Civil & Structural
Engineering Consultants

5 BOURNE HILL
PROPOSED HAND CAR WASH

TRANSPORT REPORT

Reference:14407

Revision A

July 2014:

ENVIRONMENTAL	DRAINAGE	HIGHWAYS	STRUCTURAL ENGINEERING	SPECIALIST SERVICES
▪ Ground Investigation	▪ Drainage Strategies	▪ Transportation Assessments	▪ All Structural Design	▪ Site Assessments
▪ Soakage Rate Testing	▪ S104 Drainage Design	▪ S38/278 Highway Design	▪ Temporary Works	▪ CDM Co-ordinator
▪ Geo-environmental Studies	▪ SUDS	▪ Junction Modelling	▪ Specialist Foundations	▪ Party Wall Surveyors
▪ Contamination Remediation	▪ Flood Risk Assessments	▪ Traffic & Parking Surveys	▪ Multi Storey & Basements	▪ Cost Management
▪ 3D Ground Modelling	▪ CSH SUR1	▪ HD 19/03 Safety Audits	▪ RC Detailing	▪ Expert Witness

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Document Control Sheet

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Rev B				
Rev C				

Contents

1.0 Introduction

The owner of the property known as land adjacent 5 Bourne Hill is seeking planning permission to change the use of the land from a materials storage yard to a hand car wash facility.

BdR (Civil and Structural Engineering) Ltd have been retained to consider the transport implications of this proposal and to consider whether there are implications for highway safety and whether any mitigation is required.

2.0 Site Access

The site is accessed via two vehicle crossovers allowing vehicles to enter and leave the site in forward gear. The crossovers were installed by the London Borough of Enfield at the site owner's expense. It is understood that LB Enfield Planning Department have stated that their instructions to construct the crossovers issued to the LB Enfield works contractor were issued in error. This application will regularise the crossings and remove the uncertainty about their status.

It is proposed that vehicles will enter the site at the southern crossover and exit via the northern crossover. The existing fencing will be altered to achieve a 2.0m x 2.0m sight line for pedestrian safety.

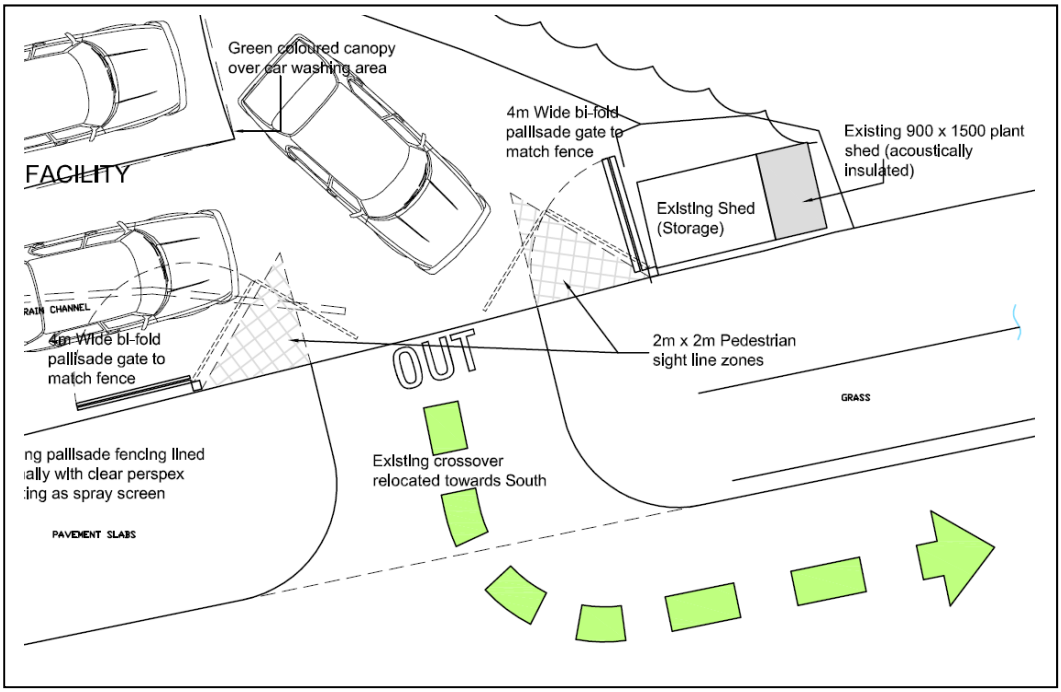

Figure 2.1 New pedestrian sight lines

The vehicle sightlines when exiting from the site conform to the requirements of TD9/93 and Manual for Streets, achieving in excess of 2.4m x 59m, based on a Design Speed of 60 kph

Table 7.1 Derived SSDs for streets (figures rounded).

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length. See 7.6.4		11	14	17	18	23	25	33	39	43	45	59
		Additional features will be needed to achieve low speeds										

Figure 2.2 Manual for Streets Sight Line requirements

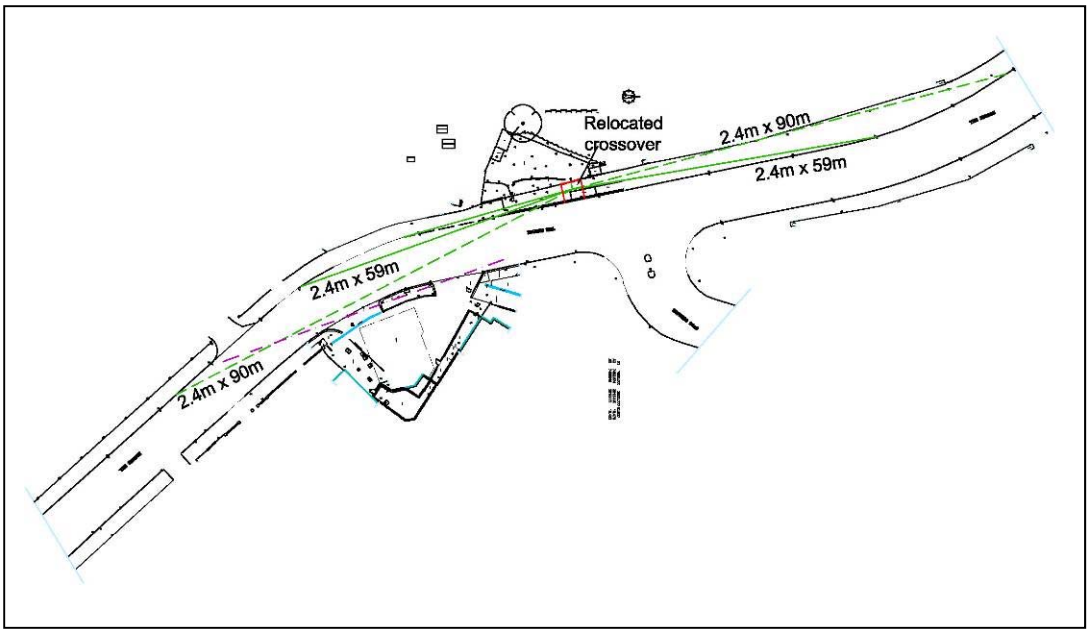

Figure 2.3 Sight lines achievable from the site

Figure 2.3 shows 2.4m x 59m sight lines in accordance with Manual for Streets. The more onerous requirement of TD 9/93 of 2.4m x 90m is shown by the dashed lines in Figure 2.3. The additional check of the sight line to the tangent of the bend is also shown. Forward visibility of 59m for vehicles turning right into the site is shown by the purple dash dot line.

From these figures it can be seen that visibility is acceptable.

3.0 Traffic Generation

The driving factor behind the hand car wash proposals is the clear local need for the facility. The car wash located opposite the application site at No 6 Bourne Hill is frequently unable to cope with the demand for its services.

Figure 3.1 Selection of photographs showing the existing demand for car wash services

The sample of pictures presented here are taken from all times of the day and demonstrate that additional facilities are urgently required to alleviate the obstruction of the highway currently experienced at the existing car wash.

3.1 Vehicle Throughput

The hand car wash facility would provide two bays for the washing of cars, with one bay for finishing, and up to three bays for cars waiting. There would be three full time and two part time members of staff. On this basis the maximum throughput of vehicles would be 12 per hour.

3.2 Highway Safety

The existing situation with vehicles queued on the highway unable to enter the car wash on the east side of Bourne Hill would be substantially alleviated by a second facility on the west side. Vehicles currently turning right into the existing car wash cause a particular problem to southbound motorists and pedestrians using the footway.

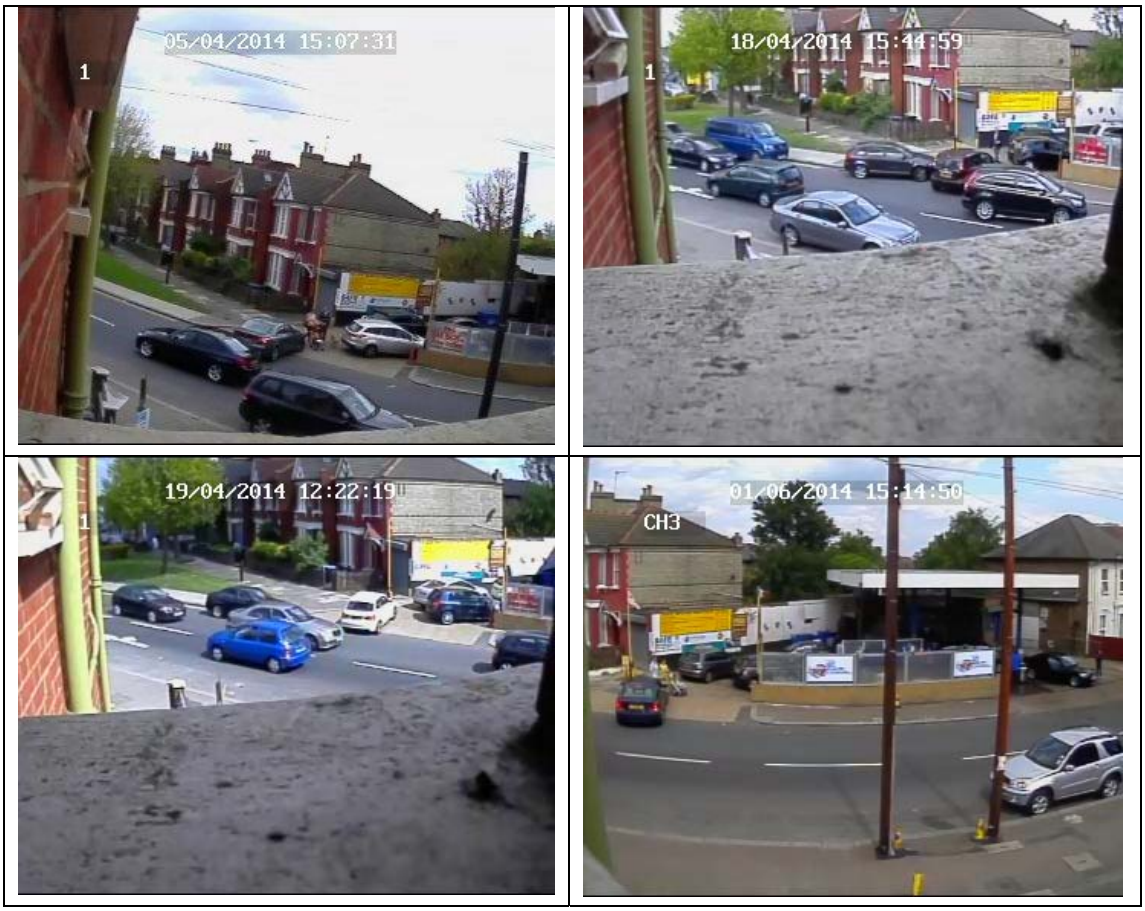

Figure 3.2 Vehicles attempting to cross Bourne Hill when the car wash is full

A car wash on the west side would give an alternative for northbound traffic which would remove the need for them to cross oncoming traffic, thereby improving highway safety.

A Zebra Crossing is under construction to the south of the site, however the operation of the car wash would not interfere with the safety of the crossing. The 40m (approximately) zone controlled by zig-zag markings would in fact improve the visibility of and for cars exiting the site

3.3 Operating Hours

It is proposed to operate the car wash between the hours of 9.00 am and 7.00 pm Monday to Saturday and 9.00 am to 4.00 on Sundays.

3.4 Existing On-Street Parking

In order to ensure the proposed car wash operates with the optimum of highway safety, the site owner will apply for a Road Traffic Order to apply restricted parking during operating hours. The precise length will be agreed with the LB Enfield Highways, but as a minimum would be the length of carriageway between the site entrance and exit and 15m to the north of the site. Due to the curvature of Bourne Hill, vehicles exiting the site would be clearly visible to traffic approaching from the south without the need to extend yellow lining to the south.

4.0 Manoeuvring on site

Figure 4.1 shows cars able to manoeuvre into either the wash bays or the waiting bays, entering and leaving the site in forward gear.

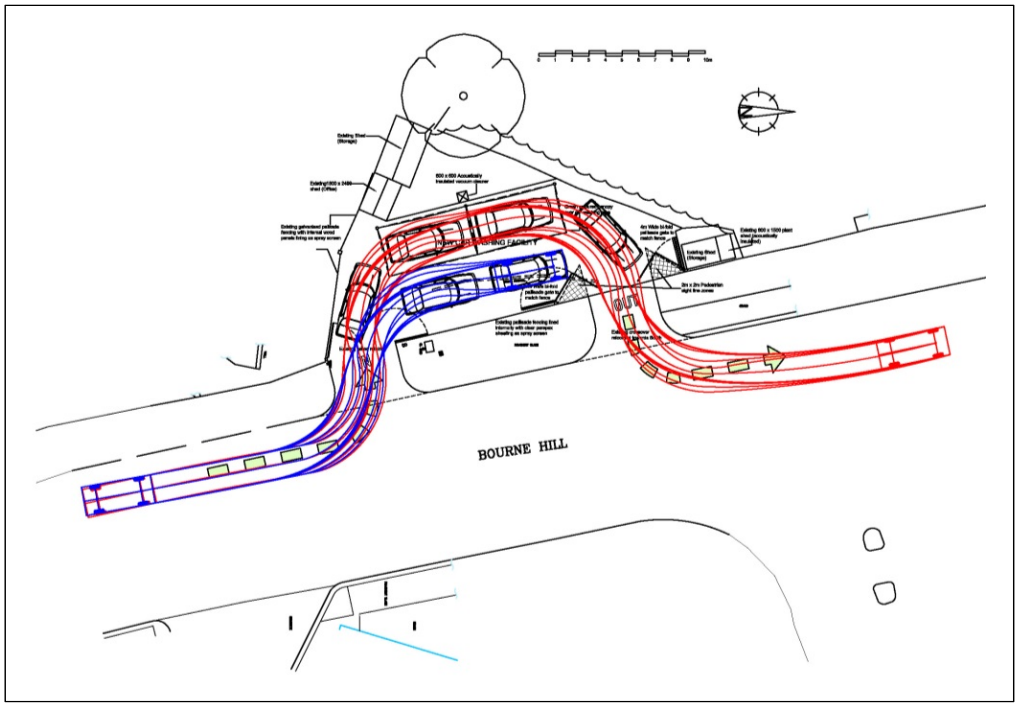

Figure 4.1 Car manoeuvring on site

5.0 Conclusion

- There is a clear local need for the proposed car wash facility without generating additional traffic to the area.
- A car wash located on both sides of the road is likely to reduce the need for existing patrons to cross oncoming traffic.
- The proposed location allows safe access and egress from the site with suitable sight lines
- The proposal will overall contribute towards improvements in highway safety.