TRANSPORT STATEMENT

SYSTRA

ASDA SOUTH SHIELDS

TRANSPORT STATEMENT

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1.1 Background

1.1.1 This Transportation Statement (TS) is prepared on behalf of ASDA Stores Limited (ASDA) in support of an Application for Planning Permission for a four pump, eight filling position Petrol Filling Station (PFS) with 'Walk-to-Pay' kiosk at the existing ASDA store on Coronation Street, South Shields.

1.1.2 The food store is open from 06:00 until midnight on Monday, and thereafter is open 24 hours Tuesday – Friday. On Saturdays, the store closes at 22:00 and on Sundays the opening hours are 10:00 – 16:00.

1.1.3 While there is not currently a PFS at the store, ASDA wishes to improve the offer to existing customers. SYSTRA Ltd (SYSTRA) has been appointed to provide transportation advice and to prepare a TS in support of the Planning Application.

1.1.4 The proposed PFS will operate 24 hours each day by means of a 'Pay-at-Pump' payment facility, while the 'Walk-to-Pay' kiosk will replicate the opening hours of the foodstore. There will be no BIO or higher grade fuel provided and, in line with ASDA's other sites, no LPG offer. The proposed PFS will replicate the operational characteristics of equivalent facilities which have been incorporated into existing ASDA stores throughout the United Kingdom.

1.2 Purpose of Report

1.2.1 This Report discusses the transportation matters associated with the proposals. This includes consideration of the operation and design of the PFS and the trip making characteristics of the proposed development. Ultimately, the report will conclude that, while the proposals will generate some additional vehicle trips, the extent of any uplift is limited and that because of the established food store operation, many of the PFS trips will already be associated with the site and therefore, associated with 'linked trip' making.

1.2.2 Autotrack swept path assessments have been undertaken to ensure the PFS design provides sufficient space for articulated tanker vehicles servicing the site.

2. EXISTING CONDITIONS

2.1 Site Location

2.1.1 The store is located within the central area of South Shields, in a predominantly mixed-use location. The site is bounded to the north by Coronation Street, to the south by industrial units, to the east by Oyston Street and to the west by Station Road.

2.1.2 The ASDA foodstore is located in the western portion of the site. The customer car park occupies land to the east, with additional underground parking beneath the foodstore (which has a combined provision of 568 spaces). The service yard is located in the south western portion of the site, to the back of the store with gated access taken from Station Road.

2.1.3 The main point of vehicular access for customers is via a priority junction with Coronation Street which includes a right-turn storage lane. A general location plan showing the site in the context of the wider catchment area is shown in Figure 2.1.

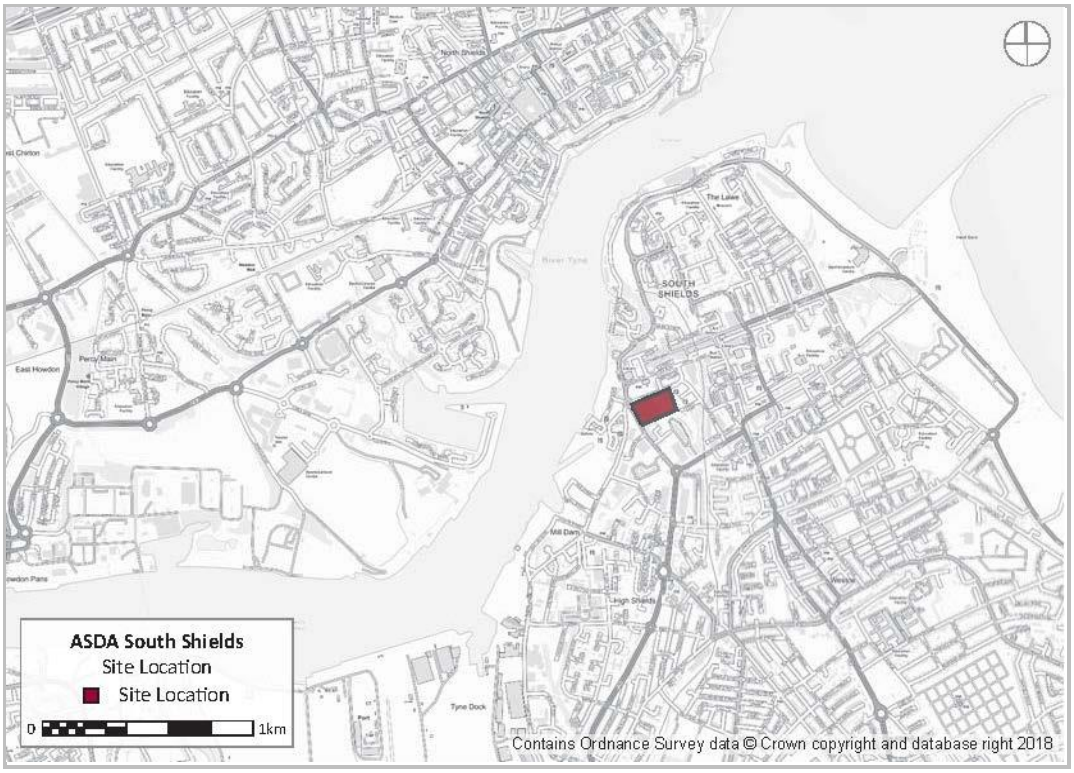

Figure 2.1 : Site Location

2.1.4 The layout of the existing ASDA store is indicated by Figure 2.1. The area highlighted in red shows the proposed location for the proposed PFS.

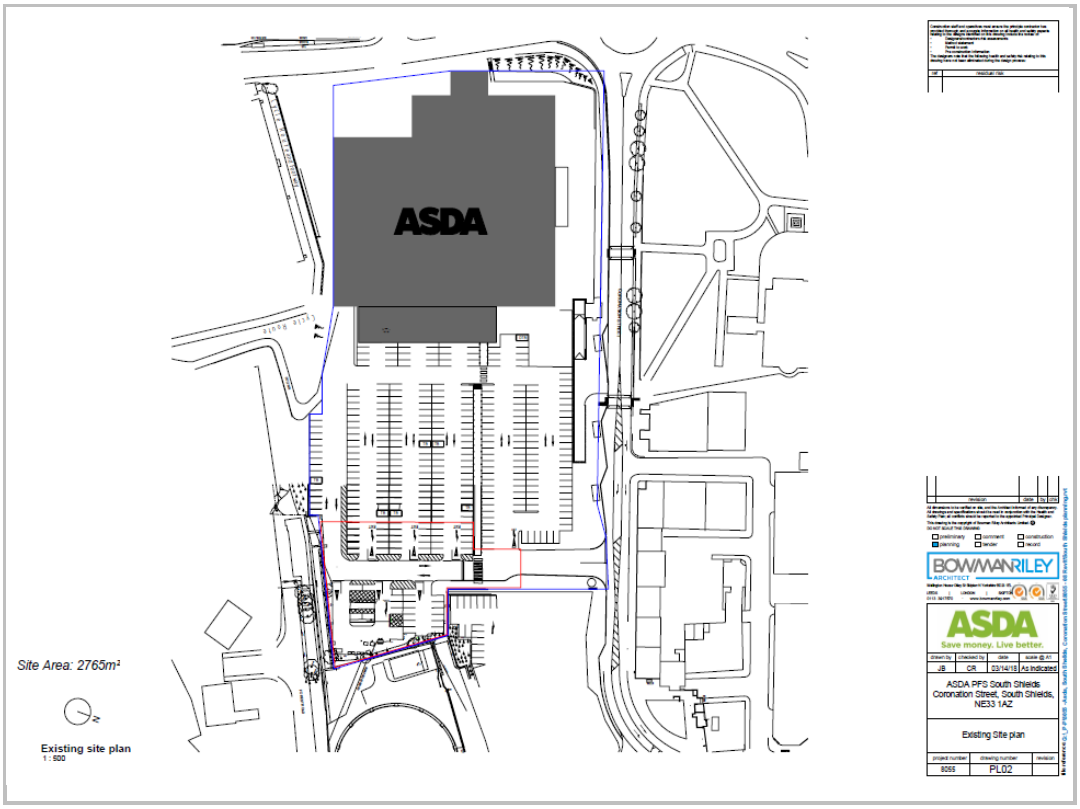

Figure 2.2 : Existing Site Layout (Bowman Riley Architects)

2.2 Existing Transport Network

2.2.1 The site is well connected through the local road network to the surrounding area. Coronation Street runs along the northern boundary, and provides connections to Waterloo Square and Garden Lane to the east and Station Road, Commercial Road and Harton Quay to the west via a roundabout junction.

2.2.2 Station Road, and the Western Approach are the key arterial routes in South Shields connecting to nearby residential catchment areas. Beyond this, they connect to neighbouring urban areas such as Jarrow and Hebburn to the west of the site. Travelling southbound, the Western Approach provides onwards linkages to the A1300 connecting to Sunderland. The A194 connects to Gateshead to the west and Durham to the south.

2.2.3 In the immediate vicinity of the store pedestrian facilities are well established. The local footway network is in good condition. There are three pedestrian access points to the store, from two from Coronation Street, and a third from Station Road. Two formal pedestrian crossing facilities are provided on Coronation Street in proximity of the store:

- A 'toucan' crossing approximately 40m to the east of the Coronation Street / Station Road / Commercial Road / Horton Way roundabout.
- A 'zebra' crossing approximately 45m to the west of the stores main vehicular access.

2.2.4 The footway network adjacent to the westbound carriageway of Coronation Street also acts as a 'shared use' footway / cycle path providing a link between the store and onward connections south on Station Road.

2.2.5 As the site is centrally positioned in South Shields, it is well served by the local bus and metro network. The closest bus stop is located on Coronation Street adjacent to the store. These bus stops are serviced by Stagecoach and Go North East (Services 5, 20, 20A, X20, 26, 27 and 50) providing frequent connections to South Shields Town Centre, North Shields, Newcastle and Durham.

2.2.6 The South Shields Metro station is located 450m to the east of the site. The station is served by trains on the Yellow Line, providing a 12-minute frequency of service to Tyne Dock, Bede, Jarrow and Hebburn in the local area.

2.2.7 Due to the nature of the proposed development, it is not envisaged that trips will be made by non-motorised users.

3. PROPOSED DEVELOPMENT

3.1 Introduction

3.1.1 The proposed development comprises a four pump, eight filling position PFS with 'Walk-to-Pay' kiosk 'in-curtilage' of the existing ASDA food store in South Shields. The PFS will be located in the south-eastern section of the store car park, and will require the removal of 31 existing spaces, leaving a revised total of 537 car parking spaces.

3.2 PFS Location & Layout

3.2.1 ASDA wishes to increase the customer offer at the store with the introduction of a PFS. The proposals comprise the installation of a four pump, eight filling position PFS with 'Walk-to-Pay' kiosk. The site layout of the proposed PFS is indicated by Figure 3.1.

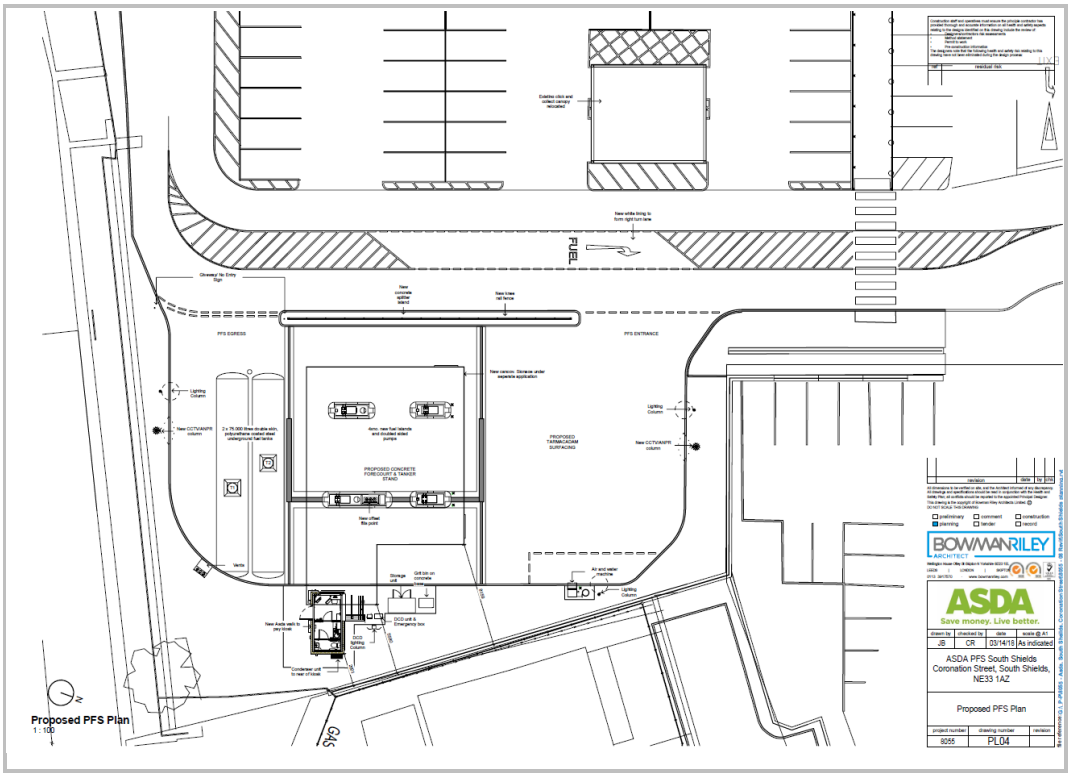

Figure 3.1 : Proposed PFS Layout (Bowman Riley Architects)

3.3 Access & Egress Arrangements

3.3.1 The proposals comprise of a "stand-alone" PFS facility within the ASDA site. The PFS will have its own access and egress points taken from the stores main internal access road. Importantly, no adjustments are proposed to the stores main vehicular access with the external road network on Coronation Street.

3.3.2 The Access strategy will include give-way markers and direction arrows to direct traffic accordingly. A short description of the internal access/egress arrangements is provided, as follows:

- **Access:**
  Customers will enter the ASDA site from Coronation Road and turn left to enter the PFS from the internal access road. From the store car park vehicles, will access the PFS by turning left or right into the forecourt depending on if they are coming from the north or south of the car park.

- **Egress:**
  Once leaving the PFS forecourt (via a give-way), vehicles will be able to keep left to join the car park or right (via keep clear markings) to exit the ASDA site via Coronation Street.

3.3.3 The movement and circulation strategy for the access/egress movements described are illustrated in Figure 3.2.

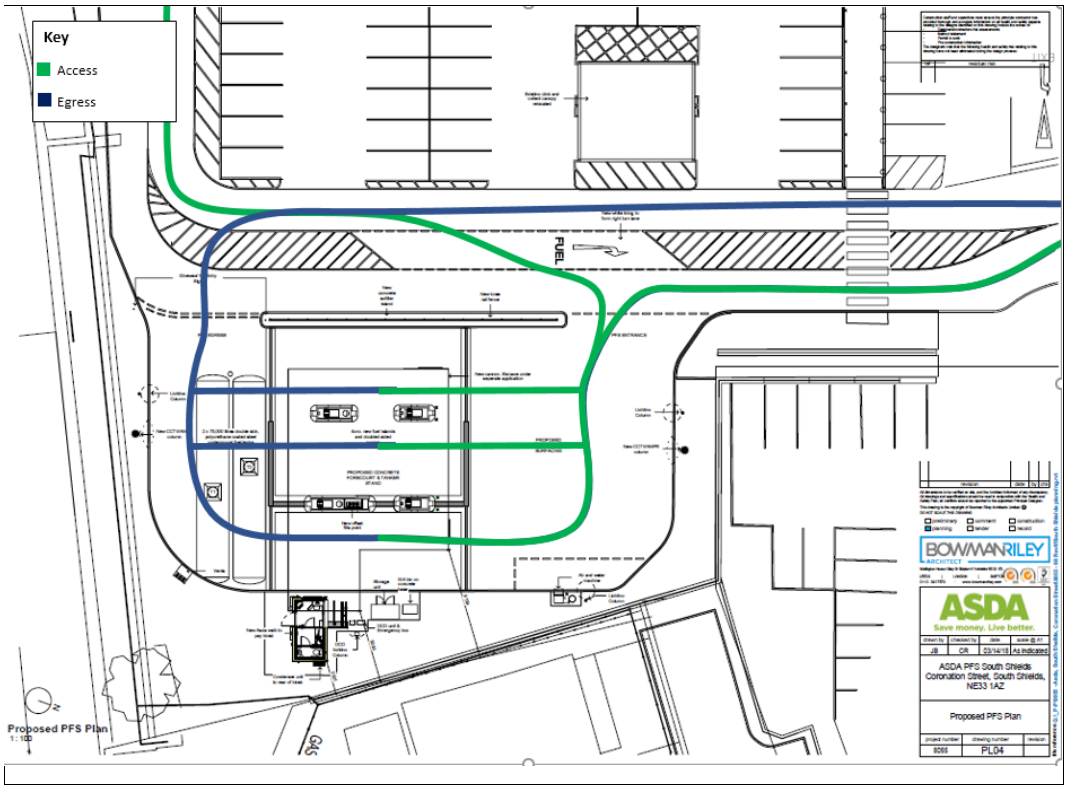

Figure 3.2 : Movement & Circulation Strategy

3.4 PFS Operational Characteristics

3.4.1 The PFS will incorporate extendable pump hoses, allowing customers to use any pump, regardless of the position of their petrol cap. Removing the restriction in pump selection significantly reduces the likelihood of customer queues forming for a particular filling position. The PFS is more efficient than equivalent facilities which have short hoses and will be capable of managing arrival demands in a more dynamic manner.

3.5 Site Servicing

3.5.1 The servicing arrangements will replicate the practices which are adopted at a large number of already operational facilities. The local road network already supports service vehicle trips to nearby retail outlets. As such, articulated vehicle movements are well established on the surrounding road network.

3.5.2 An AutoTrack swept path assessment (ATR001 in Figure 3.3, and Appendix A) has been undertaken to determine that the PFS is capable of accommodating appropriate vehicle movements. Figure 3.3 shows the Autotrack swept path requirements of a standard 15.2m ASDA articulated oil tanker movement through the PFS and demonstrates that this size of vehicle can manoeuvre safely and efficiently within the site.

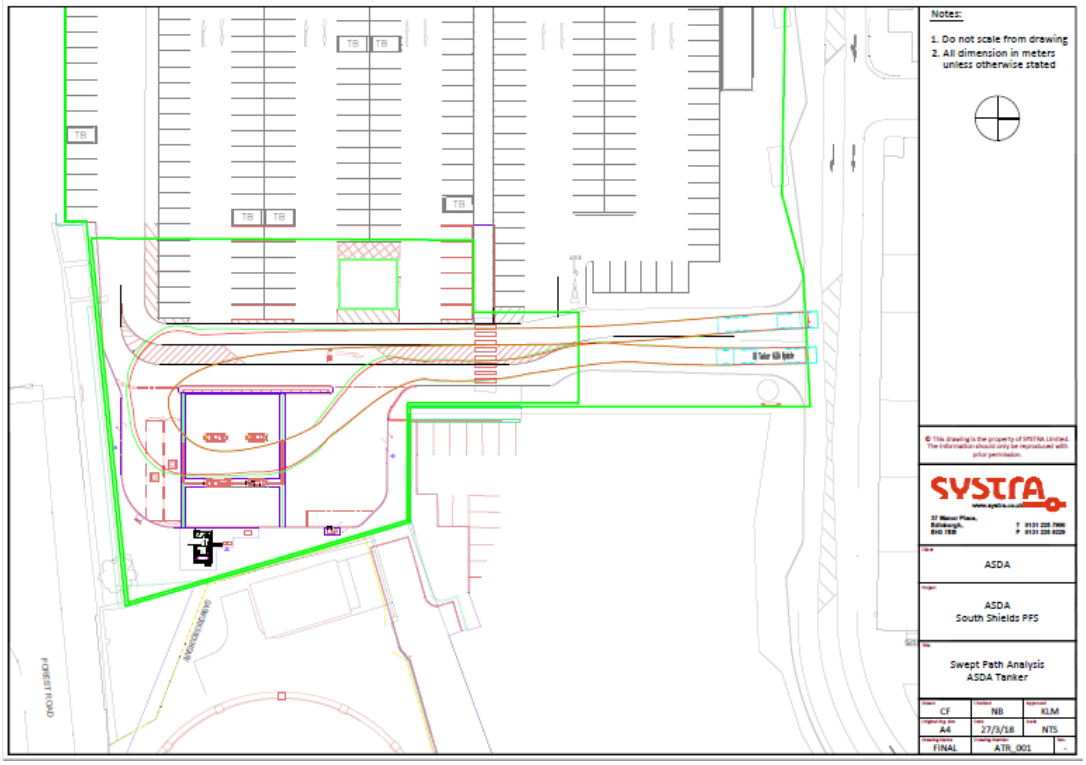

Figure 3.3 : Autotrack Swept Path ATR001- 15.2m PFS Tanker

3.6 Effect on Customer Parking

3.6.1 In its existing form, the store car park provides capacity for 568 cars. This capacity is split between the main surface car park (296 spaces) and underground parking beneath the store (272 spaces).

3.6.2 The proposals result in the removal of 31 customer car parking spaces from the store's overall parking provision. The reduction equates to 5% of the existing capacity, and will give rise to a revised capacity of 537 spaces.

3.6.3 The removal of 31 parking spaces represents a modest reduction when viewed in the overall context of the existing capacity of 568.

3.6.4 ASDA has not reported any operational difficulties with the current layout and on this basis, it is reasonable to assume that the reduction in capacity can be accommodated without detriment to car park conditions.

4. PFS TRIP GENERATION

4.1 Background Methodology

4.1.1 The key test when considering total trip generation associated with the proposed PFS is the extent to which trip making associated with an established food store increases as a result of the new offer.

4.1.2 Drivers typically purchase fuel when it is convenient for them to do so, incorporating the activity into a pre-existing trip, for example a trip to or from work or education, or as part of a shopping trip. Experience suggests that very few trips are made specifically for the purpose of purchasing fuel.

4.1.3 With this in mind, when considering trip generation, it is important to recognise that while some trips associated with the PFS development might be judged to be "new" to that part of the road network, a larger proportion of trips will already exist. Rather than simply considering the question of how many new trips a PFS might generate, it is important to acknowledge that the completed development will attract drivers who are already trip makers, simply adjusting their journey slightly to purchase fuel.

4.1.4 Quantification of trip generation is underpinned by the following key assumptions:

- Of all trips attracted to the PFS, 70% will already be associated with the food store, being made by staff and customers who already travel to the site.
- Of trips, which are judged to be "new" to the site (i.e. trips made by customers who are attracted to enter the site specifically because of the fuel offer), a proportion will already be passing the store, as users of the adjoining transport corridor for another, separate purpose. These trips, referred to as "pass-by trips" are assumed to take place at a rate of 30% and 10% for weekday and weekend trips, respectively.
- It is further assumed that drivers purchase fuel when it is convenient to them, so would be unlikely to make a specific trip for that sole purpose in the busy peak periods.

4.1.5 Trip making forecasts for the proposed PFS are set out later in this chapter. The adopted methodology uses outputs relating to typical trip making rates per fuel pump, enabling pro-rata calculations to determine the total trip making associated with four pump (eight filling positions).

4.2 TRICS Analysis

4.2.1 Petrol Filling Stations are listed as land use Category 13 in TRICS. Sub land-use classifications are included for:

- **13/A**
  PFS: "Traditional" PFS with only a small shopping element such as a newsagent-type store. Trip rates are calculated by Site Area or Filling Bays.
- **13/B**
  PFS with Retail: PFS with a significant retail element, possibly a smaller version of a branded supermarket or an extended store run by the PFS company. Trip rates are calculated by Site Area or Filling Bays.

4.2.2 The proposed PFS will have a small "Walk-to-Pay" kiosk with no retail offer. It is reasonable to assume that most customers wishing to purchase retail products would continue to visit the ASDA foodstore. Consequently, sub-category 13/A is considered to best match the characteristics of the completed development.

4.2.3 An assessment using TRICS 7.4.4 has been undertaken considering all PFS sites within Great Britain (sites in Ireland and Northern Ireland are excluded). This was undertaken so that a full range of circumstances could be considered. Trip rates are provided in Table 4.1 for each hour between 06:00 – 22:00. It is noted that the proposed PFS will be open 24 hours per day. The number of trips to the site between 22:00 -06:00 is likely to be limited, when viewed in the context of a typical daytime peak hour. Trips made during the overnight period will be made as a function of traffic flows on adjoining links, where traffic will be lighter during, these hours.

Table 4.1 : Weekday and Weekend PFS Trip Rates (06:00 – 22:00) (From TRICS)

Time	Weekday Land Use 13A	Weekend Land Use 13A
06:00-07:00	3.94	1.88
07:00-08:00	5.56	3.53
08:00-09:00	6.26	4.91
09:00-10:00	5.54	4.82
10:00-11:00	5.51	6.21
11:00-12:00	5.27	6.18
12:00-13:00	5.93	6.18
13:00-14:00	5.69	5.79
14:00-15:00	5.85	5.00
15:00-16:00	6.33	5.24
16:00-17:00	6.40	5.15
17:00-18:00	6.53	4.68
18:00-19:00	5.95	4.77
19:00-20:00	4.88	3.62
20:00-21:00	3.81	3.00
21:00-22:00	2.70	1.97

4.2.4 A total of four pumps, eight filling positions will be provided at the PFS at ASDA South Shields. The application of trip rates presented in Table 4.1 gives rise to the trip generation values shown in Table 4.2.

Table 4.2 : Weekday and Weekend PFS Trip Generation (06:00 – 22:00) (From TRICS)

Time	Weekday Land Use 13A	Weekend Land Use 13A
06:00-07:00	31	15
07:00-08:00	44	28
08:00-09:00	50	39
09:00-10:00	44	39
10:00-11:00	44	50
11:00-12:00	42	49
12:00-13:00	47	49
13:00-14:00	46	46
14:00-15:00	47	40
15:00-16:00	51	42
16:00-17:00	51	41
17:00-18:00	52	37
18:00-19:00	48	38
19:00-20:00	39	29
20:00-21:00	30	24
21:00-22:00	22	16

4.2.5 The results in Table 4.2 show the typical trip generation associated with a PFS with four pumps, eight filling positions. Peak trip generation occurs between 17:00 – 18:00 on a weekday (52 arrivals) and 10:00 – 11:00 (50 arrivals) on a weekend.

4.2.6 As discussed in the Background Methodology (Section 4.1) it is typically assumed that at a stand-alone PFS at an ASDA store 70% of the vehicles would be associated with existing shopping trips to the store. The number of "new" trips to the PFS is therefore only expected to account for 30% of the total trips to the facility.

4.2.7 Table 4.3 shows the total number of "new" trips that would be generated on the basis of the total trips shown in Table 4.2, i.e. the values in Table 4.2 multiplied by 0.3.

Table 4.3 : Weekday and Weekend "new" PFS Trip Generations (06:00 – 22:00)

Time	Weekday Land Use 13A	Weekend Land Use 13A
06:00-07:00	9	5
07:00-08:00	13	8
08:00-09:00	15	12
09:00-10:00	13	12
10:00-11:00	13	15
11:00-12:00	13	15
12:00-13:00	14	15
13:00-14:00	14	14
14:00-15:00	14	12
15:00-16:00	15	13
16:00-17:00	15	12
17:00-18:00	16	11
18:00-19:00	14	11
19:00-20:00	12	9
20:00-21:00	9	7
21:00-22:00	6	5

4.2.8 Based on the values presented in Table 4.3 and assuming a pro-rata uplift in trip making, the maximum number of additional vehicles attracted to the site would be 16 vehicles in the peak hour on a weekday (17:00 – 18:00), and 15 vehicles during the peak hours (10:00 – 13:00) on a weekend.

4.2.9 Conventionally, when determining the total number of trips associated with retail or fuel land uses, a trip reduction factor is applied to cater for the likelihood that pass-by trips will occur. In this case, SYSTRA has assumed a pass-by rate of 30% for weekdays and 10% for weekends.

4.2.10 The values presented in Table 4.4 suggest that the number of trips that might be attracted to the proposed PFS. For the purposes of this theoretical exercise, these trips are considered to represent additional trips on the adjoining road network.

Table 4.4 : Weekday and Weekend PFS "new" Trips, on the Road Network (06:00 – 22:00)

Time	Weekday Land Use 13A	Weekend Land Use 13A
06:00-07:00	7	4
07:00-08:00	9	8
08:00-09:00	11	11
09:00-10:00	9	10
10:00-11:00	9	13
11:00-12:00	9	13
12:00-13:00	10	13
13:00-14:00	10	13
14:00-15:00	10	11
15:00-16:00	11	11
16:00-17:00	11	11
17:00-18:00	11	10
18:00-19:00	10	10
19:00-20:00	8	8
20:00-21:00	6	6
21:00-22:00	5	4

4.2.11 On this basis, the maximum number of "additional trips" on the road network as a result of the PFS development is likely to be 11 each hour in the weekday (15:00- 18:00) and 13 each hour in the weekend peak hours (10:00–14:00).

4.3 Development Trips

4.3.1 With the PFS in place, the TRICS assessment forecasts that a maximum of 13 each hour during the weekend peak will be added to the entry and exit flows at the store access. To clarify, the additional trips represent peak hour values, based on the number of pumps/filling positions at the PFS. Given that ASDA South Shields is an established food store, there is a strong likelihood that a large proportion of trips to the PFS will be made by existing or "pass by" trips.

4.3.2 It can be assumed that the distribution of additional trips would broadly reflect existing traffic patterns associated with the store. The maximum forecast uplift of 13 additional vehicles (weekend peak) would be distributed from the north and south of Coronation Street with a proportion coming from the wider residential areas in South Shields. This distribution will dilute the overall impact of additional traffic.

4.3.3 The arrival and departure of any additional trips in a given hour would be dispersed throughout the course of that hour, meaning that the effect of PFS trips on the operation of the access junction would be limited. As demonstrated by the TRICS outputs, outwith the peak periods identified, there will be fewer trips associated with the PFS, and overnight activity will be limited.

5. SUMMARY & CONCLUSIONS

5.1.1 This Transportation Statement (TS) is prepared on behalf of ASDA Stores Limited (ASDA) in support of an Application for Planning Permission for a four pump, eight filling position Petrol Filling Station (PFS) at the existing ASDA store on Coronation Street, South Shields.

5.1.2 No material adjustment to the external site accesses/egresses are proposed for customer traffic.

5.1.3 The proposals result in the removal of 31 spaces (5%) from the store's overall parking provision, resulting in a reduction in total capacity from 568 to 537 spaces.

5.1.4 Given the modest adjustment to car park capacity it is reasonable to assume that the proposals can be accommodated without detriment to existing parking operations. ASDA has also not reported any operational difficulties associated with car park capacity at the store.

5.1.5 The TRICS assessment indicates that under typical operating conditions, the total number of additional vehicles attracted to the site during the peak hour would be 11 vehicles on a weekday and 13 at the weekend. The trip generation exercise makes reasonable assumptions about rates of linked trip making and pass-by activity.

5.1.6 Additional trips made in the peak hour, under typical day-to-day conditions have been calculated as follows:

5.1.7 **Weekday**

- TRICS analysis (weekday):
  52 in/ 52 out (Table 4.2)
- Disaggregation of existing ASDA trips and new trips (weekday):
  16 in/ 16 out (52 x 0.3 = 16) (Table 4.3)
- Application of weekday pass-by rate:
  11 in/ 11 out (16 x 0.7 = 11) (Table 4.4)
- Total number of new trips in and out (weekday): 11 in/ 11 out

5.1.8 **Weekend**

- TRICS analysis (weekend):
  50 in/ 50 out (Table 4.2)
- Disaggregation of existing ASDA trips and new trips (weekend):
  15 in/ 15 out (50 x 0.3 = 15) (Table 4.3)
- Application of weekend pass-by rate:
  13 in/ 13 out (15 x 0.9 = 13) (Table 4.4)
- Total number of new trips in and out (weekday): 13 in/ 13 out

5.2 Conclusions

5.2.1 ASDA's development proposals seek to improve the customer offer at the established South Shields store, better catering for the needs of existing customers. The PFS will incorporate extendable pump hoses which will reduce the potential for queues for a particular pump at the PFS.

5.2.2 The design of the PFS ensures that there is queueing capacity leading into the forecourt and Autotrack swept path assessments confirm that the layout is capable of accommodating a standard 15.2m ASDA articulated oil tanker in a safe and efficient manner.

5.2.3 Following a review of the proposals, SYSTRA concludes that the PFS can be accommodated without detriment to existing operations at ASDA's South Shields store. This is supported by evidence from TRICS which demonstrates the rate of trip making associated with a typical petrol filling station. Set within the context of typical food-store operational characteristics, this is not a significant uplift.

A. SITE LAYOUT AND AUTOTRACK SWEPT PATH ASSESSMENT

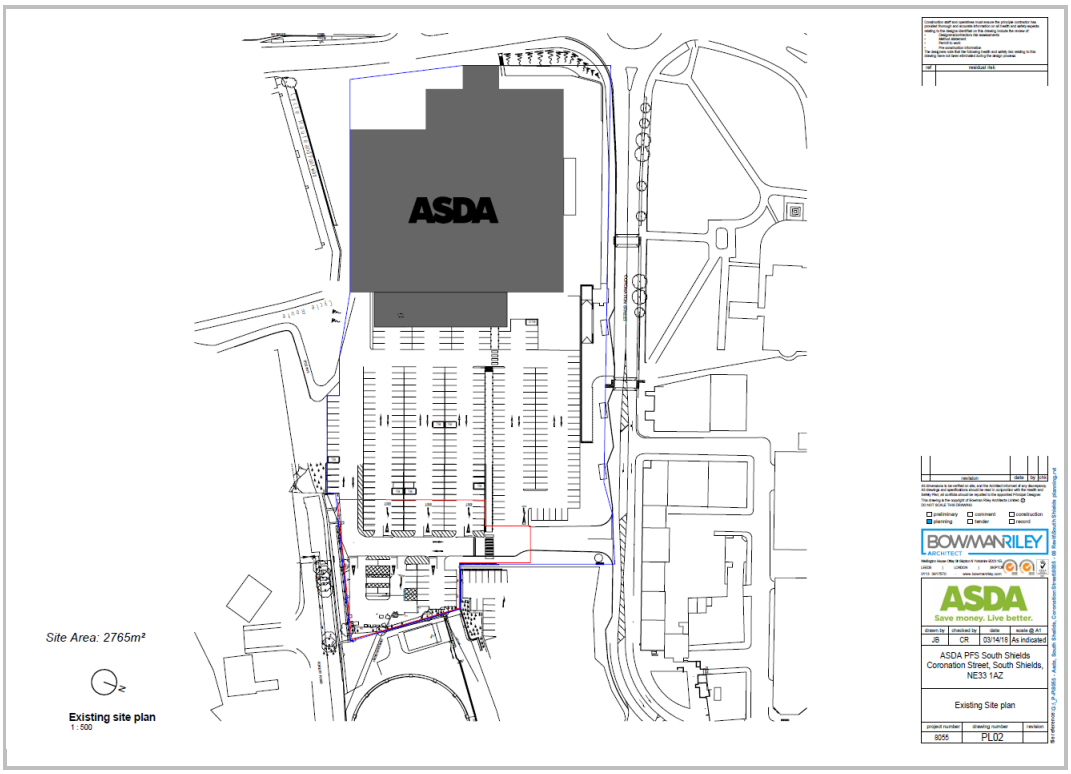

Figure A.1 : Existing Site Layout (Bowman Riley Architects)

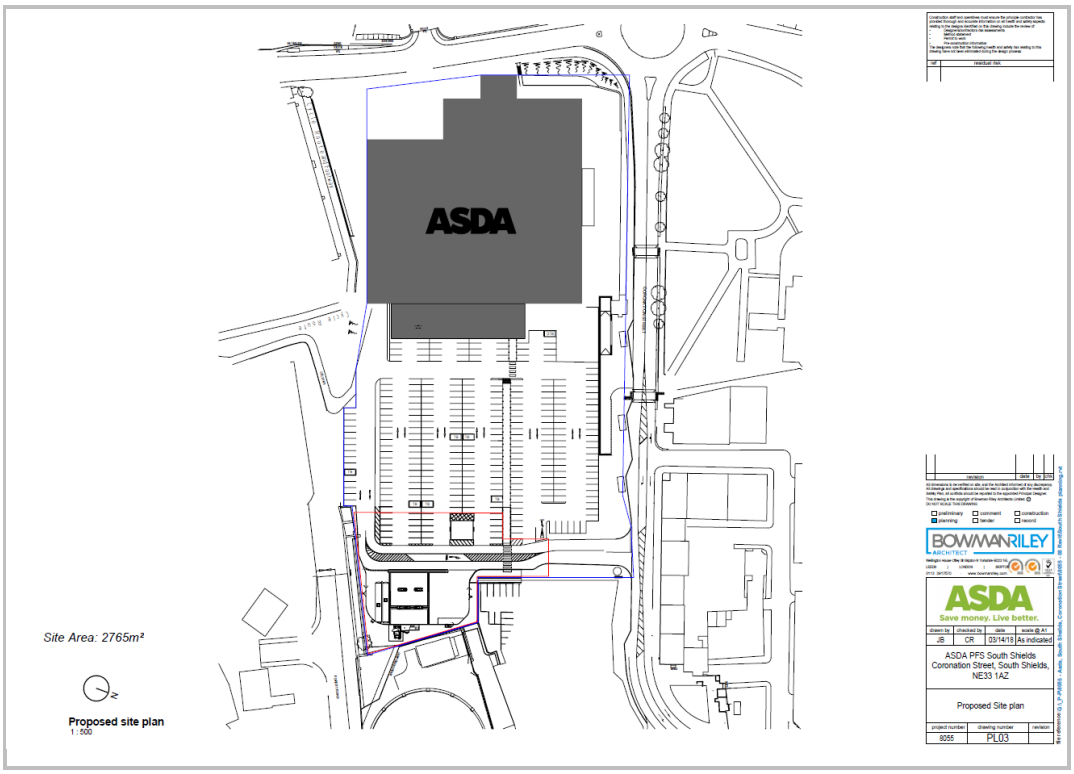

Figure A.2 : Proposed Site Layout (Bowman Riley Architects)

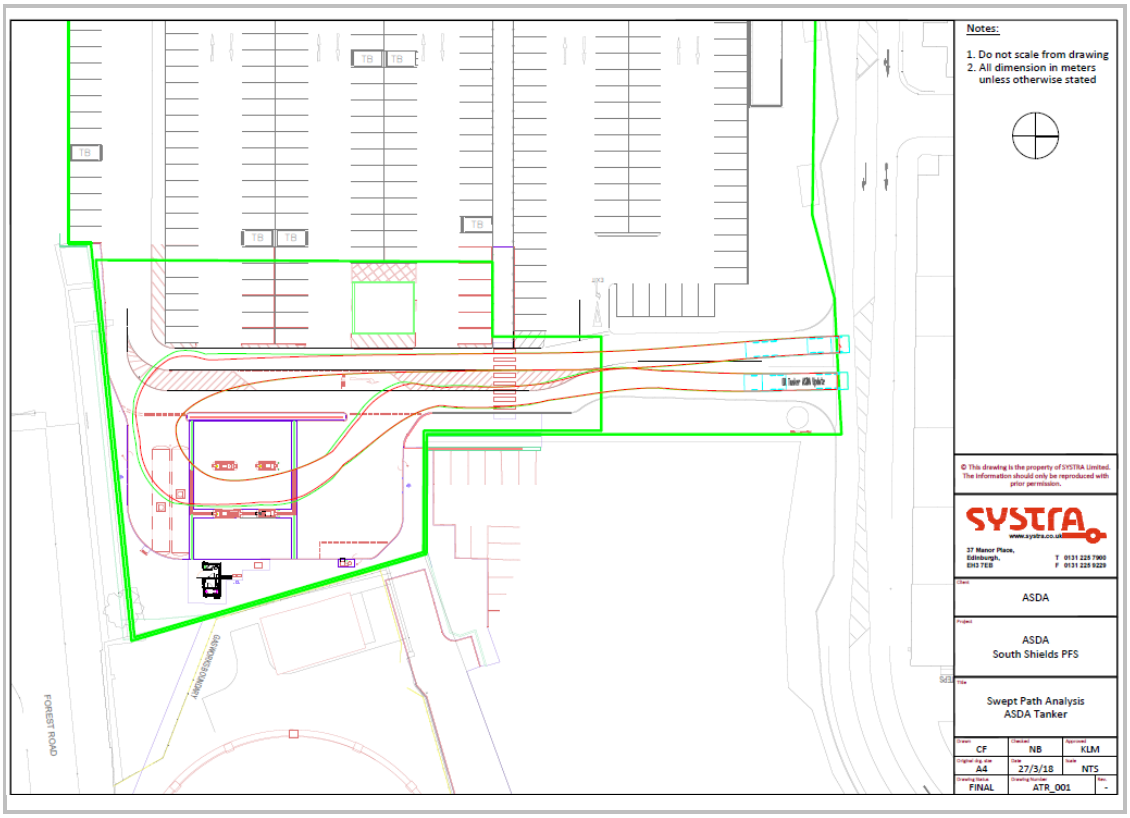

Figure A.3 : Autotrack Swept Path Analysis, ATR001 -15.2m PFS Tanker

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