



Minerals and Waste Planning
Environmental Permitting
Quarry Consultant

**PLANNING APPLICATION TO VARY CONDITIONS 3 AND 6 OF PLANNING
PERMISSION REFERENCE 2015/0823 TO AMEND THE ACCESS ARRANGEMENTS
AND TO INCREASE THE NUMBER OF HGV MOVEMENTS
AT THE FORMER CARLTON COLLIERY SITE, SHAW LANE, CARLTON,
BARNSELY S71 3HJ**

**SUBMITTED ON BEHALF OF
PORTWARD HOMES LIMITED
BRIERLEY, BARNSELY S72 9EU**

NOVEMBER 2015



Contents

	PAGE
1 INTRODUCTION	1
2 PROPOSED REVISED ACCESS ARRANGEMENTS	2
3 PLANNING POLICY	3
4 CONCLUSION	6

APPENDICES

1 TRANSPORT STATEMENT	
-----------------------	--

1 INTRODUCTION

- 1.1 We are instructed by Portward Homes Ltd ("the Applicant") to submit a planning application to vary condition 3 of Planning Permission 2015/0823 at the former Carlton Colliery Site off Shaw lane, Carlton, Barnsley. The location of the Site is shown on Drawing 10103/05C.
- 1.2 The Colliery site occupies an area of 8.75 ha and the colliery itself was demolished some time ago. The previous owner obtained planning permission to reclaim the site for a beneficial use under reference 2007/1365 in October 2008. The permission was renewed in July 2013 for a further 2 years and again in 2015 under reference 2015/0823. Appendix 1 contains the decision notice for this planning permission.
- 1.3 Condition 3 of 2015/0823 defines the development which has to be carried out in accordance with the various approved plans and documents. The approved development is described in the supporting statement as having a single access as shown on drawing 2007/1365 01 Rev A.

- 1.4 Condition 6 also limits the number of HGV vehicles entering the site so as to minimise potential impacts arising from the operation of the site and to protect the amenity of nearby occupiers. Condition 6 states:

"The number of HGV vehicles entering the site shall not exceed 20 vehicles per day. A record shall be kept by the operator of the number of HGV movements into the site on a daily basis. These records shall be made available to the WPA for inspection on request and all such records shall be retained for at least 2 years."

This application is to vary the condition so that 6 reads:

"The number of HGV vehicles entering the site shall not exceed 60 vehicles per day. A record shall be kept by the operator of the number of HGV movements into the site on a daily basis. These records shall be made available to the WPA for inspection on request and all such records shall be retained for at least 2 years."

- 1.5 Condition 3 of the Planning Permission states:

" The development hereby permitted shall only be carried out in accordance with the following documents approved under planning permission 2007/1365 and consolidated under planning permission 2011/1248, unless amendments are made pursuant to the other conditions below:

e) Drawing number DTS/CC/2007 02B as amended by 2007/1365/01 Rev A - Remediation Strategy - Site Office and Parking Locations and Pass-by Positions - dated November 2008, and received by the WPA on 7 January 2009, subject to the

limitations expressed in the Council's letters of 22 January and 5 March 2009;

- 1.6 This application is to vary the condition so that 3e) reads:

Drawing number DTS/CC/2007 02B as amended by 813/101 dated August 2015, and received by the WPA on 2015, subject to the limitations expressed in the Council's letters of 22 January and 5 March 2009;

2 PROPOSED REVISED ACCESS ARRANGEMENTS

- 2.1 The site has planning permission for the ongoing reclamation works at the site that restricts the number of HGV movements to and from the site. As a consequence this will extend the amount of time taken to carry out the reclamation works. It is proposed to provide improved access arrangements and to carry out highway infrastructure improvements to allow for an increased number of HGV movements, shortening the timeframe for completion of the works and reducing the impact on local residents.
- 2.2 The site has an existing access off Shaw Lane in the form of an unmarked priority junction, and was used as the main colliery access. Given the restricted width of the access, there are some sections along the access that do not allow for the simultaneous two way HGV traffic flow, resulting in reversing manoeuvres, which can be detrimental to the safety of all users of the access road.
- 2.3 Condition 6 of 2015/0823 restricts the number of HGV movements associated with the importation of inert construction and demolition waste to 40 HGV movements per day.
- 2.4 It is therefore proposed to create a new access off Shaw Lane which will be located on the far east side of the site adjacent to the existing public right of way (Trans Pennine Trail), although this public right of way will not be affected by the proposals. This access will be an ingress only, and will form a one way loop road travelling south into the site before travelling west then north to allow all vehicles to exit the site via the existing access. The access will be constructed in such a way that due to the geometry, large vehicles can only turn right into the site. A management plan for the site will be prepared to reinforce the one way working of the proposed access road. Equally, the exit from the site, at the western site boundary, will be priority controlled and as with the proposed ingress into the site will be designed so that large vehicles can only turn left out of the site.
- 2.5 As part of the proposals the footway along the south side of the road will be improved to the east side of the railway bridge, and will continue along the south side of Shaw

Lane to the junction into the existing industrial premises further to the east. Due to the narrow width under the railway bridge a formal footway could not be accommodated.

- 2.6 It is proposed to introduce traffic signals on both sides of the railway bridge, which will also incorporate the proposed access to assist with the traffic movements into the site. This will provide a shuttle working arrangement and also improve facilities for pedestrians with a push button operated pedestrian facility, allowing pedestrians to travel under the bridge safely.
- 2.7 Full details of the proposed access improvements are contained in the attached PAH statement and on drawing 813/101.
- 2.8 The PAH Transport Statement has looked at a maximum of 120 HGV movements per day, which would divide with 60 vehicles entering the eastern access and 60 leaving by the western access. The current HGV daily limit is 40 movements, and this is proposed for increased to 120 movements.
- 2.9 The revised access arrangements will allow the increased number of HGV movements to be accommodated without any significant impact on the local highway network.
- 2.10 The Transport Statement also notes that the proposed access arrangements will allow scope for increased traffic movements associated with any future industrial or mixed use development without significant impact on the local highway network.

3 PLANNING POLICY

- 3.1.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that all planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. In this instance, the statutory development plan consists of the adopted Barnsley Core Strategy (September 2011). The Courts have also held that the Government's statements on planning policy are material considerations which must be taken into account in reaching decisions on planning applications where relevant. The National Planning Policy Framework (NPPF), is therefore a material consideration.
- 3.1.2 The policies considered specifically relevant to this application are considered below.

3.2 National Guidance

The National Planning Policy Framework (March 2012)

- 3.2.1 The National Planning Policy Framework (Framework) sets out the purpose of the planning system as contributing to the achievement of sustainable development.

Sustainable Development

- 3.2.2 A definition of sustainable development is set out in the Framework's introduction, taken from the World Commission on Environment and Development in 1987:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The Framework describes the three dimensions to sustainable development as economic, social and environmental, and seeks positive improvements in the quality of the built, natural and historic environment

- 3.2.3 Paragraph 7 defines the three roles of the planning system as an economic role:

"contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure"

a social role:

"supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being"

and an environmental role:

"contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy."

- 3.2.4 Paragraph 14 sets out the presumption in favour of sustainable development, which for decision-taking means:

"Approving development proposals that accord with the development plan without delay; and where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:

any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or specific policies in this Framework indicate development should be restricted."

3.2.5 Twelve core land-use planning policies are set out in Paragraph 17 of which the following are relevant to this proposed development:

- *“proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs. Every effort should be made objectively to identify and then meet the housing, business and other development needs of an area, and respond positively to wider opportunities for growth. Plans should take account of market signals, such as land prices and housing affordability, and set out a clear strategy for allocating sufficient land which is suitable for development in their area, taking account of the needs of the residential and business communities;*
- *always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;*
- *support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy);*
- *contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;*
- *promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);*
- *actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable; and*
- *take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs.”*

3.2.6 The proposed development qualifies as sustainable development as it is essential to allow the effective reclamation of the site for a beneficial afteruse. As a sustainable development, the Framework presumption in favour should apply.

3.2.7 Paragraph 35 notes that

“developments should be located and designed where practical 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;*

3.3 Local Planning Policy

The Barnsley Core Strategy

- 3.3.1 The principle of the colliery site reclamation has already been accepted on the basis of the Core Strategy. This planning application seeks to amend the planning permission granted in October 2015 to improve the road access for the site. This will assist with highway safety and efficiency, and enable the reclamation of the site to be accomplished more quickly and bring forward the future beneficial use of the site.
- 3.3.2 Core Strategy Policy CSP 26 on new development and Highway Improvement notes *"that new development will be expected to be designed and built to provide safe, secure and convenient access for all road users."*
- 3.3.3 As such therefore, the proposal is in accordance with Core Strategy policies and objectives.

4 CONCLUSION

- 4.1 All planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. Government statements on planning policy are also material considerations which must be taken into account where pertinent.
- 4.2 This application seeks to improve access into the site and carry out highway infrastructure improvements to allow for the number of HGV movements to increase to up to 120 vehicle movements per day. This will allow the applicant to reclaim the site more quickly, bringing forward the future development of the site for beneficial uses.
- 4.3 The Transport Statement concludes that both the capacity and safety elements of the proposals are acceptable. The proposed increase in traffic can be readily accommodated within the operation of the adjacent highway network, subject to the proposed one way access arrangement, and the introduction of traffic signals at the bridge directly to the east of the site.
- 4.4 The entire development remains classed as sustainable development and is fully in accordance with both National and local planning policies.
- 4.5 It is therefore concluded that the development is considered acceptable, and that there are no highway safety or efficiency reasons why planning consent for the

proposed development should not be granted. It is therefore respectfully requested that planning permission be granted to enable the development to take place.

MWP Planning

APPENDIX 1

TRANSPORT STATEMENT



Unit 2
The Office Campus
Paragon Business Park
Red Hall Court
Wakefield
WF1 2UY

**LAND RECLAMATION WORKS
ON LAND AT THE FORMER CARLTON COLLIERY SITE,
SHAW LANE, CARLTON, BARNSELY**

TRANSPORT STATEMENT

813 / August 2015

CONTENTS

1	INTRODUCTION	1
2	EXISTING CONDITIONS.....	2
2.1	Site Description	2
2.2	Local Highway Network.....	2
3	THE DEVELOPMENT PROPOSALS.....	4
3.1	Proposed Development.....	4
3.2	Traffic Impact.....	5
4	TRANSPORT POLICY.....	9
5	CONCLUSIONS.....	10

APPENDICES

Appendix A	Site Location
Appendix B	Proposed Access & Highway Improvements
Appendix C	Traffic Survey
Appendix D	LinSig Output

1 INTRODUCTION

- 1.1.1 PAH Highway Consultants Ltd has been appointed to prepare this Transport Statement relating to the ongoing land reclamation works at the former Carlton Colliery site off Shaw Lane, Carlton, Barnsley. Appendix A shows the site location in relation to the local highway network.
- 1.1.2 The reclamation works involve the recovery of red shale and ash and the importation of inert construction and demolition waste. These works will allow for the site to be improved for a beneficial use such as industry. The site has existing planning permission for the ongoing reclamation works at the site that restrict the number of HGV movements to and from the site, which as a consequence will extend the amount of time taken to carry out the land reclamation works at the site, and impact this has on local residents and users of Shaw Lane. It is proposed to provide improved access arrangements at site and to carry out highway infrastructure improvements to allow for an increased number of HGV movements, shortening the timeframe for completion of the works.
- 1.1.3 This Transport Statement considers the site access, and traffic impact associated with the proposed development. This statement demonstrates that the proposals should be acceptable for planning approval purposes.

2 EXISTING CONDITIONS

2.1 Site Description

2.1.1 The site is located within the settlement of Carlton some 950m from the village centre, and 4.6km northeast of Barnsley Town Centre. The site is bounded by Shaw Lane to the north, a railway line and public right of way to the east, and greenfield land to the south and the west. There is a public right of way (Trans Pennine Trail) that travels north to south along the far east side of the site, however this will be unaffected by the proposals.

2.1.2 The site has an existing access off Shaw Lane in the form of an unmarked priority junction, and was used as the main colliery access. Given the restricted width of the access, there are some sections along the access that do not allow for the simultaneous two way HGV traffic flow, resulting in reversing manoeuvres, which can be detrimental to the safety of all users of the access road.

2.1.3 The site currently has planning permission allowing for the recovery of red shale and ash, and allows the importation of inert construction and demolition waste to replace the recovered ash. A washing plant for the recovered material is also located on site. Existing planning permission (2013/1339) condition 6 restricts the number of HGV movements associated with the recovery of red shale and ash so that it does not exceed 24 per day (12 ingress and 12 egress movements). In terms of imported inert construction and demolition waste, this is restricted to 20 HGV movements per day. These restrictions will result in the reclamation works to extend over a lengthy period of time and will delay the site being used for more beneficial purposes.

2.2 Local Highway Network

2.2.1 Shaw Lane is a local access road that travels between the settlements of Carlton and Shafton. The road is approximately 2.3km in length and connects with the A628 Cudworth Parkway to the east via Weetshaw Lane, and the B6132 at Carlton to the west. Shaw Lane provides direct access to numerous individually served residential properties, and a small number of residential streets. It also provides access to metal recycling and other industrial businesses to the east of the site.

2.2.2 Shaw Lane is a two way single carriageway road that contains a footway along the south side of the road and a verge along the north side within the vicinity of the existing site access. It contains street lighting to a suitable standard and is subject to a 30mph speed limit. Shaw Lane contains a 2m width restriction and a low bridge to the east of the site. Notwithstanding these restrictions Shaw Lane is in relatively good condition and appears to be suitable for its day to day use. The footway to the south of Shaw Lane stops at the railway bridge, with only a narrow footway provided to the north under the bridge which then stops. No footway is provided to the east of the railway bridge.

2.2.3 The B6132 is a local distributor road that runs north to south through the centre of Carlton. It connects with Royston and the B6428 to the north and the A633 and A61 to the southwest providing suitable access to the principal and primary route network, and subsequent links to the motorway network. Shaw Lane connects with the B6132 via a simple priority junction. The B6132 is a two way single carriageway road generally containing footways on both sides. It contains street lighting to an appropriate standard and is subject to 30mph speed limit. Traffic Regulation Orders are provided around junction areas and other strategic locations that restrict waiting.

3 THE DEVELOPMENT PROPOSALS

3.1 Proposed Development

3.1.1 The applicants proposed to improve access into the site and carry out highway infrastructure improvements to allow for the number of HGV movements to increase to up to 120 vehicle movements per day. This will allow for applicants to reclaim the site much quicker, allowing for the site to have a beneficial use such as industrial purposes.

3.1.2 It is therefore proposed to create a new access off Shaw Lane which will be located on the far east side of the site adjacent to the existing public right of way (Trans Pennine Trail), although this public right of way will not be affected by the proposals. This access will be an ingress only, and will form a one way loop road travelling south into the site before travelling west then north to allow all vehicles to exit the site via the existing access. The access will be constructed in such a way that due to the geometry, large vehicles can only turn right into the site. A management plan for the site will be prepared to reinforce the one way working of the proposed access road. Equally, the exit from the site, at the western site boundary, will be priority controlled and as with the proposed ingress into the site will be designed so that large vehicles can only turn left out of the site.

3.1.3 As part of the proposals the footway along the south side of the road will be improved to the east side of the railway bridge, and will continue along the south side of Shaw Lane to the junction into the existing industrial premises further to the east. Due to the narrow width under the railway bridge a formal footway could not be accommodated.

3.1.4 It is proposed to introduce traffic signals on both sides of the railway bridge, which will also incorporate the proposed access to assist with the traffic movements into the site providing a shuttle working arrangement, also improving facilities for pedestrians with a push button operated pedestrian facility, allowing pedestrians to travel under the bridge safely.

- 3.1.5 It should be noted that Barnsley Council's Highways Officer (Barbara Wilson) has confirmed that the installation of the proposed traffic signals is acceptable. The proposed access arrangements and highway improvements are shown on the plan at Appendix B.

3.2 Traffic Impact

Traffic Count

- 3.2.1 A two-way traffic count was undertaken on 11th November 2014. Interrogation of the results showed that the peak hours occur between 08:00 - 09:00 and 15:45 - 16:45. The survey results are shown at Appendix C.

- 3.2.2 The following growth rates were applied to the traffic counts to determine the traffic flows for the 2025 future year assessment:

AM 1.1737

PM 1.1784

Development Traffic and Distribution

- 3.2.3 It has been assumed that there will be in the region of 120 HGV movements spread evenly over the working day from 08:00 - 17:00. This equates to just over 13 HGV movements per hour into the site, although for robustness 15 have been used within the model. In addition to this there will be in the region of 10 staff movements. Although the staff trips are likely to occur before the AM peak they have all been assumed to occur during the AM peak to further improve the robustness of the assessment.

- 3.2.4 Due to the size of the vehicles associated with the development a pcu conversion factor of 2.3 has been used which equates to 34.5, say 35, pcu movements per hour. In addition for the AM peak the 10 staff movements have been assumed to all be by car giving a total of 45 pcu trips into the site during the AM peak and 35 pcu trips into the site during the PM peak.

- 3.2.5 Due to the nature of the local highway network and the operation of the site, it has been assumed that all the HGV's will arrive from the west and turn right into the site, whilst staff trips will be split with 50% from the west and 50% from the east.

Proposed Traffic Signals

- 3.2.6 The proposed traffic signals are to operate on a 'shuttle' system with one-way traffic underneath the existing railway bridge. In addition there will be a demand dependent pedestrian stage to allow safe pedestrian passage under the railway bridge.
- 3.2.7 The signals will work under vehicle actuated control and it is proposed that (subject to agreement with the LHA) they will rest at red so that the first demand triggers the green signal. Queue detection will be in place on the westbound approach and will be linked to a VMS advising of queuing traffic as demonstrated on the attached plan. When the queue loops have been occupied for a pre-determined period of time the VMS will be activated to advise of the standing traffic around the corner. It is anticipated that this will not be activated the majority of time but is to be provided to minimise the risk of shunt type collisions on the westbound approach where visibility is limited.
- 3.2.8 The pedestrian stage will be activated by a push button at either side of the bridge and will use a nearside display. Pedestrian detection will also be deployed on signal poles if possible to monitor the progress of pedestrians under the bridge and amend the green time accordingly (as per standard puffin type pedestrian installations).

LinSig Assessment

- 3.2.9 A LinSig model has been prepared for the proposed junction. The 2025 AM and PM peaks have been assessed. The LinSig output is shown at Appendix D.
- 3.2.10 The intergreens for the pedestrian phase have been calculated using the following formulas:
- $(w/1.2) - 2s = \text{pedestrian invite}$ and $(w/1.2) + 2s = \text{pedestrian clearance}$.*

3.2.11 In this case 'w' equates to the length between the pushbuttons which is anticipated to be around 40m, leading to a pedestrian invite of 32s and a pedestrian clearance of 36s. In reality with the use of pedestrian detection it is likely that these times may be reduced.

3.2.12 Given the nature of the area, it is unlikely that the pedestrian stage will be called with any regularity, however assessment has been made with it being called in alternate cycles, and also not being called at all.

3.2.13 When the pedestrian stage was called in alternate cycles a cycle time of 180s was used with a stage order of 1 - 2 - 3 - 1 - 3 with stage 1 being Shaw Lane West, stage 2 being pedestrians and stage 3 being Shaw Lane East. For assessment without the pedestrian stage, a cycle time of 50s was used with a stage order of 1 – 3.

3.2.14 The results for the future year assessment in 2025 are as follows:

Alternate Peds	AM		PM	
	DoS (%)	MMQ	DoS (%)	MMQ
Shaw Lane West	85.5	15.1	76.8	11.8
Shaw Lane East	85.9	11.7	76.5	10.2
	PRC	4.8%	PRC	17.2%

No Peds	AM		PM	
	DoS (%)	MMQ	DoS (%)	MMQ
Shaw Lane West	60.9	5.0	54.0	4.0
Shaw Lane East	61.6	4.3	55.6	4.0
	PRC	46.1%	PRC	61.9%

3.2.15 The results demonstrate that the development can easily be accommodated within the proposed traffic signals with significant spare capacity.

- 3.2.16 A basic assessment of the junction capacity shows that up to a further 20 pcus could be accommodated during the AM peak, *with the pedestrian stage being called in every cycle*, before the junction would be at capacity. This equates to a further 8 HGVs - half as much again as is being proposed. This number is higher for the PM peak (an additional 70 pcus) and is significantly higher when the pedestrian stage is discounted.
- 3.2.17 In conclusion, the proposed traffic signal installation can accommodate the proposed development with scope to allow for further expansion without having any significant impact on the local highway network.

4 TRANSPORT POLICY

4.1.1 When considering transport policy compliance for planning applications, the main thrust of local, regional and national policy is that new development should be conveniently accessible by a range of sustainable transport modes, including public transport, cycling and walking. This policy therefore sets out the framework for this Transport Statement and the project's compliance with the policy objectives. Further details of the relevant policy documents are set out below.

National Planning Policy Framework (NPPF)

4.1.2 National policy relating to transport is given within the National Planning Policy Framework (NPPF), which was published on 27th March 2012. This document superseded a number of national Planning Policy Statements and Guidance Notes (PPS's and PPG's). The national policy relating to transport and development that was formerly set out in PPG 13 'Transport' is now replaced by Section 4 of the NPPF.

4.1.3 The NPPF states that "developments should be located and designed where practical to:

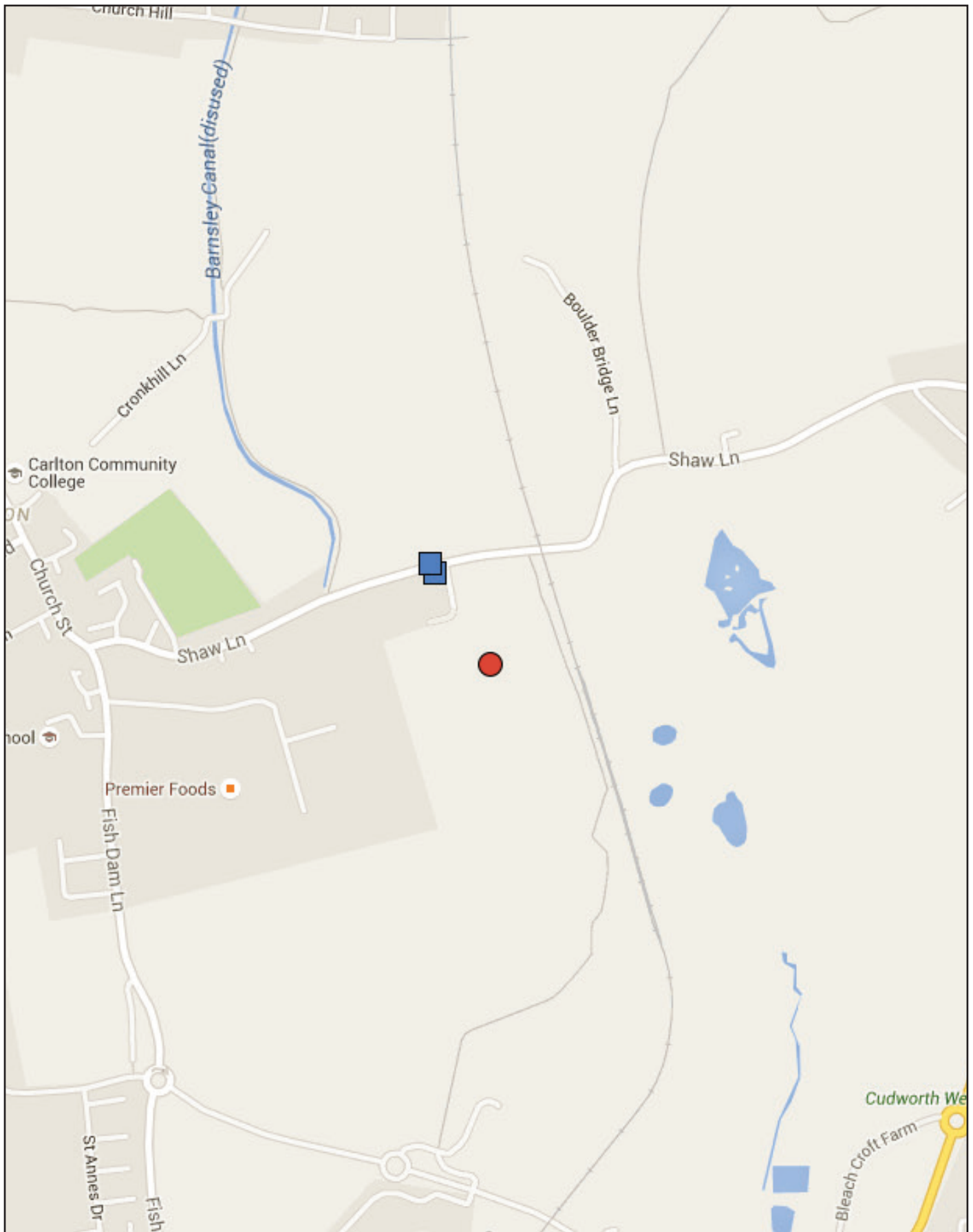
- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- promote the development and diversification of agricultural and other land based rural businesses.
- Certain developments are also not inappropriate within the Green Belt provided they preserve the openness of the Green Belt and do not conflict with the purposes of including land in the Green Belt which include engineering operations".

5 CONCLUSIONS

- 5.1.1 This report presents the proposals to improve access into the site and carry out highway infrastructure improvements to allow for the number of HGV movements to increase to up to 120 vehicle movements per day. This will allow for applicants to reclaim the site much quicker, allowing for the site to have a beneficial use such as industrial purposes.
- 5.1.2 The report concludes that both capacity and safety elements of the proposals are acceptable, as the proposed increase in traffic can be readily accommodated within the operation of the adjacent highway network given the level of improvements including a one way access arrangement, and the introduction of traffic signals at the bridge directly to the east of the site.
- 5.1.3 It is therefore concluded that the development is considered acceptable, and that there are no highway safety or efficiency reasons why planning consent for the proposed development should not be granted.

Appendix A

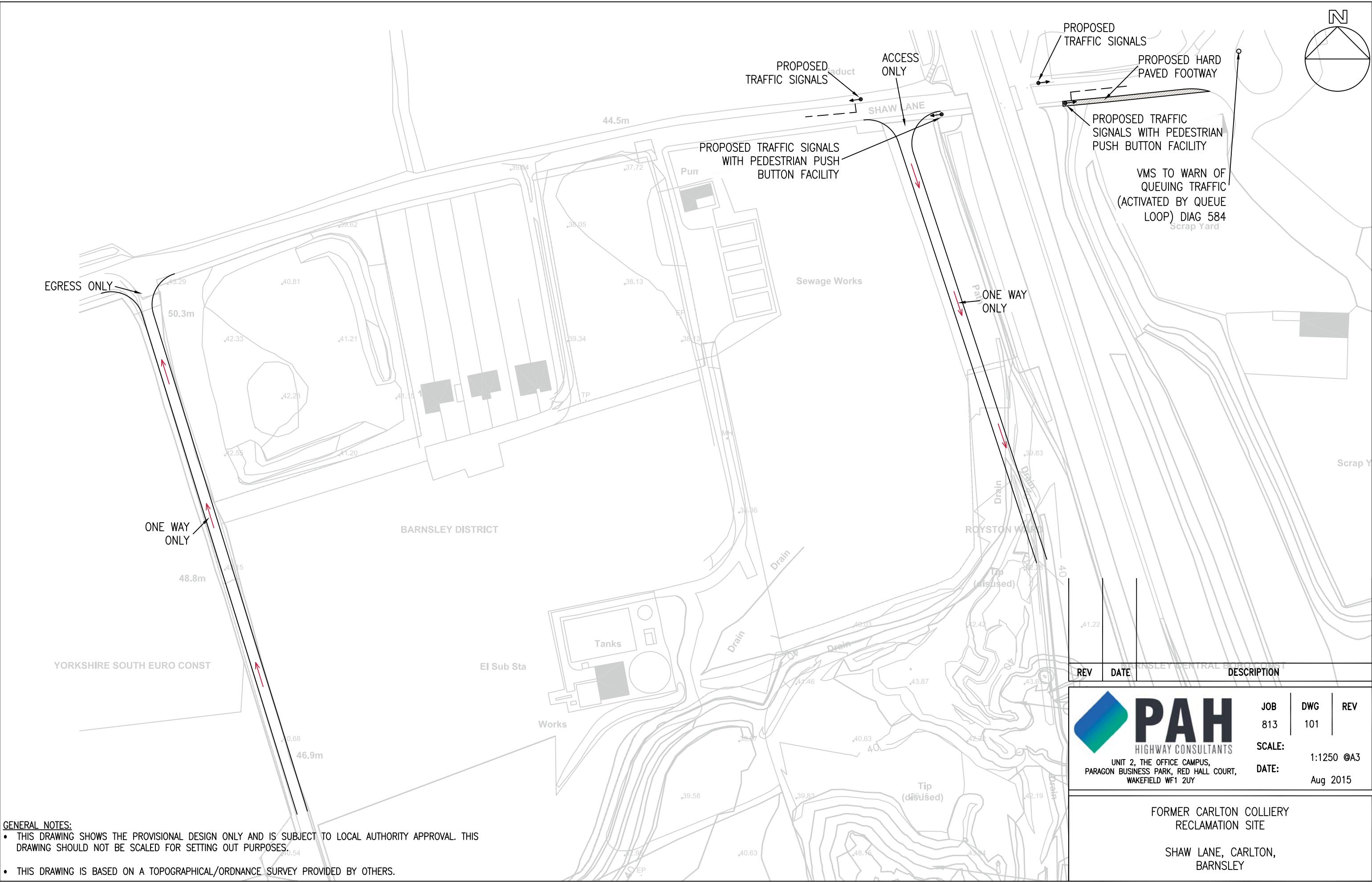
Location plan



-  SITE LOCATION
-  BUS STOP LOCATION

Appendix B

Proposed Access & Highway Improvements



- GENERAL NOTES:**
- THIS DRAWING SHOWS THE PROVISIONAL DESIGN ONLY AND IS SUBJECT TO LOCAL AUTHORITY APPROVAL. THIS DRAWING SHOULD NOT BE SCALED FOR SETTING OUT PURPOSES.
 - THIS DRAWING IS BASED ON A TOPOGRAPHICAL/ORDNANCE SURVEY PROVIDED BY OTHERS.

REV	DATE	DESCRIPTION
-----	------	-------------

 PAH HIGHWAY CONSULTANTS UNIT 2, THE OFFICE CAMPUS, PARAGON BUSINESS PARK, RED HALL COURT, WAKEFIELD WF1 2UY	JOB	DWG	REV
	813	101	
	SCALE:	1:1250 @A3	
	DATE:	Aug 2015	

FORMER CARLTON COLLIERY
RECLAMATION SITE

SHAW LANE, CARLTON,
BARNSELY

Appendix C

Traffic Survey

SURVEY CONTROL:

Client: Paul Howarth

Client Contact: PAH Highway Consultants Ltd

Survey Location: Shaw Lane, Barnsley

Date(s) of Survey: Tuesday 11 November 2014

Notes:

On Site Supervisor: David Farmer

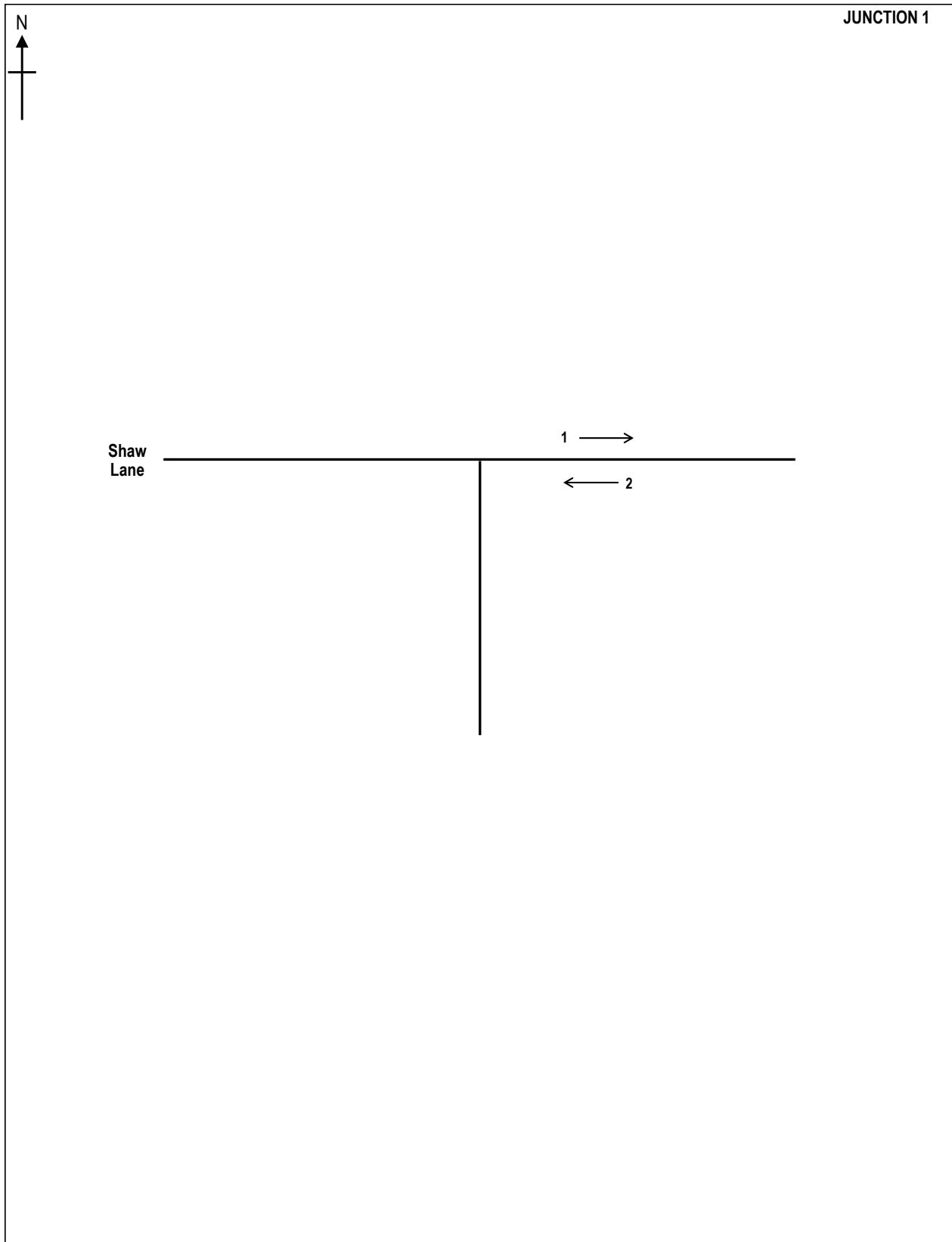
Data Checking: Pedro Dixon

Survey Reference: 2014.958

Status: Final

Date of Issue: Wednesday 12 November 2014





DRAWING TITLE			
TRAFFIC MOVEMENT REFERENCE			
JOB TITLE			
SHAW LANE, BARNSELY			
DRAWN BY	DATE	SCALE	REF
RKN	09/11/2014	NTS	FIGURE 1



Traffic & Transport Data Collection
 e: pedro@pdsurveys.co.uk
 t: +44 (0) 7880 360 238
 a: Unit C, Venture Business Park,
 Subway Street, Hull, HU3 4EL

Time Beginning	Shaw Lane, Barnsley - Tuesday 11 November 2014			
	1		2	
	LV	HV	LV	HV
0700	38	0	32	0
0715	36	1	48	0
0730	40	0	41	0
0745	59	0	57	1
0800	73	1	61	1
0815	68	0	68	1
0830	51	2	54	1
0845	74	1	53	0
0900	50	0	57	3
0915	47	0	37	0
0930	21	3	29	1
0945	28	3	29	1
1000	46	2	37	1
1015	33	1	33	1
1030	34	3	28	4
1045	25	4	29	1
1100	18	0	35	2
1115	36	5	30	1
1130	31	3	29	6
1145	22	5	20	0
1200	21	3	30	4
1215	32	3	21	2
1230	21	2	33	1
1245	35	3	39	3
1300	40	3	26	6
1315	35	3	47	4
1330	34	4	30	9
1345	43	8	31	5
1400	36	4	27	4
1415	37	9	33	8
1430	49	5	63	2
1445	55	1	41	3
1500	40	2	58	3
1515	59	2	55	3
1530	53	0	38	1
1545	57	5	63	4
1600	43	1	46	5
1615	55	3	54	2
1630	52	2	46	3
1645	45	2	69	2
1700	51	1	59	2
1715	47	2	48	1
1730	51	2	54	2
1745	38	0	39	1
1800	41	1	42	0
1815	36	2	33	1
1830	29	1	25	2
1845	31	0	38	1

Appendix D

LinSig Output

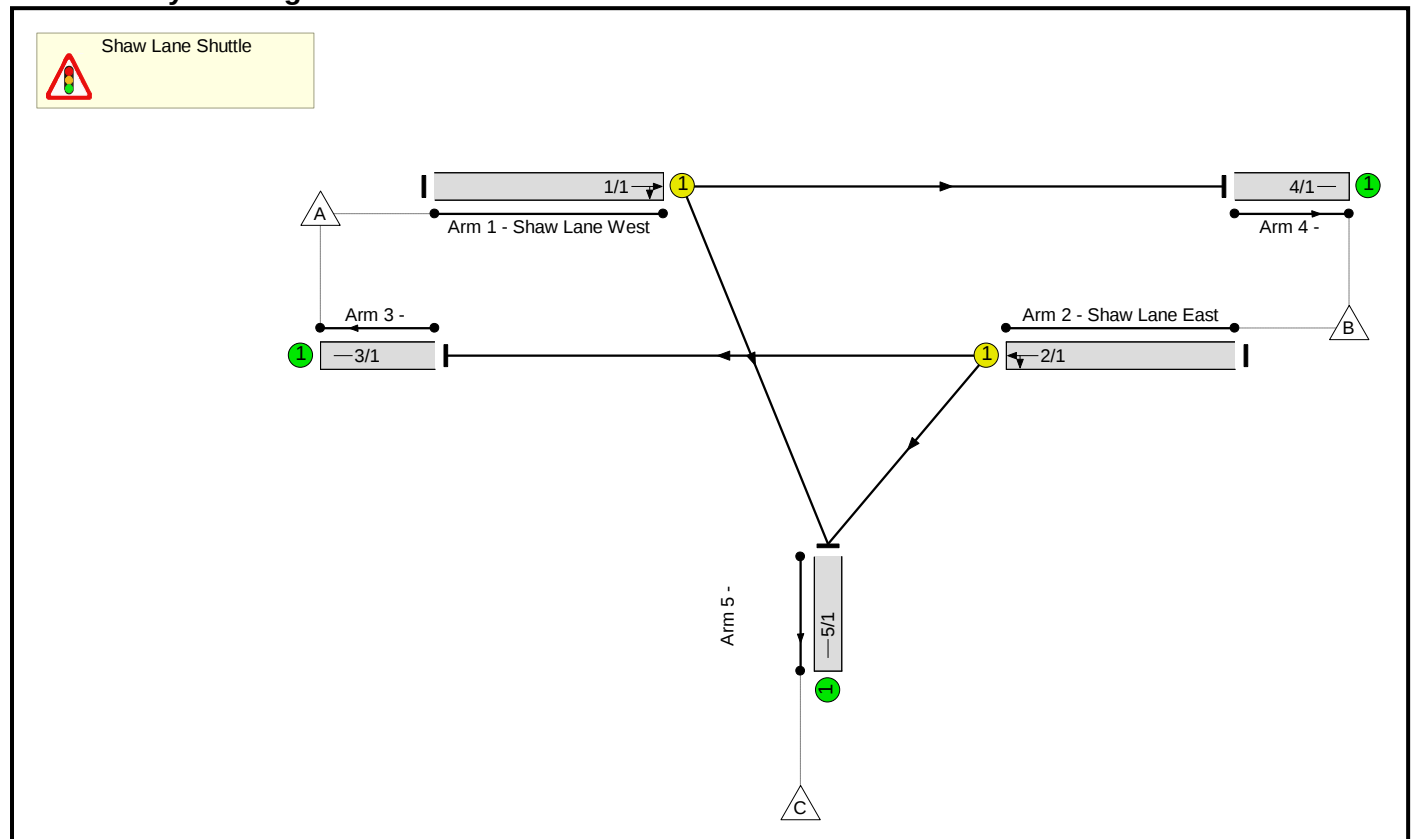
Full Input Data And Results

Full Input Data And Results

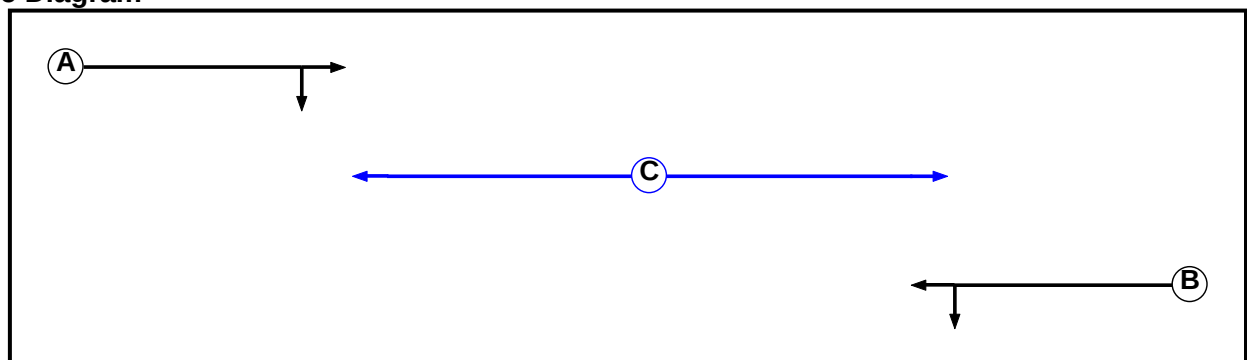
User and Project Details

Project:	Shaw Lane, Carlton
Title:	
Location:	
File name:	Shaw Lane Model.lsg3x
Company:	PAH Highway Consultants Ltd
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		32	32

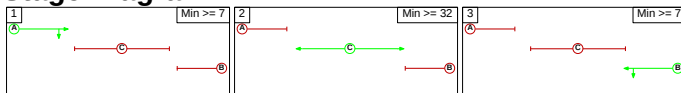
Phase Intergreens Matrix

Terminating Phase	Starting Phase			
		A	B	C
	A		12	8
	B	12		8
	C	36	36	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	C
3	B

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		8	12
	2	36		36
	3	12	8	

Give-Way Lane Input Data

Junction: Shaw Lane Shuttle
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: Shaw Lane Shuttle												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Shaw Lane West)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
											Arm 5 Right	6.00
2/1 (Shaw Lane East)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 3 Ahead	Inf
											Arm 5 Left	12.00
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2014 AM Peak Base'	08:00	09:00	01:00	
2: '2014 PM Peak Base'	15:45	16:45	01:00	
3: '2025 AM Peak Base'	08:00	09:00	01:00	F1*1.1737
4: '2025 PM Peak Base'	15:45	16:45	01:00	F2*1.1784
5: 'AM Peak Development Traffic'	08:00	09:00	01:00	
6: 'PM Peak Development Traffic'	15:45	16:45	01:00	
7: '2025 AM Peak Base + Dev'	08:00	09:00	01:00	F3+F5
8: '2025 PM Peak Base + Dev'	15:45	16:45	01:00	F4+F6
9: 'AM Peak Dev Limit'	08:00	09:00	01:00	
10: 'PM Peak Dev Limit'	15:45	16:45	01:00	
11: '2025 AM Peak Limit'	08:00	09:00	01:00	F3+F9
12: '2025 PM Peak Limit'	15:45	16:45	01:00	F4+F10

Full Input Data And Results

Traffic Flows, Desired

Scenario 1: '2025 AM Peak + Dev Alternate Peds' (FG12: '2025 PM Peak Limit', Plan 2: 'Alternate Peds')

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	273	100	373
	B	284	0	0	284
	C	0	0	0	0
	Tot.	284	273	100	657

Scenario 2: '2025 PM Peak +Dev Alternate Peds' (FG8: '2025 PM Peak Base + Dev', Plan 2: 'Alternate Peds')

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	273	30	303
	B	284	0	0	284
	C	0	0	0	0
	Tot.	284	273	30	587

Scenario 3: '2025 AM Peak + Dev No Peds' (FG7: '2025 AM Peak Base + Dev', Plan 1: 'No Peds')

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	323	40	363
	B	285	0	5	290
	C	0	0	0	0
	Tot.	285	323	45	653

Scenario 4: '2025 PM Peak + Dev No Peds' (FG8: '2025 PM Peak Base + Dev', Plan 1: 'No Peds')

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	273	30	303
	B	284	0	0	284
	C	0	0	0	0
	Tot.	284	273	30	587

Scenario 5: '2025 AM Peak LIMIT' (FG11: '2025 AM Peak Limit', Plan 2: 'Alternate Peds')

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	323	60	383
	B	285	0	0	285
	C	0	0	0	0
	Tot.	285	323	60	668

Full Input Data And Results

Scenario 6: '2025 PM Peak LIMIT' (FG12: '2025 PM Peak Limit', Plan 2: 'Alternate Peds')

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	273	100	373
	B	284	0	0	284
	C	0	0	0	0
	Tot.	284	273	100	657

Full Input Data And Results

Network Results

Scenario 1: '2025 AM Peak + Dev Alternate Peds' (FG12: '2025 PM Peak Limit', Plan 2: 'Alternate Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		2	39	-	363	1864	425	85.5%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		2	29	-	290	1961	338	85.9%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	363	363	-	-	-	4.1	2.7	-	6.9	67.9	12.8	2.7	15.5
2/1	290	290	-	-	-	3.1	2.7	-	5.9	72.8	8.9	2.7	11.7
C1 PRC for Signalled Lanes (%): 4.8 PRC Over All Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 12.71 Total Delay Over All Lanes(pcuHr): 12.71 Cycle Time (s): 180													

Scenario 2: '2025 PM Peak +Dev Alternate Peds' (FG8: '2025 PM Peak Base + Dev', Plan 2: 'Alternate Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		2	36	-	303	1869	395	76.8%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		2	32	-	284	1965	371	76.5%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	303	303	-	-	-	3.3	1.6	-	4.9	58.8	10.2	1.6	11.8
2/1	284	284	-	-	-	3.0	1.6	-	4.5	57.4	8.6	1.6	10.2
C1 PRC for Signalled Lanes (%): 17.2 PRC Over All Lanes (%): 17.2 Total Delay for Signalled Lanes (pcuHr): 9.48 Total Delay Over All Lanes(pcuHr): 9.48 Cycle Time (s): 180													

Full Input Data And Results

Scenario 3: '2025 AM Peak + Dev No Peds' (FG7: '2025 AM Peak Base + Dev', Plan 1: 'No Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		1	15	-	363	1864	596	60.9%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		1	11	-	290	1961	471	61.6%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	363	363	-	-	-	1.4	0.8	-	2.2	22.0	4.2	0.8	5.0
2/1	290	290	-	-	-	1.4	0.8	-	2.2	26.8	3.5	0.8	4.3
C1 PRC for Signalled Lanes (%): 46.1 PRC Over All Lanes (%): 46.1 Total Delay for Signalled Lanes (pcuHr): 4.38 Total Delay Over All Lanes(pcuHr): 4.38 Cycle Time (s): 50													

Scenario 4: '2025 PM Peak + Dev No Peds' (FG8: '2025 PM Peak Base + Dev', Plan 1: 'No Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		1	14	-	303	1869	561	54.0%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		1	12	-	284	1965	511	55.6%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	303	303	-	-	-	1.2	0.6	-	1.8	21.6	3.5	0.6	4.0
2/1	284	284	-	-	-	1.3	0.6	-	1.9	23.9	3.4	0.6	4.0
C1 PRC for Signalled Lanes (%): 61.9 PRC Over All Lanes (%): 61.9 Total Delay for Signalled Lanes (pcuHr): 3.70 Total Delay Over All Lanes(pcuHr): 3.70 Cycle Time (s): 50													

Full Input Data And Results

Scenario 5: '2025 AM Peak LIMIT' (FG11: '2025 AM Peak Limit', Plan 2: 'Alternate Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		2	40	-	383	1843	430	89.1%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		2	28	-	285	1965	327	87.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	383	383	-	-	-	4.4	3.5	-	7.9	74.3	13.6	3.5	17.2
2/1	285	285	-	-	-	3.2	2.9	-	6.1	77.2	8.9	2.9	11.8
C1 PRC for Signalled Lanes (%): 1.1 Total Delay for Signalled Lanes (pcuHr): 14.02 Cycle Time (s): 180 PRC Over All Lanes (%): 1.1 Total Delay Over All Lanes(pcuHr): 14.02													

Scenario 6: '2025 PM Peak LIMIT' (FG12: '2025 PM Peak Limit', Plan 2: 'Alternate Peds')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Shaw Lane West Ahead Right	U	N/A	N/A	A		2	40	-	373	1795	419	89.1%
2/1	Shaw Lane East Ahead Left	U	N/A	N/A	B		2	28	-	284	1965	327	86.7%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
1/1	373	373	-	-	-	4.3	3.5	-	7.8	75.1	13.3	3.5	16.8
2/1	284	284	-	-	-	3.1	2.9	-	6.0	76.4	8.8	2.9	11.7
C1 PRC for Signalled Lanes (%): 1.1 Total Delay for Signalled Lanes (pcuHr): 13.80 Cycle Time (s): 180 PRC Over All Lanes (%): 1.1 Total Delay Over All Lanes(pcuHr): 13.80													