neighbouring settlements and, therefore, access by pedestrians from beyond the village boundary is unlikely to be significant.

There are no dedicated cycle facilities within North Queensferry with all cycling being on-road. Beyond the village there are a number of off-street cycle routes including NCN1 and NCN76, summarised in section 3.2.1.1.

3.3.1.2 Bus Access

The nearest bus stop to the proposed site is located on Battery Road, approximately 300m north of the site, adjacent to the junction with Chapel Place. The stop has a shelter and flag and acts as a terminus for a number of services. Additional bus services can be accessed at the bus stops located on the Forth Road Bridge and Ferryhill Road. The Forth Road Bridge stop is approximately 1km northwest of the site and the Ferryhill Road stop is approximately 750m north of the site, both beyond the normally acceptable walking distance of 400m. A summary of the available bus services not summarised in Table 2 i.e. those services accessing North Queensferry, are set out in Table 3.

Table 3: Summary of Approximate Frequency of Bus Services (North Queensferry)

Service Number	Operator	Route	Bus Stop Reference	Day	Service Summary
89/89A	Stagecoach Fife	North Queensferry – Duloch Park – Dunfermline – Crossford	Battery Road	Monday to Saturday	Hourly service with additional weekday morning services
87	Stagecoach Fife	Dunfermline – North Queensferry	Ferryhill Road	Monday to Sunday	Hourly service

3.3.1.3 Rail Access

The nearest railway station to the development site is North Queensferry Railway Station, located approximately 750m from the development site (an approximate 12-minute walk) along Ferrytoll Road, which has a steep incline and substandard footway provision. The station consists of a single platform for both northbound and southbound services with each platform connected by a non-DDA compliant pedestrian over-bridge. The North Queensferry Station provides access to the Fife Circle Line and connects to Dalmeny Railway Station, serving the same destinations as those summarised in 3.2.1.3.

3.3.2 Vehicular Access

3.3.2.1 Road Network

North Queensferry is connected with the wider road network via the B981 (Hope View/Main Road) to the west and Ferryhill Road to the north. Both routes connect with the A90.

The B981 is a local distributor road subject to a 40mph speed limit outside the village boundary, reducing to 20mph within the village. Whilst the infrastructure provision is below current standards, it is noted that it is in character of the village's historical layout, with little to no scope for improvement.

Ferryhill Road is a two-way road, however the very steep gradient combined with the sub-standard horizontal alignment, residential access and boundary walls severely impacts on its operation with drivers having to stop and give-way to oncoming vehicles on an uncontrolled basis. Ferryhill Road is unsuitable for use by coaches and public service vehicles and is assumed to present additional dangers during periods of inclement weather.

3.4 Existing Traffic Data

In order to inform this study, data was collected by undertaking vehicle volume, speed and classification surveys at 8 location in South Queensferry, undertaken over a 4-week period. The locations comprised:

1. A904, Builyeon Road
2. Ferrymuir Gait
3. B800, Ferry Muir Road
4. B907, Kirkliston Road
5. B907, The Loan
6. Station Road
7. B924, Hopetoun Road
8. B924, Edinburgh Road (east of cobbles at same location as undertaken in 2013)

Longer term data was supplied by Transport Scotland from permanent and temporary counters at the following locations:

A. A90 Forth Bridge (WiM) – (ref: 265800)
B. A904, Queensferry (west of A90) – (ref: JTC00394)
C. A90, Echline North, on-slip – (ref: JTC58347)
D. A90, Echline North, main carriageway – (ref: JTC08347)
E. A90, Echline South, main carriageway – (ref: JTC08348)
F. A90, Echline South, off-slip – (ref: JTC58348)
G. B924 Hawes Brae – (ref: JTC00592)
H. B907 Kirkliston Road – (ref: JTC00603)
I. B924 Bo'ness Road – (ref: JTC00575)
J. B800 Ferry Muir Road – (ref: JTC00598)

Additionally, the Network Rail study (Forth Bridge Visitor Experience, Transport Impact Assessment, published in December 2014) installed four temporary counters: three in North Queensferry and one in South Queensferry at the following locations:

K. B981, Main Road – at the village centre boundary
L. Ferryhill Road – within the village on steep slope from B981 junction
M. Forthside Terrace/Deep Sea World car park entrance
N. B924, Hawes Brae – east of Railway Bridge

The ATC locations are illustrated on Drawing 9004. A summary of the traffic flow data from both sources is provided in Table 4, which highlights:

- The flows recorded during the first week of the August/September surveys i.e. prior to the Forth Bridges Festival, on the A904 were in line with the Average Annual daily flows recorded in 2014; and
- The flows recorded during the first week of the August/September surveys i.e. prior to the Forth Bridges Festival, on the B800 and B907 were reasonably in line with the Average daily flows recorded during August 2014 at the temporary Transport Scotland sites (Forth Replacement Crossing monitoring sites)[5].

Table 4: Average Daily Flows Summary from ATC Sites

Reference (from lists above)		ADF from August/ September Survey Sites (first survey week)[6]		AADF from Transport Scotland Sites	
		5-Day	7-Day	5-Day	7-Day
1	B	15,094	14,128	14,918	13,945

[5] Note, the traffic numbers recorded during the Forth Bridges Festival have been considered in Section 3.4.2.

[6] K, L, M and N use the whole of August averages determined from the surveys undertaken for the Network Rail Transport Impact Assessment.

Reference (from lists above)		ADF from August/ September Survey Sites (first survey week)[6]		AADF from Transport Scotland Sites	
		5-Day	7-Day	5-Day	7-Day
2	-	782	722	-	-
3	J	15,531	15,203	-	14,759[7]
4	H	11,002	10,827	-	9,191[7]
5	-	3,468	3,162	-	-
6	-	5,129	4,957	-	-
7	-	6,149	6,369	-	-
8	-	3,651	3,914	-	-
A	-	-	-	79,912	75,752
C	-	-	-	7,312	6,858
D	-	-	-	29,376	27,724
E	-	-	-	34,242	32,381
F	-	-	-	7,127	6,750
G	-	-	-	-	2,905[7]
I	-	-	-	-	4,152[8]
K	-	1,651	1,722	-	-
L	-	436	409	-	-
M	-	814	871	-	-
N	G	2,621	2,575	-	2,905[7]

3.4.1 Network Rail Study Summary

3.4.1.1 North Queensferry

Based on the traffic surveys undertaken between May and November 2014 for the Network Rail study, their assessment of the existing travel characteristics highlighted:

- B981 Main Road is the primary access route to North Queensferry;
- It is assumed that Ferryhill Road predominantly serves local residents providing access to the Primary School and the Railway Station;

[7] August 2014 from Transport Scotland temporary monitoring site, in relation to Forth Replacement Crossing

[8] September 2014 from Transport Scotland temporary monitoring site, in relation to Forth Replacement Crossing

- North Queensferry trips are affected by seasonality i.e. a defined increase in traffic volumes in the summer months as a result of visitors e.g. to Deep Sea World;
- Deep Sea World was determined to comprise a high proportion of traffic demand through North Queensferry in the summer months (e.g. 60% on Wednesday 06 August 2014);
- The peak hour in the village during the busiest month of August is 12.00 – 13.00 which coincides with the peak flows determined from the surveys travelling to/from Deep Sea World;
- North Queensferry has an estimated on-street parking capacity of 85 spaces with additional off-street capacity of 25 spaces in Battery Car Park;
- On-street parking was determined to be mainly used by residents; and
- From the car parking analysis, it was determined that Battery Car Park and available on-street parking did not reach its full capacity, with on-street parking never more than approximately 60% utilised.

3.4.1.2 South Queensferry

Based on the traffic surveys undertaken between May and November 2014 for the Network Rail study, their assessment of the existing travel characteristics highlighted:

- The B924, Hawes Brae is affected by seasonality and school holiday periods;
- On-street parking capacity was estimated at 100 car parking spaces along Edinburgh Road/Newhalls Road leading into the town centre, with an additional 30 spaces on High Street (mostly pay and display);
- Off-street parking capacity was determined as 15 spaces on High Street and another 64 spaces at Hawes Pier (plus 9 coach parking spaces); and
- An assessment of the parking beat surveys at Hawes Pier indicated that the car park often operates at capacity, being mainly tourists, and was busiest during the 13.00 beat.

3.4.2 Effects of Forth Bridges Festival

In order to try and understand the impacts that a large increase in traffic can have in South Queensferry, analysis of the traffic flows during the Forth Bridges Festival has been undertaken. A comparison of the traffic flows recorded during the first week of the August/September 2014 surveys and the traffic flows recorded at the same sites during the Forth Bridges Festival has been undertaken. The summary is provided in Table 5. This highlights the following:

- The traffic flows recorded on the A904, Builyeon Road did not change significantly throughout the Festival period with the exception of Friday 12 September (16% increase).
- Ferrymuir Gait saw a marked increase on most days during the Festival with large increases on both weekends, with the exception of Sunday 13 September which saw a marked decrease as a result of the use of the site during the fireworks i.e. with restrictions on traffic and the car park being used as a concert arena.
- The traffic flows recorded on the B800, Ferry Muir Road did not change significantly throughout the Festival period with the exception of the final weekend which did see an increase of 10%-20%.
- The traffic flows recorded on the B907, Kirkliston Road did not change significantly throughout the Festival period with the exception of the final weekend which did see an increase of 10%-20%.
- The traffic flows recorded on Station Road saw a marked increase (up to 88% increase) on both weekends of the Festival, perhaps demonstrating the impact of the High Street road closures and an increase in on-street parking due to an increase in visitor numbers during this period.
- The traffic flows recorded on the B924, Hopetoun Road did not change significantly throughout the Festival period with the exception of the final weekend which did see an increase of 10%-20%.
- The traffic flows recorded on the B907,The Loan did see changes in traffic flows throughout the Festival period, both increases and decreases, although some issues were experienced with the accuracy of the counts probably due to parked vehicles.

- The traffic flows recorded on the B924, Edinburgh Road did not change significantly throughout the Festival period with the exception of the weekends which did see significant decreases due to the closure of the High Street.

SECTION 3

Table 5: Traffic flow comparison to determine impact of the Forth Bridges Festival (percentage increase/decrease compared with flows recorded in first week of August/September 2014 surveys)

Location	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	04/09/14	05/09/14	06/09/14	07/09/14	08/09/14	09/09/14	10/09/14	11/09/14	12/09/14	13/09/14
A904, Bullyeon Road	100%	90%	100%	101%	100%	101%	97%	95%	116%	94%
Ferrymuir Gait	131%	110%	187%	158%	116%	119%	125%	125%	180%	71%
B800, Ferry Muir Road	101%	99%	104%	105%	103%	98%	101%	96%	113%	118%
B907, Kirkliston Road	98%	104%	102%	108%	102%	99%	104%	96%	112%	118%
Station Road	102%	127%	176%	180%	100%	95%	106%	95%	144%	188%
B924, Hopetoun Road	99%	107%	100%	106%	104%	103%	107%	98%	118%	114%
B907, The Loan	91%	117%	64%	0%	146%	101%	72%	88%	90%	44%
B924, Edinburgh Road	99%	63%	3%	13%	110%	105%	117%	100%	91%	34%
Total	**99%**	**100%**	**94%**	**87%**	**106%**	**100%**	**99%**	**95%**	**111%**	**98%**

North Queensferry

South Queensferry

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Key Plan:

- Transport Scotland Visitor Centre
- Network Rail Visitor Centre Experience
- Network Rail Guided Bridge Walk Experience
- Public Transport Stops
- Transport Scotland Walking Isochrones
- Network Rail Walking Isochrones - NQ
- Network Rail Walking Isochrones - SQ
- On-road Cycle Route
- Traffic Free Cycle Route
- NCN Local Link
- 1 Cycle Route Number/ Reference

Notes:

Rev	By	Chkd	Apprvd	Date	Description
-	-	-	-	-	-

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Project:

FORTH BRIDGES
TRAFFIC IMPACT ASSESSMENT

Drawing

Existing Facilities
and Walking Isochrones

Drawn by: -	Date: -
Checked by: -	Date: -
Approved by: -	Date: -

Drawing No.	Revision
9002	-

Drawing Scale: NTS

Drawing file path & name - C:\Users\kerrallspostal\local temp\AcPublish_5484\ Queensferry – Location Plan_Rev.dwg
Xreference file path : : C:\Users\kerrallspostal\local temp\AcPublish_5484\
User and Plot Date : : Kerrall, 13/12/2015 - 10:03 am