN ON HIS MOBILE PHONE AT TIME OF COLLISION, THIS WAS ONLY DISCLOSED AFTER DRIVER 3 HAD LEFT SCENE. VEHICLE 1 DID NOT STOP. VEHICLE 2 REAR END DAMAGE REMOVED TO FONTWELL BY WESTBOUR E. VEHICLE 3 FRONT END DAMAGE REMOVED BY OWNER. WITNESS WAS BEHIND VEHICLE 3 AND HAS DASHCAM FOOTAGE.

0872811 Thursday GREVATTS LANE (A259) AT Veh 1 Car Starting N to SW
29/08/2019 JUNCTION WITH YAPTON ROAD Veh 2 Car Going ahead SW to NE Dri F 63 Slight
R1: A 259 0650hrs (B2132)
R2: B 2132 Daylight:street lights present
E 497,547 Dry
N 101,272 Fine without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Dazzling sun

Vehicle 1 Very Likely

V1 HAS ENTERED THE MAIN ROAD, FROM A SIDE ROAD, INTO THE PATH OF V2, WHICH WAS TRAVELLING AT RELATIVELY LOW SPEED. MINOR INJURY TO D2

0890910 Wednesday YAPTON ROAD (B2132) NEAR Veh 1 Car Turning right N to W
23/10/2019 JUNCTION WITH GREVATTS LANE Veh 2 M/C > 500 cc Going ahead SW to NE Dri M 31 Slight
R1: B 2132 0855hrs (A259)
R2: A 259 Daylight:street lights present
E 497,549 Dry
N 101,277 Fine without high winds
50 mph

VEH2 DRIVING EASTBOUND ON THE A259, ON APPROACHING THE YAPTON ROAD JUNCTION VEH1 HAS EXITED YAPTON ROAD ON TO A259 IN FRONT OF VEH2 WHICH CAUSED VEH2 TO PERFORM AN EMERGENCY STOP AND VEH2 COLLIDED WITH VEH1 DRIVERS SIDE FRONT WHEEL ARCH.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Date									
2nd Road No.	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1901239 Monday A259 WORMS LANE MIDDLETON ON VEH 1 Car Wait to turn right N to W
04/03/2019 SEA AT JUNCTION OF B2132 YAPON VEH 2 Car Going ahead W to E FSP M 24 Slight
R1: A 259 1915hrs ROAD
R2: B 2132 Darkness: street lights present a
E 497,547 Wet/Damp
N 101,276 Raining with high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly
2nd: Failed to judge other persons path or speed
3rd: Junction overshoot

Vehicle 1 Very Likely
Vehicle 1 Very Likely
Vehicle 1

V1 (NORTH TO SOUTH) OVERSHOT GIVE WAY LINES FROM MINOR TO MAJOR ROAD. V2 (WEST TO EAST) ON MAJOR ROAD COLLIDED WITH OFFSIDE OF V1.

0899140 Friday GREVATTS LANE (A259) VEH 1 Car Going ahead W to E
15/11/2019 VEH 2 Car Stopping W to E FSP F 25 Slight
R1: A 259 1732hrs VEH 3 Car Stopping W to E FSP F 16 Slight
Darkness: no street lighting
E 499,549 Wet/Damp
N 101,644 Raining without high winds
40 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1 Very Likely

VEHICLE ONE IN SLOW MOVING TRAFFIC HAS GONE IN TO THE BACK OF VEHICLE 2 WHICH HAS GONE IN TO VEHICLE 3

19913371 Sunday GREVATTS LANE (A259) VEH 1 Car Going ahead LH bend W to NE Dri F 27 Slight
22/12/2019
R1: A 259 0224hrs
Darkness: no street lighting
E 498,778 Wet/Damp
N 101,534 Fine without high winds
60 mph

Causation Factor:

Participant:

Confidence:

1st: Impaired by alcohol

Vehicle 1 Very Likely

VEHICLE BEING DRIVEN BY SINGLE FEMALE OCCUPANT WHILST UNDER INFLUENCE OF ALCOHOL LEFT 60MPH CARRIAGEWAY TO THE OFFSIDE. VEHICLE 1 HAS DRIVEN APPROX 150 YARDS ALONG GRASS EMBANKMENT BEFORE VEHICLE HAS DRIVEN DOWN INTO GULLY DITCH. VEHICLE 1 HAS CONTINUED TO DRIVE THROUGH DITCH UNTIL HAVING STRUCK BUSHES AND TREES FLIPPED VEHICLE OVER TRAPPING FEMALE DRIVER IN DRIVERS SEAT. AMBULANCE CREW IN OASIS G FOUND FEMALE DRIVER IN DRIVERS SEAT IN BADLY CRUSHED VEHICLE. FEMALE SUFFERING LOW LEVEL INJURIES. ELF EXTRACTED FROM THE DRIVERS SEAT.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

20968582 Thursday GREVATTS LANE (A259) - 27 Veh 1 Car Going ahead W to E FSP M 21 Serious
30/07/2020 METRES FROM JUNCTION WITH Veh 2 Car Starting W to E
R1: A 259 1710hrs GREVATT'S LANE
Daylight:street lights present
E 499,356 Dry
N 101,625 Fine without high winds
60 mph

Causation Factor:

Participant:

Confidence:

1st: Sudden braking

Vehicle 1

Very Likely

V1 COLLIDED WITH REAR OF V2

201004801 Monday GREVATTS LANE (A259) NEAR Veh 1 Car U turn NE to NE Dri M 66 Slight
07/12/2020 JUNCTION WITH YAPTON ROAD Veh 2 Car Going ahead NE to SW Dri F 36 Slight
R1: A 259 1345hrs (B2132)
R2: B 2132 Daylight:street lights present
E 497,529 Wet/Damp
N 101,260 Fine without high winds
50 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 1

Very Likely

2nd: Dazzling sun

Vehicle 1

Possible

DRIVER OF VEHICLE ONE (D1) HAS BEEN PARKED IN A LAY BY ON THE A259 AT THE JUNCTION WITH BILSHAM ROAD FACING IN THE WESTBOUND DIRECTION. THE DRIVER OF VEHICLE TWO (D2) HAS ALSO BEEN TRAVELLING WESTBOUND TOWARDS BOGNOR REGIS. D1 STATES THAT HE NEEDED TO GET ONTO THE EASTBOUND SIDE AND HAVING CHECKED HIS BLIND SPOTS BEGAN A U-TURN IN THE CARRIAGEWAY AND PULLED STRAIGHT INTO THE PATH OF D2 WHO HAD NO CHANCE TO STOP. D2 HAS IMPACTED THE FRONT OFFSIDE OF D1 CAUSING FRONT END DAMAGE. D1 HAS SUFFERED RED WHIPLASH TYPE INJURY AND D2 SOFT TISSUE INJURY TO HER RIGHT HAND. BOTH DRIVERS HAVE GIVEN IDENTICAL ACCOUNTS AND D1 HAS DEMONSTRATED A HIGH DEGREE OF REMORSE AND ACCEPTANCE OF BLAME. DUE TO THE VERY MINOR INJURY LEVEL IT HAS BEEN DECIDED THAT AT D1 WILL NOT BE REPORTED FOR DRIVING WITHOUT DUE CARE AND ATTENTION.

211016087 Thursday GREVATTS LANE (A259) NEAR Veh 1 Car Turning right S to E
21/01/2021 JUNCTION WITH GREVATT'S LANE Veh 2 Car Going ahead E to W Dri M 24 Slight
R1: A 259 1700hrs
R2: U Darkness: no street lighting
E 499,322 Wet/Damp
N 101,618 Raining without high winds
60 mph

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry

Vehicle 1

Very Likely

2nd: Failed to look properly

Vehicle 1

Very Likely

3rd: Failed to judge other persons path or speed

Vehicle 1

V1 TURNING RIGHT FROM JUNCTION WAS HIT BY V2 WHICH WAS TRAVELLING WEST ALONG MAIN ROAD.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection:

Notes:

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sex
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

211049156	Wednesday	GREVATTS LANE (A259) - 39	Veh 1	Car	Stopping	W	to E			
	26/05/2021	METRES FROM JUNCTION WITH	Veh 2	Car	Stopping	W	to E	Dri	F	43 Slight
R1: A 259	0750hrs	GREVATT'S LANE	Veh 3	Car	Going ahead	W	to E	Dri	M	39 Slight
		Daylight:street lights present								
E 499,369	Dry									
N 101,624	Fine without high winds									
	40 mph									

Causation Factor:

Participant:

Confidence:

- 1st: Dazzling sun
2nd: Stationary or parked vehicle
3rd: Failed to judge other persons path or speed
4th: Sudden braking
5th: Sudden braking

- Vehicle 3
Vehicle 2
Vehicle 2
Vehicle 2
Vehicle 3
- Possible
Very Likely
Very Likely
Very Likely
Very Likely

V1 WAS TRAVELLING EASTBOUND ALONG THE A259 WITHIN SPEED LIMIT RESTRICTIONS (40MPH AND UNDER). V1 CAME TO A GRADUAL STOP DUE THE BUILD UP OF TRAFFIC IN FRONT LEADING UP THE THE SINGLE ROUNDABOUT AROUND 250M AWAY FROM THE CURRENT LOCATION ON THE CARRIA GEWAY. V2 WAS DIRECTLY BEHIND V1 IN THE TRAFFIC QUEUE AND WAS TRAVELLING WITHIN SPEED LIMIT RESTRICTIONS. THE DRIVER OF V2 DID STATE THAT THEY MAY HAVE STOPPED SUDDENLY AS THEY MAY HAVE MISJUDGED THE DISTANCE FROM V1 BUT CAME TO A STOP AROUND ONE FOOT WAY FROM THE REAR OF V1. V3 WAS DIRECTLY BEHIND V2 AND THE DRIVER OF V3 HAS STATED THAT HE WAS TRAVELLING UNDER SPEED LIMIT RESTRICTIONS AT AROUND 10-15MPH. HE HAS STATED THAT HE SNEEZED SUDDENLY AND AS A RESULT LURCHED FORWARD AND LOST SIGHT OF HE ROAD IN FRONT OF HIM. UPON LOOKING BACK UP FROM THE SNEEZE, HE HAS STATED THAT HE HAS THEN HAD TO SLAM ON HIS BREAKS IN ORDER TO STOP IN TIME IN ORDER TO NOT COLLIDE WITH V2. V3 HAS THEN COLLIDED WITH THE REAR OF V2 AND V2 HAS THEN BEEN SENT TOWAR

20968585	Thursday	GREVATTS LANE (A259) - 56	Veh 1	Car	Stopping	W	to E			
	30/07/2020	METRES FROM JUNCTION WITH	Veh 2	Goods 3.5 - 7.5t	Stopping	W	to E	Dri	M	52 Slight
R1: A 259	1700hrs	GREVATT'S LANE	Veh 3	Car	Stopping	W	to E	Dri	F	63 Slight
		Daylight:street lights present	Veh 4	Goods < 3.5t	Stopping	W	to E	Dri	M	38 Slight
E 499,385	Dry		Veh 5	Goods < 3.5t	Going ahead	W	to E			
N 101,627	Fine without high winds									
	60 mph									

Causation Factor:

Participant:

Confidence:

- 1st: Following too close
2nd: Following too close
3rd: Following too close
4th: Following too close
5th: Following too close

- Vehicle 1
Vehicle 2
Vehicle 3
Vehicle 4
Vehicle 5
- Very Likely
Very Likely
Very Likely
Very Likely
Very Likely

5 VEHs MOVING AT ABOUT 40MPH IN BUILT UP TRAFFIC ON A259 OVERTOOK 2 VEH COLLISION AND VEH 3 HAS COLLIDED WITH VEH 2. AS A RESULT VEH 2 HAS COLLIDED WITH VEH 1 AND CAUSED VEH 4 TO COLLIDE INTO THE REAR OF VEH 3 AND VEH 5 DRIVE INTO THE REAR OF VEH 4 WHICH CAUSED A FURTHER IMPACT BETWEEN ALL VEHs.

Details of Personal Injury Accidents for Period - 01/11/2016 to 31/10/2021 (60) months

Selection: Notes:

Police Ref. Road No. 2nd Road No. Grid Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
	Time									
	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
	Causation Factor:									

211055727	Monday	GREVATTS LANE (A259) - 56	Veh 1	Car	Stopping	W	to	E		
R1: A 259	14/06/2021	METRES FROM JUNCTION WITH	Veh 2	Car	Going ahead	W	to	E	FSP	F 12 Slight
	1748hrs	GREVATT'S LANE	Veh 2	Car	Going ahead	W	to	E	Dri	F 65 Slight
		Daylight:street lights present	Veh 3	Car	Going ahead	W	to	E	Dri	M 26 Slight
E 499,274	Dry		Veh 3	Car	Going ahead	W	to	E	FSP	M 29 Slight
N 101,614	Fine without high winds		Veh 4	Car	Going ahead	W	to	E		
	60 mph									

Causation Factor: Participant: Confidence:

1st: Careless/Reckless/In a hurry Vehicle 4 Very Likely

CARS WERE DRIVING ALONG THE A259 EAST BOUND IN LATE RUSH OVER TRAFFIC. THE FRONT OF A 4 CAR QUEUE WAS A WHITE MERCEDES WHICH HAS REPORTEDLY SWERVED BACK AND FORTH IN THE ROAD. IT HAS DONE IT AGAIN NEAR A RIGHT HAND JUNCTION BUT THEN HAS DICED BACK IN TO THE QUEUE OF TRAFFIC CAUSING TO SLAM BREAKS ON CAUSING VEHICLE 1 TO REAR END VEHICLE 2 AND THEN VEHICKE 3 INTO THE REAR IF THIS. THE WHITE MERCEDES HAS LEFT SCENE OBLIVIOUS TO THE SITUATION

Appendix 3 ~ ATC Data - Grevatt's Lane

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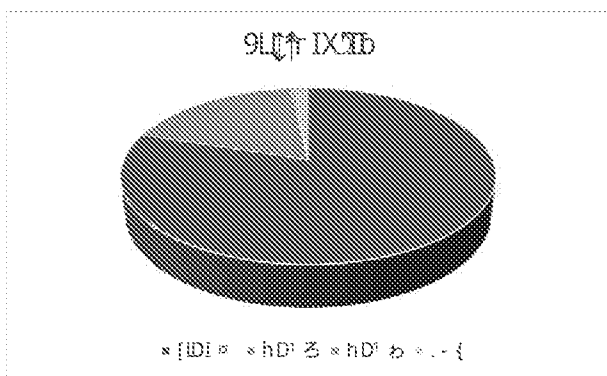
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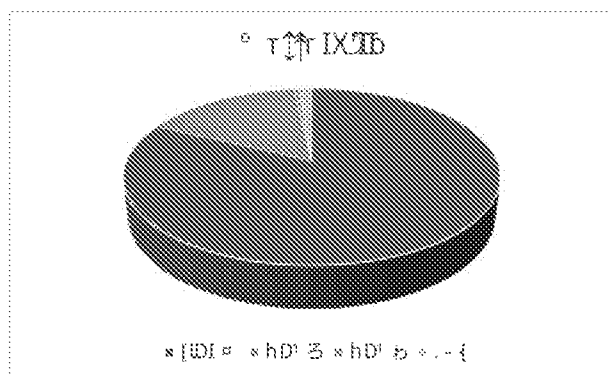
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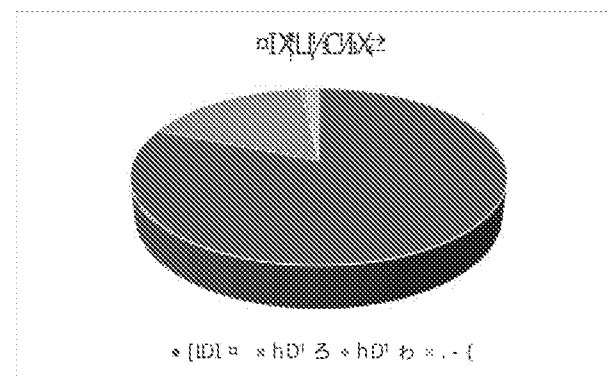
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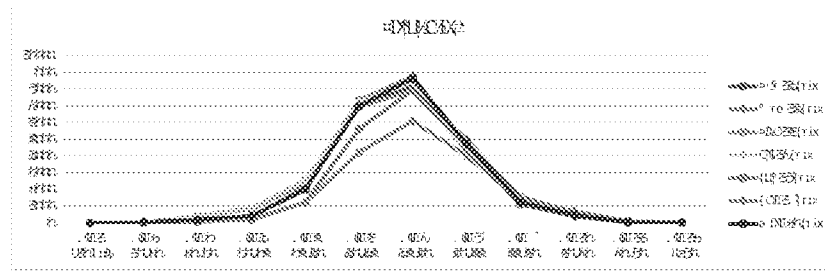
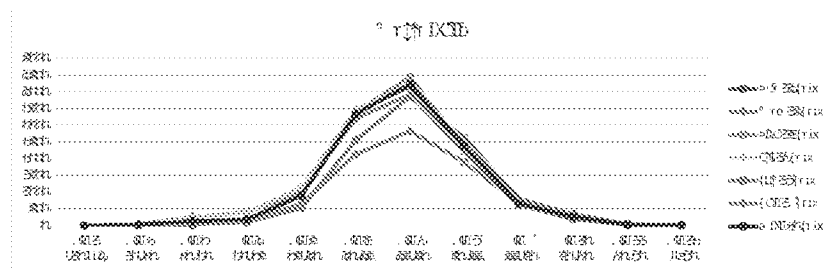
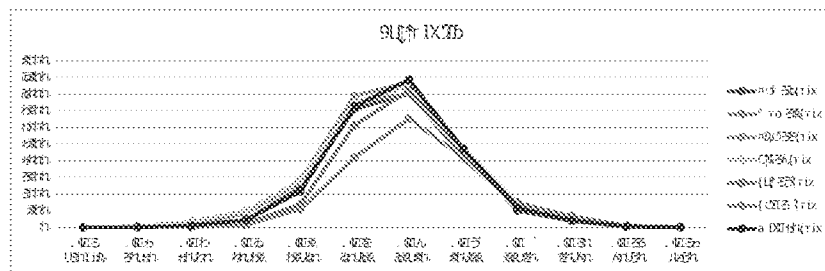
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第1行	ア	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第2行	イ	キ	ス	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第3行	ウ	ク	シュ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第4行	エ	ケ	セ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第5行	オ	コ	ソ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第6行	カ	キ	カ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第7行	ク	キ	カ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第8行	サ	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第9行	シ	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第10行	ス	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第11行	セ	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ
第12行	ソ	カ	サ	シ	チ	ツ	テ	ト	ナ	ニ	ノ	ハ	ヘ	コ	セ	ソ

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ARUN DISTRICT COUNCIL M/16/22/PL

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項目	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
項目	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	5																																																																																																																																																																																																																																																																																																																																																																																																																																											

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漢字	平仮名	カタカナ	ローマ字	英語	日本語	英語	日本語	英語	日本語	英語	日本語
一	いち	イチ	ICHI	一	一	one	one	一	一	one	one
二	に	ニ	NI	二	二	two	two	二	二	two	two
三	さん	サン	SAN	三	三	three	three	三	三	three	three
四	し	シ	SHI	四	四	four	four	四	四	four	four
五	ご	ゴ	GO	五	五	five	five	五	五	five	five
六	ろく	ロク	ROKU	六	六	six	six	六	六	six	six
七	しち	シチ	SHICHI	七	七	seven	seven	七	七	seven	seven
八	はち	ハチ	HACHI	八	八	eight	eight	八	八	eight	eight
九	く	ク	KU	九	九	nine	nine	九	九	nine	nine
十	じゅう	ジュウ	JUJU	十	十	ten	ten	十	十	ten	ten
十一	じゅういち	ジュウイチ	JUJUICHI	十一	十一	eleven	eleven	十一	十一	eleven	eleven
十二	じゅうに	ジュウニ	JUJUNI	十二	十二	twelve	twelve	十二	十二	twelve	twelve
十三	じゅうさん	ジュウサン	JUUSAN	十三	十三	thirteen	thirteen	十三	十三	thirteen	thirteen
十四	じゅうし	ジュウシ	JUUSHI	十四	十四	fourteen	fourteen	十四	十四	fourteen	fourteen
十五	じゅうご	ジュウゴ	JUUGO	十五	十五	fifteen	fifteen	十五	十五	fifteen	fifteen
十六	じゅうろく	ジュウロク	JUUROKU	十六	十六	sixteen	sixteen	十六	十六	sixteen	sixteen
十七	じゅうしち	ジュウシチ	JUUSICHI	十七	十七	seventeen	seventeen	十七	十七	seventeen	seventeen
十八	じゅうはち	ジュウハチ	JUUHACHI	十八	十八	eighteen	eighteen	十八	十八	eighteen	eighteen
十九	じゅうく	ジュウク	JUUKU	十九	十九	nineteen	nineteen	十九	十九	nineteen	nineteen
二十	じゅうじゅう	ジュウジュウ	JUJUJUJU	二十	二十	twenty	twenty	二十	二十	twenty	twenty
二十一	じゅうじゅういち	ジュウジュウイチ	JUJUJUJUICHI	二十一	二十一	twenty-one	twenty-one	二十一	二十一	twenty-one	twenty-one
二十二	じゅうじゅうに	ジュウジュウニ	JUJUJUJUNI	二十二	二十二	twenty-two	twenty-two	二十二	二十二	twenty-two	twenty-two
二十三	じゅうじゅうさん	ジュウジュウサン	JUJUJUUSAN	二十三	二十三	twenty-three	twenty-three	二十三	二十三	twenty-three	twenty-three
二十四	じゅうじゅうし	ジュウジュウシ	JUJUJUUSHI	二十四	二十四	twenty-four	twenty-four	二十四	二十四	twenty-four	twenty-four
二十五	じゅうじゅうご	ジュウジュウゴ	JUJUJUUGO	二十五	二十五	twenty-five	twenty-five	二十五	二十五	twenty-five	twenty-five
二十六	じゅうじゅうろく	ジュウジュウロク	JUJUJUUROKU	二十六	二十六	twenty-six	twenty-six	二十六	二十六	twenty-six	twenty-six
二十七	じゅうじゅうしち	ジュウジュウシチ	JUJUJUUSICHI	二十七	二十七	twenty-seven	twenty-seven	二十七	二十七	twenty-seven	twenty-seven
二十八	じゅうじゅうはち	ジュウジュウハチ	JUJUJUUHACHI	二十八	二十八	twenty-eight	twenty-eight	二十八	二十八	twenty-eight	twenty-eight
二十九	じゅうじゅうく	ジュウジュウク	JUJUJUUKU	二十九	二十九	twenty-nine	twenty-nine	二十九	二十九	twenty-nine	twenty-nine
三十	さんじゅう	サンジュウ	SANJUJU	三十	三十	thirty	thirty	三十	三十	thirty	thirty
三十一	さんじゅういち	サンジュウイチ	SANJUJUICHI	三十一	三十一	thirty-one	thirty-one	三十一	三十一	thirty-one	thirty-one
三十二	さんじゅうに	サンジュウニ	SANJUJUNI	三十二	三十二	thirty-two	thirty-two	三十二	三十二	thirty-two	thirty-two
三十三	さんじゅうさん	サンジュウサン	SANJUUSAN	三十三	三十三	thirty-three	thirty-three	三十三	三十三	thirty-three	thirty-three
三十四	さんじゅうし	サンジュウシ	SANJUUSHI	三十四	三十四	thirty-four	thirty-four	三十四	三十四	thirty-four	thirty-four
三十五	さんじゅうご	サンジュウゴ	SANJUUGO	三十五	三十五	thirty-five	thirty-five	三十五	三十五	thirty-five	thirty-five
三十六	さんじゅうろく	サンジュウロク	SANJUUROKU	三十六	三十六	thirty-six	thirty-six	三十六	三十六	thirty-six	thirty-six
三十七	さんじゅうしち	サンジュウシチ	SANJUUSICHI	三十七	三十七	thirty-seven	thirty-seven	三十七	三十七	thirty-seven	thirty-seven
三十八	さんじゅうはち	サンジュウハチ	SANJUUHACHI	三十八	三十八	thirty-eight	thirty-eight	三十八	三十八	thirty-eight	thirty-eight
三十九	さんじゅうく	サンジュウク	SANJUUKU	三十九	三十九	thirty-nine	thirty-nine	三十九	三十九	thirty-nine	thirty-nine
四十	よんじゅう	ヨンジュウ	YONJUJU	四十	四十	forty	forty	四十	四十	forty	forty
四十一	よんじゅういち	ヨンジュウイチ	YONJUJUICHI	四十一	四十一	forty-one	forty-one	四十一	四十一	forty-one	forty-one
四十二	よんじゅうに	ヨンジュウニ	YONJUJUNI	四十二	四十二	forty-two	forty-two	四十二	四十二	forty-two	forty-two
四十三	よんじゅうさん	ヨンジュウサン	YONJUUSAN	四十三	四十三	forty-three	forty-three	四十三	四十三	forty-three	forty-three
四十四	よんじゅうし	ヨンジュウシ	YONJUUSHI	四十四	四十四	forty-four	forty-four	四十四	四十四	forty-four	forty-four
四十五	よんじゅうご	ヨンジュウゴ	YONJUUGO	四十五	四十五	forty-five	forty-five	四十五	四十五	forty-five	forty-five
四十六	よんじゅうろく	ヨンジュウロク	YONJUUROKU	四十六	四十六	forty-six	forty-six	四十六	四十六	forty-six	forty-six
四十七	よんじゅうしち	ヨンジュウシチ	YONJUUSICHI	四十七	四十七	forty-seven	forty-seven	四十七	四十七	forty-seven	forty-seven
四十八	よんじゅうはち	ヨンジュウハチ	YONJUUHACHI	四十八	四十八	forty-eight	forty-eight	四十八	四十八	forty-eight	forty-eight
四十九	よんじゅうく	ヨンジュウク	YONJUUKU	四十九	四十九	forty-nine	forty-nine	四十九	四十九	forty-nine	forty-nine
五十	ごじゅう	ゴジュウ	GOJUJU	五十	五十	fifty	fifty	五十	五十	fifty	fifty
五十一	ごじゅういち	ゴジュウイチ	GOJUJUICHI	五十一	五十一	fifty-one	fifty-one	五十一	五十一	fifty-one	fifty-one
五十二	ごじゅうに	ゴジュウニ	GOJUJUNI	五十二	五十二	fifty-two	fifty-two	五十二	五十二	fifty-two	fifty-two
五十三	ごじゅうさん	ゴジュウサン	GOJUUSAN	五十三	五十三	fifty-three	fifty-three	五十三	五十三	fifty-three	fifty-three
五十四	ごじゅうし	ゴジュウシ	GOJUUSHI	五十四	五十四	fifty-four	fifty-four	五十四	五十四	fifty-four	fifty-four
五十五	ごじゅうご	ゴジュウゴ	GOJUUGO	五十五	五十五	fifty-five	fifty-five	五十五	五十五	fifty-five	fifty-five
五十六	ごじゅうろく	ゴジュウロク	GOJUUROKU	五十六	五十六	fifty-six	fifty-six	五十六	五十六	fifty-six	fifty-six
五十七	ごじゅうしち	ゴジュウシチ	GOJUUSICHI	五十七	五十七	fifty-seven	fifty-seven	五十七	五十七	fifty-seven	fifty-seven
五十八	ごじゅうはち	ゴジュウハチ	GOJUUHACHI	五十八	五十八	fifty-eight	fifty-eight	五十八	五十八	fifty-eight	fifty-eight
五十九	ごじゅうく	ゴジュウク	GOJUUKU	五十九	五十九	fifty-nine	fifty-nine	五十九	五十九	fifty-nine	fifty-nine
六十	ろくじゅう	ロクジュウ	ROKUJUJU	六十	六十	sixty	sixty	六十	六十	sixty	sixty
六十一	ろくじゅういち	ロクジュウイチ	ROKUJUJUICHI	六十一	六十一	sixty-one	sixty-one	六十一	六十一	sixty-one	sixty-one
六十二	ろくじゅうに	ロクジュウニ	ROKUJUJUNI	六十二	六十二	sixty-two	sixty-two	六十二	六十二	sixty-two	sixty-two
六十三	ろくじゅうさん	ロクジュウサン	ROKUJUUSAN	六十三	六十三	sixty-three	sixty-three	六十三	六十三	sixty-three	sixty-three
六十四	ろくじゅうし	ロクジュウシ	ROKUJUUSHI	六十四	六十四	sixty-four	sixty-four	六十四	六十四	sixty-four	sixty-four
六十五	ろくじゅうご	ロクジュウゴ	ROKUJUUGO	六十五	六十五	sixty-five	sixty-five	六十五	六十五	sixty-five	sixty-five
六十六	ろくじゅうろく	ロクジュウロク	ROKUJUUROKU	六十六	六十六	sixty-six	sixty-six	六十六	六十六	sixty-six	sixty-six
六十七	ろくじゅうしち	ロクジュウシチ	ROKUJUUSICHI	六十七	六十七	sixty-seven	sixty-seven	六十七	六十七	sixty-seven	sixty-seven
六十八	ろくじゅうはち	ロクジュウハチ	ROKUJUUHACHI	六十八	六十八	sixty-eight	sixty-eight	六十八	六十八	sixty-eight	sixty-eight
六十九	ろくじゅうく	ロクジュウク	ROKUJUUKU	六十九	六十九	sixty-nine	sixty-nine	六十九	六十九	sixty-nine	sixty-nine
七十	しちじゅう	シチジュウ	SHICHIJUJU	七十	七十	seventy	seventy	七十	七十	seventy	seventy
七十一	しちじゅういち	シチジュウイチ	SHICHIJUJUICHI	七十一	七十一	seventy-one	seventy-one	七十一	七十一	seventy-one	seventy-one
七十二	しちじゅうに	シチジュウニ	SHICHIJUJUNI	七十二	七十二	seventy-two	seventy-two	七十二	七十二	seventy-two	seventy-two
七十三	しちじゅうさん	シチジュウサン	SHICHIJUUSAN	七十三	七十三	seventy-three	seventy-three	七十三	七十三	seventy-three	seventy-three
七十四	しちじゅうし	シチジュウシ	SHICHIJUUSHI	七十四	七十四	seventy-four	seventy-four	七十四	七十四	seventy-four	seventy-four
七十五	しちじゅうご	シチジュウゴ	SHICHIJUUGO	七十五	七十五	seventy-five	seventy-five	七十五	七十五	seventy-five	seventy-five
七十六	しちじゅうろく	シチジュウロク	SHICHIJUUROKU	七十六	七十六	seventy-six	seventy-six	七十六	七十六	seventy-six	seventy-six
七十七	しちじゅうしち	シチジュウシチ	SHICHIJUUSICHI	七十七	七十七	seventy-seven	seventy-seven	七十七	七十七	seventy-seven	seventy-seven
七十八	しちじゅうはち	シチジュウハチ	SHICHIJUUHACHI	七十八	七十八	seventy-eight	seventy-eight	七十八	七十八	seventy-eight	seventy-eight
七十九	しちじゅうく	シチジュウク	SHICHIJUUKU	七十九	七十九	seventy-nine	seventy-nine	七十九	七十九	seventy-nine	seventy-nine
八十	はちじゅう	ハチジュウ	HACHIJUJU	八十	八十	eighty	eighty	八十	八十	eighty	eighty
八十一	はちじゅういち	ハチジュウイチ	HACHIJUJUICHI	八十一	八十一	eighty-one	eighty-one	八十一	八十一	eighty-one	eighty-one
八十二	はちじゅうに	ハチジュウニ	HACHIJUJUNI	八十二	八十二	eighty-two	eighty-two	八十二	八十二	eighty-two	eighty-two
八十三	はちじゅうさん	ハチジュウサン	HACHIJUUSAN	八十三	八十三	eighty-three	eighty-three	八十三	八十三	eighty-three	eighty-three
八十四	はちじゅうし	ハチジュウシ	HACHIJUUSHI	八十四	八十四	eighty-four	eighty-four	八十四	八十四	eighty-four	eighty-four
八十五	はちじゅうご	ハチジュウゴ	HACHIJUUGO	八十五	八十五	eighty-five	eighty-five	八十五	八十五	eighty-five	eighty-five
八十六	はちじゅうろく	ハチジュウロク	HACHIJUUROKU	八十六	八十六	eighty-six	eighty-six	八十六	八十六	eighty-six	eighty-six
八十七	はちじゅうしち	ハチジュウシチ	HACHIJUUSICHI	八十七	八十七	eighty-seven	eighty-seven	八十七	八十七	eighty-seven	eighty-seven
八十八	はちじゅうはち	ハチジュウハチ	HACHIJUUHACHI	八十八	八十八	eighty-eight	eighty-eight	八十八	八十八	eighty-eight	eighty-eight
八十九	はちじゅうく	ハチジュウク	HACHIJUUKU	八十九	八十九	eighty-nine	eighty-nine	八十九	八十九	eighty-nine	eighty-nine
九十	くじゅう	クジュウ	KUJUJU	九十	九十	ninety	ninety	九十	九十	ninety	ninety
九十一	くじゅういち	クジュウイチ	KUJUJUICHI	九十一	九十一	ninety-one	ninety-one	九十一	九十一	ninety-one	ninety-one
九十二	くじゅうに	クジュウニ	KUJUJUNI	九十二	九十二	ninety-two	ninety-two	九十二	九十二	ninety-two	ninety-two
九十三	くじゅうさん	クジュウサン	KUJUUSAN	九十三	九十三	ninety-three	ninety-three	九十三	九十三	ninety-three	ninety-three
九十四	くじゅうし	クジュウシ	KUJUUSHI	九十四	九十四	ninety-four	ninety-four	九十四	九十四	ninety-four	ninety-four
九十五	くじゅうご	クジュウゴ	KUJUUGO	九十五	九十五	ninety-five	ninety-five	九十五	九十五	ninety-five	ninety-five
九十六	くじゅうろく	クジュウロク	KUJUUROKU	九十六	九十六	ninety-six	ninety-six	九十六	九十六	ninety-six	ninety-six
九十七	くじゅうしち	クジュウシチ	KUJUUSICHI	九十七	九十七	ninety-seven	ninety-seven	九十七	九十七	ninety-seven	ninety-seven
九十八	くじゅうはち	クジュウハチ	KUJUUHACHI	九十八	九十八	ninety-eight	ninety-eight	九十八	九十八	ninety-eight	ninety-eight
九十九	くじゅうく	クジュウク	KUJUUKU	九十九	九十九	ninety-nine	ninety-nine	九十九	九十九	ninety-nine	ninety-nine
百	ひゃく	ヒャク	HYAKU	百	百	hundred	hundred	百	百	hundred	hundred

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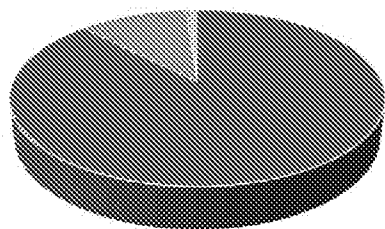
[illegible][illegible]

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フ 2nd 声	材知	3知	3知	3ん	3知
ハ 2nd 声	材知	3知	3知	3ん	3知
フ 2nd 声	材知	3知	3知	3ん	3知
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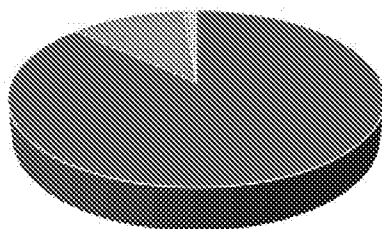
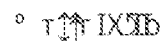
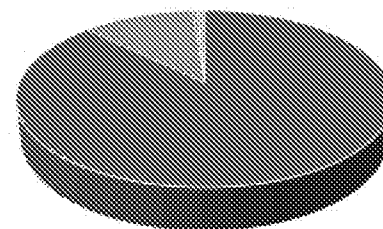
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ア a	a	i	u	e	-1
イ i	a	i	u	e	-1
ウ u	a	i	u	e	-1
エ e	a	i	u	e	-1
オ o	a	i	u	e	-1
カ ka	a	i	u	e	-1
キ ki	a	i	u	e	-1
ク ku	a	i	u	e	-1
ケ ke	a	i	u	e	-1
コ ko	a	i	u	e	-1
サ sa	a	i	u	e	-1
シ shi	a	i	u	e	-1
ス su	a	i	u	e	-1
セ se	a	i	u	e	-1
ソ so	a	i	u	e	-1
タ ta	a	i	u	e	-1
チ chi	a	i	u	e	-1
ツ tsu	a	i	u	e	-1
テ te	a	i	u	e	-1
ト to	a	i	u	e	-1
ナ na	a	i	u	e	-1
ニ ni	a	i	u	e	-1
ノ no	a	i	u	e	-1
ハ ha	a	i	u	e	-1
ヒ hi	a	i	u	e	-1
フ fu	a	i	u	e	-1
ヘ he	a	i	u	e	-1
ホ ho	a	i	u	e	-1
マ ma	a	i	u	e	-1
ミ mi	a	i	u	e	-1
ム mu	a	i	u	e	-1
メ me	a	i	u	e	-1
モ mo	a	i	u	e	-1
ヤ ya	a	i	u	e	-1
ユ yu	a	i	u	e	-1
ヨ yo	a	i	u	e	-1
エ a	a	i	u	e	-1
オ i	a	i	u	e	-1
カ u	a	i	u	e	-1
キ e	a	i	u	e	-1
ク o	a	i	u	e	-1
ケ a	a	i	u	e	-1
コ i	a	i	u	e	-1
サ u	a	i	u	e	-1
シ e	a	i	u	e	-1
ス o	a	i	u	e	-1
セ a	a	i	u	e	-1
ソ i	a	i	u	e	-1
タ u	a	i	u	e	-1
チ e	a	i	u	e	-1
ツ o	a	i	u	e	-1
テ a	a	i	u	e	-1
ト i	a	i	u	e	-1
ナ u	a	i	u	e	-1
ニ e	a	i	u	e	-1
ノ o	a	i	u	e	-1
ハ a	a	i	u	e	-1
ヒ i	a	i	u	e	-1
フ u	a	i	u	e	-1
ヘ e	a	i	u	e	-1
ホ o	a	i	u	e	-1
マ a	a	i	u	e	-1
ミ i	a	i	u	e	-1
ム u	a	i	u	e	-1
メ e	a	i	u	e	-1
モ o	a	i	u	e	-1
ヤ a	a	i	u	e	-1
ユ i	a	i	u	e	-1
ヨ u	a	i	u	e	-1
エ a	a	i	u	e	-1
オ i	a	i	u	e	-1
カ u	a	i	u	e	-1
キ e	a	i	u	e	-1
ク o	a	i	u	e	-1
ケ a	a	i	u	e	-1
コ i	a	i	u	e	-1
サ u	a	i	u	e	-1
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ソ i	a	i	u	e	-1
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チ e	a	i	u	e	-1
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テ a	a	i	u	e	-1
ト i	a	i	u	e	-1
ナ u	a	i	u	e	-1
ニ e	a	i	u	e	-1
ノ o	a	i	u	e	-1
ハ a	a	i	u	e	-1
ヒ i	a	i	u	e	-1
フ u	a	i	u	e	-1
ヘ e	a	i	u	e	-1
ホ o	a	i	u	e	-1
マ a	a	i	u	e	-1
ミ i	a	i	u	e	-1
ム u	a	i	u	e	-1
メ e	a	i	u	e	-1
モ o	a	i	u	e	-1
ヤ a	a	i	u	e	-

樹形{[[↑


$$\otimes [DI] \otimes \otimes hD^1 \otimes \otimes hD^1 \otimes \otimes \dots \otimes \{$$

推知{[[↑


$$s \in \text{ID} \Leftrightarrow s \in \text{hd}^1 \mathcal{S} \wedge s \in \text{hd}^1 \mathcal{P} \wedge s \in \cdot - \{$$
$$[a]_{\mathcal{A}} \{ [[\uparrow]_0$$

$$* \text{HDI} \approx * \text{hD}^1 \text{ } \mathfrak{E} * \text{hD}^2 \text{ } \mathfrak{b} \text{ } \cdot \text{ } \cdot \text{ } \{$$

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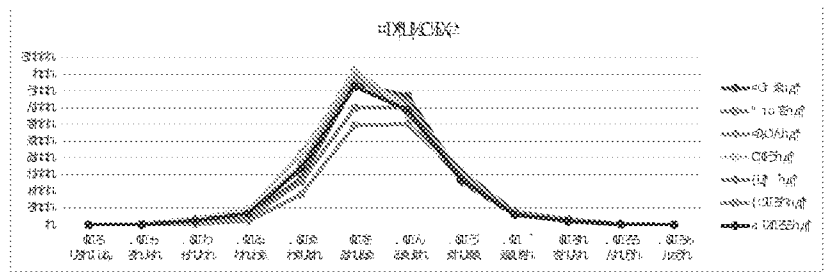
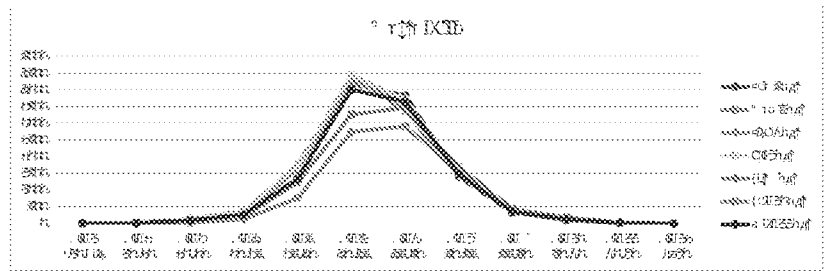
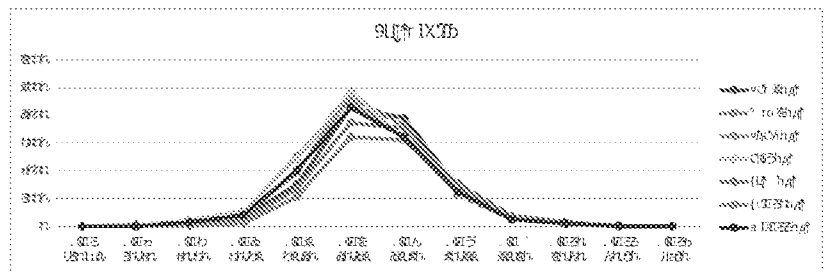
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ア行	ア	カ	サ	シ	フ	バ	パ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
イ行	イ	キ	シ	ス	フ	ビ	ピ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
エ行	エ	ケ	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
オ行	オ	コ	ソ	ソ	フ	ボ	ポ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
カ行	カ	カ	サ	シ	フ	バ	パ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
キ行	キ	キ	シ	ス	フ	ビ	ピ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ク行	ク	ク	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ケ行	ケ	ケ	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
コ行	コ	コ	ソ	ソ	フ	ボ	ポ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
サ行	サ	カ	サ	シ	フ	バ	パ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
シ行	シ	キ	シ	ス	フ	ビ	ピ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ス行	ス	ケ	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
セ行	セ	コ	ソ	ソ	フ	ボ	ポ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ソ行	ソ	ク	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
タ行	タ	ケ	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
チ行	チ	コ	ソ	ソ	フ	ボ	ポ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ツ行	ツ	ク	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
テ行	テ	ケ	セ	セ	フ	ベ	ペ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト
ト行	ト	コ	ソ	ソ	フ	ボ	ポ	ミ	ヤ	リ	ロ	メ	モ	マ	タ	チ	ツ	テ	ト

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	ラ行	カ行	サ行	タ行	ナ行	ハ行	マ行	ヤ行	ラ行	カ行	サ行	タ行	ナ行	ハ行	マ行	ヤ行	ラ行	カ行	サ行	タ行	ナ行	ハ行	マ行	ヤ行
ア行	ア	カ	サ	タ	ナ	ハ	マ	ヤ	ア	カ	サ	タ	ナ	ハ	マ	ヤ	ア	カ	サ	タ	ナ	ハ	マ	ヤ
イ行	イ	キ	シ	チ	ニ	ヒ	ミ	リ	イ	キ	シ	チ	ニ	ヒ	ミ	リ	イ	キ	シ	チ	ニ	ヒ	ミ	リ
エ行	エ	ケ	セ	テ	ネ	ヘ	メ	レ	エ	ケ	セ	テ	ネ	ヘ	メ	レ	エ	ケ	セ	テ	ネ	ヘ	メ	レ
オ行	オ	コ	ソ	ト	ノ	ホ	モ	ロ	オ	コ	ソ	ト	ノ	ホ	モ	ロ	オ	コ	ソ	ト	ノ	ホ	モ	ロ
ウ行	ウ	ク	ス	ツ	ヌ	フ	ム	ル	ウ	ク	ス	ツ	ヌ	フ	ム	ル	ウ	ク	ス	ツ	ヌ	フ	ム	ル
エ行	エ	ケ	セ	テ	ネ	ヘ	メ	レ	エ	ケ	セ	テ	ネ	ヘ	メ	レ	エ	ケ	セ	テ	ネ	ヘ	メ	レ
オ行	オ	コ	ソ	ト	ノ	ホ	モ	ロ	オ	コ	ソ	ト	ノ	ホ	モ	ロ	オ	コ	ソ	ト	ノ	ホ	モ	ロ
カ行	カ	カ	サ	タ	ナ	ハ	マ	ヤ	カ	カ	サ	タ	ナ	ハ	マ	ヤ	カ	カ	サ	タ	ナ	ハ	マ	ヤ
キ行	キ	キ	シ	チ	ニ	ヒ	ミ	リ	キ	キ	シ	チ	ニ	ヒ	ミ	リ	キ	キ	シ	チ	ニ	ヒ	ミ	リ
ク行	ク	ク	ス	ツ	ヌ	フ	ム	ル	ク	ク	ス	ツ	ヌ	フ	ム	ル	ク	ク	ス	ツ	ヌ	フ	ム	ル
ケ行	ケ	ケ	セ	テ	ネ	ヘ	メ	レ	ケ	ケ	セ	テ	ネ	ヘ	メ	レ	ケ	ケ	セ	テ	ネ	ヘ	メ	レ
コ行	コ	コ	ソ	ト	ノ	ホ	モ	ロ	コ	コ	ソ	ト	ノ	ホ	モ	ロ	コ	コ	ソ	ト	ノ	ホ	モ	ロ
サ行	サ	サ	サ	タ	ナ	ハ	マ	ヤ	サ	サ	サ	タ	ナ	ハ	マ	ヤ	サ	サ	サ	タ	ナ	ハ	マ	ヤ
シ行	シ	シ	シ	チ	ニ	ヒ	ミ	リ	シ	シ	シ	チ	ニ	ヒ	ミ	リ	シ	シ	シ	チ	ニ	ヒ	ミ	リ
ス行	ス	ス	ス	ツ	ヌ	フ	ム	ル	ス	ス	ス	ツ	ヌ	フ	ム	ル	ス	ス	ス	ツ	ヌ	フ	ム	ル
セ行	セ	セ	セ	テ	ネ	ヘ	メ	レ	セ	セ	セ	テ	ネ	ヘ	メ	レ	セ	セ	セ	テ	ネ	ヘ	メ	レ
ソ行	ソ	ソ	ソ	ト	ノ	ホ	モ	ロ	ソ	ソ	ソ	ト	ノ	ホ	モ	ロ	ソ	ソ	ソ	ト	ノ	ホ	モ	ロ
タ行	タ	タ	タ	タ	ナ	ハ	マ	ヤ	タ	タ	タ	タ	ナ	ハ	マ	ヤ	タ	タ	タ	タ	ナ	ハ	マ	ヤ
チ行	チ	チ	チ	チ	ニ	ヒ	ミ	リ	チ	チ	チ	チ	ニ	ヒ	ミ	リ	チ	チ	チ	チ	ニ	ヒ	ミ	リ
ニ行	ニ	ニ	ニ	ツ	ヌ	フ	ム	ル	ニ	ニ	ニ	ツ	ヌ	フ	ム	ル	ニ	ニ	ニ	ツ	ヌ	フ	ム	ル
ヒ行	ヒ	ヒ	ヒ	テ	ネ	ヘ	メ	レ	ヒ	ヒ	ヒ	テ	ネ	ヘ	メ	レ	ヒ	ヒ	ヒ	テ	ネ	ヘ	メ	レ
ミ行	ミ	ミ	ミ	ト	ノ	ホ	モ	ロ	ミ	ミ	ミ	ト	ノ	ホ	モ	ロ	ミ	ミ	ミ	ト	ノ	ホ	モ	ロ
フ行	フ	フ	フ	タ	ナ	ハ	マ	ヤ	フ	フ	フ	タ	ナ	ハ	マ	ヤ	フ	フ	フ	タ	ナ	ハ	マ	ヤ
ム行	ム	ム	ム	チ	ニ	ヒ	ミ	リ	ム	ム	ム	チ	ニ	ヒ	ミ	リ	ム	ム	ム	チ	ニ	ヒ	ミ	リ
ル行	ル	ル	ル	ツ	ヌ	フ	ム	ル	ル	ル	ル	ツ	ヌ	フ	ム	ル	ル	ル	ル	ツ	ヌ	フ	ム	ル

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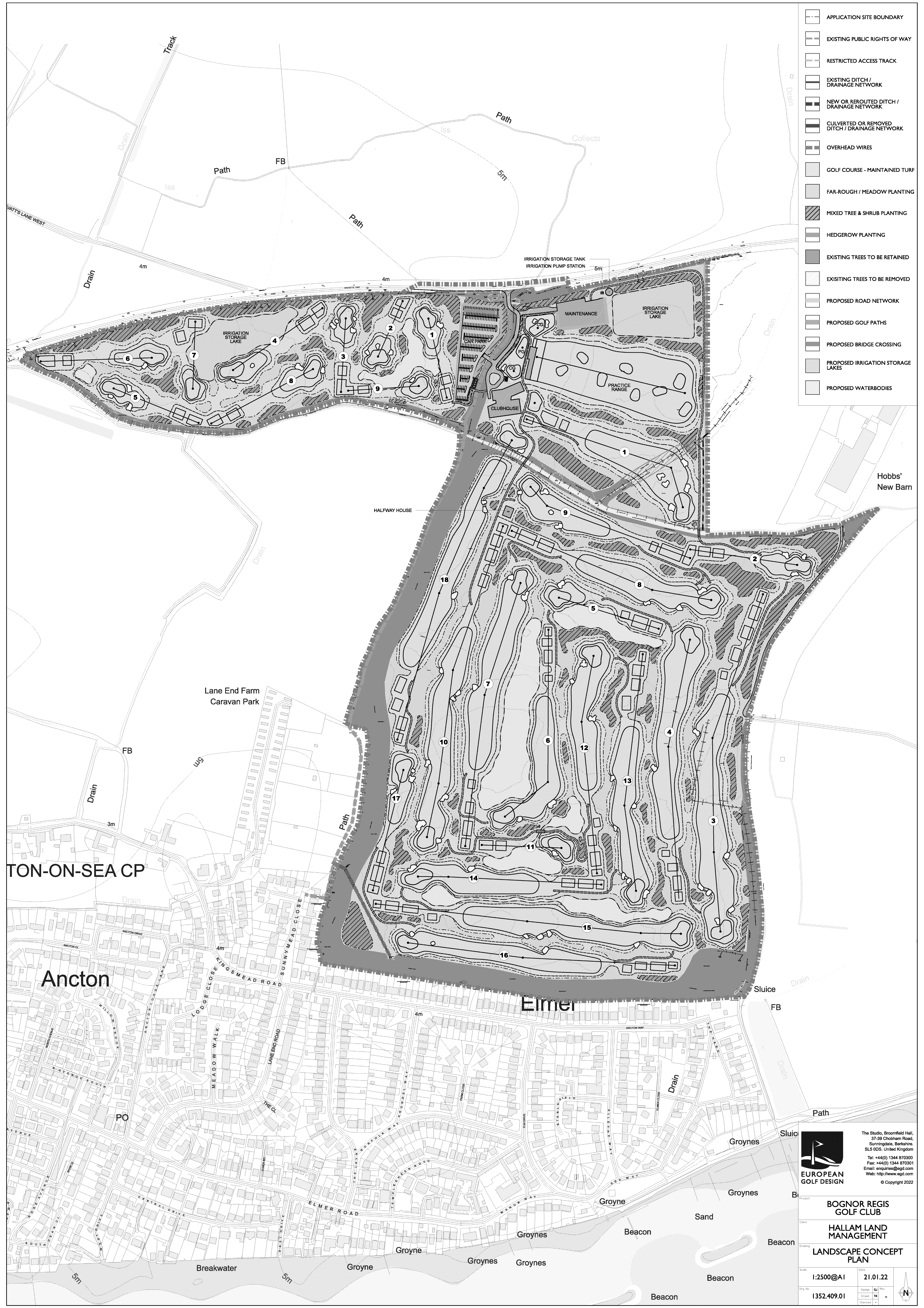
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Appendix 4 ~ Masterplan Layout



- APPLICATION SITE BOUNDARY
- EXISTING PUBLIC RIGHTS OF WAY
- RESTRICTED ACCESS TRACK
- EXISTING DITCH / DRAINAGE NETWORK
- NEW OR REROUTED DITCH / DRAINAGE NETWORK
- CULVERTED OR REMOVED DITCH / DRAINAGE NETWORK
- OVERHEAD WIRES
- GOLF COURSE - MAINTAINED TURF
- FAR-ROUGH / MEADOW PLANTING
- MIXED TREE & SHRUB PLANTING
- HEDGEROW PLANTING
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- PROPOSED ROAD NETWORK
- PROPOSED GOLF PATHS
- PROPOSED BRIDGE CROSSING
- PROPOSED IRRIGATION STORAGE LAKES
- PROPOSED WATERBODIES

The Studio, Broomfield Hall,
37-39 Chobham Road,
Sunningdale, Berkshire,
SL5 0DS, United Kingdom
Tel: +44(0) 1344 870300
Fax: +44(0) 1344 870301
Email: enquiries@egd.com
Web: http://www.egd.com
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EUROPEAN GOLF DESIGN

BOGNOR REGIS GOLF CLUB

Client: **HALLAM LAND MANAGEMENT**

Drawing: **LANDSCAPE CONCEPT PLAN**

Scale: **1:2500@A1**

Date: **21.01.22**

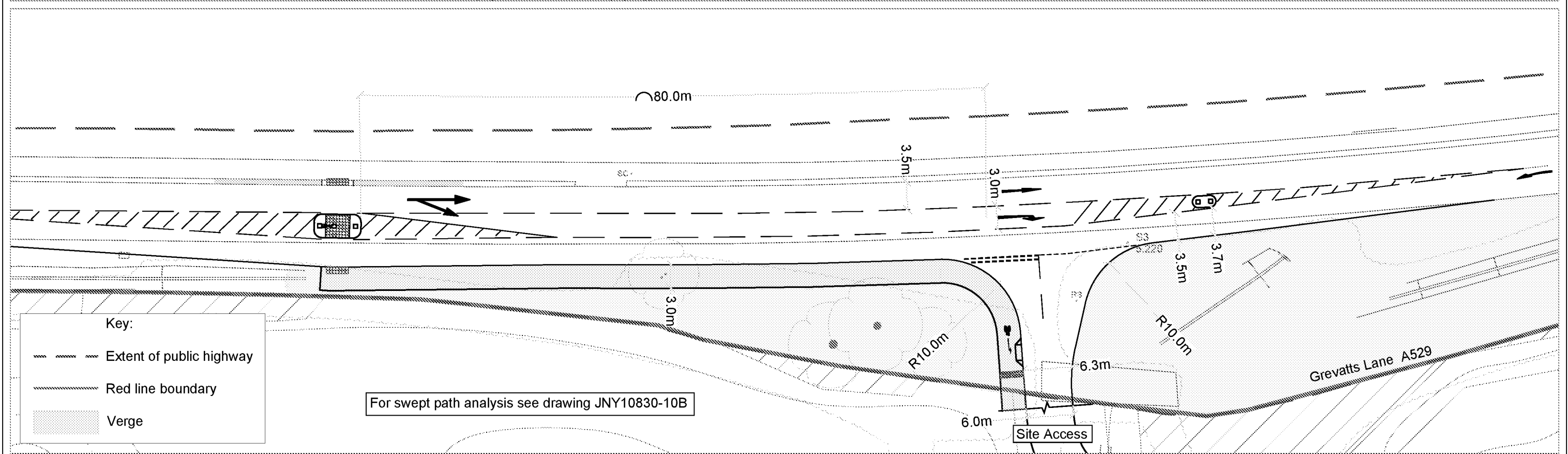
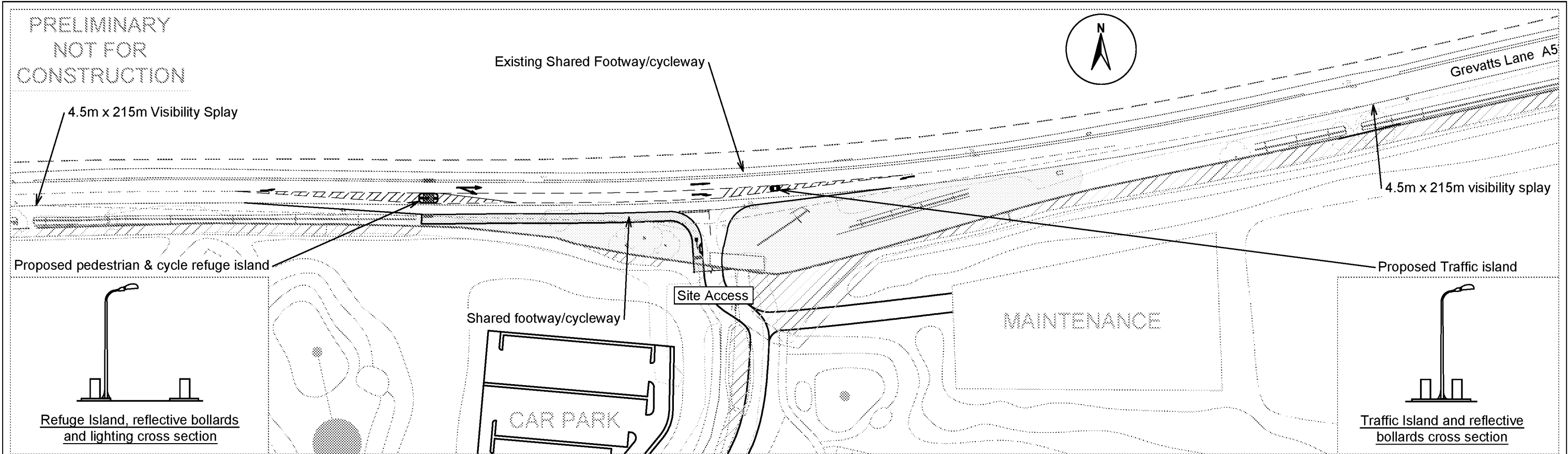
Orig No: **1352.409.01**

Design: **GA**

Drawn: **TK**

Checked: **-**

Appendix 5 - Proposed Access Arrangement and Swept Path Analysis



20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3691 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

Title Proposed Access Arrangement
to New Golf Course

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NOTES

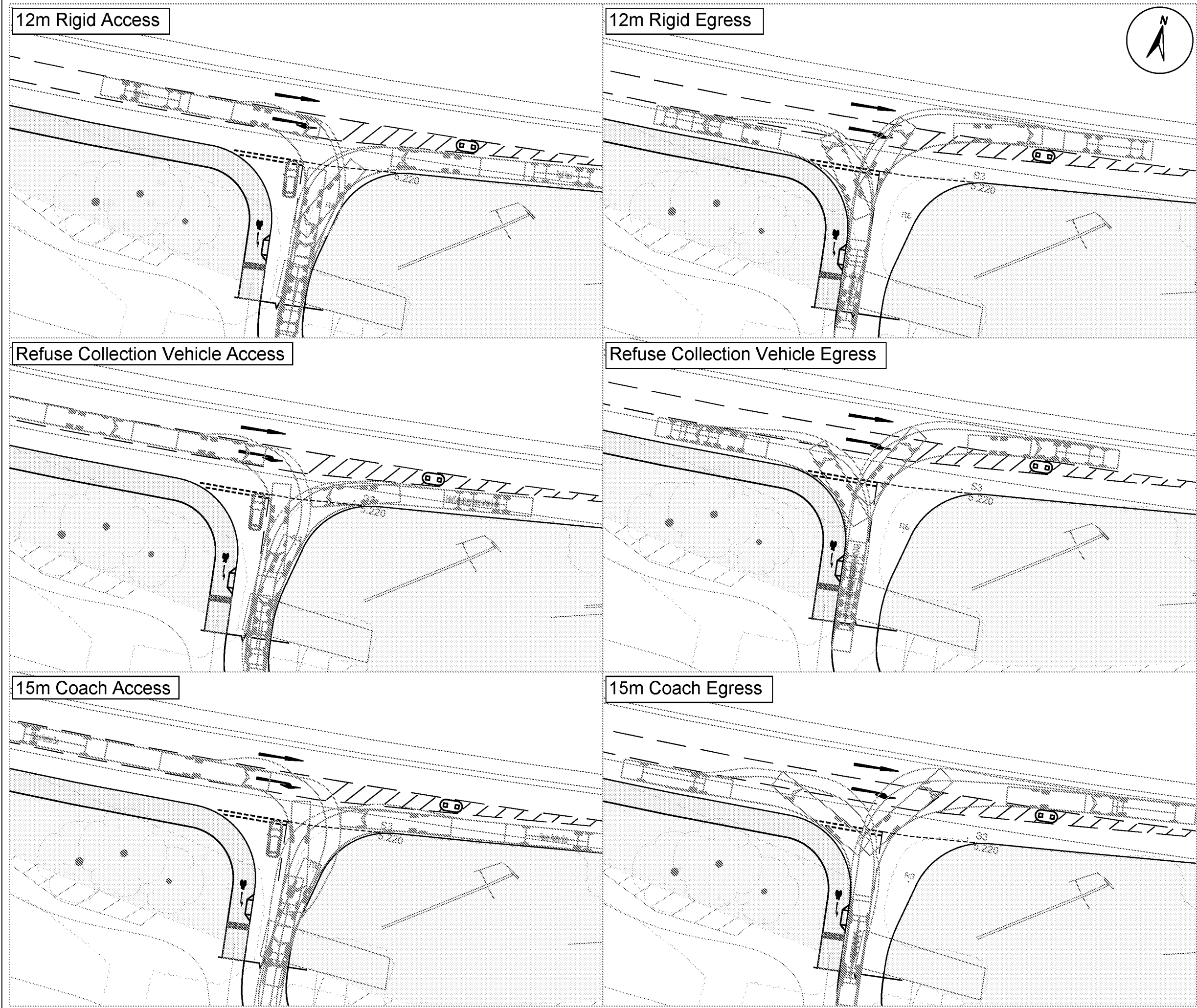
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing is to be read in conjunction with all relevant scheme drawings.

C	Footway Width Amended		MA	26.01.22
B	Topo survey added	AJ	MA	16.12.21
A	Following RSA comments	AJ	MA	25.11.21
Rev	Description	By	CB	Date

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:200 / 1:500	10/11/21
RPS Drawing/Figure Number		Rev
JNY10830-09		C

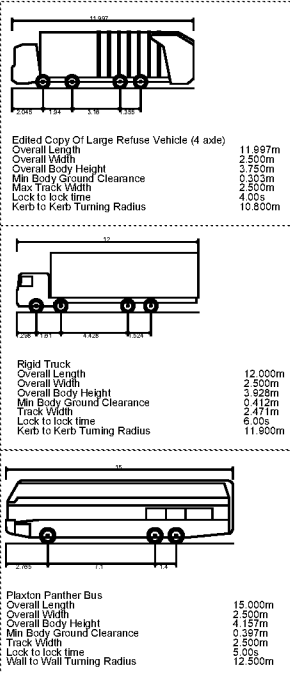
rpsgroup.com

Drawing Ref: P:\JNY10830 - Bognor Regis\Highways\Drawings\JNY10830_09C & 10F_Golf Access.dwg



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- NOTES
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 2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
 3. This drawing is to be read in conjunction with all relevant scheme drawings.

Vehicle Profile



Based on drawing JNY10830-09C

C	Footway Width amended		MA	26.01.22
B	Topo survey added	AJ	MA	16.12.21
A	Following RSA comments	AJ	MA	25.11.21
Rev	Description	By	CB	Date



20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3891 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

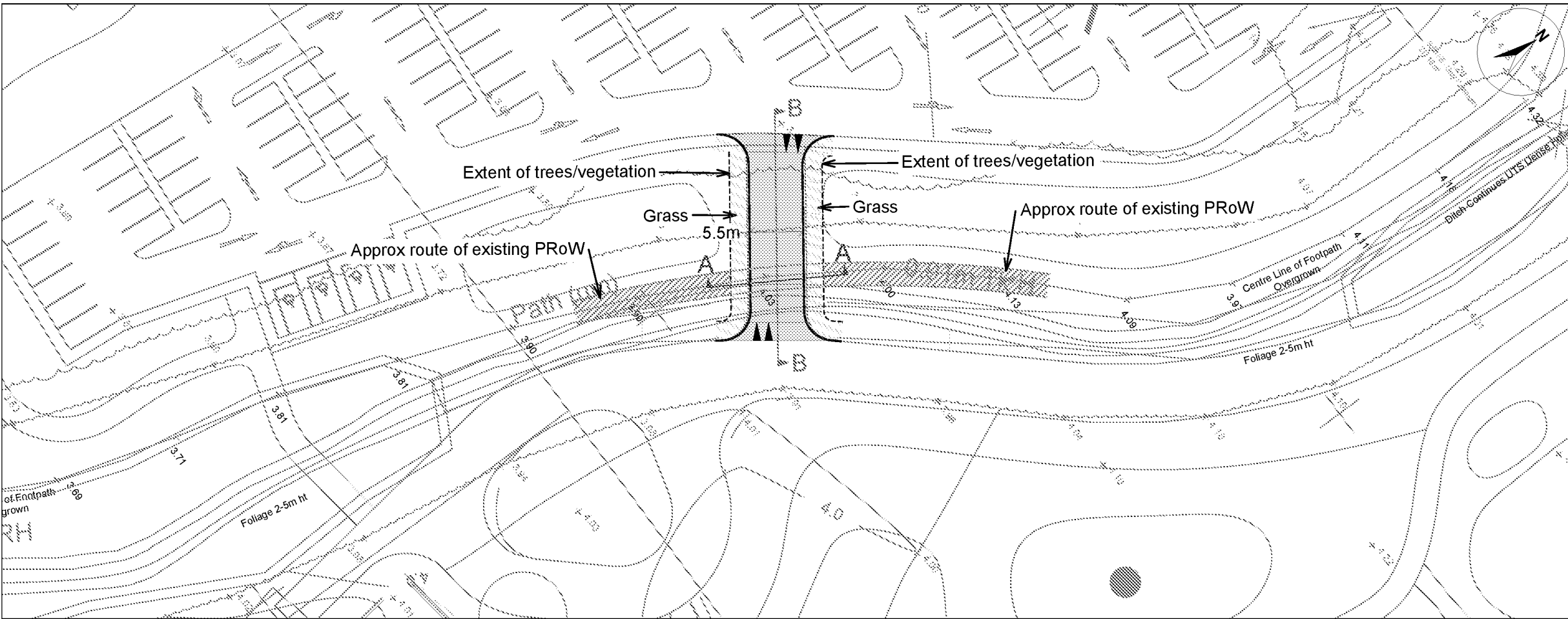
Title Proposed Access Arrangement to
New Golf Course - Swept Path
Analysis

Status Drawn By PMA/Checked by
INFORMATION AJ MA

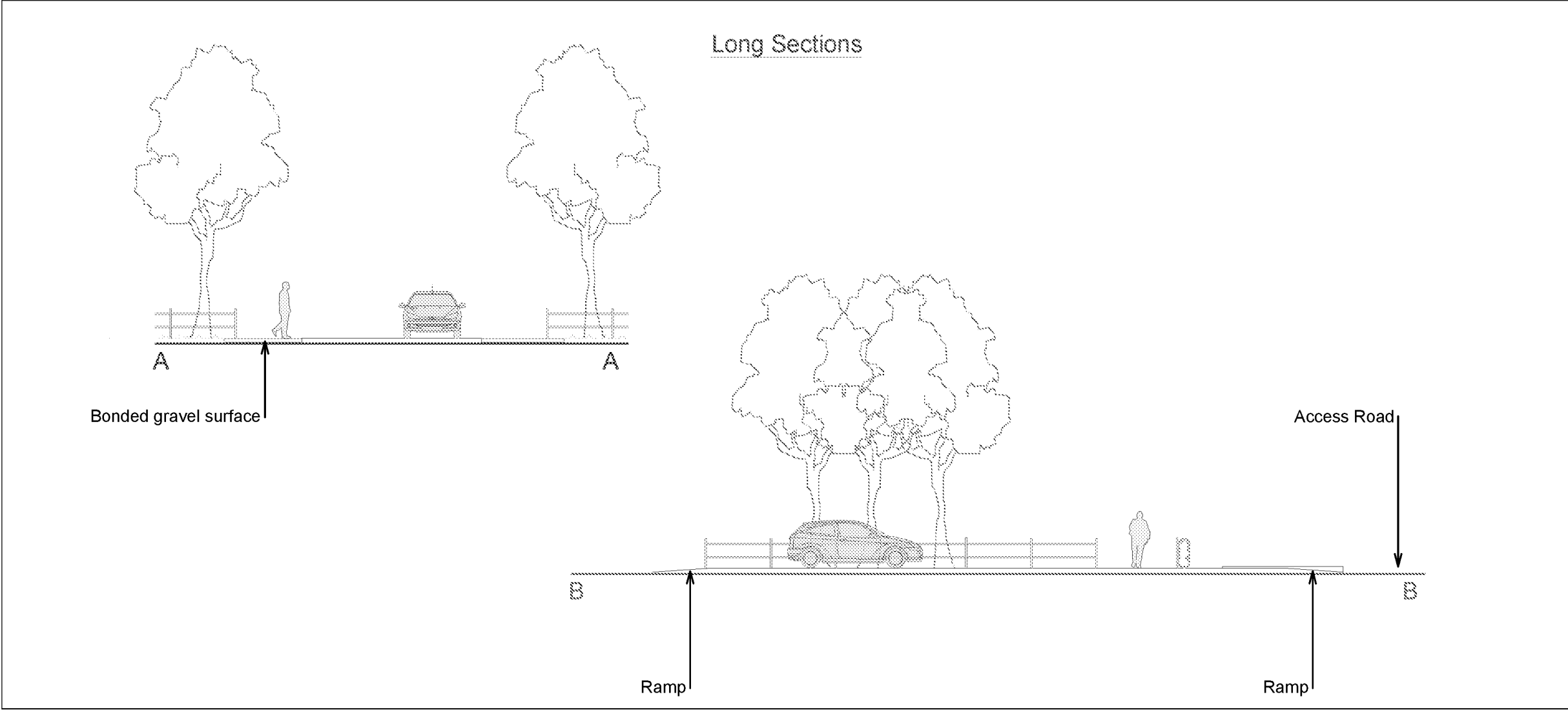
Project Number Scale @ A3 Date Created
JNY10830 1:500 10/11/21

RPS Drawing/Figure Number Rev
JNY10830-10 C

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- NOTES
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 2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
 3. This drawing is to be read in conjunction with all relevant scheme drawings.



A	Proposed footway removed	AJ	MA	26.01.22
Rev	Description	By	CB	Date



20 Farringdon Street, London EC4A 4AB
T: +44(0)20 3891 0500 E: transport@rpsgroup.com

Client Hallam Land Management

Project Bognor Regis

Title Access/Car Park Link Detail

Status	Drawn By	PM/Checked by
INFORMATION	AJ	MA
Project Number	Scale @ A3	Date Created
JNY10830	1:500	19/01/22
RPS Drawing/Figure Number		Rev
JNY10830-14		A

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Appendix 6 ~ Stage 1 Road Safety Audit and Designers Response

A259 GREVATTS LANE BOGNOR REGIS

Proposed Access Arrangement for New Golf Course

Road Safety Audit - Stage 1

Final Report

November 2021

TBL19/246

Taylor Bowie Ltd
ROAD SAFETY & TRANSPORTATION CONSULTANCY

REPORT APPROVAL

Project Details

Project Title	A259 Grevatts Lane, Bognor Regis		
Project Subtitle	Proposed Access Arrangement for New Golf Course		
Road Safety Audit	Stage 1		
Document Reference	TBL19/246 Rev 0	Audit Brief Date	18 th October 2021
Overseeing Organisation	West Sussex County Council		
Design Organisation	Melanie A'Lee	RPS	
Client	-	Hallam Land Management	
Maintaining Agent Details	-	-	

Approvals

This document requires the following approvals:

Name	Title
Sarah Bowie	Audit Team Leader
Linda Irons	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Melanie A'Lee	Associate Director – RPS (Transport & Engineering)

1 INTRODUCTION

1.1 The Scheme and its Purpose

This report results from a Stage 1 Road Safety Audit (RSA) carried out on the proposed golf course on land south of A259 Grevatts Lane, Bognor Regis, West Sussex.

The proposal is to relocate the existing Bognor Regis Golf Course onto land south of Grevatts Lane. Access to this site will be provided in the form of a priority junction arrangement with a ghost island right turn lane. As part of the access arrangement a new refuge island is proposed on Grevatts Lane to allow a safe crossing point for pedestrians and cyclists using the existing combined footway/cycleway that continues along the northern side of Grevatts Lane. A new 3m wide footway/cycleway is then proposed on the southern side to the proposed site access where cyclists will be able to continue on road into the site, a 2m footway will be provided to facilitate any pedestrians.

1.2 Terms of Reference & Audit Report

The Road Safety Audit Brief was approved and issued by Melanie A'Lee of the Design Organisation. The RSA team has been approved by the Design Organisation.

Table 1 - Audit Team Membership

Membership	Name	Details
Audit Team Leader	Sarah Bowie	IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Audit Team Member	Linda Irons	MCIHT, MSoRSA, HE RSA Cert Comp

The Road Safety Audit was undertaken in accordance with the requirements of GG 119. No additional audit requirements were requested. The audit comprised of an examination of the brief and the documents provided to the Audit Team, listed in **Appendix A**.

The audit took place at Taylor Bowie Ltd Cambridgeshire office during October and November 2021 and both Audit Team Members examined the site together in daylight hours on the afternoon of 23rd October 2021 between the times of 1430 and 1515hrs. The weather during the site visit was mild and cloudy. The carriageway was dry. Traffic flows at all times were moderate. One pedestrian (on scooter) and one cyclist were observed during the site visit.

The scheme has been examined, and this report compiled only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

No Departures from Standards (DfS) have been provided to the Audit Team. It is important that if there are any DfS, then they are submitted to the Overseeing Organisation (OO) as soon as possible with appropriate mitigating measures for the OO to approve.

All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in **Appendix B** (where applicable).

1.3 Audit Administration

Issues identified during the audit and site visit which the Terms of Reference exclude from this report, but which the audit team wishes to draw to the attention of the OO, will be set out in a separate letter. These issues could include maintenance items and operational issues.

The Audit Team have not identified any issues during this Stage 1 RSA and site visit that are considered to be outside the Terms of Reference.

2 ITEMS RAISED AT PREVIOUS ROAD SAFETY AUDITS

No previous Road Safety Audits have been undertaken on these proposals.

3 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

3.1 Local Alignment

PROBLEM	1
Location	Proposed ghost island right-turn facility (Drg.no. JNY10830-03 Rev C)
Summary	Risk of overtaking resulting in vehicle to vehicle head on type collisions.
The introduction of a short section of carriageway widening to accommodate a ghost island right-turn facility into the development access junction may encourage vehicles to overtake within this area. This may result in an increased risk of vehicle to vehicle head on type collisions.	
RECOMMENDATION	
The Audit Team recommend that the right turn facility is designed to prevent vehicles from carrying out overtaking movements within this section on the westbound approach.	

3.2 General

PROBLEM	2
Location	Scheme extents (Drwg No. JNY10830-03 Rev C)
Summary	Existing open drainage ditch, potential hazard to an errant road user.
No drainage details have been provided for this stage of audit and it is not clear what methods will be used to deal with the drainage when the access junction and associated works are constructed. This could increase the severity of a collision involving a vehicle leaving the carriageway at this location	
RECOMMENDATION	
The Audit Team recommends that appropriate drainage is included within the scheme proposals.	

3.3 Junctions

No Problems identified in this category at this Stage 1 Road Safety Audit.

3.4 Walking, Cycling and Horse Riding

PROBLEM	3
Location	Proposed refuge island (Drwg No. JNY10830-03 Rev C)
Summary	Width of refuge island may not accommodate cyclists crossing the carriageway. Risk of vehicle to cyclist type collisions.
The drawing indicates that a refuge crossing facility is proposed to the west of the proposed development access junction. Proposed widths are not indicated. The existing facility along the northern side of Grevatts Lane is a shared facility. This island, if implemented, would act as a refuge for pedestrians and cyclists to cross the carriageway in two stages. A lack of sufficient refuge width may increase the risk of cyclists overhanging the approach traffic lanes. This may increase the risk of vehicle to cyclist type collisions.	
RECOMMENDATION	
The Audit Team recommend that the proposed refuge island can safely accommodate both pedestrians and cyclists waiting to cross between the northern and southern sides of Grevatts Lane.	

PROBLEM	4
Location	Development access road (Drwg No. JNY10830-03 Rev C)
Summary	Risk of pedestrians/cyclists falling in drainage ditch

The proposed footway/cycleway facility will span an existing wide ditch/water channel. At this stage of audit, cross section drawings have not been provided and it is therefore unclear what measures are proposed at this location.

Pedestrians/cyclists may be at an increased risk of falling into the drainage ditch from the footway areas and sustaining injury.

RECOMMENDATION

The Audit Team recommends that at the next stage of audit appropriate measures are provided to protect pedestrians/cyclists from falling from the footway into the adjacent ditch area.

PROBLEM	5
Location	Proposed refuge island (Drwg No. JNY10830-03 Rev C)
Summary	Lack of pedestrian/cyclist provision may result in pedestrian/cyclist to vehicle collisions.
The drawing indicates that a refuge island is proposed on Grevatts Lane to the west of the development access junction. Dropped kerbs and tactile paving are not shown on either the northern or southern side of Grevatts Lane. This may increase the risk of pedestrian/cyclist trip hazards and /or vehicle to pedestrian/cyclist type collisions.	
RECOMMENDATION	
The Audit Team recommends that appropriate dropped kerbs and tactile paving are provided.	

PROBLEM	6
Location	Footway tie into shared facility (Drg.no. JNY10830-03 Rev C)
Summary	Lack of signage and corduroy paving on the shared use facility may increase the risk of cyclist to pedestrian type collisions.

As part of the scheme proposals a new section of shared provision is proposed between the refuge island facility and the development site access junction linking to a footway only provision on the western side of the development access road. The drawings provided for this stage of audit do not indicate any corduroy paving to warn blind/partially sighted users of the potential presence of cyclists.

This may increase the risk of cyclist to pedestrian type collisions.

RECOMMENDATION

The Audit Team recommend that the appropriate form of tactile paving is provided where required.

PROBLEM	7
Location	Development access junction (Drg.no. JNY10830-03 Rev C)
Summary	Lack of guidance for cyclists to gain access to the off road facility may increase the risk of cyclist to vehicle type collisions.
The scheme proposals do not give an indication of what measures will be provided within the new layout to enable cyclists to leave the shared facility to join the carriageway into the development access road or vice versa. This may result in these users leaving/joining the carriageway over a full height kerb whereby they may lose control and fall off their bicycles into the carriageway. This may increase the risk of vehicle to cyclist type collisions.	
RECOMMENDATION	
The Audit Team recommends that sufficient guidance is provided to ensure cyclists can safely access the facility and also leave the carriageway.	

3.5 Traffic Signs, Carriageway Markings and Lighting

PROBLEM	8
Location	Proposed ghost island right-turn lane Grevatts Lane (Drg.no. JNY10830-03 Rev C)

Summary	Lack of deflection 'kicker' arrows may increase the risk of vehicle to street furniture and/or pedestrians type collisions.
The drawing does not show any deflection arrows for the tapered approaches to the right turn lane. This lack of guidance may increase the risk of vehicles striking the pedestrian refuge with the attendant risk of injury to pedestrians at the pedestrian refuge, particularly during the hours of darkness.	
RECOMMENDATION	
The Audit Team recommend that deflection arrows are provided for the tapered approaches to the ghost island right-turn lane facility.	

PROBLEM	9
Location	Proposed refuge island (Drg.no. JNY10830-03 Rev C)
Summary	Lack of signage/lighting may increase the risk of vehicles mounting the refuge island and colliding with non motorised users.
For this stage of audit, no information has been provided with regard to street lighting or signage provision. The proposed pedestrian refuge island is to be located within a road that is not currently street lit to the west of the proposed development access junction. A lack of signage and street lighting may increase the risk of vehicles striking the island resulting in single vehicle loss of control type collisions or vehicle to pedestrian/cyclist type collisions, particularly during the hours of darkness and/or poor daylight conditions.	
RECOMMENDATION	
The Audit Team recommend that the refuge island is visible to approaching drivers during all lighting conditions.	

END OF PROBLEMS IDENTIFIED & RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

4 AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

AUDIT TEAM LEADER	
Name	Sarah Bowie - IEng, MICE, FIHE, MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Director
Organisation	Taylor Bowie Ltd
Date	8 th November 2021

AUDIT TEAM MEMBER	
Name	Linda Irons - MCIHT, MSoRSA, HE RSA Cert Comp
Signed	
Position	Associate Consultant
Organisation	Taylor Bowie Ltd
Date	8 th November 2021

APPENDIX A

Documents Forming the Audit Brief

Drawings:

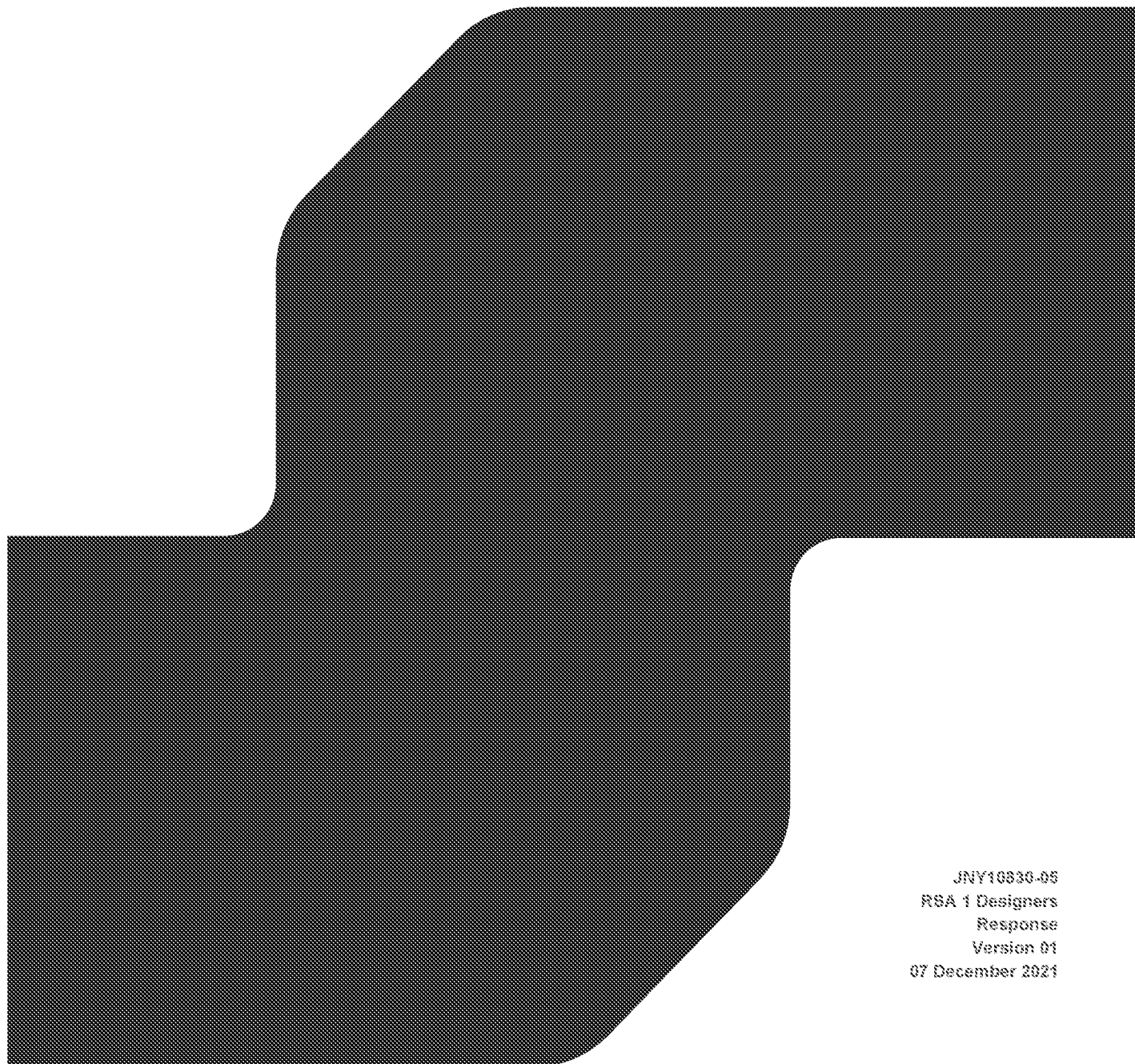
DRAWING NO.	TITLE
JNY10830-03 Rev C	Proposed Access Arrangement to New Golf Course
JNY10830-06	Swept Path Analysis

APPENDIX B

Problem Location Plan

BOGNOR REGIS GOLF COURSE – PROPOSED NEW GOLF COURSE ACCESS – A259 GREVATTS LANE

Stage 1 Road Safety Audit – Designers Response



JNY10530-05
RSA 1 Designers
Response
Version 01
07 December 2021

Document Status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
01	Designers Response to RSA	MA	BP	MA	07 December 2021

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Prepared by:

Prepared for:

RPS Consulting Services Ltd

Hallam Land Management

Name: Melanie A'Lee
Title: Associate Director

20 Farringdon Street, London EC4A 4AB

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
3.1 - 1	Summary: Risk of overtaking resulting in vehicle-to-vehicle head on type collisions. The introduction of a short section of carriageway widening to accommodate a ghost island right-turn facility in the development access junction may encourage vehicles to overtake within this area. This may result in an increased risk of vehicle-to-vehicle head on type collisions. Recommendation: The Audit Team recommend that the right turn facility is designed to prevent vehicles from carrying out overtaking movements within this section on the westbound approach.	The A259 has a number of existing ghost island right turn lanes and where movements in and out of developments such as Bairds Business Park are relatively low, no measures are provided. However, if WSCC consider it appropriate a traffic island on the eastern side of the access can be provided. This is included on the proposed access drawing. This is the type of measure provided at the B2132 junctions although there is a significantly higher volume of movements at this location.	
3.2 - 2	Summary: Existing open drainage ditch, potential hazard to an errant road user. No drainage details have been provided for this stage of audit and it is not clear what methods will be used to deal with the drainage when the access junction and associated works are constructed. This could increase the severity of a collision involving a vehicle leaving the carriageway at this location. Recommendation: The Audit Team recommends that appropriate drainage is included within the scheme proposals.	The existing ditch is set back some distance from the road edge and whilst the road will be widened, it is not considered that there would be any greater risk to drivers. A review of drainage will be provided as part of the detailed design stage, where required the existing ditch will be culverted.	
3.4-3	Summary: Width of refuge island may not accommodate cyclists crossing the carriageway. Risk of vehicle to cyclist type collisions. The drawing indicated that a refuge crossing facility is proposed to the west of the proposed development access junction. Proposed widths are not indicated.	The proposed traffic island has been increased to provide a depth of 3m, the width is 3m which is considered sufficient for the likely level of use and provides a suitable safe waiting area for cyclists and pedestrians.	

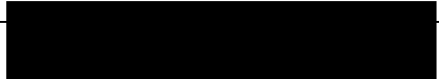
AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	The existing facility along the northern side of Gravatt's Lane is a shared facility. This island, if implemented, would act as a refuge for pedestrians and cyclists to cross the carriageway in two stages. A lack of sufficient refuge width may increase the risk of cyclists overhanging the approach traffic lanes. This may increase the risk of vehicle to cyclist type collisions. Recommendation: The Audit Team recommend that the proposed refuge island can safely accommodate both pedestrians and cyclists waiting to cross between the northern and southern sides of Grevatt's Lane.		
4	Summary: Risk of pedestrians/ cyclists falling in drainage ditch The proposed footway/cycleway facility will span an existing wide ditch/ water channel. At this stage of the audit, cross section drawings have not been provided and it is therefore unclear what measures are proposed at this location. Pedestrians/cyclists may be at an increased risk of falling into the drainage ditch from the footway areas and sustaining injury. Recommendation: The Audit Team recommends that at the next stage of audit appropriate measures are provided to protect pedestrians /cyclists from falling from the footway into the adjacent ditch area.	The existing footway/cycleway on the northern side of the A259 runs alongside an existing ditch. Where the distance from the back of the footway and the edge of the ditch is 0.5m or less consideration will be given to appropriate measures subject to discussion with WSCC. This will be dealt with at the detail design stage.	
5	Summary: Lack of pedestrian/cyclists' provision may result in pedestrian/cyclist to vehicle collisions. The drawing indicates that a refuge island is proposed on Grevatts Lane to the west of the development access junction. Dropped kerbs and tactile paving are not shown on either the northern or southern side of Grevatts Lane.	Recommendation accepted. Dropped Kerbs and tactile paving have been added to the access layout.	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	This may increase the risk of pedestrian/cyclist trip hazards and /or vehicle to pedestrian /cyclist type collisions. Recommendation: The Audit Team recommends that appropriate dropped kerbs and tactile paving are provided.		
6	Summary: Lack of signage and corduroy paving on the shared use facility may increase the risk of cyclists to pedestrian type collisions. As part of the scheme proposals a new section of shared provision is proposed between the refuge island and the development site access junction linking to a footway only provision on the western side of the development access road. The drawings provided for this stage of audit do not indicate any corduroy paving to warn blind/ Partially sighted users of the potential presence of cyclists. This may increase the risk of cyclists to pedestrian type collisions. Recommendation: The Audit Team recommend that the appropriate form of tactile paving is provided where required.	Recommendation Accepted: Corduroy tactile paving has been added to the layout.	
7	Summary: Lack of guidance for cyclists to gain access to the off-road facility may increase the risk of cyclist to vehicle type collisions. The scheme proposals do not give an indication of what measures will be provided within the new layout to enable cyclists to leave the shared facility to join the carriageway into the development access road or vice versa. This may result in these users leaving/ joining the carriageway over a full height kerb whereby they may lose control and fall off their bicycles into the carriageway. This may increase the risk of vehicles to cyclist's type collisions.	Recommendation accepted. The access to the golf course will see low vehicle movements and therefore cyclists will be able to continue on road into the site. The layout has been amended to show a dropped kerb for cyclists to use at the access road.	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	Recommendation: The Audit Team recommends that sufficient guidance is provided to ensure cyclists can safely access the facility and also leave the carriageway.		
8	Summary: Lack of deflection 'kicker' arrows may increase the risk of vehicle to street furniture and/or pedestrians type collisions. The drawing does not show any deflection arrows for the tapered approaches to the right turn lane. This lack of guidance may increase the risk of vehicles striking the pedestrian refuge with the attendant risk of injury to pedestrians at the pedestrian refuge, particularly during the hours of darkness. Recommendation: The Audit Team recommend that deflection arrows are provided for the tapered approaches to the ghost island right turn lane facility.	The Department of Transports 'Chapter 5 Road markings' states in para 2.7.2 '<i>Diagrams 1020,1040.3 and 1040.4 may be preceded by the deflection arrow diagram 1014. Arrows used with diagram 1040 are positioned in the centre line and not in the opposing carriageway as with double white lines.</i>' Whilst it is not normal for deflection arrows to be provided on the approach to right turn lanes, it may be beneficial in this location due to limited lighting and vehicle speeds. Therefore, the deflection arrows have been added in both directions.	
9	Summary: Lack of signage /lighting may increase the risk of vehicles mounting the refuge island and colliding with non-motorised users. For this stage of the audit, no information has been provided with regard to street lighting or signage provision. The proposed pedestrian refuge island is to be located within a road that is not currently street lit to the west of the proposed development access junction. A lack of signage and street lighting may increase the risk of vehicles striking the island resulting in single vehicle loss of control type collisions or vehicle to pedestrian/ cyclist type	Recommendation accepted: The location of the access is currently on an unlit rural road; therefore the proposed traffic islands will include reflective bollards and lighting on the islands, a typical example of this arrangement is provided on the access drawings. Details of signage will be dealt with at the detail design stage.	

AUDIT	Problem Summary and Recommendation	Designers Response	WSCC Comments
	collisions, particularly during the hours of darkness and /or poor daylight conditions. Recommendation: The Audit Team recommend that the refuge island is visible to approaching drivers during all lighting conditions.		

Design Organisation Statement

On behalf of the design organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation	
Name	Melanie A'Lee
Signed	
Position	Associate Director
Organisation	RPS

JNY10830-06 | RSA1 Designers Response | Version: 01 01 | 07 December 2021

www.rpsgroup.com

Date	24/11/2021
------	------------

Overseeing Organisation statement

On behalf of the Overseeing Organisation, I certify that:	
1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and 2) The agreed RSA actions will be progressed	
Name	
Signed	
Position	
Organisation	West Sussex County Council
Date	

Appendix 7 - TRICS Output

Calculation Reference: AUDIT-515506-211005-1047

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : B - PRIVATE 18 HOLE COURSES

TOTAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	HF HERTFORDSHIRE	1 days
	KC KENT	1 days
03	SOUTH WEST	
	DC DORSET	2 days

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

Primary Filtering selection:

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

Parameter: Number of holes
 Actual Range: 18 to 18 (units:)
 Range Selected by User: 18 to 18 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 28/09/19

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

Selected survey days:

Thursday 2 days
 Friday 3 days

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

Selected survey types:

Manual count 4 days
 Directional ATC Count 1 days

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

Selected Locations:

Free Standing (PPS6 Out of Town) 5

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

Selected Location Sub Categories:

Out of Town 5

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

Secondary Filtering selection:

Use Class:

F2(c) 5 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less 2 days

1,001 to 5,000 3 days

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

Population within 5 miles:

5,001 to 25,000 3 days

25,001 to 50,000 1 days

75,001 to 100,000 1 days

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

Car ownership within 5 miles:

1.1 to 1.5 4 days

1.6 to 2.0 1 days

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

Travel Plan:

Not Known 5 days

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

PTAL Rating:

No PTAL Present 5 days

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

LIST OF SITES relevant to selection parameters

1	DC-09-B-02	GOLF CLUB		DORSET
	NEAR DORCHESTER			
	CHARMINSTER			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	18		
	Survey date: FRIDAY	07/09/01		Survey Type: MANUAL
2	DC-09-B-03	GOLF CLUB		DORSET
	EAST CLIFF			
	NEAR BRIDPORT			
	WEST BAY			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	18		
	Survey date: FRIDAY	08/12/00		Survey Type: DIRECTIONAL ATC COUNT
3	ES-09-B-03	GOLF & COUNTRY C.		EAST SUSSEX
	NORTH STREET			
	NEAR HAILSHAM			
	HELLINGLY			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	18		
	Survey date: THURSDAY	05/07/01		Survey Type: MANUAL
4	HF-09-B-01	GOLF CLUB		HERTFORDSHIRE
	A10 LONDON ROAD			
	NR BISHOPS STORTFORD			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	18		
	Survey date: THURSDAY	20/09/01		Survey Type: MANUAL
5	KC-09-B-01	GOLF CLUB		KENT
	EBBSFLEET LANE			
	NEAR RAMSGATE			
	RICHBOROUGH PORT			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Number of holes:	18		
	Survey date: FRIDAY	13/10/00		Survey Type: MANUAL

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

TRIP RATE for Land Use 09 - GOLF/B - PRIVATE 18 HOLE COURSES

TOTAL VEHICLES**Calculation factor: 18 HOLES****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00	1	18	0.000	1	18	0.000	1	18	0.000
01:00 - 02:00	1	18	0.000	1	18	0.000	1	18	0.000
02:00 - 03:00	1	18	0.000	1	18	0.000	1	18	0.000
03:00 - 04:00	1	18	0.000	1	18	0.000	1	18	0.000
04:00 - 05:00	1	18	0.000	1	18	0.000	1	18	0.000
05:00 - 06:00	1	18	0.000	1	18	0.000	1	18	0.000
06:00 - 07:00	2	18	0.500	2	18	0.000	2	18	0.500
07:00 - 08:00	4	18	4.000	4	18	1.000	4	18	5.000
08:00 - 09:00	5	18	9.000	5	18	2.800	5	18	11.800
09:00 - 10:00	5	18	18.000	5	18	3.800	5	18	21.800
10:00 - 11:00	5	18	10.800	5	18	6.800	5	18	17.600
11:00 - 12:00	5	18	10.000	5	18	6.600	5	18	16.600
12:00 - 13:00	5	18	17.200	5	18	13.000	5	18	30.200
13:00 - 14:00	5	18	12.600	5	18	9.400	5	18	22.000
14:00 - 15:00	5	18	14.200	5	18	11.600	5	18	25.800
15:00 - 16:00	5	18	10.800	5	18	13.200	5	18	24.000
16:00 - 17:00	5	18	9.200	5	18	15.000	5	18	24.200
17:00 - 18:00	5	18	8.600	5	18	11.600	5	18	20.200
18:00 - 19:00	5	18	4.400	5	18	10.800	5	18	15.200
19:00 - 20:00	4	18	5.250	4	18	13.500	4	18	18.750
20:00 - 21:00	4	18	5.500	4	18	9.000	4	18	14.500
21:00 - 22:00	3	18	0.333	3	18	7.667	3	18	8.000
22:00 - 23:00	1	18	0.000	1	18	0.000	1	18	0.000
23:00 - 24:00	1	18	1.000	1	18	1.000	1	18	2.000
Total Rates:			141.383			136.767			278.150

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

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

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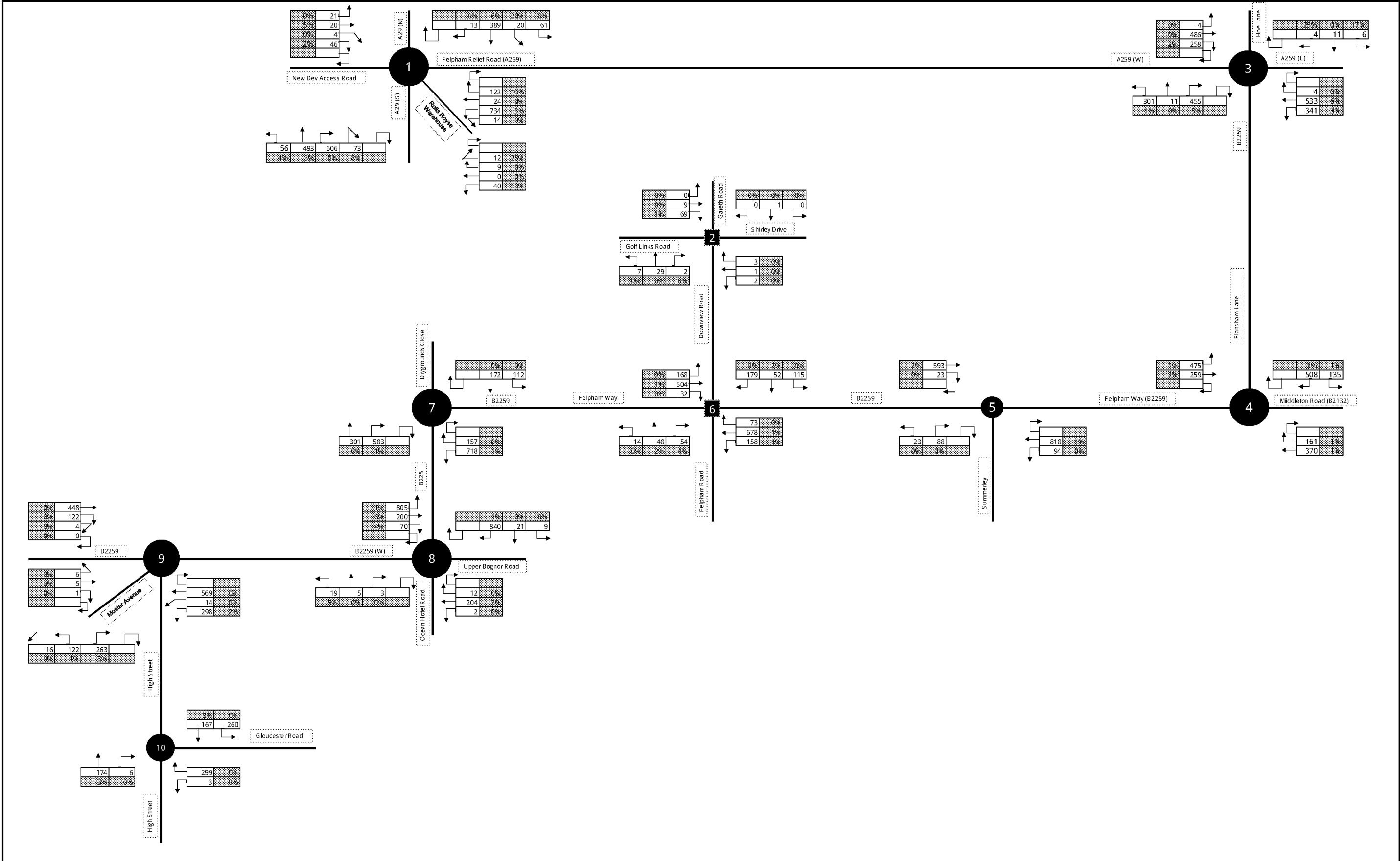
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Parameter summary

Trip rate parameter range selected: 18 - 18 (units:)
 Survey date range: 01/01/00 - 28/09/19
 Number of weekdays (Monday-Friday): 13
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

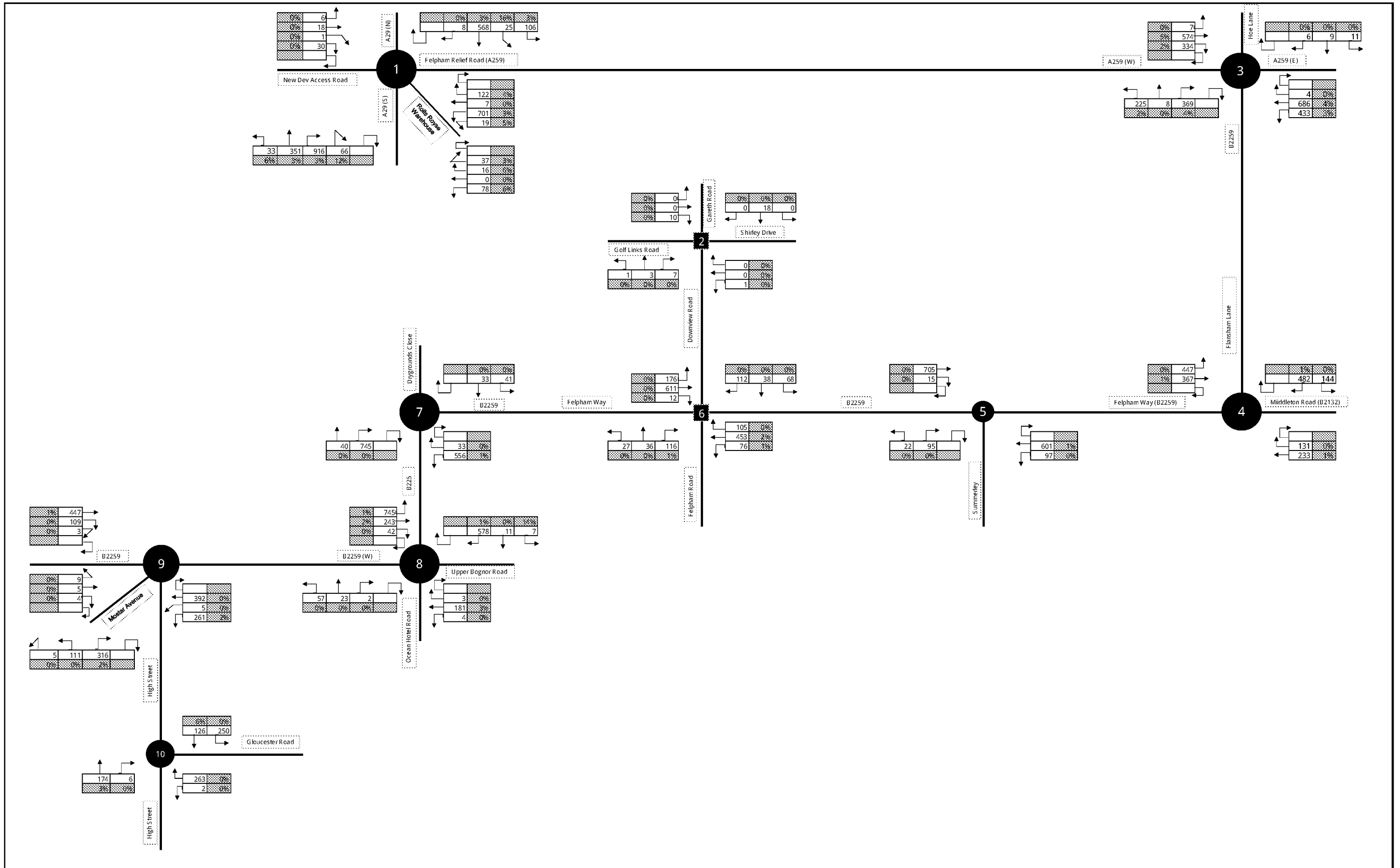
Appendix 8 ~ Base and Proposed Traffic Flow Diagrams

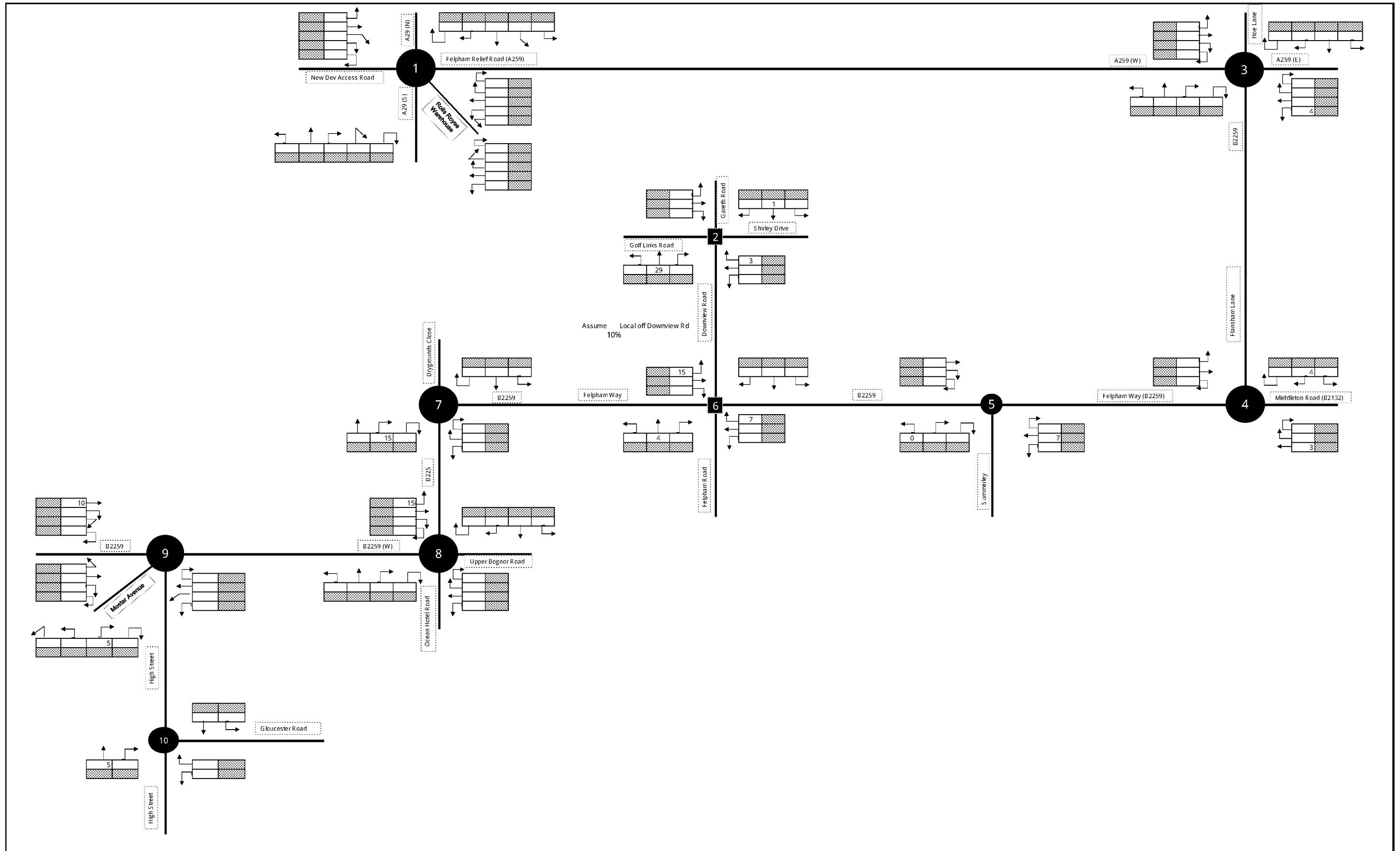


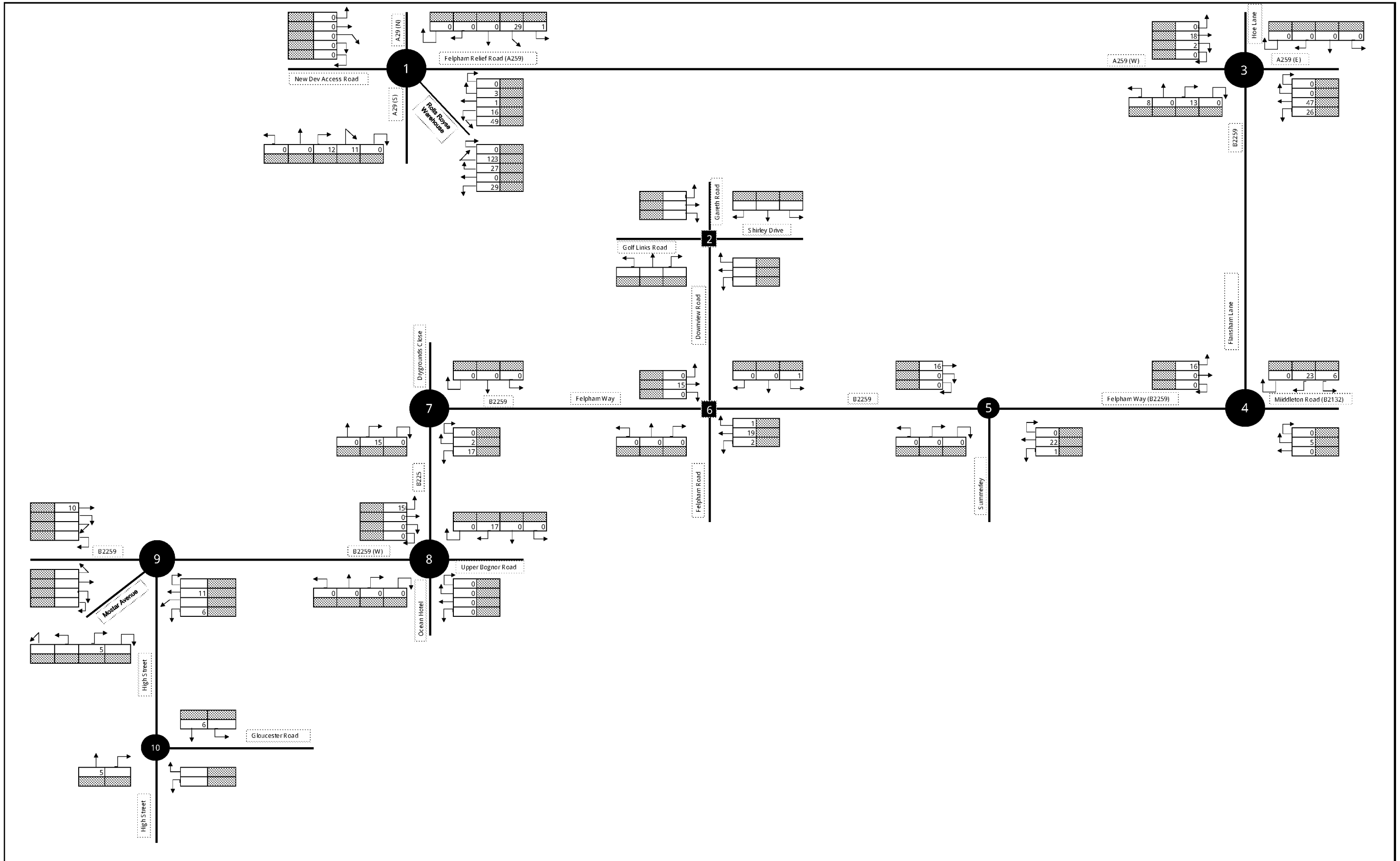
Notes

Project Name: Bognor Regis
Job Number: JNY 10830
Title Base 2021 AM Peak 08:00-09:00

Figure No. 1



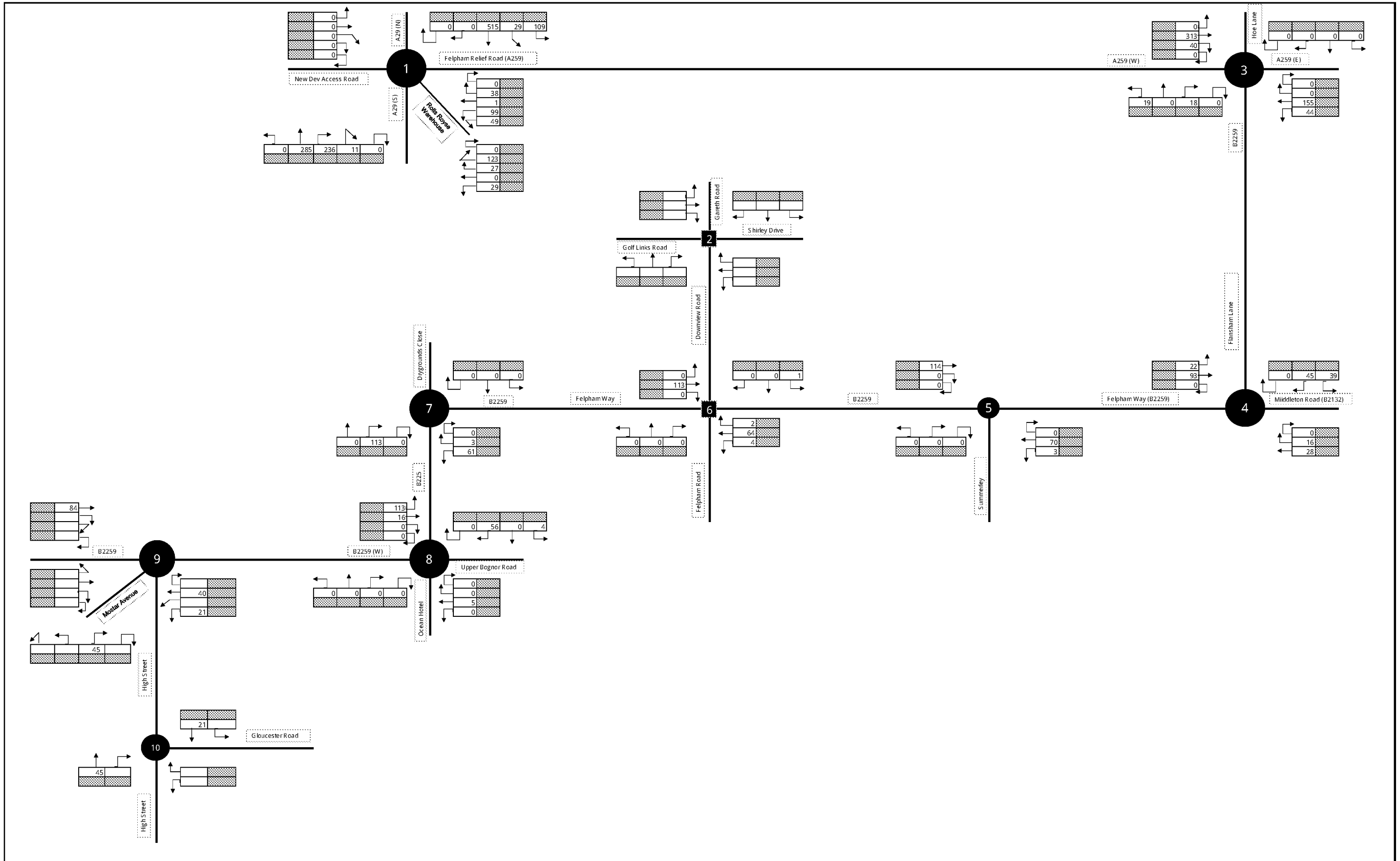




Notes

Project Name: Bognor Regis
 Job Number: JNY 10830
 Title: Total Committed Dev Flows - 2026
 AM Peak

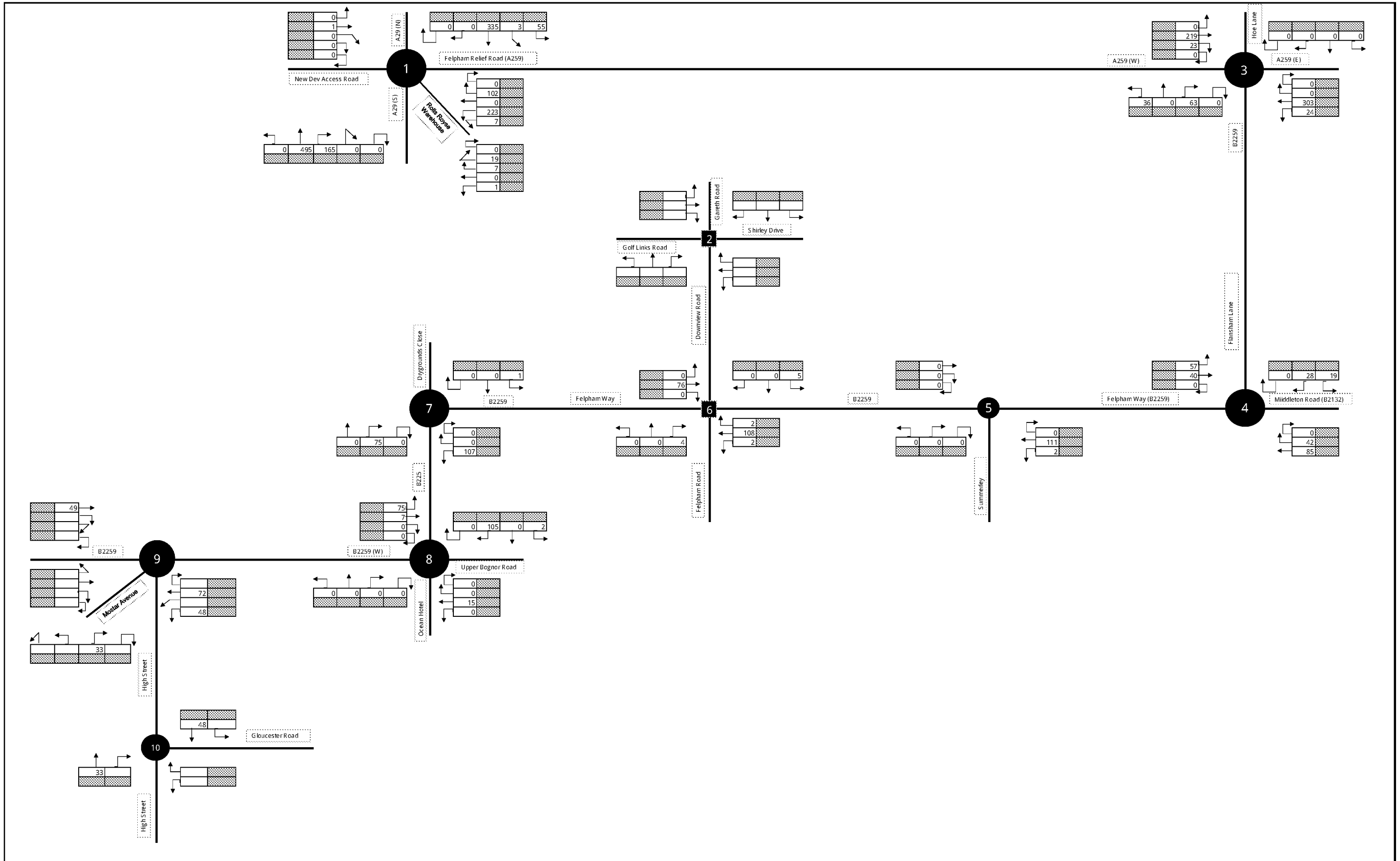
Figure No. 5



Notes

Project Name: Bognor Regis
 Job Number: J NY 10830
 Title: Total Committed Dev Flows 2031
 AM Peak

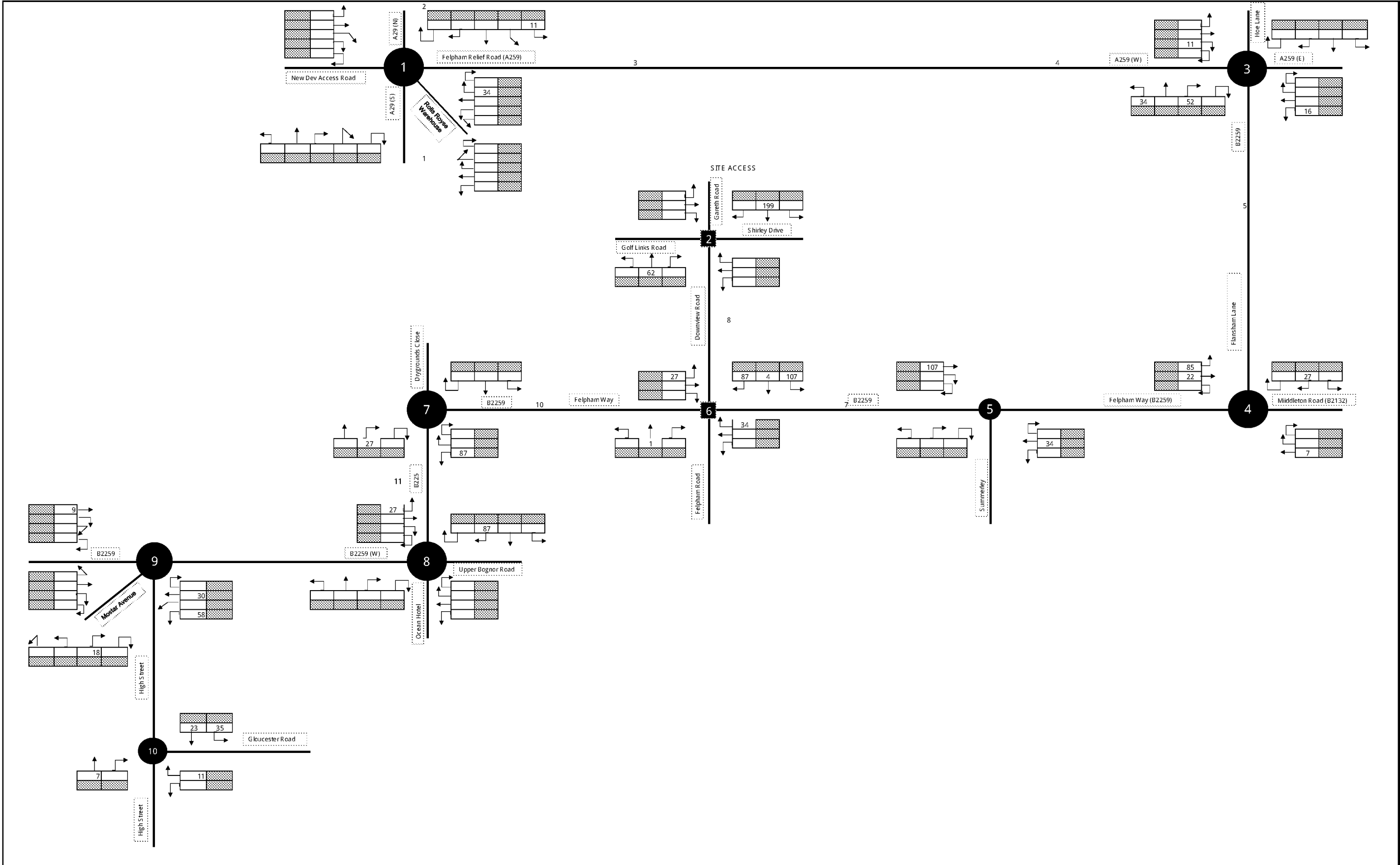
Figure No. 7



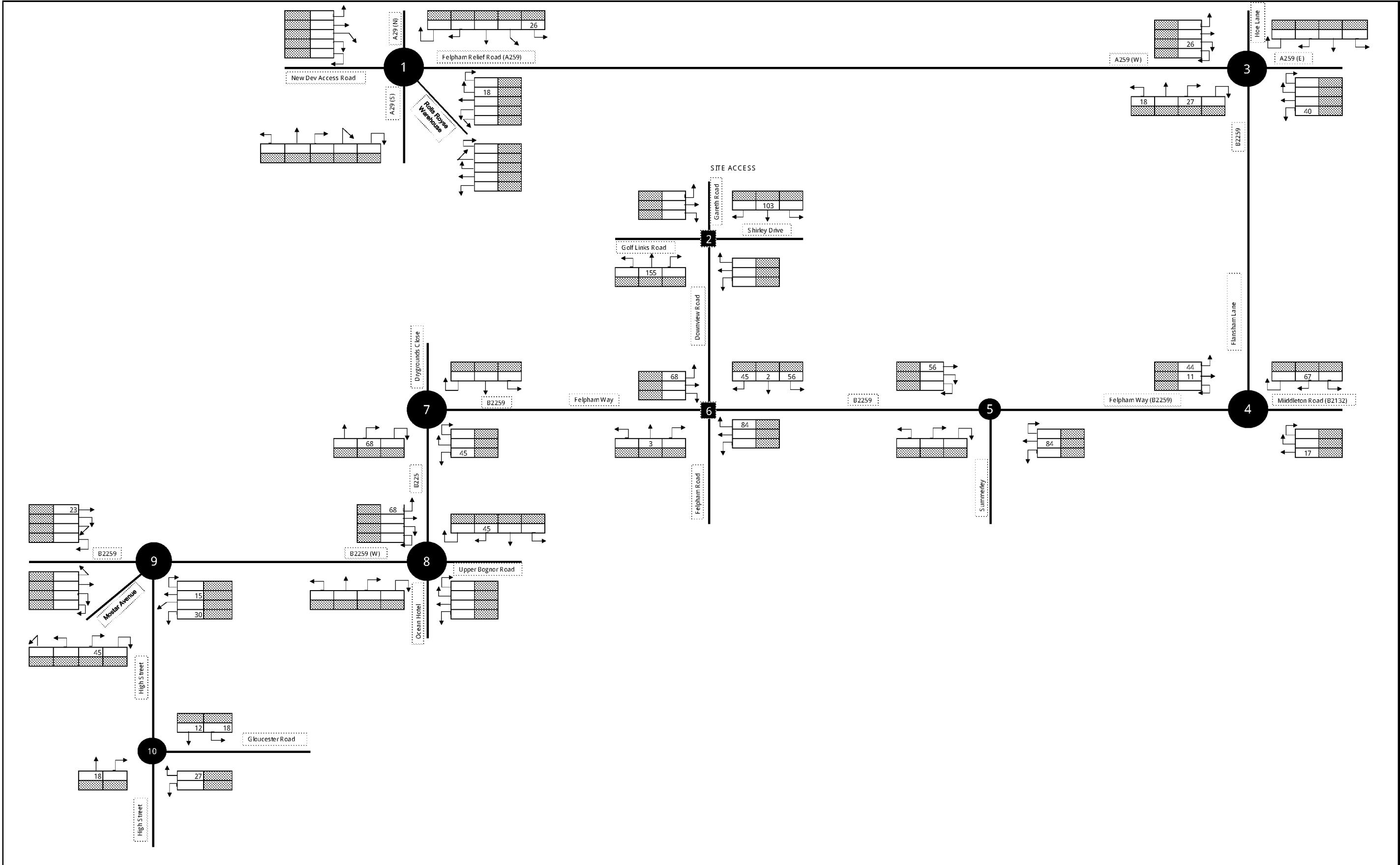
Notes

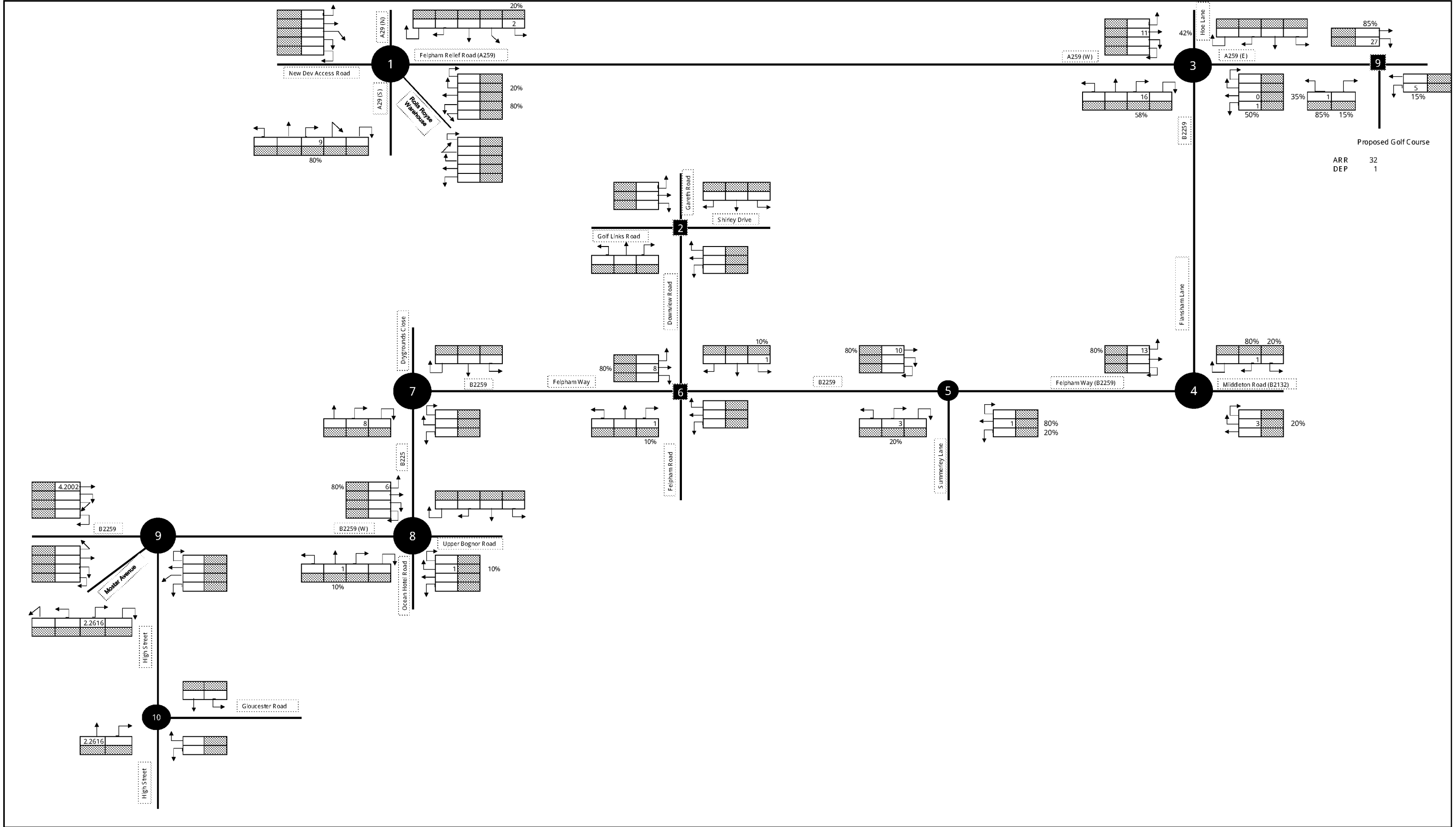
Project NPM: Bognor Regis
 Job Number: JNY 10830
 Title: Total Committed Dev Flows - 2031
 PM Peak

Figure No. 8



	Notes Includes 500 Dwellings & 755m2 Community Facilities	Project Name: Bognor Regis Job Number: JNY10830 Title: Proposed Residential Development Trips AM Peak Figure No. 9
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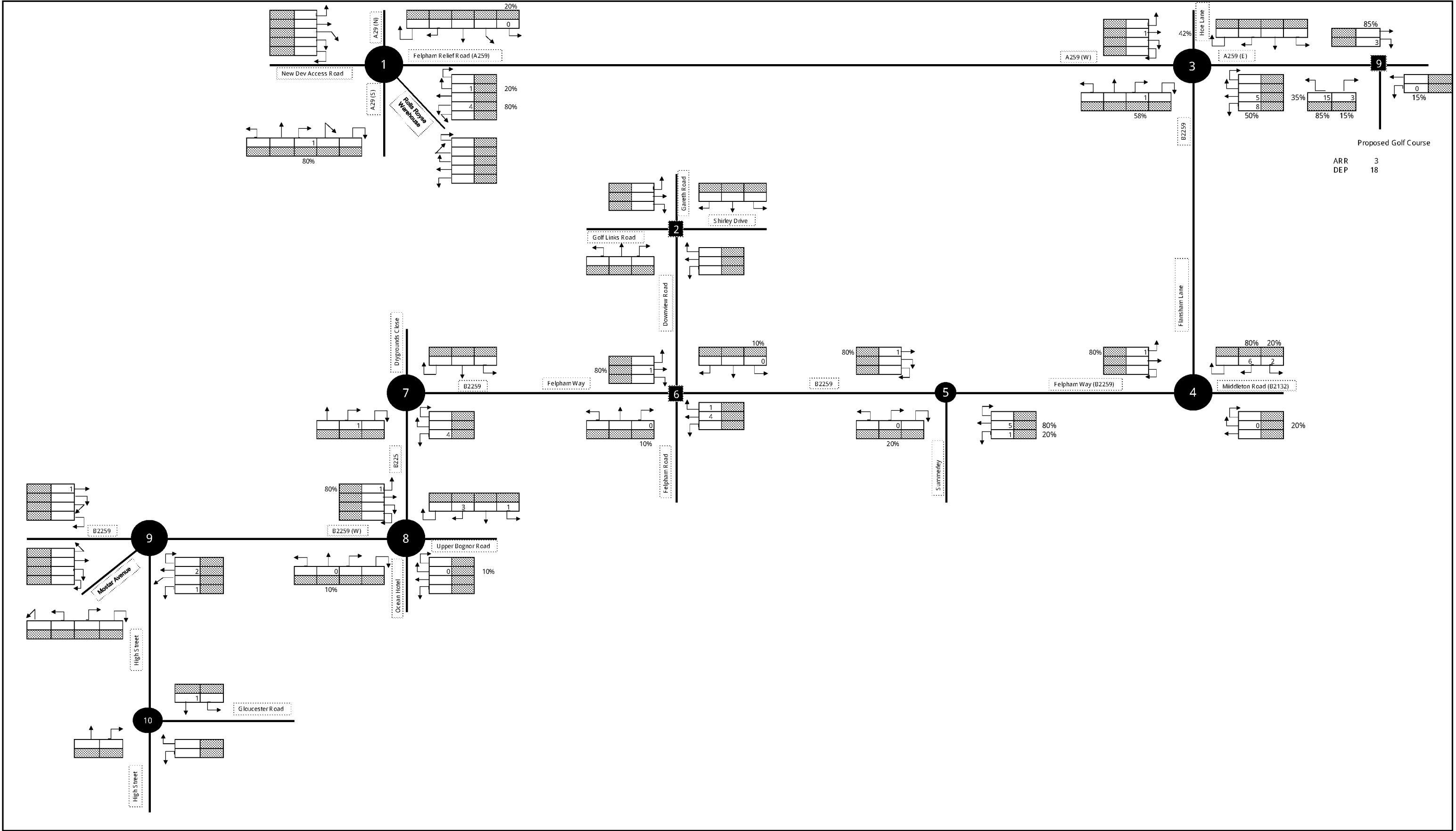


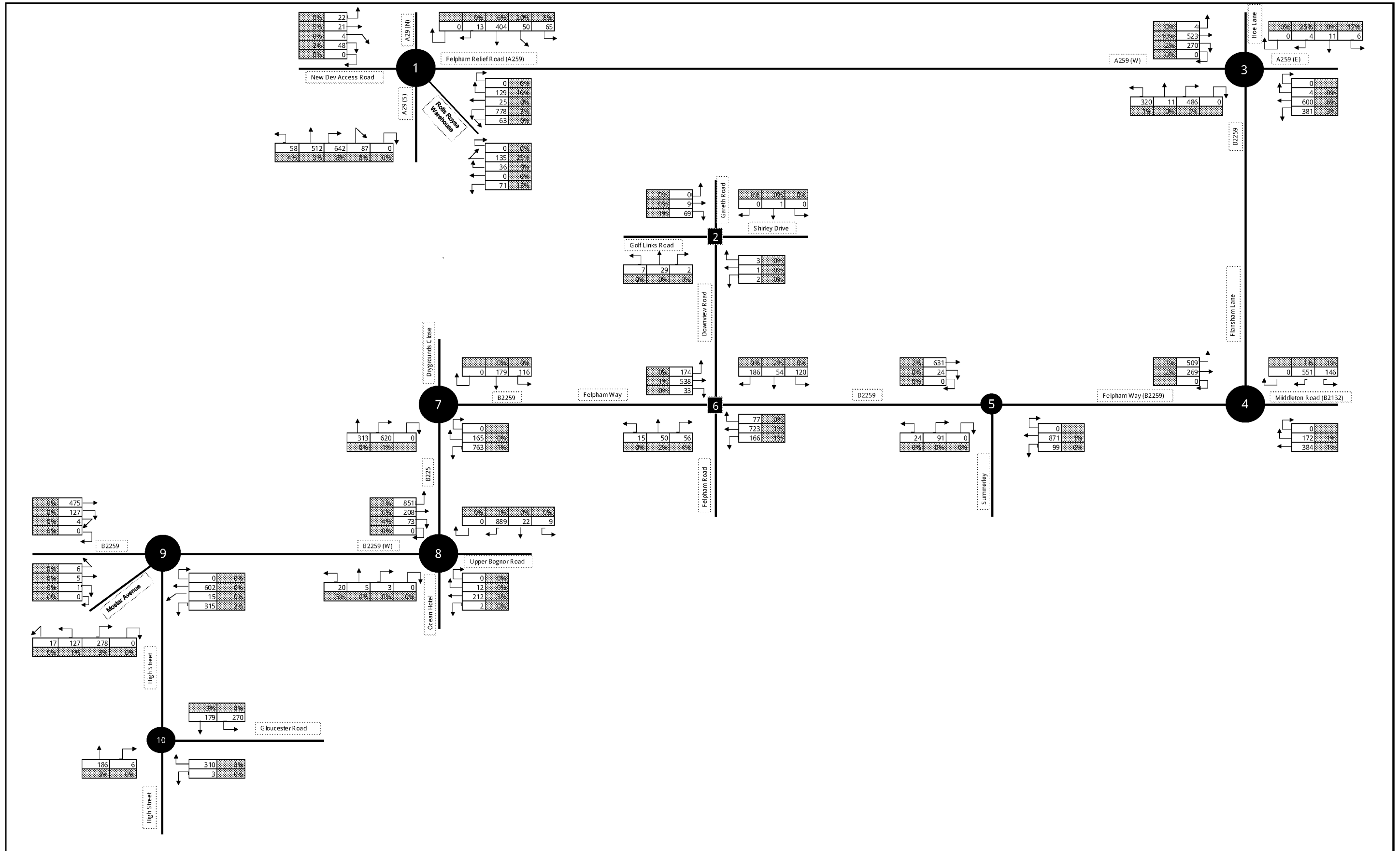


Notes Trips Used are the same as the existing Golf Course

Project Name: Bognor Regis
Job Number: J NY10830
Title: Proposed Golf Course Flows
AM Peak

Figure No. 11

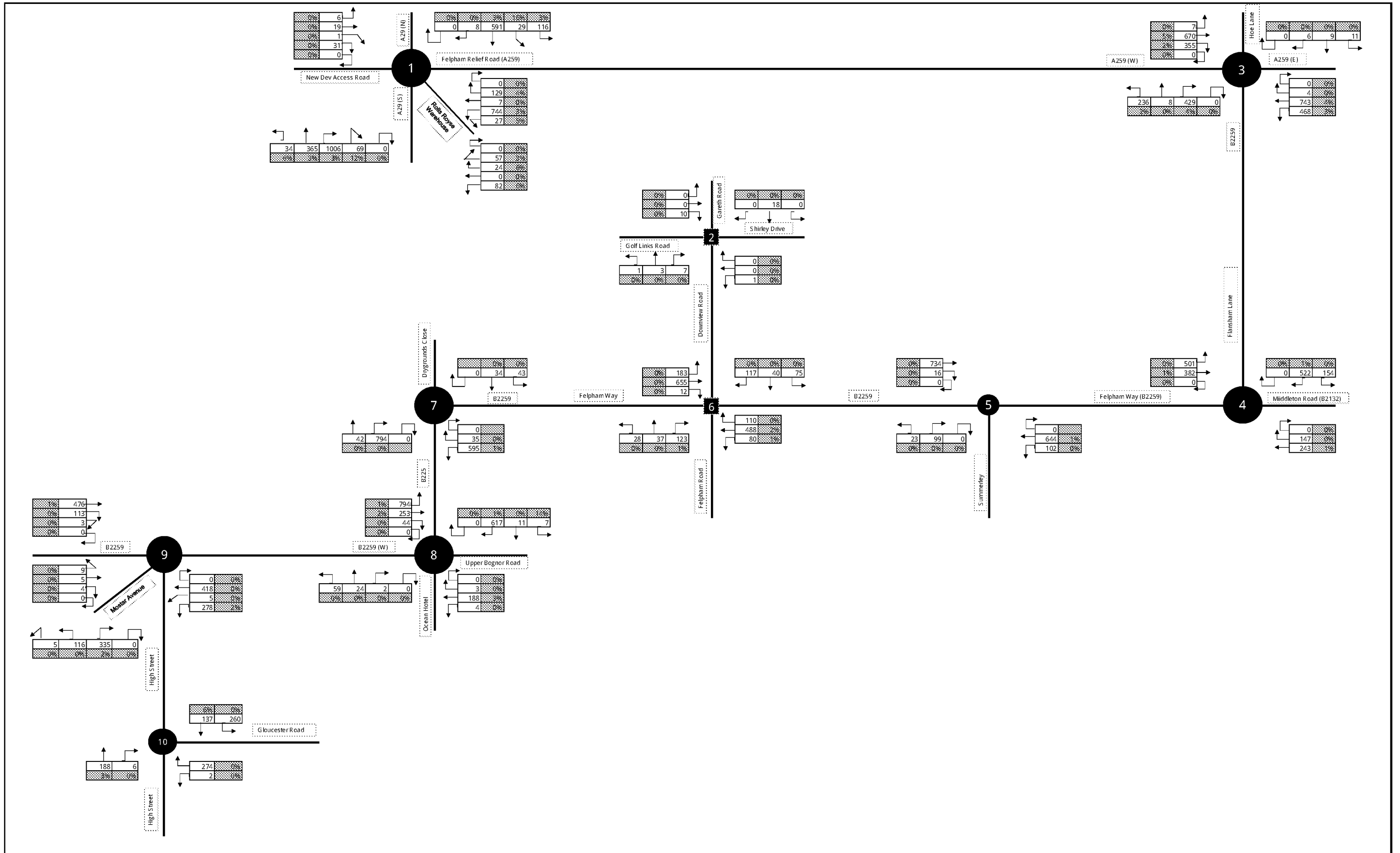




Notes

Project Name: Bognor Regis
 Job Number: JNY10830
 Title: 2026 Base + Committed AM Peak

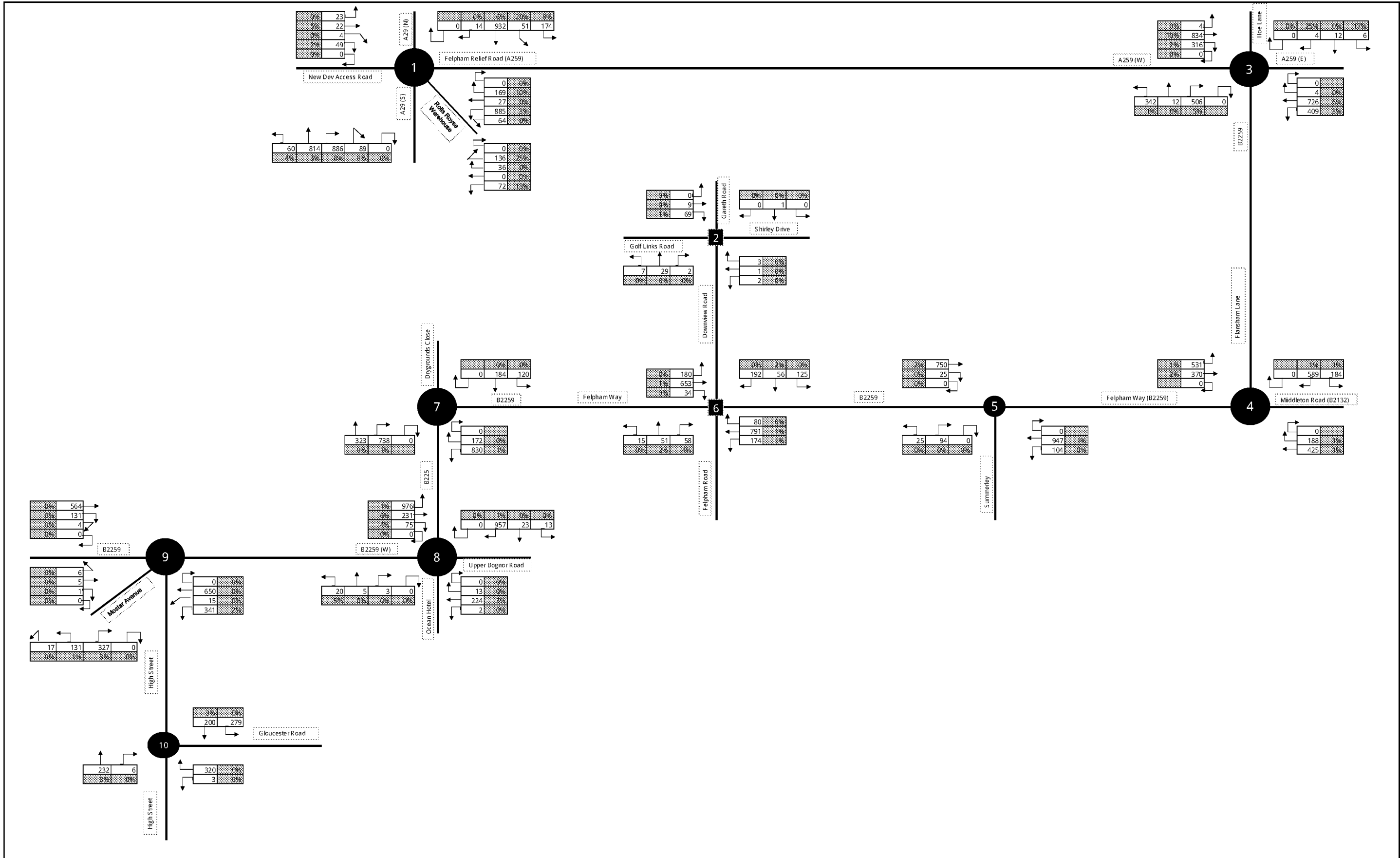
Figure No. 13



Notes

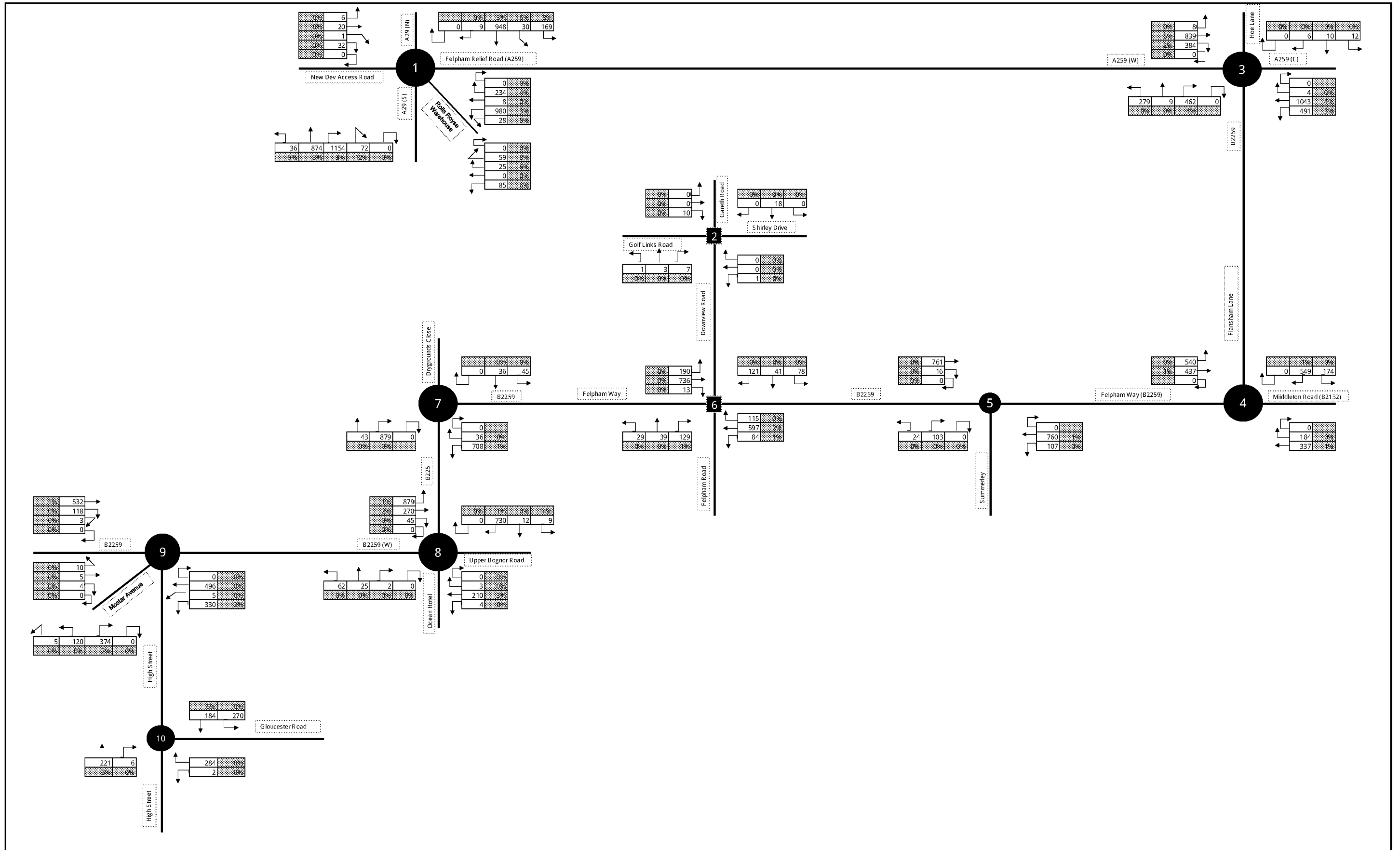
Project NPM: Bognor Regis
Job Number: J NY 10830
Title: 2026 Base + Committed PM Peak

Figure No. 14



Notes

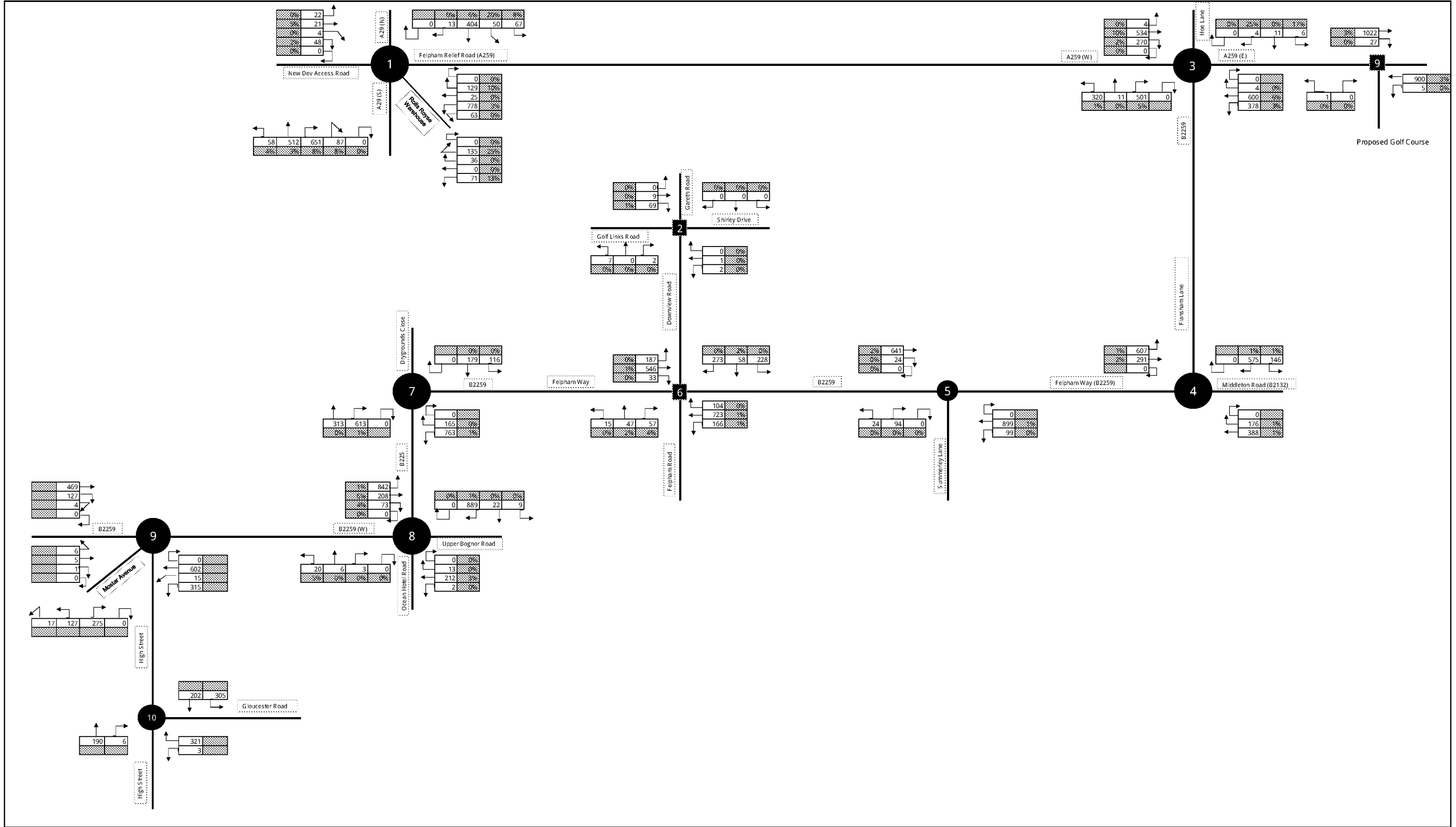
Project Name: Bognor Regis
 Job Number: J NY 10830
 Title: 2031 Base + Committed AM Peak



Notes

Project Name: Bognor Regis
Job Number: JNY10830
Tide 2031 Base + Committed PM Peak

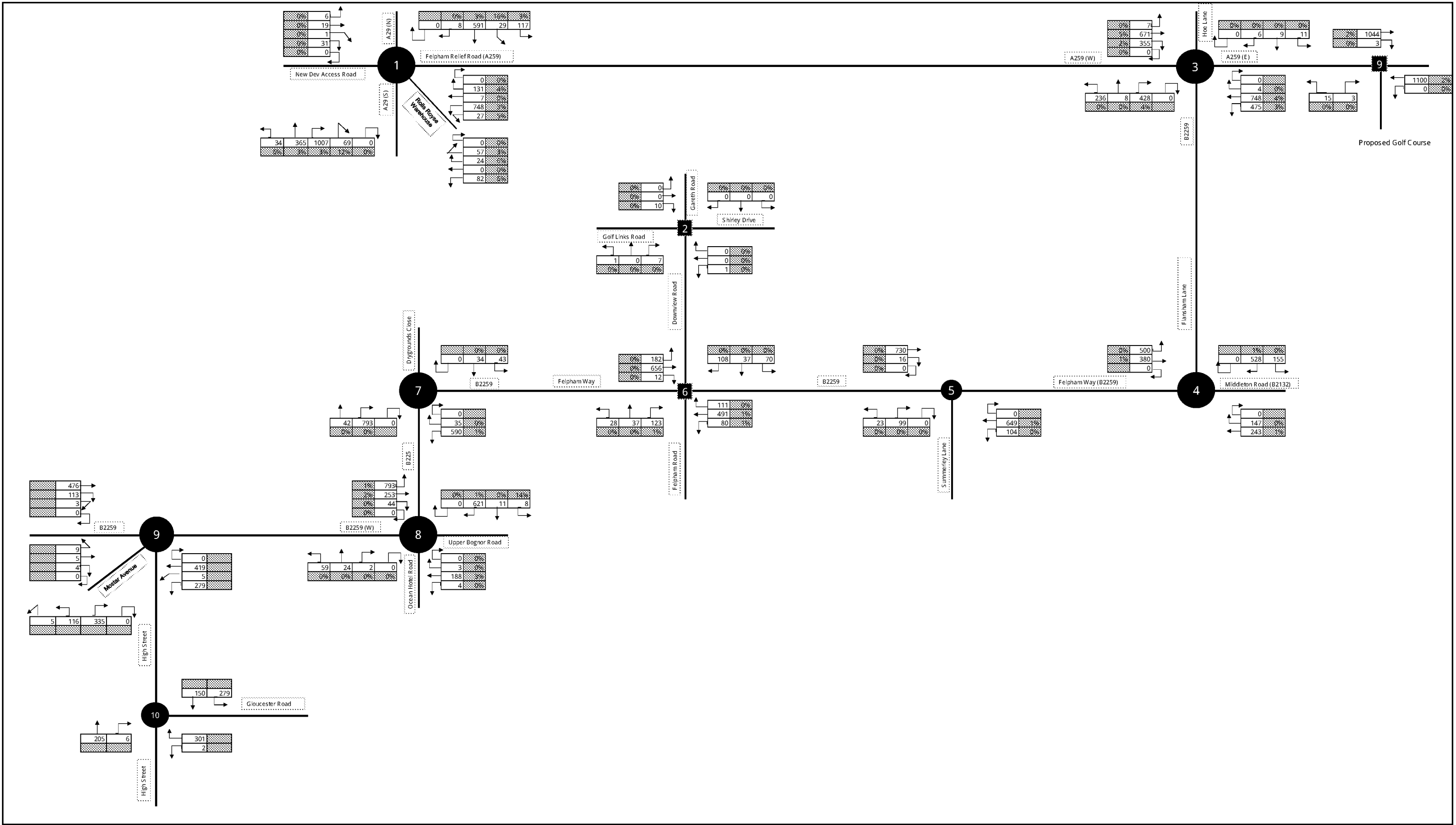
Figure No. 16



Notes

Project Name: Bognor Regis
 Job Number: JNY10830
 Title: 2026 Base + Committed + New Golf Course AM Peak

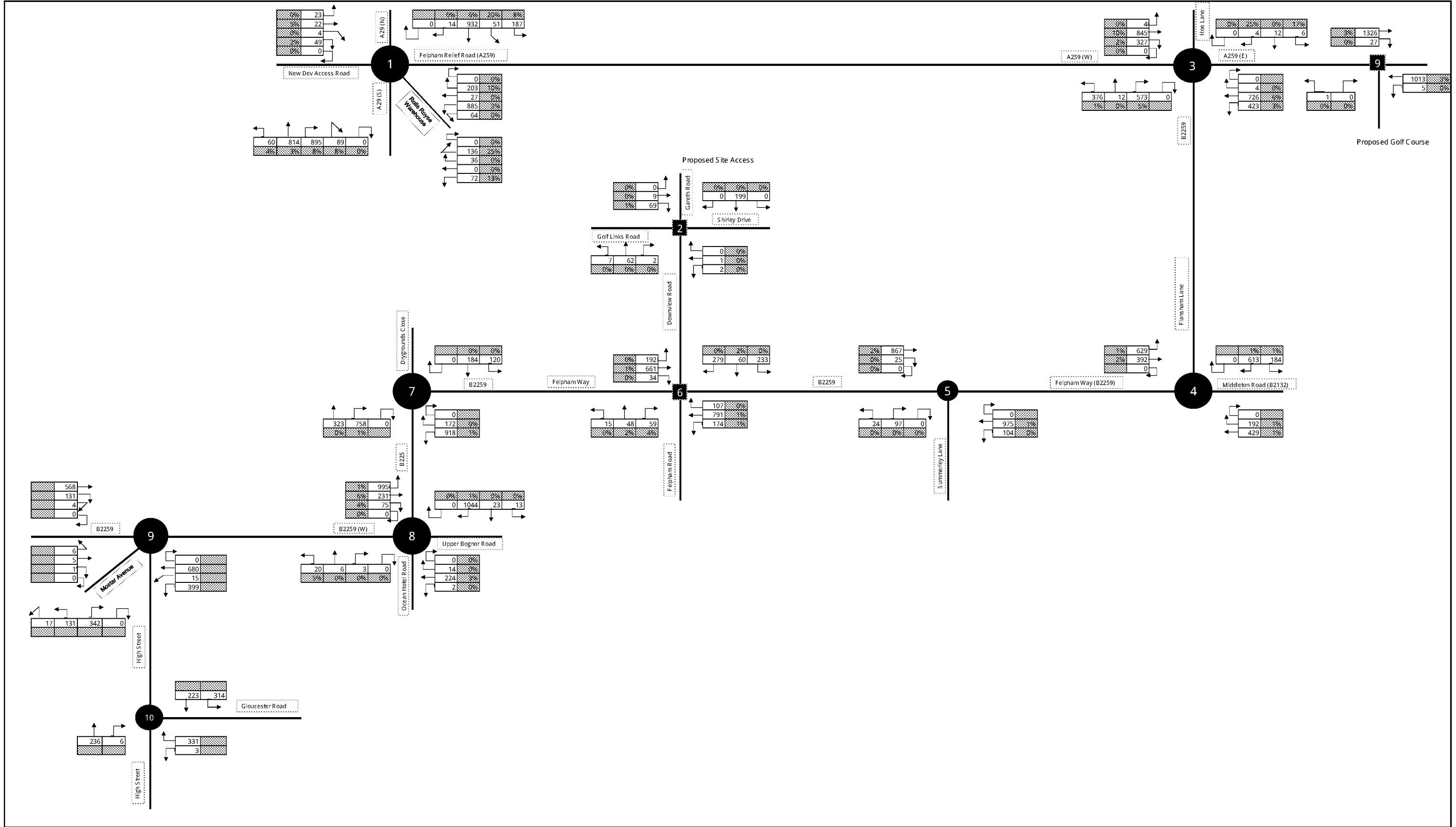
Figure No. 17

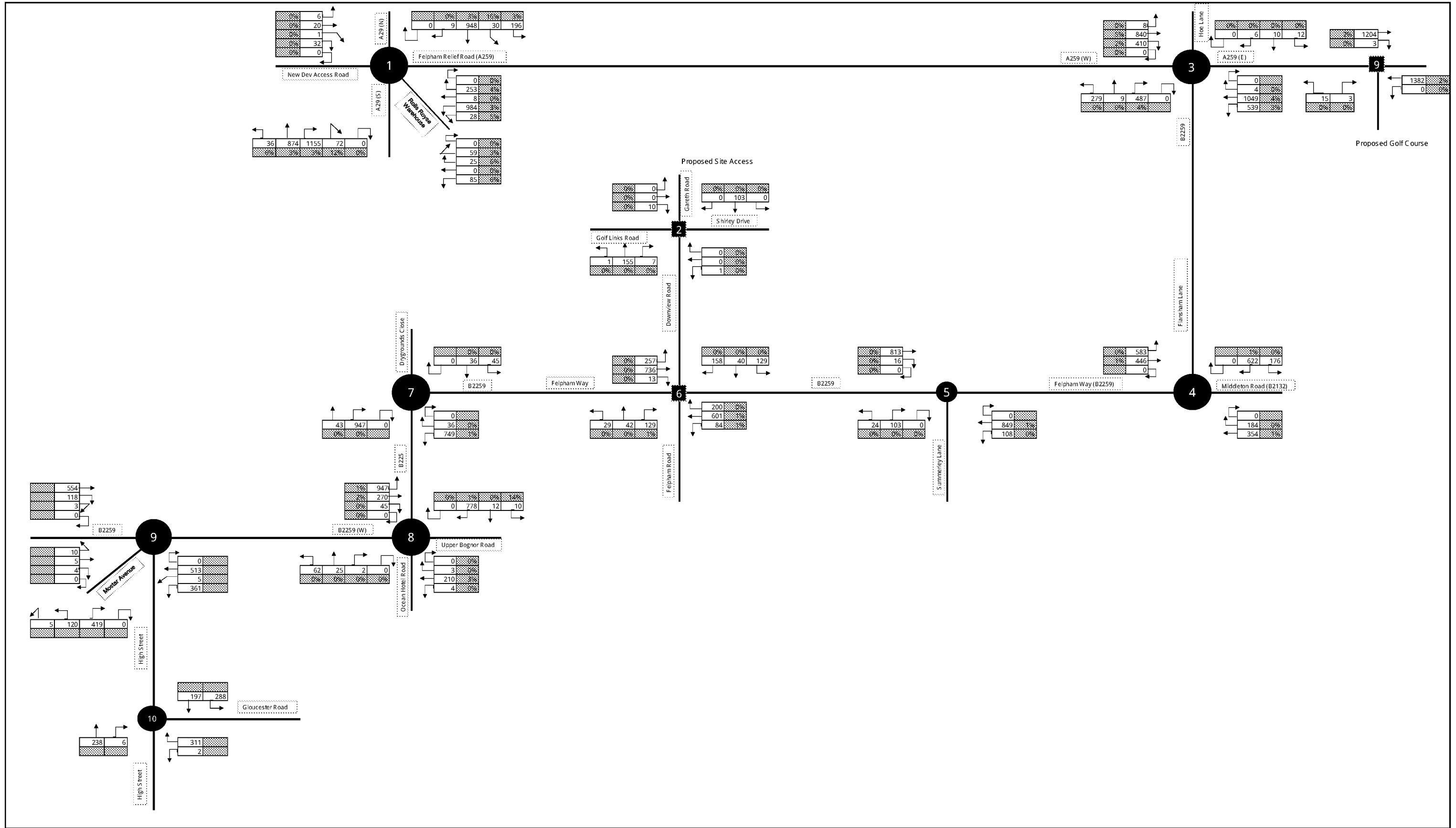


Notes

Project Name: Bognor Regis
Job Number: JNY10830
Title: 2026 Base + Committed + New Golf Course PM Peak

Figure No. 18







Notes
 Excludes Existing Golf Course, includes Proposed Golf Course + Proposed Housing Dev at existing Golf Course

Project Name: Bognor Regis
Job Number: J NY10830
Title: 2031 Base + Committed + Dev PM Peak

Figure No. 20

Appendix 9 - Junctions 9 Output

Junctions 9							
PICADY 9 - Priority Intersection Module							
Version: 9.5.1.7462							
© Copyright TRL Limited, 2019							
For sales and distribution information, program advice and maintenance, contact TRL:							
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution							

Filename: Grevatts Lane.Proposed Golf Course Site Access.j9

Path: P:\JNY10830 - Bognor Regis\Transport\Picady

Report generation date: 18/11/2021 14:49:50

- »2026 Base + Committed + Proposed, AM
- »2026 Base + Committed + Proposed, PM
- »2031 Base + Committed + Proposed, AM
- »2031 Base + Committed + Proposed, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2026 Base + Committed + Proposed									
Stream B-C	D1	0.0	7.65	0.00	A	D2	0.0	9.08	0.04	A
Stream B-A		0.0	0.00	0.00	A		0.0	29.40	0.02	C
Stream C-B		0.1	7.50	0.05	A		0.0	8.14	0.01	A
	2031 Base + Committed + Proposed									
Stream B-C	D3	0.0	8.11	0.00	A	D4	0.0	11.24	0.04	B
Stream B-A		0.0	0.00	0.00	A		0.1	154.40	0.11	F
Stream C-B		0.1	7.98	0.06	A		0.0	9.70	0.01	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

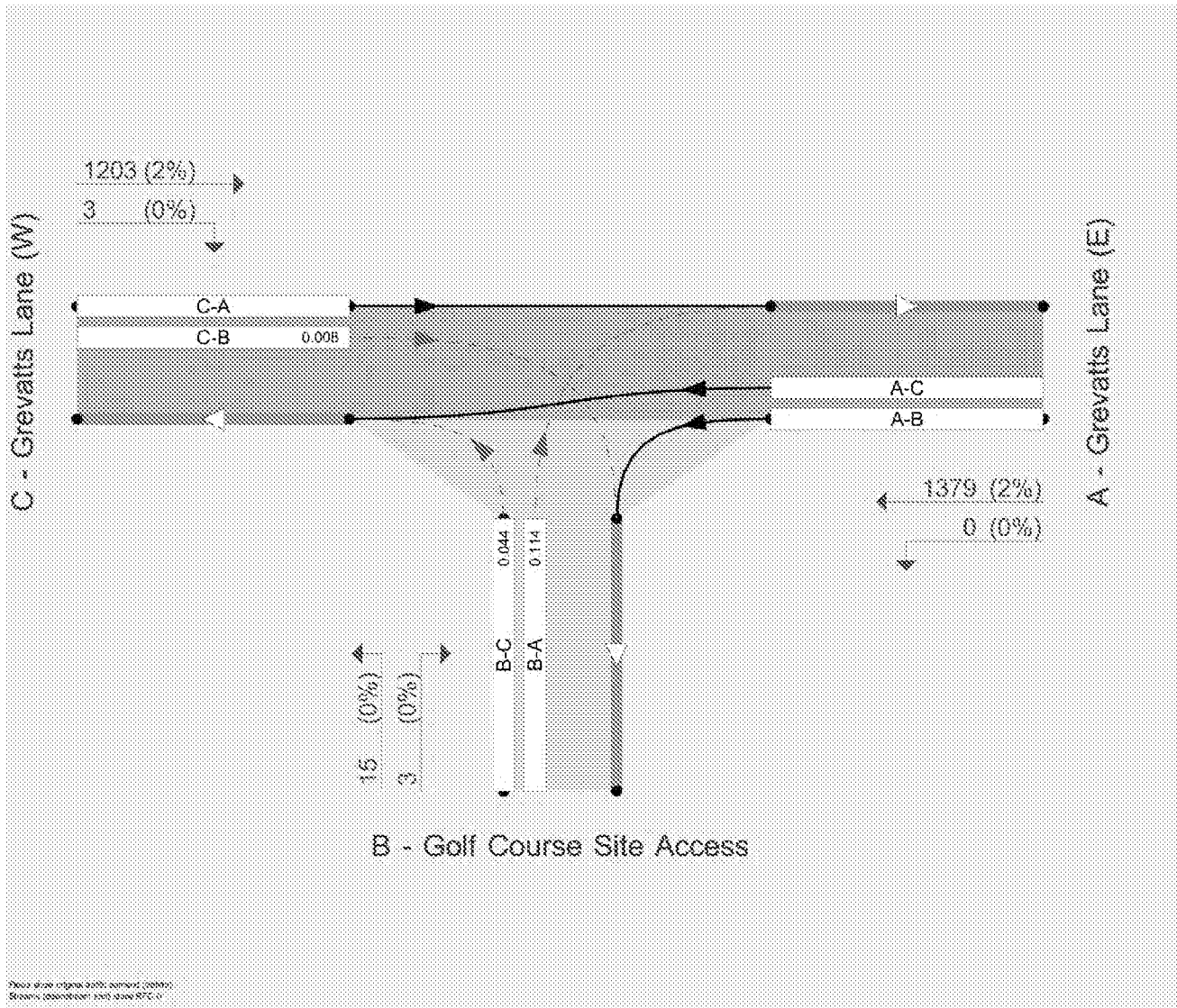
File summary

File Description

Title	
Location	
Site number	
Date	16/11/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Danesh.Aryan
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2026 Base + Committed + Proposed	AM	DIRECT	00:00	01:30	90	15	✓
D2	2026 Base + Committed + Proposed	PM	DIRECT	00:00	01:30	90	15	✓
D3	2031 Base + Committed + Proposed	AM	DIRECT	00:00	01:30	90	15	✓
D4	2031 Base + Committed + Proposed	PM	DIRECT	00:00	01:30	90	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2026 Base + Committed + Proposed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Golf Course Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Profile Type	D1 - 2026 Base + Committed + Proposed, AM	The DIRECT profile type is intended to be used for demand that varies over time. You are using it with the 'Use O-D data' option, but your O-D data does not vary over time. Are you sure this is correct?

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Grevatts Lane (E)		Major
B	Golf Course Site Access		Minor
C	Grevatts Lane (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Grevatts Lane (W)	7.00		✓	3.00	250.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Golf Course Site Access	One lane plus flare	10.00	4.10	3.00	3.00	3.00	✓	1.00	120	95

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	678	0.118	0.298	0.188	0.426
B-C	726	0.106	0.269	-	-
C-B	781	0.290	0.290	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2026 Base + Committed + Proposed	AM	DIRECT	00:00	01:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Grevatts Lane (E)		DIRECT	✓	100.000
B - Golf Course Site Access		DIRECT	✓	100.000
C - Grevatts Lane (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
From	A - Grevatts Lane (E)	0	5	916
	B - Golf Course Site Access	0	0	1
	C - Grevatts Lane (W)	1069	27	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
From	A - Grevatts Lane (E)	0	0	3
	B - Golf Course Site Access	0	0	0
	C - Grevatts Lane (W)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	7.65	0.0	A	1	2
B-A	0.00	0.00	0.0	A	0	0
C-A					1069	1604
C-B	0.05	7.50	0.1	A	27	41
AB					5	8
AC					916	1374

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	0.99	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.0	0.1	7.498	A
AB	5	1			5				
AC	916	229			916				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	1.00	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.1	0.1	7.503	A
AB	5	1			5				
AC	916	229			916				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	1	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.1	0.1	7.503	A
AB	5	1			5				
AC	916	229			916				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	1	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.1	0.1	7.503	A
AB	5	1			5				
AC	916	229			916				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	1	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.1	0.1	7.503	A
AB	5	1			5				
AC	916	229			916				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	472	0.002	1	0.0	0.0	7.650	A
B-A	0	0	177	0.000	0	0.0	0.0	0.000	A
C-A	1069	267			1069				
C-B	27	7	507	0.053	27	0.1	0.1	7.503	A
AB	5	1			5				
AC	916	229			916				

2026 Base + Committed + Proposed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Golf Course Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Profile Type	D2 - 2026 Base + Committed + Proposed, PM	The DIRECT profile type is intended to be used for demand that varies over time. You are using it with the 'Use O-D data' option, but your O-D data does not vary over time. Are you sure this is correct?

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2026 Base + Committed + Proposed	PM	DIRECT	00:00	01:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Grevatts Lane (E)		DIRECT	✓	100.000
B - Golf Course Site Access		DIRECT	✓	100.000
C - Grevatts Lane (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
From	A - Grevatts Lane (E)	0	0	1137
	B - Golf Course Site Access	3	0	15
	C - Grevatts Lane (W)	1070	3	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
	A - Grevatts Lane (E)	0	0	2
	B - Golf Course Site Access	0	0	0
	C - Grevatts Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.04	9.08	0.0	A	15	23
B-A	0.02	29.40	0.0	D	3	5
C-A					1070	1605
C-B	0.01	8.14	0.0	A	3	5
AB					0	0
AC					1137	1706

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.076	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.357	D
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.135	A
AB	0	0			0				
AC	1137	284			1137				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.083	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.403	D
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.135	A
AB	0	0			0				
AC	1137	284			1137				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.083	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.403	D
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.136	A
AB	0	0			0				
AC	1137	284			1137				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.083	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.403	C
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.136	A
AB	0	0			0				
AC	1137	284			1137				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.083	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.403	C
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.136	A
AB	0	0			0				
AC	1137	284			1137				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	411	0.036	15	0.0	0.0	9.083	A
B-A	3	0.75	125	0.024	3	0.0	0.0	29.403	C
C-A	1070	268			1070				
C-B	3	0.75	446	0.007	3	0.0	0.0	8.136	A
AB	0	0			0				
AC	1137	284			1137				

2031 Base + Committed + Proposed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Golf Course Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Profile Type	D3 - 2031 Base + Committed + Proposed, AM	The DIRECT profile type is intended to be used for demand that varies over time. You are using it with the 'Use O-D data' option, but your O-D data does not vary over time. Are you sure this is correct?

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2031 Base + Committed + Proposed	AM	DIRECT	00:00	01:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Grevatts Lane (E)		DIRECT	✓	100.000
B - Golf Course Site Access		DIRECT	✓	100.000
C - Grevatts Lane (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
From	A - Grevatts Lane (E)	0	5	1012
	B - Golf Course Site Access	0	0	1
	C - Grevatts Lane (W)	1322	27	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
	A - Grevatts Lane (E)	0	0	3
	B - Golf Course Site Access	0	0	0
	C - Grevatts Lane (W)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	8.11	0.0	A	1	2
B-A	0.00	0.00	0.0	A	0	0
C-A					1322	1983
C-B	0.06	7.98	0.1	A	27	41
AB					5	8
AC					1012	1518

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	0.99	0.0	0.0	8.109	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.0	0.1	7.973	A
AB	5	1			5				
AC	1012	253			1012				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	1.00	0.0	0.0	8.109	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.1	0.1	7.981	A
AB	5	1			5				
AC	1012	253			1012				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	1	0.0	0.0	8.110	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.1	0.1	7.981	A
AB	5	1			5				
AC	1012	253			1012				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	1	0.0	0.0	8.110	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.1	0.1	7.981	A
AB	5	1			5				
AC	1012	253			1012				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	1	0.0	0.0	8.110	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.1	0.1	7.981	A
AB	5	1			5				
AC	1012	253			1012				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	1	0.25	445	0.002	1	0.0	0.0	8.110	A
B-A	0	0	99	0.000	0	0.0	0.0	0.000	A
C-A	1322	331			1322				
C-B	27	7	478	0.056	27	0.1	0.1	7.981	A
AB	5	1			5				
AC	1012	253			1012				

2031 Base + Committed + Proposed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Golf Course Site Access - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Profile Type	D4 - 2031 Base + Committed + Proposed, PM	The DIRECT profile type is intended to be used for demand that varies over time. You are using it with the 'Use O-D data' option, but your O-D data does not vary over time. Are you sure this is correct?

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2031 Base + Committed + Proposed	PM	DIRECT	00:00	01:30	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Grevatts Lane (E)		DIRECT	✓	100.000
B - Golf Course Site Access		DIRECT	✓	100.000
C - Grevatts Lane (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
From	A - Grevatts Lane (E)	0	0	1379
	B - Golf Course Site Access	3	0	15
	C - Grevatts Lane (W)	1203	3	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Grevatts Lane (E)	B - Golf Course Site Access	C - Grevatts Lane (W)
	A - Grevatts Lane (E)	0	0	2
	B - Golf Course Site Access	0	0	0
	C - Grevatts Lane (W)	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.04	11.24	0.0	B	15	23
B-A	0.11	154.40	0.1	F	3	5
C-A					1203	1805
C-B	0.01	9.70	0.0	A	3	5
AB					0	0
AC					1379	2069

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	337	0.044	15	0.0	0.0	11.164	B
B-A	3	0.75	26	0.114	3	0.0	0.1	148.710	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	335	0.045	15	0.0	0.0	11.232	B
B-A	3	0.75	26	0.114	3	0.1	0.1	153.825	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	335	0.045	15	0.0	0.0	11.237	B
B-A	3	0.75	26	0.114	3	0.1	0.1	154.180	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	335	0.045	15	0.0	0.0	11.239	B
B-A	3	0.75	26	0.114	3	0.1	0.1	154.318	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	335	0.045	15	0.0	0.0	11.240	B
B-A	3	0.75	26	0.114	3	0.1	0.1	154.380	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	335	0.045	15	0.0	0.0	11.241	B
B-A	3	0.75	26	0.114	3	0.1	0.1	154.403	F
C-A	1203	301			1203				
C-B	3	0.75	374	0.008	3	0.0	0.0	9.702	A
AB	0	0			0				
AC	1379	345			1379				

Contact

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