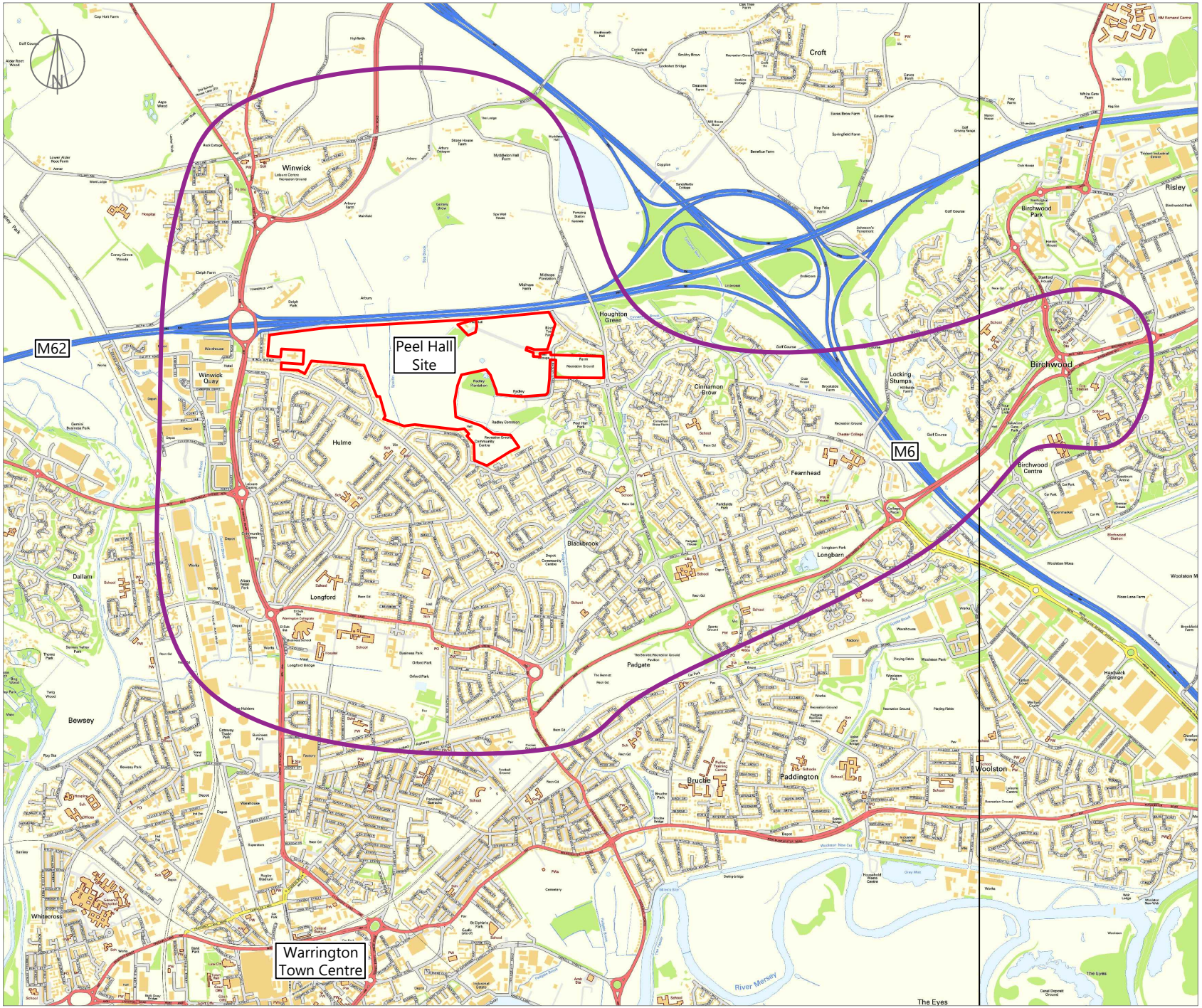
Appendix 1

The Study Area



KEY:

Study Area

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	ES T1	NOT TO SCALE

HighgateTransportation

www.highgatetransportation.co.uk

Box 13, 42 Triangle West
Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

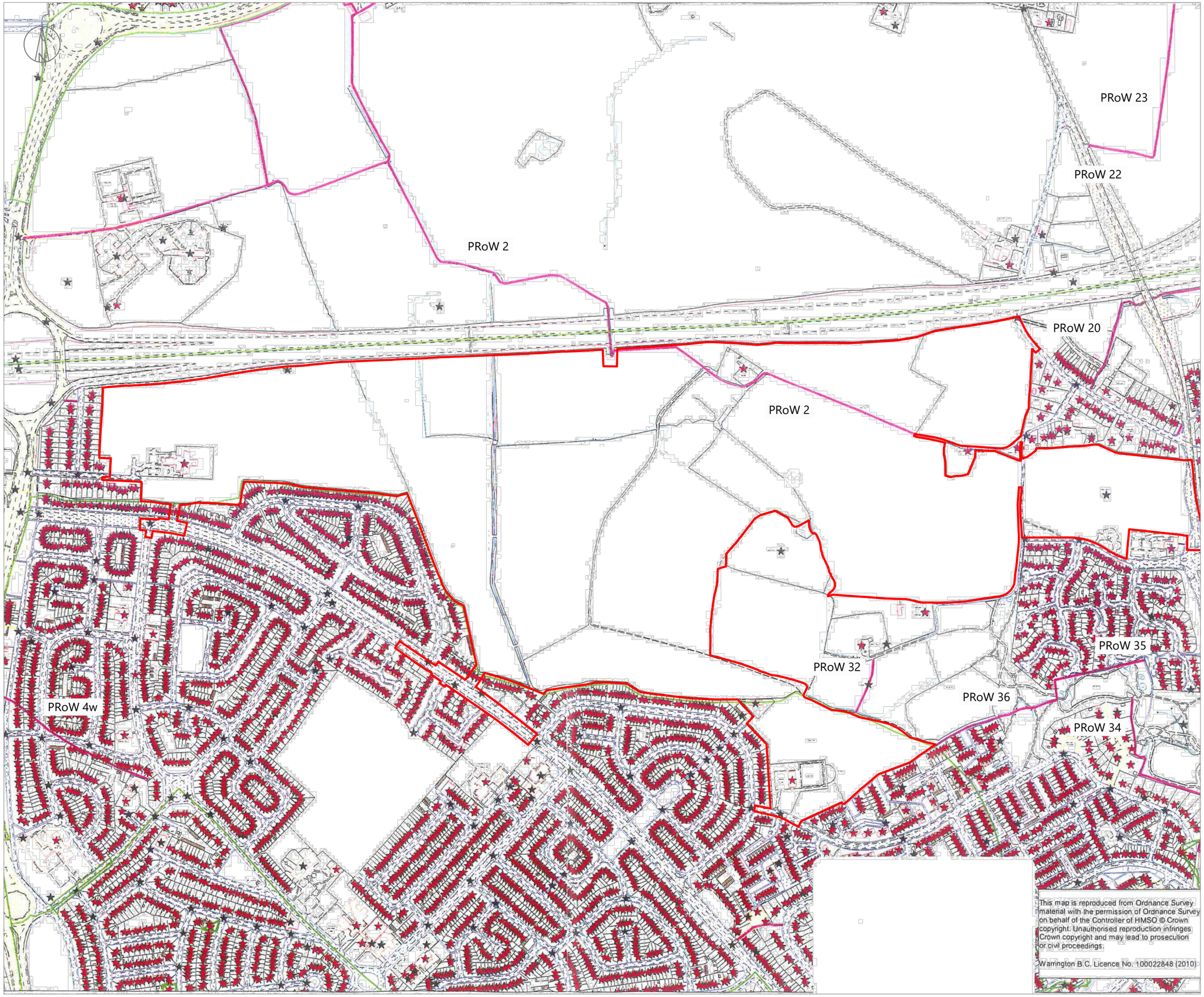
TITLE:

ASSESSMENT STUDY AREA

DATE:	DRAWN BY:	CHECKED:
10/05/16	FB	DT

Appendix 6

Public Rights of Way Plan



NOTES:
Reproduced from Warrington Borough Council PRoW plan.

KEY:

Existing PRoW

Indicative Site Boundary

ISSUE	REASON FOR REVISION	DATE

PROJECT:
PEEL HALL, WARRINGTON

CLIENT:
SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	16/A	NOT TO SCALE

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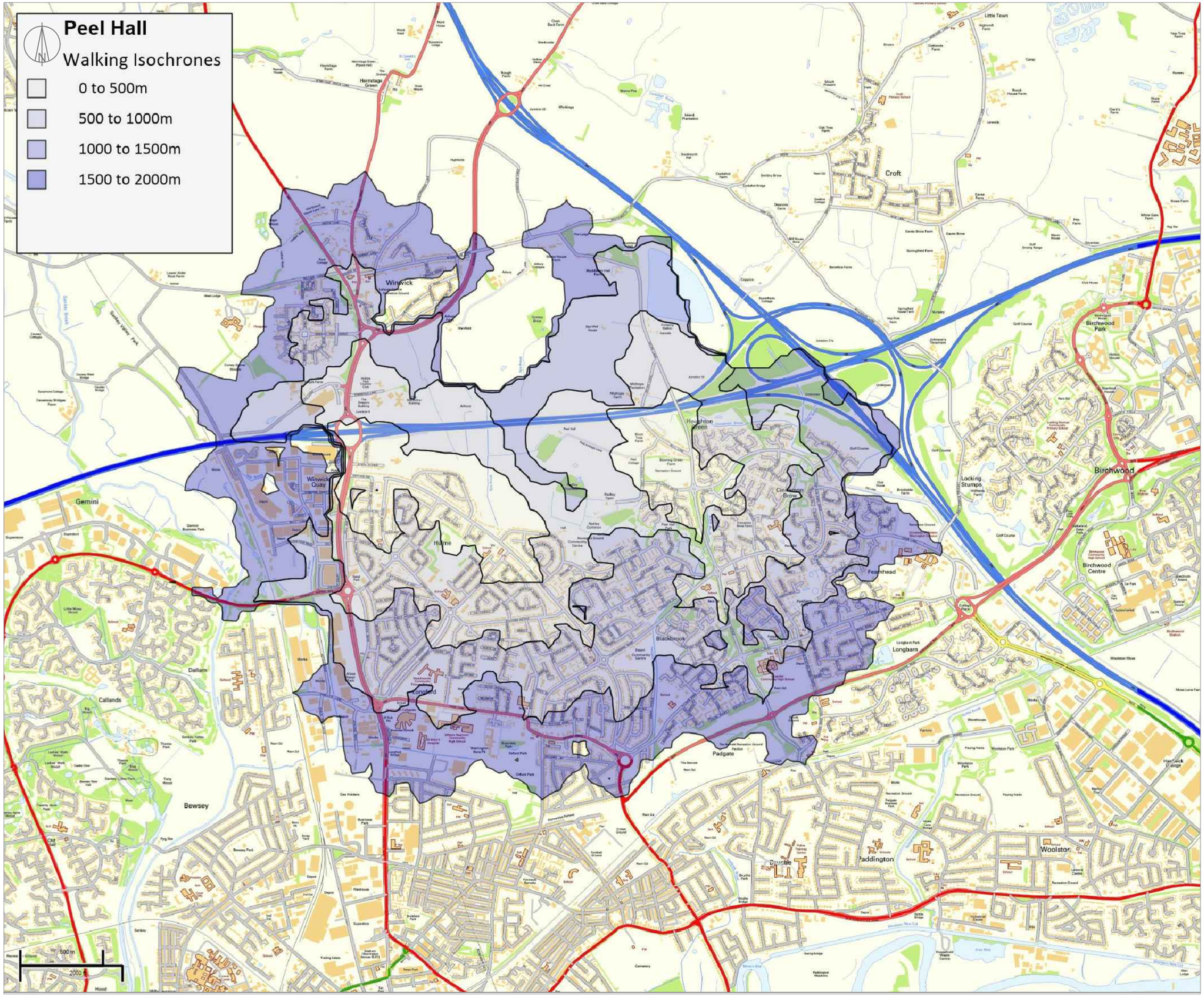
TITLE:
EXISTING PRoW NETWORK

DATE:	DRAWN BY:	CHECKED:
28/06/16	FB	DT

Appendix 7

Walking Isochrones Plan



ISSUE	REASON FOR REVISION	DATE

PROJECT:
PEEL HALL, WARRINGTON

CLIENT:
SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	35	SCALE SHOWN

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07973 375 937 / 07595 892 217

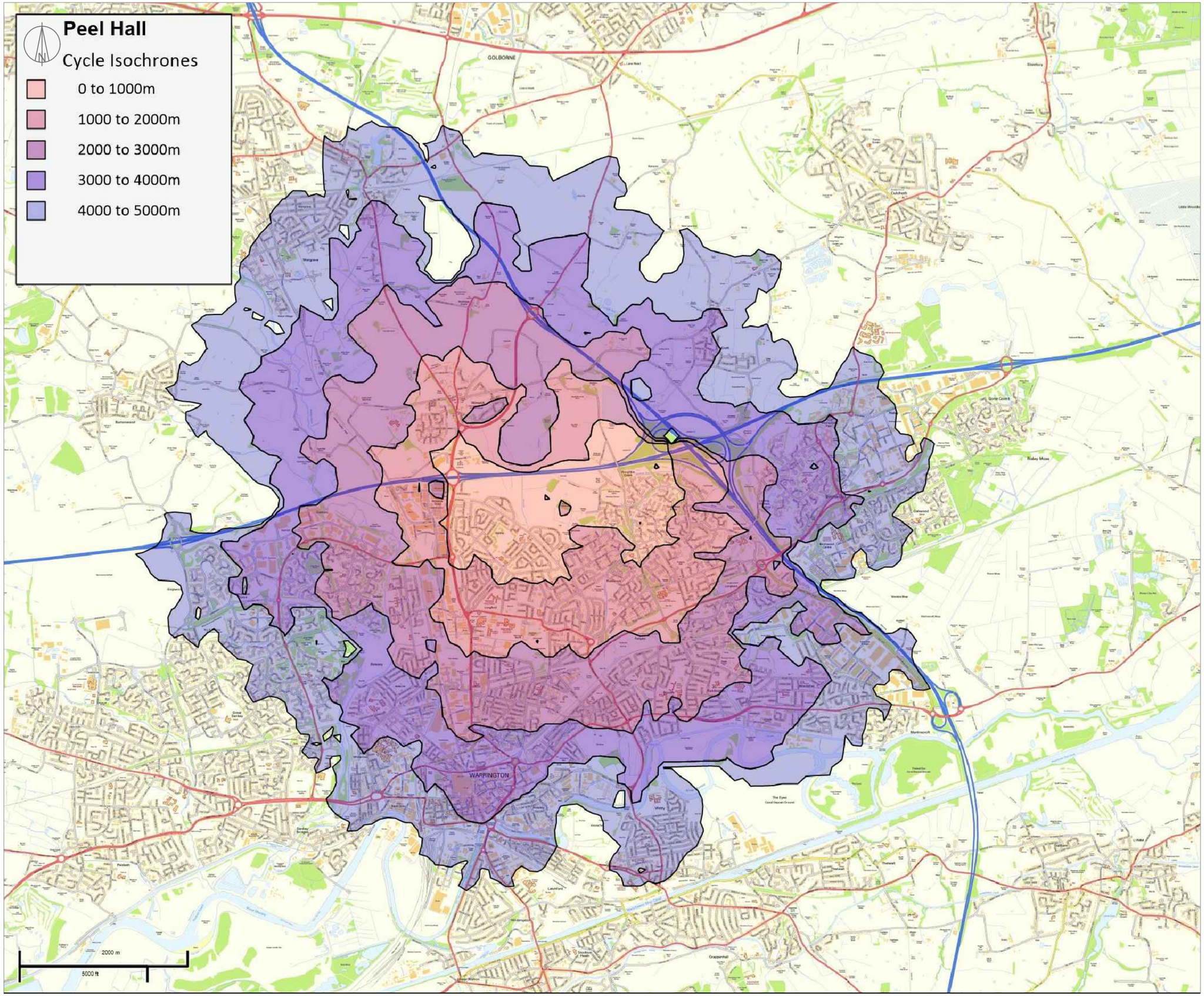
TITLE:
WALKING ISOCHRONES

DATE:	DRAWN BY:	CHECKED:
30/06/16	FB	DT

Appendix 8

Cycle Isochrones Plan

WBC Cycle Route Plan



NOTES:

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	36	SCALE SHOWN

HighgateTransportation
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Box 13, 42 Triangle West
Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

TITLE:

CYCLING ISOCHRONES

DATE:	DRAWN BY:	CHECKED:
30/06/16	FB	DT

A guide to

Cycling in Warrington

Warrington and the surrounding area

Issue 5

Produced by Warrington Cycle Forum, a partnership between Warrington Borough Council, Warrington Cycle Campaign and other interested parties. Funded by the Department for Transport's Local Sustainable Transport Fund.

WARRINGTON
Borough Council

Every effort has been taken to provide an accurate and useful guide. If you have any comments on the guide please contact us:

Transport For Warrington
New Town House
Buttermarket Street
Warrington WA1 2NH

travelwarrington@warrington.gov.uk

How to use this guide...

The Warrington Cycle Map has been created to assist all cyclists with planning the best route for your journey.

Roads graded ⟶ Increasing difficulty

Cycleability gradations, in increasing experience

1 2 3 4 5

The road network shown on the map is graded according to the degree of skill and experience needed to cycle each route. If you are a beginner or haven't cycled for some time, you should build up your confidence and basic skills on the yellow roads where traffic is lighter and speeds are low.

As your cycling skills increase, so you can explore the green roads. When you are able to deal with heavier and faster traffic you can venture onto the blue and pink routes.

Pavement cycle paths, in particular, still require caution and low speed, especially at junctions. Wherever paths are shared with pedestrians, please be considerate; make sure that others are aware of you, and pass slowly leaving as much room as possible. In all cases of shared and segregated pavement cycling the right of way remains with the pedestrian.

Key

Cycleability gradations, in increasing experience

1 2 3 4 5

- Tarmac surfaced cycle paths
- Unsurfaced cycle paths
- Bridleway
- Pedestrian links
- Shared-use cycle path
- Motorway
- One way
- One way with contra flow cycling permitted
- National Cycle Network route number & Trans-Pennine Trail (TPT 62)
- Railway station
- Bus interchange
- Schools
- Colleges
- Hospital
- Place of worship
- Library
- Supermarket
- Post office
- Cycle parking
- Bridge
- Pedestrian crossing
- Toucan crossing

N W E S

Appendix 9

Existing Bus Services and Routes

This map shows services that operate on Monday to Saturday between 7am and 7pm. We operate a number of other services not shown, these are either infrequent or run only during the mornings, evenings or on Sundays.

Earlestown
Vulcan Village
22
Newton-le-Willows Station
22
Myddleton Lane
19
Croft
Culcheth
Glazebury
19 28.28A
Leigh
25
Gorse Covert
Risley Road*
Faraday Street*
17A 17C
Oakwood
17.17A.17C
28
28A
H.M.P. Risley
*Daten Avenue
17A 17C
*Birchwood Park
17A 28
Birchwood Centre
28
17.25.28
Birchwood Station
Roberts Fold
Birchwood Way
17
17A 17C
Fearnhead Lane
28 28A
Harpers Road
Insall Road
Hilden Road
Orford Road
Padgate Station
4A
Epping Drive
Woolston
4A
Padgate Lane
Holes Lane
Hillock Lane
Holes Lane
3
Martinscroft
Dam Lane
Bruche Bridge
Cemetery
Parish Church
1 2 3 4A 28 28A
Kingsway North
1 2
Whitley Avenue
Thelwall Lane
1.10C 11A
Latchford
2.10C 11A.12A
12A 10C
LATCHFORD
WESTY
River Mersey
Manchester Ship Canal
Bridge Street
Winwick
Sandy Lane/ Cromwell Avenue
Gemini Retail Park
Gemini Business Park
17.17A 17C 18
Callands
17 17C
17 17A 18
Callands Road
17 17A 17C 18
Westbrook Crescent
16.16A
Dallam
Longshaw Street
16A
16
Troutbeck Avenue
Folly Lane
Warrington General Hospital
16 16A
Lovely Lane
Crosfields
17.17A 17C.18
Old Hall
Twenty Acre Road
Gullivers World
Westbrook Way
Westbrook Centre
13
Whittle Avenue
13
29A 29C
Chapelford
Whittle Hall
Lingley Mere Business Park
Great Sankey Leisure Centre
29A 29C
Lingley Green Avenue
GREAT SANKEY
Dorchester Road
Tankersley Grove
14 15
Canons Road
Cromwell Avenue
Lingley Green
Sankey Station
Park Road
Highfield Avenue
St. Mary's Road
14 15
29A
29C
Sankey Way
Liverpool Road
Sankey Bridges
Penketh Lane Ends
Coronation Drive
Greystone Road
Meeting Lane
31 32A
Stocks Lane
31
Widnes Road
PENKETH
Chapel Road
32A
Falmouth Drive
32A
Tannery Lane
River Mersey
Manchester Ship Canal
CENTRAL WARRINGTON
Enfield Park Road (North)
23.23A
Cinnamon Brow
23 23A
Croppers Road
Orange Grove
23A
ORFORD
20 21
Cotswold Road
Poplars Avenue
Northway
Collegiate Institute
19 20 21 22
Orford Park
20 21
Winwick Road
Orford Green
Orford Avenue
Orford Lane
Enfield Park Road (South)
Padgate Campus (Crab Lane)
Locking Stumps
Heathfield House
Greenwood Crescent
Statham Avenue
Fisher Avenue
Hallfields Road
25
O'Leary Street
Battersby Lane
Smith Drive
Capesthorne Road
20 21
Marsh House Lane
17.17A 17C.23.23A
Cinnamon Lane
23 23A
17 17A 17C
Insall Road
Hilden Road
Orford Road
Padgate Lane
4A 28 28A
Holes Lane
Dam Lane
Bruche Bridge
Cemetery
Parish Church
1 2 3 4A 28 28A
Kingsway North
1 2
Whitley Avenue
Thelwall Lane
1.10C 11A
Latchford
2.10C 11A.12A
12A 10C
LATCHFORD
WESTY
Victoria Park
1 2 11A 12A
Wilderspool Causeway
Chester Road
Wash Lane
11A 10C
10C 11A 12A
10C 12A
Gainsborough Road
Loushers Lane
Station Road
Hunts Lane
10C
Fairfield Road
Victoria Square
Ackers Road
5 35
Pilling Gardens
5 6 35
Bradshaw Lane
GRAPPENHALL
Thelwall New Road
THELWALL
6
Chester Road
Stockport Road
Pickering Arms
6
Thelwall Brook
Statham
5 35
Barsbank Lane
Lymm Church
Higher Lane
Eagle Brow
Lymm Cross
LYMM
Altrincham
Bowdon
5 35
Dunham Massey
5
Warburton
Little Bollington
35
Broomedge
Grappenhall Road
6C
Cobbs Estate
6
Lumb Brook Road
Shadewood Crescent
London Bridge
6.6C 8.9.10C 45.46
STOCKTON HEATH
Grappenhall Heys
Appleton
9 45 46
Dudlows Green
10C
8
10C
Owen's Corner
Longwood Road
Wrights Green
8
8 9
Hatton
8.9
Hatton Lane
Stretton
Appleton Thorn
45 46
Lower Stretton
45
Antrobus
Higher Wincham
Lostock Gralam
Northwich
45.46
Comberbach
Barnton
46

networkwarrington
warrington's local bus company

Services		Services	
1, 2		19	
3		20, 21	
4A		22	
5		23, 23A	
6, 6C		25	
8, 9		28, 28A	
10C		29A, 29C	
11A, 12A		31	
13		32A	
14, 15		45, 46	
16, 16A			
17, 17A, 17C			
18		Limited service or occasional journeys	

All services operate to and from Warrington Interchange located at Golden Square Shopping Centre.

Produced by FWT 30.3.15 www.fwt.co.uk

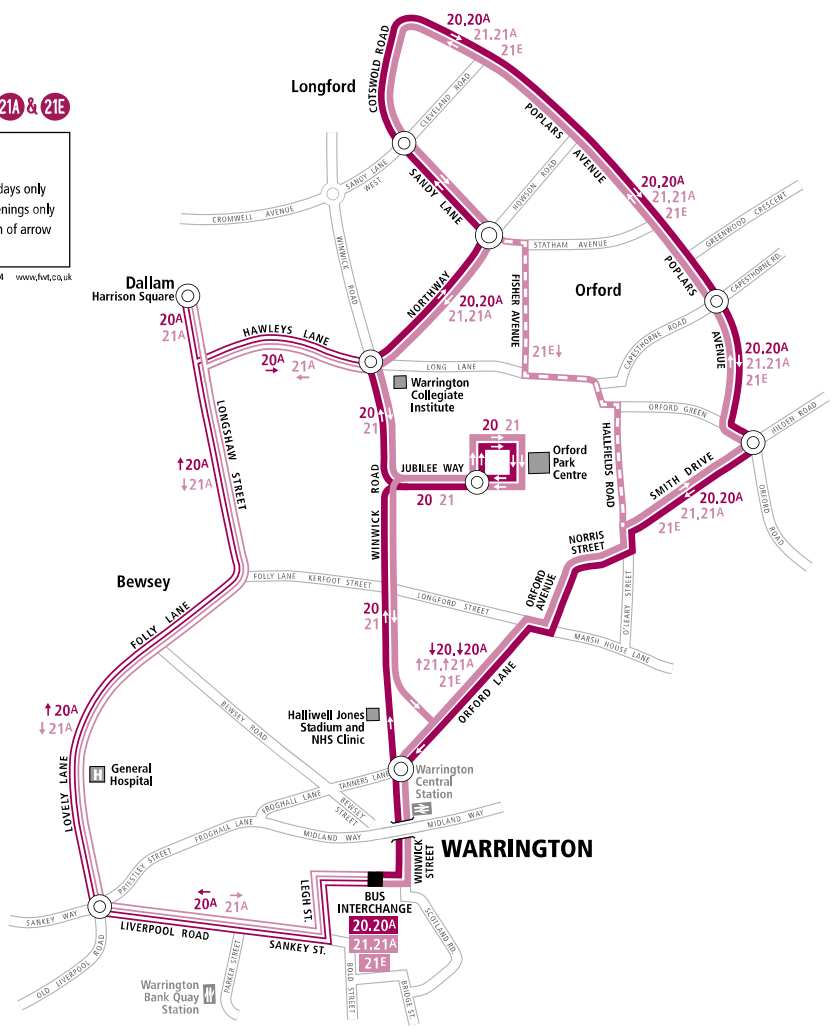
*Only journeys on services 17A (morning) 17C (evening) will serve Risley Industrial Estate and Birchwood Park.

20 21

including services 20A 21A & 21E

- Services 20/20A
- Services 21/21A/21E
- early mornings and Sundays only
- Monday to Saturday evenings only
- Bus operates in direction of arrow
- 20.20A Bus terminus

Produced by FWT 19.12.14 www.fwt.co.uk



20 21

including services 20A 21A & 21E

- LONGFORD
- POPLARS AVENUE
- ORFORD
- WARRINGTON

WARRINGTON'S LOCAL BUS COMPANY

It's easy to get in touch with us...

W: networkwarrington.co.uk **T:** 01925 634296

Pop in to our **travel centre** at Warrington Interchange

networkwarrington
warrington's **local** bus company

Bus times

Map

from 26 January 2015

networkwarrington
warrington's **local** bus company

Edition 10 – 26.01.15

20 WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA ORFORD PARK CENTRE
20A WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA WARRINGTON HOSPITAL – DALLAM

MONDAY TO FRIDAY [excluding Public Holidays]

	20A	20A	20	20	20	20	20	20	20	20	20		20	20	20	20	20		20	20	20
Warrington, Interchange [4]	0617	0645	0709	0724	0739	0754	0809	0824	0839	0854	0906		18	30	42	54	06		1418	1430	1442
Warrington, Central Station	|	|	0710	0725	0740	0755	0810	0825	0840	0855	0907		19	31	43	55	07		1419	1431	1443
Winwick Road, McDonalds	|	|	0712	0727	0742	0757	0812	0827	0842	0857	0909		21	33	45	57	09		1421	1433	1445
Orford Park Centre	|	|	0717	0732	0747	0802	0817	0832	0847	0902	0914		26	38	50	02	14		1426	1438	1450
Winwick Road, Collegiate Inst	|	|	0719	0734	0749	0804	0819	0834	0849	0904	0916		28	40	52	04	16		1428	1440	1452
General Hospital	0622	0650	|	|	|	|	|	|	|	|	|	and	|	|	|	|	|		|	|	|
Folly Lane, Tyrol House	0624	0652	|	|	|	|	|	|	|	|	|	then	|	|	|	|	|		|	|	|
Dallam, Harrison Square	0627	0655	|	|	|	|	|	|	|	|	|	at	|	|	|	|	|		|	|	|
Longford, Cotswold Road	0633	0701	0725	0740	0755	0810	0825	0840	0855	0910	0922		34	46	58	10	22		1434	1446	1458
Poplars Avenue, Cleveland Road	0635	0703	0727	0742	0757	0812	0827	0842	0857	0912	0924		36	48	00	12	24		1436	1448	1500
Orford Avenue	0641	0709	0734	0749	0804	0819	0834	0849	0904	0919	0931		43	55	07	19	31		1443	1455	1507
Warrington, Central Station	0650	0718	0745	0800	0815	0830	0845	0900	0915	0926	0938		50	02	14	26	38		1450	1502	1516
Warrington, Interchange	0651	0719	0746	0801	0816	0831	0846	0901	0916	0927	0939		51	03	15	27	39		1451	1503	1517

	20	20	20		20	20	20	20		20	20	20	20
Warrington, Interchange [4]	1455	1510	1525		40	55	10	25		1740	1755	1815	1845
Warrington, Central Station	1456	1511	1526		41	56	11	26		1741	1756	1816	1846
Winwick Road, McDonalds	1458	1514	1529		44	59	14	29		1744	1759	1818	1848
Orford Park Centre	1503	1520	1535	and	50	05	20	35	min-	1750	1805	1821	1851
Winwick Road, Collegiate Inst	1505	1522	1537	then	52	07	22	37	utes past	1752	1807	1823	1853
Longford, Cotswold Road	1511	1528	1543	at	58	13	28	43	each	1758	1813	1828	1858
Poplars Avenue, Cleveland Road	1513	1530	1545	these	00	15	30	45	hour	1800	1815	1830	1900
Orford Avenue	1520	1537	1552		07	22	37	52	until	1807	1822	1836	1906
Warrington, Central Station	1529	1546	1601		16	31	46	01		1816	1829	1841	1911
Warrington, Interchange	1530	1547	1602		17	32	47	02		1817	1830	1842	1912

20 WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA ORFORD PARK CENTRE
20A WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA WARRINGTON HOSPITAL – DALLAM

SATURDAY

	20A	20	20	20	20	20		20	20	20	20	20		20	20	20	20	20	20
Warrington, Interchange [4]	0645	0730	0800	0824	0848	0906		18	30	42	54	06		1718	1730	1742	1754	1815	1845
Warrington, Central Station	|	0731	0801	0825	0849	0907		19	31	43	55	07		1719	1731	1743	1755	1816	1846
Winwick Road, McDonalds	|	0733	0803	0827	0851	0909		21	33	45	57	09		1721	1733	1745	1757	1818	1848
Orford Park Centre	|	0736	0808	0832	0856	0914		26	38	50	02	14		1726	1738	1750	1802	1821	1851
Winwick Road, Collegiate Inst	|	0738	0810	0834	0858	0916		28	40	52	04	16		1728	1740	1752	1804	1823	1853
General Hospital	0652	|	|	|	|	|	and	|	|	|	|	|	min-	|	|	|	|	|	|
Folly Lane, Tyrol House	0654	|	|	|	|	|	then	|	|	|	|	|	utes past	|	|	|	|	|	|
Dallam, Harrison Square	0657	|	|	|	|	|	at	|	|	|	|	|	each	|	|	|	|	|	|
Longford, Cotswold Road	0703	0743	0816	0840	0904	0922	these	34	46	58	10	22	hour	1734	1746	1758	1809	1828	1858
Poplars Avenue, Cleveland Road	0705	0745	0818	0842	0906	0924		36	48	00	12	24	until	1736	1748	1800	1811	1830	1900
Orford Avenue	0711	0751	0825	0849	0913	0931		43	55	07	19	31		1743	1755	1806	1817	1836	1906
Warrington, Central Station	0716	0756	0832	0856	0920	0938		50	02	14	26	38		1750	1802	1811	1822	1841	1911
Warrington, Interchange	0717	0757	0833	0857	0921	0939		51	03	15	27	39		1751	1803	1812	1823	1842	1912

20 WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA ORFORD PARK CENTRE

20A WARRINGTON – LONGFORD/ORFORD (CIRCULAR) VIA WARRINGTON HOSPITAL – DALLAM

SUNDAY & PUBLIC HOLIDAYS

	20A	20		20A	20		20A
Warrington, Interchange [4]	0915	0945		15	45		1715
Warrington, Central Station	|	0946		|	46		|
Winwick Road, McDonalds	|	0948		|	48		|
Orford Park Centre	|	0952		|	52		|
Winwick Road, Collegiate Inst	|	0954		|	54		|
General Hospital	0922	|	and then at these	22	|	minutes past each hour until	1722
Folly Lane, Tyrol House	0924	|		24	|		1724
Dallam, Harrison Square	0927	|		27	|		1727
Longford, Cotswold Road	0933	1000		33	00		1733
Poplars Avenue, Cleveland Road	0935	1002		35	02		1735
Orford Avenue	0942	1009		42	09		1742
Warrington, Central Station	0948	1015		48	15		1748
Warrington, Interchange	0949	1016		49	16		1749

21 WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA ORFORD PARK CENTRE

21A WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA DALLAM – WARRINGTON HOSPITAL

21E WARRINGTON – ORFORD/LONGFORD (CIRCULAR)

MONDAY TO FRIDAY [excluding Public Holidays]

	21A	21A	21A	21A	21	21	21	21	21	21	21	21	21	21		21	21	21	21	21
Warrington, Interchange [3]	0510	0540	0610	0640	0700	0715	0730	0745	0800	0815	0830	0845	0900	0912		24	36	48	00	12
Warrington, Central Station	0511	0541	0611	0641	0701	0716	0731	0746	0801	0816	0831	0846	0901	0913		25	37	49	01	13
Orford Avenue	0516	0546	0616	0646	0707	0722	0737	0752	0807	0822	0837	0852	0907	0919		31	43	55	07	19
Poplars Avenue, Cleveland Road	0523	0553	0623	0653	0714	0729	0744	0759	0814	0829	0844	0859	0914	0926		38	50	02	14	26
Longford, Cotswold Road	0525	0555	0625	0655	0716	0731	0746	0801	0816	0831	0846	0901	0916	0928		40	52	04	16	28
Winwick Road, Collegiate Inst	|	|	|	|	0722	0737	0752	0807	0822	0837	0852	0907	0922	0934	and then at these	46	58	10	22	34
Orford Park Centre	|	|	|	|	0725	0740	0755	0810	0825	0840	0855	0909	0924	0936		48	00	12	24	36
Winwick Road, McDonalds	|	|	|	|	0731	0746	0801	0816	0831	0846	0901	0914	0929	0941		53	05	17	29	41
Warrington, Central Station	|	|	|	|	0734	0749	0804	0819	0834	0849	0904	0917	0932	0944		56	08	20	32	44
Dallam, Harrison Square	0531	0601	0631	0701	|	|	|	|	|	|	|	|	|	|		|	|	|	|	|
Folly Lane, Tyrol House	0532	0602	0632	0702	|	|	|	|	|	|	|	|	|	|		|	|	|	|	|
General Hospital	0534	0604	0634	0704	|	|	|	|	|	|	|	|	|	|		|	|	|	|	|
Warrington, Interchange	0544	0614	0644	0714	0735	0750	0805	0820	0835	0850	0905	0918	0933	0945		57	09	21	33	45

	21	21	21	21	21		21	21	21	21		21	21	21	21	21E	21E	21E	21E	21E
Warrington, Interchange [3]	1424	1436	1448	1500	1515		30	45	00	15		1730	1745	1800	1830	1900	2000	2100	2200	2300
Warrington, Central Station	1425	1437	1449	1501	1516		31	46	01	16		1731	1746	1801	1831	1901	2001	2101	2201	2301
Orford Avenue	1431	1443	1455	1508	1523		38	53	08	23		1738	1753	1808	1838	1906	2006	2106	2206	2306
Poplars Avenue, Cleveland Road	1438	1450	1502	1516	1531		46	01	16	31		1746	1801	1816	1846	1912	2012	2112	2212	2312
Longford, Cotswold Road	1440	1452	1504	1518	1533		48	03	18	33		1748	1803	1818	1848	1913	2013	2113	2213	2313
Winwick Road, Collegiate Inst	1446	1458	1510	1524	1539		54	09	24	39		1754	1809	1824	1854	|	|	|	|	|
Orford Park Centre	1448	1500	1512	1526	1541		56	11	26	41		1756	1811	1826	1856	|	|	|	|	|
Winwick Road, McDonalds	1453	1505	1517	1531	1546		01	16	31	46		1801	1816	1831	1901	|	|	|	|	|
O'Leary Street	|	|	|	|	|		|	|	|		|	|	|		1919	2019	2119	2219	2319
Warrington, Central Station	1456	1508	1520	1534	1549		04	19	34	49		1804	1819	1833	1903	1924	2024	2124	2224	2324
Warrington, Interchange	1457	1509	1521	1535	1550		05	20	35	50		1805	1820	1834	1904	1925	2025	2125	2225	2325

21 WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA ORFORD PARK CENTRE
21A WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA DALLAM – WARRINGTON HOSPITAL
21E WARRINGTON – ORFORD/LONGFORD (CIRCULAR)

SATURDAY

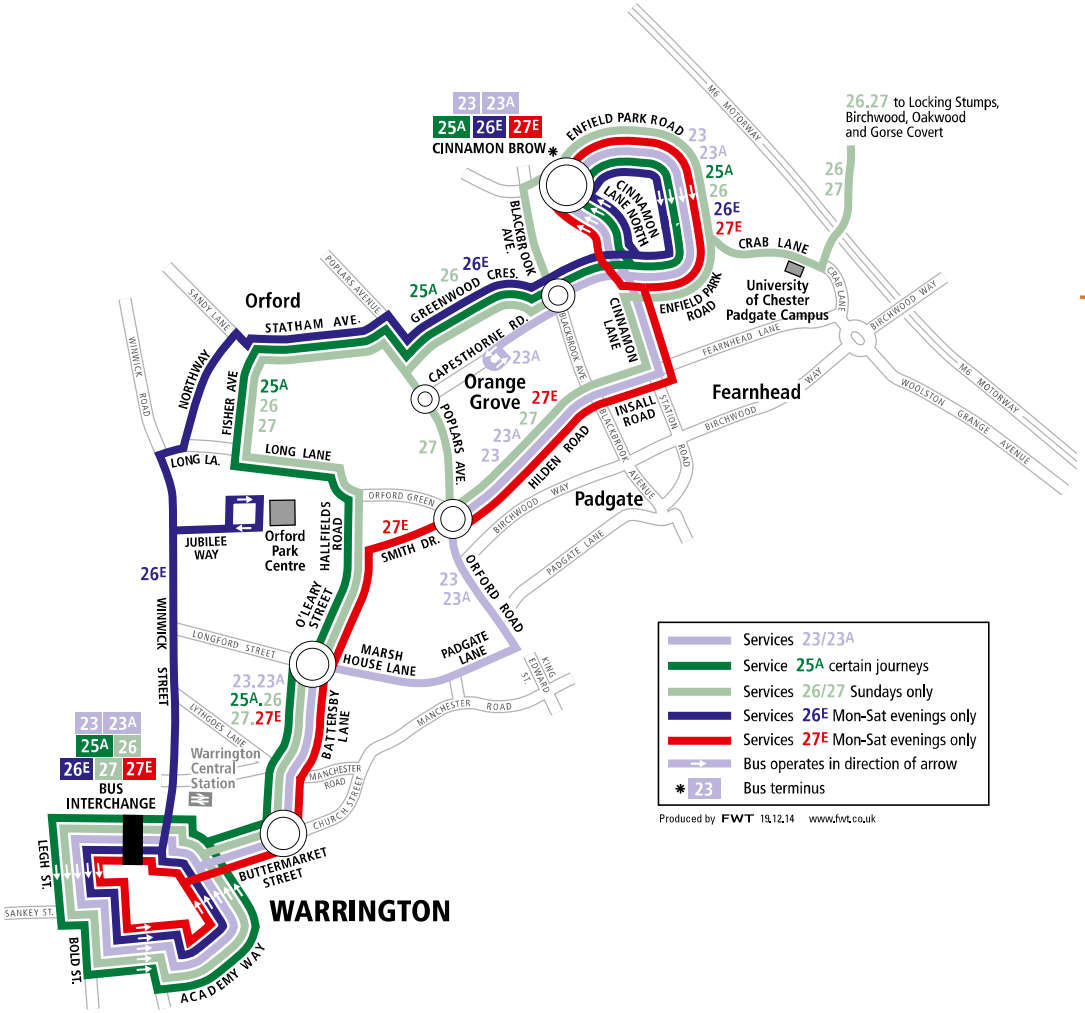
	21A	21	21	21	21	21	21		21	21	21	21	21		21	21	21	21	21	21E	21E
Warrington, Interchange [3]	0613	0715	0745	0812	0836	0900	0912		24	36	48	00	12		1724	1736	1748	1800	1830	1900	2000
Warrington, Central Station	0614	0716	0746	0813	0837	0901	0913		25	37	49	01	13		1725	1737	1749	1801	1831	1901	2001
Orford Avenue	0620	0721	0751	0819	0843	0907	0919		31	43	55	07	19		1731	1743	1755	1806	1836	1906	2006
Poplars Avenue, Cleveland Road	0627	0727	0757	0826	0850	0914	0926		38	50	02	14	26		1738	1750	1802	1812	1842	1912	2012
Longford, Cotswold Road	0629	0729	0759	0828	0852	0916	0928		40	52	04	16	28	min-	1740	1752	1804	1814	1844	1913	2013
Winwick Road, Collegiate Inst	|	0734	0804	0834	0858	0922	0934	and	46	58	10	22	34	utes	1746	1758	1809	1819	1849	|	|
Orford Park Centre	|	0736	0806	0836	0900	0924	0936	then	48	00	12	24	36	past	1748	1800	1811	1821	1851	|	|
Winwick Road, McDonalds	|	0739	0811	0841	0905	0929	0941	at	53	05	17	29	41	each	1753	1803	1814	1824	1854	|	|
O'Leary Street	|	|	|	|	|	|	|	these	|	|	|	|	|	hour	|	|	|	|	|	1919	2019
Warrington, Central Station	|	0741	0814	0844	0908	0932	0944		56	08	20	32	44	until	1756	1805	1816	1826	1856	1924	2024
Dallam, Harrison Square	0635	|	|	|	|	|	|		|	|	|	|	|		|	|	|	|	|	|	|
Folly Lane, Tyrol House	0636	|	|	|	|	|	|		|	|	|	|	|		|	|	|	|	|	|	|
General Hospital	0638	|	|	|	|	|	|		|	|	|	|	|		|	|	|	|	|	|	|
Warrington, Interchange	0647	0742	0815	0845	0909	0933	0945		57	09	21	33	45		1757	1806	1817	1827	1857	1925	2025

	21E	21E	21E
Warrington, Interchange [3]	2100	2200	2300
Warrington, Central Station	2101	2201	2301
Orford Avenue	2106	2206	2306
Poplars Avenue, Cleveland Road	2112	2212	2312
Longford, Cotswold Road	2113	2213	2313
O'Leary Street	2119	2219	2319
Warrington, Central Station	2124	2224	2324
Warrington, Interchange	2125	2225	2325

21 WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA ORFORD PARK CENTRE
21A WARRINGTON – ORFORD/LONGFORD (CIRCULAR) VIA DALLAM – WARRINGTON HOSPITAL

SUNDAY & PUBLIC HOLIDAYS

	21A	21		21A	21		21A	21
Warrington, Interchange [3]	0900	0930		00	30		1700	1730
Warrington, Central Station	0901	0931		01	31		1701	1731
Orford Avenue	0907	0937		07	37		1707	1737
Poplars Avenue, Cleveland Road	0914	0944		14	44		1714	1744
Longford, Cotswold Road	0916	0946		16	46	min-	1716	1746
Winwick Road, Collegiate Inst	|	0952	and	|	52	utes	|	1752
Orford Park Centre	|	0954	then	|	54	past	|	1754
Winwick Road, McDonalds	|	0958	at	|	58	each	|	1758
Warrington, Central Station	|	1000	these	|	00	hour	|	1800
Dallam, Harrison Square	0922	|		22	|	until	1722	|
Folly Lane, Tyrol House	0925	|		25	|		1725	|
General Hospital	0927	|		27	|		1727	|
Warrington, Interchange	0934	1001		34	01		1734	1801



23 23A 25A

includes services 26 26E 27 27E

Note – see Connect 17 timetable for services from Cinnamon Brow to Birchwood.

It's easy to get in touch with us...

W: networkwarrington.co.uk **T:** 01925 634296

Pop in to our **travel centre** at Warrington Interchange

networkwarrington
warrington's local bus company

23 23A 25A

includes services 26 26E 27 27E

- CINNAMON BROW
- ORANGE GROVE
- ORFORD
- PADGATE
- WARRINGTON

Bus times

Map

from 26 January 2015

networkwarrington
warrington's local bus company

Edition 11 – 26.1.15

23 CINNAMON BROW – WARRINGTON
23A ORANGE GROVE – CINNAMON BROW – WARRINGTON

MONDAY TO FRIDAY [excluding Public Holidays]

	23	23	23	23	23A	23		23A	23		23A	23	23A	23	23	23	23	23	23
Orange Grove, Avery Close	-	-	-	-	0933	-		28	-		1428	-	1530	-	-	-	-	-	-
Cinnamon Lane North	0712	0749	0826	0859	0936	0958		31	01		1431	1501	1533	1603	1630	1708	1733	1758	1828
Cinnamon Brow, Millhouse Rdbt	0713	0750	0827	0900	0937	0959	and	32	02	mins	1432	1502	1534	1604	1631	1709	1734	1759	1829
Enfield Park Rd, Stirrup Cl	0715	0752	0829	0902	0939	1001	then	34	04	past	1434	1504	1536	1606	1633	1711	1736	1801	1831
Insall Road, Valiant Close	0718	0755	0832	0905	0942	1004	at	37	07	each	1437	1507	1539	1609	1636	1714	1739	1804	1834
Padgate Stores	0724	0801	0838	0911	0949	1011	these	43	13	hour	1443	1513	1545	1615	1642	1720	1745	1810	1840
Warrington, Scotland Road	0737	0814	0851	0920	1000	1022		52	22	until	1452	1524	1556	1626	1653	1731	1756	1821	1851
Warrington, Interchange	0739	0816	0853	0922	1002	1024		54	24		1454	1526	1558	1628	1655	1733	1758	1823	1853

23 WARRINGTON – CINNAMON BROW
23A WARRINGTON – ORANGE GROVE – CINNAMON BROW

MONDAY TO FRIDAY [excluding Public Holidays]

	23	23	23	23	23A	23	23A		23	23A		23	23A	23	23	23	23	23	23
Warrington, Interchange [13]	0652	0728	0805	0838	0911	0937	1006		40	06		1440	1506	1540	1607	1645	1710	1735	1805
Warrington, Academy Way	0654	0730	0807	0840	0913	0939	1008		42	08		1442	1508	1542	1609	1647	1712	1737	1807
Padgate Stores	0703	0740	0817	0850	0923	0949	1018	and	52	18	mins	1452	1520	1554	1621	1659	1724	1749	1819
Insall Road, Valiant Close	0709	0746	0823	0856	0929	0955	1024	then	58	24	past	1458	1526	1600	1627	1705	1730	1755	1825
Orange Grove, Avery Close	|	|	|	|	0933	|	1028	at	|	28	each	|	1530	|	|	|	|	|	|
Cinnamon Lane North	0712	0749	0826	0859	0936	0958	1031	these	01	31	hour	1501	1533	1603	1630	1708	1733	1758	1828
Cinnamon Brow, Millhouse Rdbt	0713	0750	0827	0900	0937	0959	1032		02	32	until	1502	1534	1604	1631	1709	1734	1759	1829
Enfield Park Rd, Stirrup Cl	0715	0752	0829	0902	0939	1001	1034		04	34		1504	1536	1606	1633	1711	1736	1801	1831

23 CINNAMON BROW – WARRINGTON
23A ORANGE GROVE – CINNAMON BROW – WARRINGTON

SATURDAY

	23	23	23	23A		23	23A		23	23A	23	23	23	23	23	23
Orange Grove, Avery Close	-	-	-	0928		-	28		-	1528	-	-	-	-	-	-
Cinnamon Lane North	0802	0831	0901	0931		01	31		1501	1531	1557	1627	1657	1727	1756	1824
Cinnamon Brow, Millhouse Rdbt	0803	0832	0902	0932	and	02	32	mins	1502	1532	1558	1628	1658	1728	1757	1825
Enfield Park Rd, Stirrup Cl	0805	0834	0904	0934	then	04	34	past	1504	1534	1600	1630	1700	1730	1759	1827
Insall Road, Valiant Close	0808	0837	0907	0937	at	07	37	each	1507	1537	1603	1633	1703	1733	1802	1830
Padgate Stores	0813	0843	0913	0943	these	13	43	hour	1513	1543	1609	1639	1709	1739	1807	1835
Warrington, Scotland Road	0822	0852	0922	0952		22	52	until	1522	1552	1618	1648	1718	1748	1815	1843
Warrington, Interchange	0824	0854	0924	0954		24	54		1524	1554	1620	1650	1720	1750	1817	1845

23 WARRINGTON - CINNAMON BROW

23A WARRINGTON - ORANGE GROVE - CINNAMON BROW

SATURDAY

	23	23	23	23A		23	23A		23	23A	23	23	23	23	23	23
Warrington, Interchange [13]	0743	0810	0840	0906		40	06		1440	1506	1536	1606	1636	1706	1735	1805
Warrington, Academy Way	0745	0812	0842	0908		42	08		1442	1508	1538	1608	1638	1708	1737	1807
Padgate Stores	0754	0822	0852	0918	and	52	18	mins	1452	1518	1548	1618	1648	1718	1747	1816
Insall Road, Valiant Close	0759	0828	0858	0924	then	58	24	past	1458	1524	1554	1624	1654	1724	1753	1821
Orange Grove, Avery Close	|	|	|	0928	at	|	28	each	|	1528	|	|	|	|	|	|
Cinnamon Lane North	0802	0831	0901	0931	these	01	31	hour	1501	1531	1557	1627	1657	1727	1756	1824
Cinnamon Brow, Millhouse Rdbt	0803	0832	0902	0932		02	32	until	1502	1532	1558	1628	1658	1728	1757	1825
Enfield Park Rd, Stirrup Cl	0805	0834	0904	0934		04	34		1504	1534	1600	1630	1700	1730	1759	1827

26E CINNAMON BROW - WARRINGTON VIA WINWICK ROAD

27E CINNAMON BROW - WARRINGTON VIA ORFORD

MONDAY TO FRIDAY [excluding Public Holidays]

	27E	27E	26E	27E	26E	27E	26E	27E	26E
Cinnamon Brow, Millhouse Rdbt	1911	1941	2010	2041	2110	2143	2213	2243	2313
Enfield Park Rd, Stirrup Cl	1913	1943	2012	2043	2112	2145	2215	2245	2315
Insall Road, Valiant Close	1915	1945	|	2045	|	2147	|	2247	|
Greenwood Crescent, Merrick Cl	|	|	2013	|	2113	|	2216	|	2316
Statham Avenue, Kirkstone Av	|	|	2016	|	2116	|	2219	|	2319
Winwick Road, Collegiate Inst	|	|	2018	|	2118	|	2221	|	2321
Orford Park Centre	|	|	2019	|	2119	|	2222	|	2322
Warrington, Central Station	|	|	2026	|	2126	|	2227	|	2327
O'Leary Street	1919	1949	|	2049	|	2151	|	2251	-
Warrington, Scotland Road	1924	1954	|	2054	|	2154	|	2254	-
Warrington, Interchange	1926	1956	2027	2056	2127	2156	2228	2256	-

26E WARRINGTON - CINNAMON BROW VIA WINWICK ROAD

27E WARRINGTON - CINNAMON BROW VIA ORFORD

MONDAY TO FRIDAY [excluding Public Holidays]

					@@		@@		@@
	27E	26E	27E	26E	27E	26E	27E	26E	27E
Warrington, Interchange	1854	1923	1954	2023	2054	2127	2159	2227	2259
Warrington, Central Station	|	1924	|	2024	|	2128	|	2228	|
Orford Park Centre	|	1929	|	2029	|	2133	|	2233	|
Winwick Road, Collegiate Inst	|	1930	|	2030	|	2134	|	2234	|
Warrington, Academy Way	1856	|	1956	|	|	|	|	|	|
O'Leary Street	1901	|	2001	|	2101	|	2206	|	2306
Insall Rd, Valiant Cl	1906	|	2006	|	2106	|	2210	|	2310
Statham Avenue, Kirkstone Av	|	1933	|	2033	|	2136	|	2236	|
Greenwood Crescent, Merrick Cl	|	1937	|	2038	|	2140	|	2240	|
Cinnamon Brow, Millhouse Rdbt	1911	1941	2010	2041	2110	2143	2213	2243	2313

@@ Does NOT operate via Rylands Street or Academy Way.

26E CINNAMON BROW - WARRINGTON VIA WINWICK ROAD
27E CINNAMON BROW - WARRINGTON VIA ORFORD

SATURDAY

	27E	26E	27E	26E	27E	26E	27E	26E
Cinnamon Brow, Millhouse Rdbt	1941	2010	2041	2110	2143	2213	2243	2313
Enfield Park Rd, Stirrup Cl	1943	2012	2043	2112	2145	2215	2245	2315
Insall Road, Valiant Close	1945	|	2045	|	2147	|	2247	|
Greenwood Crescent, Merrick Cl	|	2013	|	2113	|	2216	|	2316
Statham Avenue, Kirkstone Av	|	2016	|	2116	|	2219	|	2319
O'Leary Street	1949	|	2049	|	2151	|	2251	|
Winwick Road, Collegiate Inst	|	2018	|	2118	|	2221	|	2321
Orford Park Centre	|	2019	|	|	|	|	|	|
Warrington, Central Station	|	2026	|	2125	|	2226	|	2326
Warrington, Scotland Road	1954	|	2054	|	2154	|	2254	-
Warrington, Interchange	1956	2027	2056	2126	2156	2227	2256	-

26E WARRINGTON - CINNAMON BROW VIA WINWICK ROAD
27E WARRINGTON - CINNAMON BROW VIA ORFORD

SATURDAY

					@@		@@		@@
	27E	26E	27E	26E	27E	26E	27E	26E	27E
Warrington, Interchange [14]	1854	1923	1954	2023	2054	2129	2159	2229	2259
Warrington, Academy Way	1856	|	1956	|	|	|	|	|	|
Warrington, Central Station	|	1924	|	2024	|	2130	|	2230	|
Orford Park Centre	|	1929	|	|	|	|	|	|	|
Winwick Road, Collegiate Inst	|	1930	|	2028	|	2134	|	2234	|
O'Leary Street	1901	|	2001	|	2101	|	2206	|	2306
Statham Avenue, Kirkstone Av	|	1933	|	2031	|	2136	|	2236	|
Greenwood Crescent, Merrick Cl	|	1937	|	2036	|	2140	|	2240	|
Insall Rd, Valiant Cl	1906	|	2006	|	2106	|	2210	|	2310
Cinnamon Brow, Millhouse Rdbt	1911	1941	2010	2041	2110	2143	2213	2243	2313

26 GORSE COVERT - WARRINGTON VIA BIRCHWOOD - LOCKING STUMPS - CINNAMON BROW - ORFORD
27 GORSE COVERT - WARRINGTON VIA BIRCHWOOD - LOCKING STUMPS - FEARNHEAD - ORFORD

SUNDAY & PUBLIC HOLIDAYS

	27	26	27	26	27	26	27	26	27	26
Gorse Covert, Spar Store	0908	1026	1124	1226	1324	1426	1524	1626	1724	1826
Gorse Covert, Ashdown Lane	0911	1029	1127	1229	1327	1429	1527	1629	1727	1829
Oakwood, Keyes Close	0914	1032	1130	1232	1330	1432	1530	1632	1730	1832
Birchwood, Railway Station	0919	1037	1135	1237	1335	1437	1535	1637	1735	1837
Birchwood Centre	0920	1038	1136	1238	1336	1438	1536	1638	1736	1838
Heathfield House	0925	1043	1141	1243	1341	1443	1541	1643	1741	1843
Glover Road, Turf & Feather	0926	1044	1142	1244	1342	1444	1542	1644	1742	1844
Locking Stumps, Copperfield Cl	0928	1046	1144	1246	1344	1446	1544	1646	1744	1846
Crab Lane, Uni of Chester	0932	1050	1148	1250	1348	1450	1548	1650	1748	1850
Enfield Park Rd, Shetland Cl	|	1053	|	1253	|	1453	|	1653	|	1853
Greenwood Crescent, Merrick Cl	|	1055	|	1255	|	1455	|	1655	|	1855
Enfield Park Rd, Stirrup Cl	0934	|	1150	|	1350	|	1550	|	1750	|
Insall Road, Valiant Close	0937	|	1153	|	1353	|	1553	|	1753	|
Statham Avenue, Kirkstone Av	0942	1058	1158	1258	1358	1458	1558	1658	1758	1858
O'Leary Street	0948	1104	1204	1304	1404	1504	1604	1704	1804	1904
Warrington, Scotland Road	0952	1108	1208	1308	1408	1508	1608	1708	1808	1908
Warrington, Interchange	0954	1110	1210	1310	1410	1510	1610	1710	1810	1910

26 WARRINGTON – GORSE COVERT VIA ORFORD – CINNAMON BROW – LOCKING STUMPS – BIRCHWOOD

27 WARRINGTON – GORSE COVERT VIA ORFORD – FEARNHEAD – LOCKING STUMPS – BIRCHWOOD

SUNDAY & PUBLIC HOLIDAYS

	26	27	26	27	26	27	26	27	26	27
Warrington, Interchange [14]	0825	0941	1041	1141	1241	1341	1441	1541	1641	1741
Warrington, Academy Way	0827	0943	1043	1143	1243	1343	1443	1543	1643	1743
O'Leary Street	0833	0949	1049	1149	1249	1349	1449	1549	1649	1749
Statham Avenue, Kirkstone Av	0839	0955	1055	1155	1255	1355	1455	1555	1655	1755
Greenwood Crescent, Merrick Cl	0842	|	1058	|	1258	|	1458	|	1658	|
Enfield Park Rd, Shetland Cl	0844	|	1100	|	1300	|	1500	|	1700	|
Insall Road, Valiant Close	|	1000	|	1200	|	1400	|	1600	|	1800
Enfield Park Rd, Stirrup Cl	|	1003	|	1203	|	1403	|	1603	|	1803
Crab Lane, Uni of Chester	0847	1005	1103	1205	1303	1405	1503	1605	1703	1805
Locking Stumps, Copperfield Cl	0851	1009	1107	1209	1307	1409	1507	1609	1707	1809
Glover Road, Turf & Feather	0853	1011	1109	1211	1309	1411	1509	1611	1709	1811
Heathfield House	0854	1012	1110	1212	1310	1412	1510	1612	1710	1812
Birchwood Centre	0859	1017	1115	1217	1315	1417	1515	1617	1715	1817
Birchwood, Railway Station	0901	1019	1117	1219	1317	1419	1517	1619	1717	1819
Oakwood, Keyes Close	0905	1023	1121	1223	1321	1423	1521	1623	1721	1823
Gorse Covert, Spar Store	0908	1026	1124	1226	1324	1426	1524	1626	1724	1826

25A CINNAMON BROW – WARRINGTON VIA ORFORD

MONDAY TO FRIDAY [excluding Public Holidays]

Cinnamon Brow, Millhouse Rdbt	0525	0625
Enfield Park Road, Stirrup Cl	0527	0627
Greenwood Crescent, Merrick Cl	0529	0629
Statham Avenue, Kirkstone Av	0531	0631
O'Leary Street	0536	0636
Warrington, Scotland Road	0540	0640
Warrington, Interchange	0542	0642

25A WARRINGTON – CINNAMON BROW VIA ORFORD

MONDAY TO FRIDAY [excluding Public Holidays]

	D	
Warrington, Interchange [14]	-	0607
Warrington, Academy Way	-	0609
Wilderspool, St James Church	0509	|
O'Leary Street	0514	0614
Statham Avenue, Kirkstone Avenue	0520	0620
Greenwood Crescent, Merrick Close	0522	0622
Cinnamon Lane North	0524	0624
Cinnamon Brow, Enfield Pk Rd, Shetland Cl	0525	0625

D **From Wilderspool, St James Church (at 0509) via Warrington Bridge and Mersey Street to Fennel Street.**

Appendix 9

Summary of Existing Bus Services

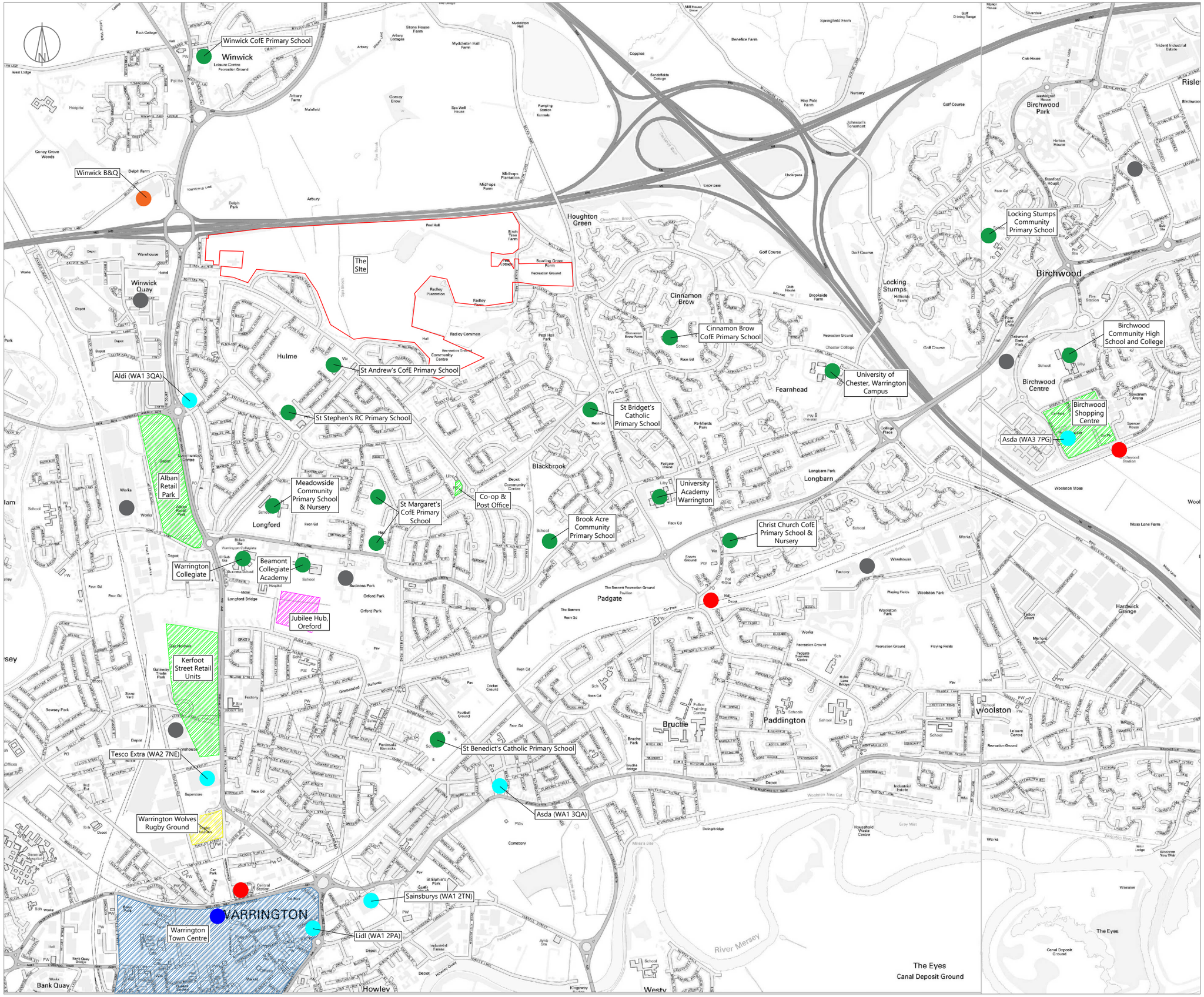
Service Number	Stop	Route	Operator	Weekday Daytime Frequency	Weekday Evening Frequency	Saturday Frequency	Sunday Frequency
19	Winwick Rd	Leigh - Culcheth - Winwick - Winwick Road - Warrington Interchange	Network Warrington	Hourly First Bus 0728/ 0618 Last Bus 2002/ 1852	No Service beyond 2002	Hourly First Bus 0746/0718 Last Bus 1834/ 1817	Hourly First Bus 0946/ 0902 Last Bus 1741/ 1702
20/ 20A	Poplars Avenue	Warrington Interchange - Winwick Road/ General Hospital (20A) - Longford - Poplars Avenue - Orford Avenue - Warrington Interchange	Network Warrington	Every 12 – 15 minutes First Bus 0635 Last Bus 1900	No Service	Every 12 minutes First Bus 0705 Last Bus 1900	Hourly First Bus 1002 (20)/ 0935 (20A) Last Bus 1702 (20)/ 1735 (20A)
21/ 21A	Poplars Avenue	Warrington Interchange - Orford Avenue - Poplars Avenue - Longford - Winwick Road/ General Hospital (21A) – Warrington Interchange	Network Warrington	Every 12 – 15 minutes First Bus 0523 Last Bus 1846	No Service	Every 12 minutes First Bus 0627 Last Bus 1842	Every 30 minutes First Bus 0944 (20)/ 0914 (20A) Last Bus 1744 (20)/ 1714 (20A)
21E	Poplars Avenue	Warrington Interchange - Orford Avenue - Poplars Avenue - Longford - Winwick Road/ General Hospital (21A) – Warrington Interchange	Network Warrington	No Service	Hourly First Bus 1913 Last Bus 2313	Hourly First Bus 1912 Last Bus 2312	No Service

Service Number	Stop	Route	Operator	Weekday Daytime Frequency	Weekday Evening Frequency	Saturday Frequency	Sunday Frequency
22	Winwick Road	Vulcan (22 only) - Earlestown - Newton le Willows - Winwick - Winwick Road - Warrington Interchange	Network Warrington	Hourly First Bus 0734/0737 Last Bus 1903/1832	(22E) Hourly First Bus 1912/1921 Last Bus 2254/2321	(22) Hourly First Bus 0836/ 0753 Last Bus 1855/ 1842 (23) First Bus 1920/ 1921 Last Bus 2254/ 2320	(22) Hourly First Bus 0930/ 0850 Last Bus 1810/ 1734
23/ 23A	Enfield Park Rd (Shetland Cl)	Warrington Interchange - Padgate Lane - Hilden Rd - Cinnamon Brow - Orange Grove (23A only) - Cinnamon Brow - Enfield Park Rd	Network Warrington	Every 30 minutes First Bus 0712 Last Bus 1828	No Service	Every 30 minutes First Bus 0802 Last Bus 1824	No Service
25	Enfield Park Rd (Shetland Cl)	Warrington Interchange - Statham Avenue - Crab Lane - Birchwood - Gorse Covert	Network Warrington	Every 20 minutes 0600-1000 Every 30 minutes 1000-1400	Last bus 1955	Every 30 minutes First Bus 0653/ 0744 Last Bus 1844/ 1936	No Service
25A	Enfield Park Rd (Shetland Cl)	Warrington Interchange - O'Leary Street - Statham Avenue - Greenwood Crescent - Cinnamon Lane North - Enfield Park Road	Network Warrington	First Bus 0520/ 0531 Last Bus 0620/ 0631	No Service	No Service	No Service

Service Number	Stop	Route	Operator	Weekday Daytime Frequency	Weekday Evening Frequency	Saturday Frequency	Sunday Frequency
26	Enfield Park Rd (Shetland Cl)	Warrington Interchange - O'Leary Street - Statham Avenue - Greenwood Crescent - Crab Lane - Birchwood - Gorse Covert	Network Warrington	No Service	No Service	No Service	Every 2 Hours in each direction First Bus 0844/ 1053 Last Bus 1700/ 1853
26E/ 27E	Enfield Park Rd (Shetland Cl)	Cinnamon Brow - Enfield Park Road - Greenwood Crescent - Statham Avenue - Winwick Road - Orford Park Centre - O'Leary Street - Warrington Interchange	Network Warrington	No Service	Every 30 minutes First Bus 1911 (27E)/ 2010 (26E) Last Bus 2243 (27E)/ 2313 (26E)	Every 30 minutes First Bus 1911 (26E)/ 1941 (27E) Last Bus 2313	
27	Poplars Avenue (nr Statham Avenue)	Warrington Interchange - O'Leary Street - Statham Avenue - Greenwood Crescent - Crab Lane - Birchwood - Gorse Covert	Network Warrington	No Service	No Service	No Service	Every 2 Hours in each direction First Bus 0942/ 0955 Last Bus 1758/ 1755
329	Winwick Road	St Helens - Winwick - Warrington	Arriva	Every 30 minutes First Bus 0645/ 0720 Last Bus 1854/ 1918	No Service	Every 30 minutes First Bus 0725/ 0750 Last Bus 1854/ 1918	Every 30 minutes First Bus 0944/ 1020 Last Bus 1744/ 1820
360	Winwick Road	Warrington - Winwick - Newton le Willows - Platt Bridge Warrington Road - Wigan	Arriva	Every 30 minutes First Bus 0713 /0646 Last Bus 1838/ 1944	No Service	Every 30 minutes First Bus 0828/ 0745 Last Bus 1838/ 1845	No Service

Appendix 10

Plan of Local Services and Amenities



NOTES:

Site boundary shown as approximate only.

KEY:

- Supermarket
- Education
- Rail Station
- Warrington Bus Station
- Retail Park
- Business Park/Employment

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	37	NOT TO SCALE

HighgateTransportation
www.highgatetransportation.co.uk
Box 13, 42 Triangle West
Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

TITLE:

LOCAL SERVICES AND AMENITIES

DATE:	DRAWN BY:	CHECKED:
30/06/16	FB	DT

Appendix 11

Warrington Design Guide Extract – Road Hierarchy

4.0 ROAD DESIGN AND STANDARDS

4.1 The layout and design of roads and footpaths within any new residential and commercial/industrial development form an integral part of the overall design concept and therefore cannot be considered in isolation. In line with an integrated transport policy, the concept of road hierarchy has been adopted within residential and commercial/industrial estates, from a small-scale cul-de-sac where pedestrian movements are predominant and vehicle speeds are restricted, to distributor roads catering for the free flow of the largest of vehicles.

4.2 The design of the estate using this hierarchy should prevent areas where people live or work being intruded upon by traffic from outside their immediate area whilst maintaining ease of access for residents, visitors and service vehicles to their homes and workplaces. The Guide is not intended to present a rigid set of rules to be followed in the design of layouts or to present standard layouts that can be applied but gives guidance on flexibility of use and where in some cases, minimum or maximum standards must be met.

4.3 There are several issues to consider when designing a residential layout and amongst these are:

- Function;
- Street widths and components;
- Junctions;
- Features for controlling vehicle speeds;
- Forward visibility on links;
- Visibility splays at junctions;
- Servicing;
- Parking.

4.4 The road hierarchy for different types of roads require different road widths to accommodate its intended use and there are various factors that need to be considered in determining appropriate street widths. In most cases within residential areas, the road width will vary between 4.8m and 5.5m. Some of the factors to be considered are:

- The level of vehicular traffic and pedestrian activity;
- Whether parking is to be allowed on-street and its distribution, occupation and enforcement;
- The design speed for the road;
- Whether any traffic measures such as traffic calming are to be included.

4.5 In lightly trafficked streets, carriageways may be narrowed over short lengths to a single lane as a traffic calming feature. In such single working sections of the street measures should be taken to prevent parking with a maximum width of 3.5m between constraining vertical features such as bollards. In certain circumstances this may be reduced to a minimum of 2.75m, which will still allow for the occasional large vehicles. In most cases widths between 3.1m and 3.9m should be avoided since they could result in drivers trying to squeeze past cyclists.

Figure 1: Road Hierarchy

4.6 District Distributor Roads

Distributor roads provide for the movement of vehicles between the different districts of a town or urban area. They will normally be designed in accordance with the Design Manual for Roads and Bridges (DMRB) issued by the Highways Agency, an executive agency of the Department for Transport (D*f*T). They are beyond the scope of this design guide and reference should be made to the appropriate national standards and Technical Advice/Design Notes.

4.7 Local Distributor Roads

Local distributor roads form the links between residential access roads and the district distributor roads. The function of the distributor road is to distribute access traffic and provide bus routes to residential developments. Where a speed limit of 30mph applies, direct frontage access is permitted on the distributor road as long as the daily traffic flow is no more than 10,000 vehicles. The roads will normally be designed in accordance with DMRB after referring to the local parameters as follows:

Table 1: Local Distributor Road Summary Design Parameters

	Typical Parameter	**Notes**
Provides access to:	Major residential roads, Minor access roads, Shared surface roads	
Serves	Over 300 dwellings	
Anticipated vehicle types	HGVs and all other types (assessment of likelihood of HGVs should be made depending on type of development and context of area)	Mandatory parameter range is pantechnicon
Min carriageway width	6.75m	
Min centreline radius	40m	
Design Speed	30 mph	
Distance between speed restraint features	80m to 120m	
Frontage access	Yes	Direct access will not be permitted within 20m of its junction with a classified road.
Footway	Minimum width 2.0m	Provided on both sides
Segregated cycle track	Optimum width 3.0m. Minimum 3.5m if combined with footway (assuming facility open on both sides)	Required on both sides. Transition between on & off street treatment at side roads/junctions require careful design
Verge	Required on both sides between carriageway edge and cycleway/footway. Minimum 1.5m wide	
Min forward visibility	60m	
Junction visibility - x	4.5m	
Junction visibility - y	90m	May be reduced if it can be demonstrated that vehicle speeds will be less than 30 mph
Min junction spacing - adjacent	90m	

Table 1: Local Distributor Road Summary Design Parameters (cont'd)

	Typical Parameter	**Notes**
Min junction spacing - opposite	45m	
Max gradient	1 in 12 (8.33 %)	Gradient may only be increased due to local topography
Min gradient	1 in 150 (0.67 %)	
Vertical curve min K value	6.5	May be reduced subject to a minimum curve length of 30m
Kerb radius	10m	
Kerb height	125mm	

4.8 Major Residential Access Roads

Access roads form the major part of residential road networks and provide direct access to individual dwellings and parking spaces (for properties with direct frontage access in sensitive locations, on site turning areas may be requested) and often links several residential areas to a local distributor road. They may serve between 50 and 300 dwellings (or equivalent mixed uses) including those located on other access roads feeding onto it. It should preferably have two points of access or take the form of a loop road with a short connection to a single point of access and a secondary emergency access link. Any through route must be designed so as it discourages non-essential through traffic. Cul-de-sac may be permitted on sites, which are too small to accommodate a loop road, or on sites where existing allocated or consented land is involved. Any such roads should however serve no more than 150 dwellings. The design speed for this access road is 20mph.

Table 2: Major Residential Access Road Summary Design Parameters

	Typical Parameter	**Notes**
Provides access to:	Minor Residential Access roads Shared Surface roads Private drives	
Gains access from	Classified Roads & Local Distributor	
Serve	Between 50 and 300 dwellings	
Anticipated vehicle types	Low pantechnicon, refuse vehicle, fire tender, car	Recommended parameter range is pantechnicon
Turning head	Yes, if cul-de-sac	
Frontage access	Yes	Direct access will not be permitted within 20m of its junction with a classified or Distributor road
Min carriageway width	5.5m	(6.0m for Bus Routes)
Min centreline radius	20m	
Design Speed	20 mph	25mph may be considered where vehicles would have to travel over a kilometre (0.6 miles) by '20 mph' roads.
Distance between speed restraint features	Between 60m and 80m	See advice on speed restraint features
Footway	Minimum width 2.0m	Required on both sides
Segregated cycle track	Optimum width 3.0m. Minimum 3.5m if combined with footway (assuming facility open on both sides)	Required on at least one side or both sides where appropriate. May not be required if design speed is demonstrably 20mph and or a large no of side junctions/drives interrupt route

Table 2: Major Residential Access Road Summary Design Parameters (cont'd)

	Typical Parameter	**Notes**
Verge	Required on both sides between carriageway edge and cycleway/footway. Minimum 1.5m wide	
Min forward visibility	35m	
Junction visibility – x	4.5m	May be reduced to 2.4m if side road is minor access road or lower category
Junction visibility – y	70m	May be reduced if it can be demonstrated that vehicle speeds will be less than 20 mph
Min junction spacing – adjacent	60m	May be reduced to 30m dependent on vehicle speed
Min spacing – junction opposite R/L	15m	Cross roads should be avoided, unless other features such as a roundabout is provided
Min spacing – junction opposite L/R	30m	
Max gradient	1 in 12 (8.33 %)	Gradient may only be increased due to local topography
Min gradient	1 in 150 (0.67 %)	
Vertical curve min K value	4	May be reduced subject to a minimum curve length of 25m
Kerb radius	6m	
Kerb height	125mm	

4.9 Minor Residential Access Roads

Minor residential access roads generally serve up to 100 dwellings including those in other residential areas which feed onto it and give direct frontage access to dwellings. It can either be a through road or a Cul-de-sac. If a cul-de-sac it should serve not more than 50 dwellings and have a secondary link for pedestrians and cyclists, capable of being used by emergency vehicles. (See 4.19 for further details). The design speed of this access road is 20mph.

Table 3: Minor Residential Access Roads Summary Design Parameters

	Typical Parameter	**Notes**
Provides access to:	Shared Surface roads Private drives	
Serve	Up to 50 dwellings	
Turning head	Yes, if cul-de-sac	
Anticipated vehicle types	Low pantechnicon, refuse vehicle, fire tender, car	Recommended parameter range is refuse vehicle
Frontage access	Yes	Direct access will not be permitted within 20m of its junction with a classified or Distributor road
Min carriageway width	4.8m	
Min centreline radius	15m	
Design Speed	20 mph	
Distance between speed restraint features	40m to 60m	
Footway	Minimum width 2.0m	Required on both sides where there is frontage access
Cycleway	No separate provision	
Verge	Required on both sides if no footway provided. Min width 2m	
Min forward visibility	25m	
Junction visibility - x	2.4m	
Junction visibility - y	60m	May be reduced if it can be demonstrated that vehicle speeds will be less than 20 mph
Min junction spacing – adjacent	30m	
Min spacing – junction opposite R/L	15m	Cross roads should be avoided, unless other features such as a roundabout is provided
Min spacing – junction opposite L/R	15m	
Max gradient	1 in 12 (8.33 %)	
Min gradient	1 in 150 (0.67 %)	
Vertical curve min K value	2	May be reduced subject to a minimum curve length of 20m
Kerb radius	6m or 4m	
Kerb height	125mm	

4.10 Shared Surface Roads

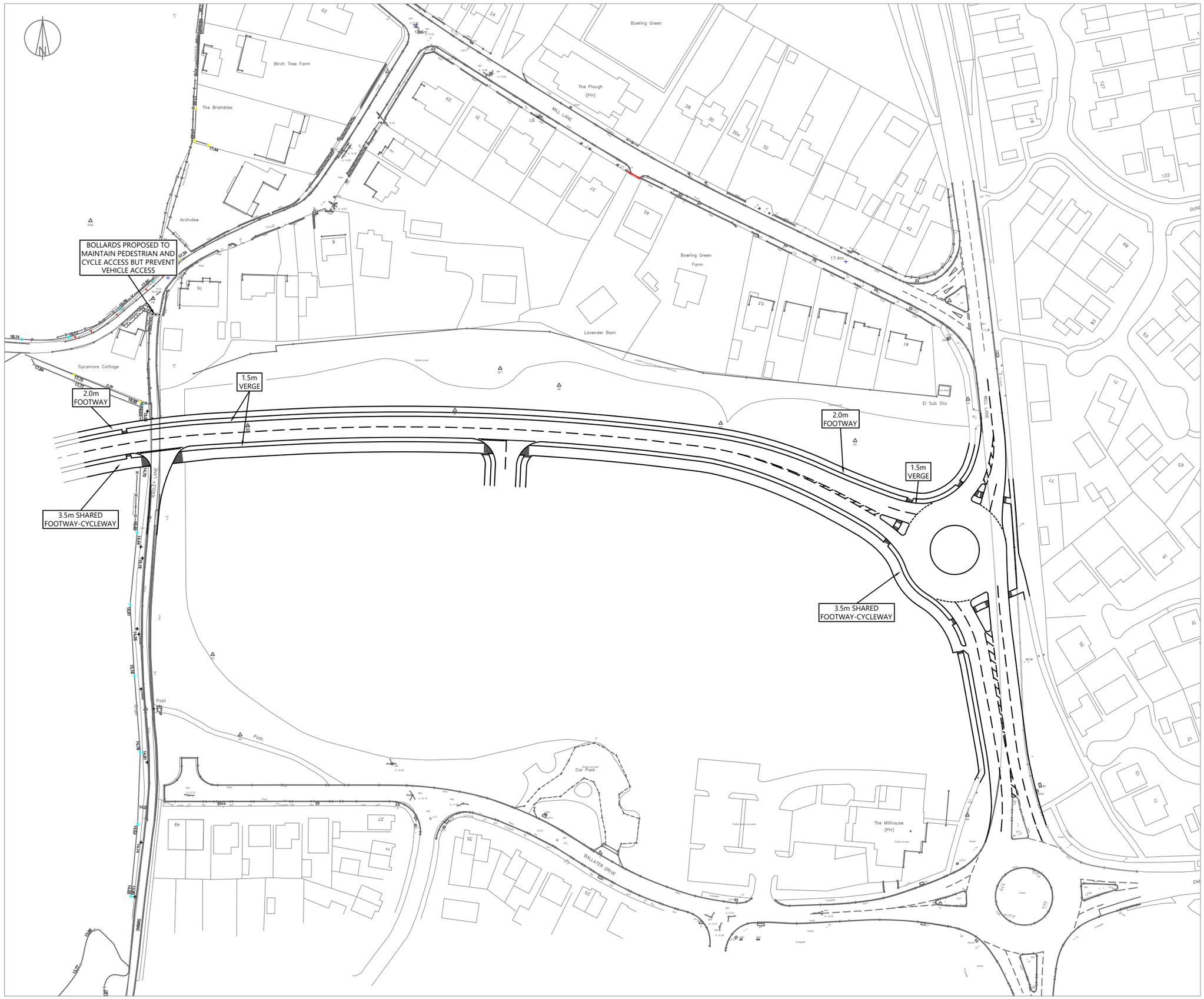
The primary purpose of these roads is to provide direct access to dwellings with shared use by vehicles and pedestrians. They are engineered with low traffic speeds and help create a sense of community. Since pedestrians and vehicles share the same surface it is most important that all road users are made aware of the separate and distinctive nature of these roads. The distinction between other residential estate roads must be made, not only by the presence of traffic calming measures, but also by the use of differing carriageway surfacing materials subject to the approval of the Local Highway Authority. It is not appropriate to provide formal footways adjacent to the shared surface road and therefore any road where footway links are required will need to be designed as Minor Access Road.

Table 4: Shared Surface Roads Summary Design Parameters

	Typical parameter	**Notes**
Provides access to:	Shared Surface roads Private drives	
Serve	Up to 50 dwellings if formed as a loop road	25 dwellings if formed as a cul-de-sac
Turning head	Yes, if cul-de-sac	
Anticipated vehicle types	Low pantechnicon, refuse vehicle, fire tender, car	Recommended parameter range is refuse vehicle
Frontage access	Yes	
Min carriageway width	4.8m total width	5.5m with frontage access
Min centreline radius	15m	
Design Speed	Below 20 mph	
Distance between speed restraint features	40m	
Footway	No separate provision	
cycleway	No separate provision	
Verge	Required on both sides. Min width 2m	
Min forward visibility	25m. Overrun widening on bend if required	
Junction visibility - x	2.4m	
Junction visibility - y	45m	
Min junction spacing – adjacent	30m	
Min spacing – junction opposite R/L	15m	Cross roads should be avoided, unless other features such as a roundabout is provided
Min spacing – junction opposite L/R	15m	
Max gradient	1 in 12 (8.33 %)	
Min gradient	1 in 150 (0.67 %)	
Kerb radius	6m or 4m	
Kerb height	25mm	

Appendix 12

Proposed Mill Lane/Blackbrook Avenue Access



NOTES:
Drawing based on Powers & Tiltman topographical survey 6297/01 dated 25/07/11 and Geomatic Surveys Ltd topographical survey 01532/01 dated 27/07/15.

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	10/K	1:1,250 @ A3

HighgateTransportation
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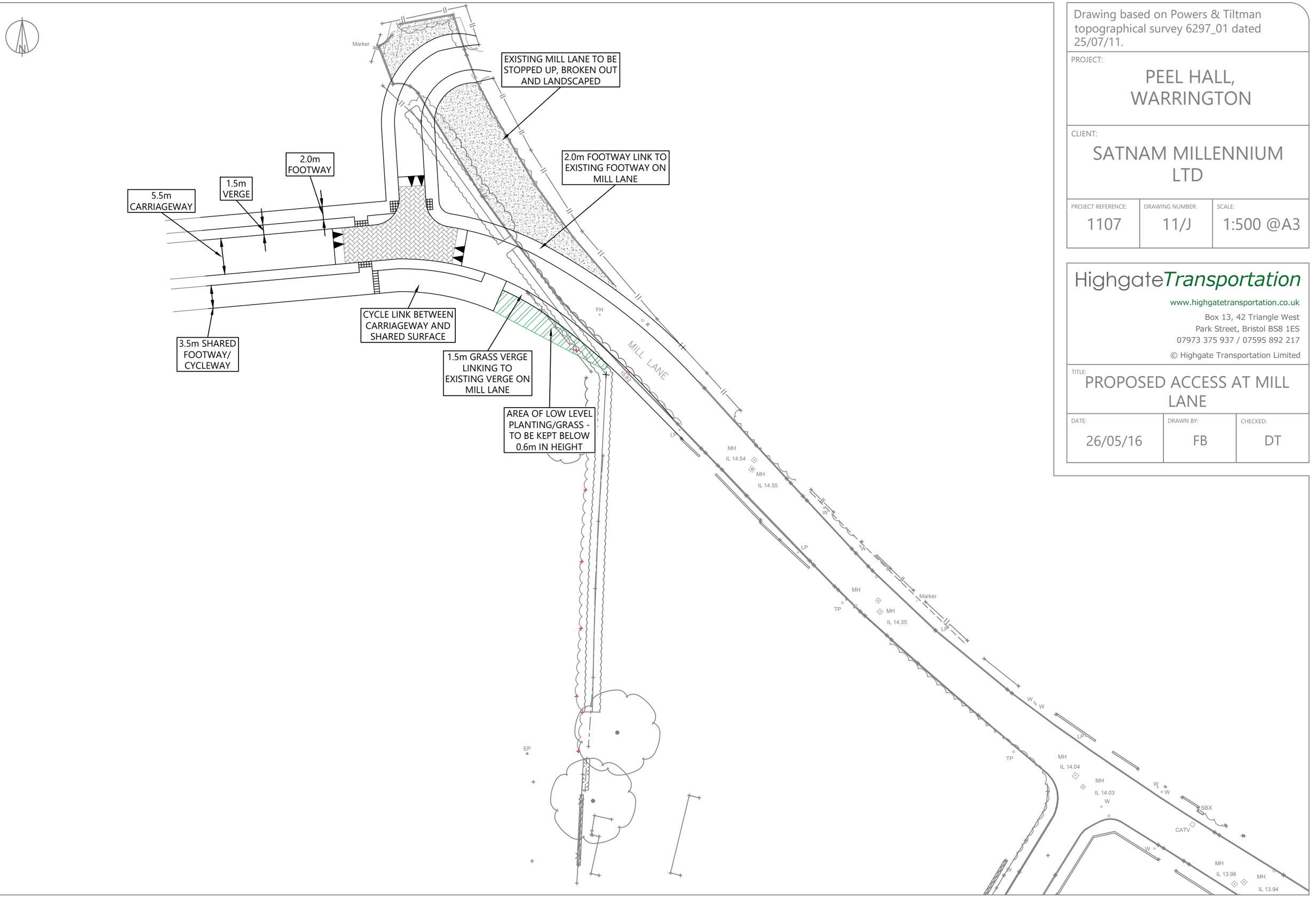
TITLE:

PROPOSED MAIN SITE ACCESS AT BLACKBROOK AVENUE

DATE:	DRAWN BY:	CHECKED:
25/06/16	FB	DT

Appendix 13

Proposed Mill Lane Access



Drawing based on Powers & Tiltman topographical survey 6297_01 dated 25/07/11.

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
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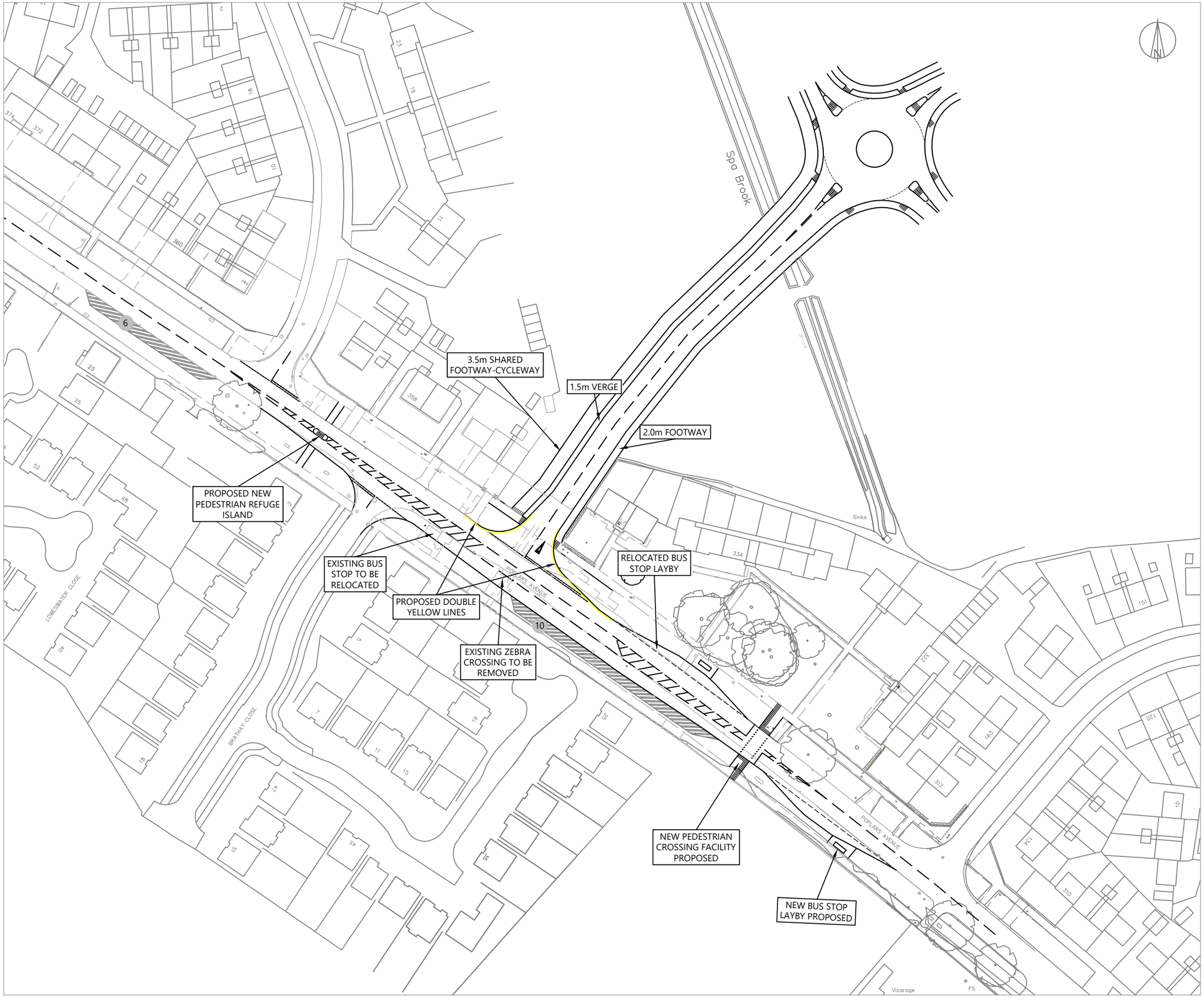
TITLE:

PROPOSED ACCESS AT MILL LANE

DATE:	DRAWN BY:	CHECKED:
26/05/16	FB	DT

Appendix 14

Proposed Poplars Avenue (*central*) Access



NOTES:

Drawing based on Appletons plan 140367-B-001G dated January 2016.

KEY:

Parking Areas (number of cars that can be accommodated) 6

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	12/O	1:1,000 @ A3

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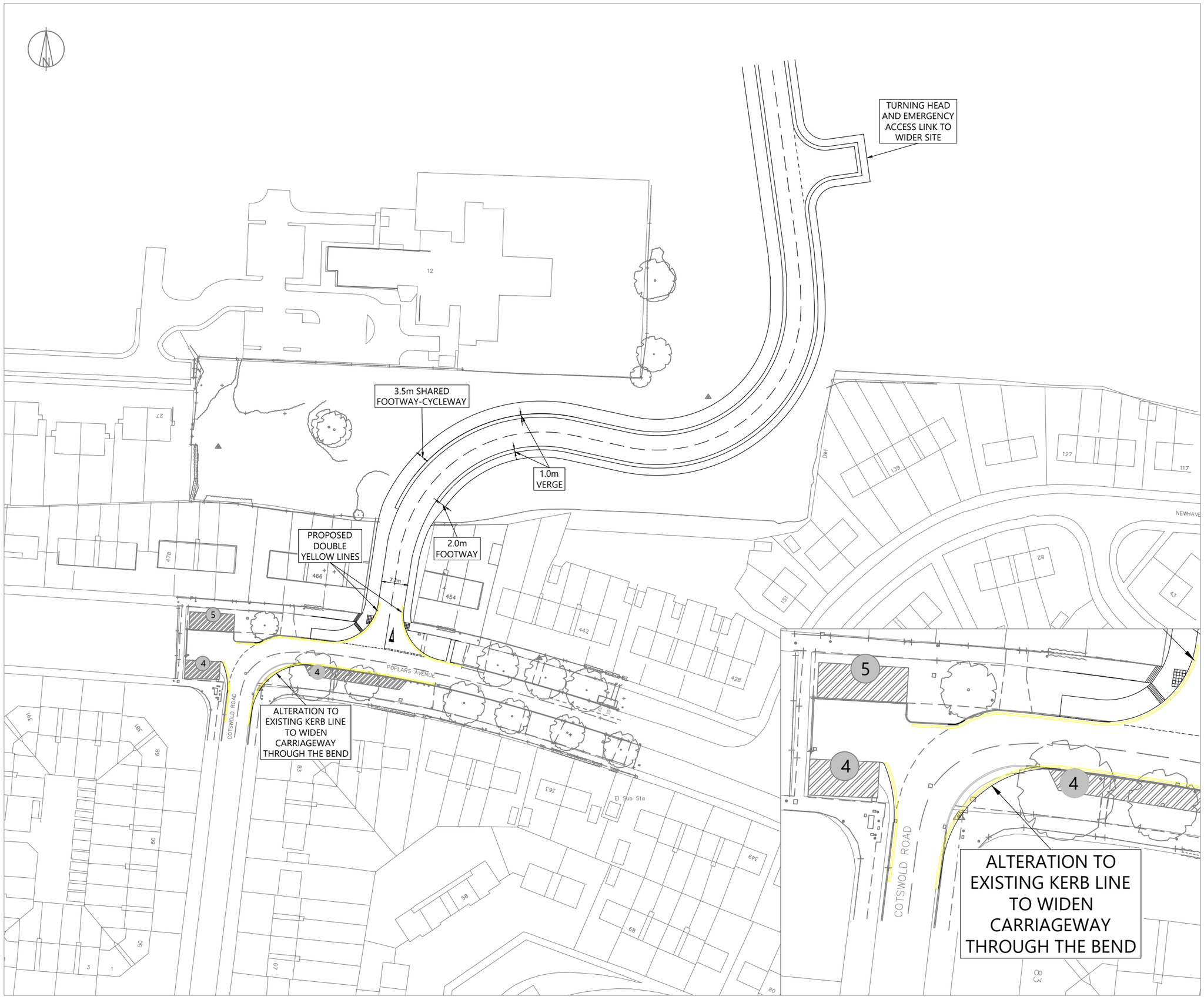
TITLE:

PROPOSED ACCESS FROM POPLARS AVENUE TO RESIDENTIAL LAND AND LOCAL CENTRE

DATE:	DRAWN BY:	CHECKED:
26/05/16	FB	DT

Appendix 15

Proposed Poplars Avenue (*west*) Access



NOTES:

Drawing based on Geomatic Surveys Ltd topographical survey 01532/01 dated 27/07/15.

KEY:

Parking Areas (number of cars that can be accommodated) 6

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	09/K	1:1,000 @ A3

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TITLE:

PROPOSED ACCESS TO EMPLOYMENT LAND AT POPLARS AVENUE

DATE:	DRAWN BY:	CHECKED:
26/05/16	FB	DT

Appendix 16

Proposed Birch Avenue Access

NOTES:

Drawing based on Geomatic Surveys Ltd topographical survey 01532/01 dated 27/07/15.

ISSUE	REASON FOR REVISION	DATE

2.0m FOOTWAY

4.8m

10 CARS

POTENTIAL AREAS OF INFORMAL PARKING FOR AROUND 15 CARS

GRASS VERGE

5 CARS

900mm RAMP OR 2.0m CONTRASTING STRIP TO MARK CHANGE OF SURFACE

VERGE

4.8m

5.5m

PROPOSED SHARED SURFACE ACCESS

EXTENSION TO FOOTWAY

ELM ROAD

BIRCH AVENUE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	08/N	1:500 @ A3

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07973 375 937 / 07595 892 217

TITLE:

PROPOSED ACCESS TO RESIDENTIAL LAND AT BIRCH AVENUE

DATE:	DRAWN BY:	CHECKED:
26/05/16	FB	DT

Appendix 17

Proposed Grasmere Avenue Access

NOTES:

Drawing based on Appleton's plan Survey 2/2 drawing number 1820/02 dated January 2012.

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	30/E	1:500 @ A4

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Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

TITLE:

PROPOSED ACCESS TO SPORTS FACILITIES AT GRASMERE AVENUE

DATE:	DRAWN BY:	CHECKED:
26/05/16	FB	DT

Appendix 18

Road Safety Audit Stage 1

WARRINGTON
Borough Council

Traffic Management & Road Safety

SA478 PEEL HALL

ACCESS PROPOSAL (6 JUNCTIONS)

Stage 1 Safety Audit

Warrington Borough Council
Environment & Regeneration
Traffic Management, Road Safety & Highways Adoptions
New Town House
Buttermarket Street
Warrington
WA1 2NH

STAGE 1 SAFETY AUDIT

PEEL HALL (NORTH OF POPLARS AVENUE)

1.0 Introduction

This report results from a Stage 1 Safety audit carried out on roads surrounding Peel Hall. The scheme involved the proposal for six potential access points and was at the request of Ms Fiona Bennett of Highgate Transportation Ltd, Box13, 42 Triangle West, Park Street, Bristol, BS8 1ES.

The Audit Team was:

Jamie Fisher MIHE - Audit Team Leader
Principal Highway Engineer
Traffic Management, Road Safety & Highways Adoptions

Mark Tune – Audit Team Member
Team Manager
Traffic Management, Road Safety & Highways Adoptions

The audit comprised an examination of the documents provided by Fiona Bennett listed below:-

Project Number	Drawing Number	Title
	HTp1107 08N	Birch Avenue Access
	HTp1107 09K	Poplars Avenue West Access
	HTp1107 10K	Blackbrook Avenue Access
	HTp1107 11J	Mill Lane Access
	HTp1107 12O	Poplars Avenue Central Access
	HTp1107 30E	Grasmere Avenue Access

A visit to the site was made on the afternoon of 8 June 2016.

The Terms of Reference of the audit are as described in Chapter 2 of HD 19/03 Design Manual for Roads and Bridges (DMRB) 5.2.2 and DMRB HA 42/94 5.2.3. In addition guidance is taken from The Institution of Highways and Transportation (IHT) Guidelines for The Safety Audit of Highways.

The team has examined and reported only on the road safety implications of the scheme as presented and has not examined verified the compliance of the designs to any other criteria.

2.0 Auditors Comments

Location: Birch Avenue

2.1 Problem

Given that this proposed access road will receive substantial use the inter-visibility through the junction should not be hindered by parked vehicles both on and off carriageway. Masked vehicles may result in side or head on impaction junction collisions.

Recommendation

Restrict on and off road parking about the junction to maximise visibility.

2.2 Problem

Given the proposed informal 10 space off road parking 4.8m of carriageway would not allow sufficient avoidance manoeuvring of vehicles exiting the parking area. This may lead to side impact or head on collision occurrence.

Recommendation

Maintain 5.5m carriageway width at this point.

2.3 Problem

There is overhanging hedge line at the boundary of No.4 Birch Avenue that will restrict visibility of the junction. This may lead to turning vehicle conflicts.

Recommendation

Have hedge line set back or removed.

2.4 Problem

The width of Birch Avenue with the addition of on street parking results in a very narrow carriageway that is unsuitable for substantial addition of through traffic. This may lead to head on and glancing collisions.

Recommendation

Consider volume of additional traffic in relation to guidance in Manual for Streets and make alterations accordingly.

Location: Poplars Avenue West

2.5 Problem

The proposed 4 bay parking opposite the junction would not be legally accessibly due to the proposed double yellow line provision. This type of parking restriction is enforceable to the back of the footpath at this location. This will force parking to migrate without proper management and may result in collision occurrence elsewhere on Poplars Avenue.

Recommendation

Provide alternate parking location or consider the requirement of the proposed parking restrictions about the junction.

2.6 Problem

The close proximity of the proposed junction to the existing bend may result in emerging vehicle conflicts with approaching traffic due to restricted visibility of the bend to the west.

Recommendation

Ensure that visibility splays agree with the Design Manual for Roads and Bridges (DMRB) for the intended / existing speed limit (taking into account the existing off street parking occurrence and trees).

Location: Blackbrook Avenue

2.7 Problem

The proposed roundabout offsets approaching traffic heading northbound to Mill Lane. This will reduce forward visibility for vehicles exiting Mill Lane and may result in side impact collisions.

Recommendation

Ensure that the forward visibility from Mill Lane is in adherence to the standards set in the DMRB.

2.8 Problem

The short section of carriageway created between the existing Enfield Park Round roundabout and the proposed roundabout is likely to cause queuing traffic to back up through the proposed junction during peak hours. This may result in the northbound access being restricted, aggressive driving and/or side impact collisions.

Recommendation

Assess the present and expected traffic flow requirements as part of the Transport Assessment Report for this proposal and ensure that the proposals do not have a negative impact on the road network.

2.9 Problem

The southbound approach to the proposed roundabout has little deflection to slow entry vehicle speeds. This will promote higher speed of southbound through traffic leading to potential side impact and tail end collisions.

Recommendation

Provision a greater deflection in the southbound approach to the roundabout.

2.10 Problem

The straight line pedestrian crossing alignments shown on the south side, southbound carriageway of the proposed roundabout increase pedestrian time in the live carriageway, raising the risk of vehicle strikes.

Recommendation

Ensure that all pedestrian crossing points are perpendicular to the kerb to reduce the width of requires carriageway crossing.

Location: Mill Lane

2.11 Problem

Visibility at the termination point of the proposed shared surface will be restricted by the existing hedge and bend to the south east. This may result in cyclists being struck by passible vehicles on crossing at this point.

Recommendation

Ensure adequate visibility splays are provisioned to allow inter-visibility between approaching drivers and cyclists.

2.12 Problem

Although the northbound route from the proposed junction is for very lightly traffic access the proposed width of the carriageway would restrict passing vehicles potentially leading to side or head on conflicts.

Recommendation

With little footfall requirements the removal of one of the proposed footpaths would allow a wider access road construction reducing the risk of vehicle conflicts.

2.13 Problem

The proposed tabled junction may cause adverse camber for long or trailered vehicles turning north onto the access road. This may result in loss of loads taking into account that the horse fields may be retained.

Recommendation

Track such vehicles through the junction and consider alternative forms of traffic calming if deemed necessary.

Location: Poplars Avenue Central

2.14 Problem

The proposed relocated bus stop layby is depicted with the shelter to the rear of the provision which is away from the alighting area that the bus will pull up to. This may cause trips or falls by pedestrians rushing to the pickup point.

Recommendation

Relocate the shelter to the alighting point that a bus would pull up to in the layby.

2.15 Problem

The proposed right turn filter lane on Poplars Avenue to feed the proposed junction will be an ideal overtaking opportunity for through traffic in both directions which may result in head on collisions.

Recommendation

Provision traffic or refuge islands to protect the right turn lane and restrict vehicles from overtaking.

2.16 Problem

The stop lines for the relocated controlled crossing provision to the south east of the proposed junction would seem close proximity to the crossing studs. This reduces the safety margin for vehicles to stop potentially conflicting with pedestrians. The Borough standard between stop line to stud line on controlled crossings is 3m to maximise this safety margin.

Recommendation

Ensure that all crossing stop lines are set back 3m from the stud line. This may affect the positioning of the bus laybys to allow signal post positioning.

2.17 Problem

Tactile paving is not shown on either verge of the proposed uncontrolled crossing provision between Brathay Close and Newhaven Road. This may lead to confusion for visually impaired pedestrians.

Recommendation

Ensure tactile paving is provisioned at all dropped pedestrian crossing points.

2.18 Problem

There are existing trees close to the location of the proposed controlled crossing relocation which may reduce the visibility of the signal heads to oncoming traffic. Late signal appreciation may result in collisions with pedestrians or rear end shunts.

Recommendation

Ensure that forward visibility of signal heads is within the guidance set in the DMRB TD9/93 Table 3 taking into account the roads design speed.

2.19 Problem

The proposed exclusion of parking restrictions between the 10 space layby and the junction with Brathay Close may result in obstructive parking particularly with the introduction of a traffic island to protect the right turn filter lane. This may result in collision with the island and/or parked vehicles and would specifically restrict through access.

Recommendation

Extend junction protection to the south side of Poplars Avenue between the 10 space layby and the junction with Brathay Close.

Location: Grasmere Avenue

2.20 Problem

Parking on Windermere Avenue may lead to access obstruction or impatient overtaking that may result in a head on or avoidance manoeuvre collision.

Recommendation

If access road must be provisioned on Grasmere Avenue the parking restrictions should be introduced on Windermere Avenue to the junction with Poplars Avenue to maintain through access.

2.21 Problem

Although Mallard Close is lightly trafficked the staggered junction proposal may lead to vehicles merging from opposite side roads resulting in head on or side impact collisions.

Recommendation

Consider removal of the stagger for a standard cross road junction or offset the stagger further.

2.22 Problem

The high sided boundary fence to no 37 Windermere Avenue will restrict the inter-visibility of the proposed junction to the right on exit. This may lead to side impact collisions with passing vehicles.

Recommendation

Reduce the height of the boundary fence or set the junction further away from this boundary line to ensure visibility splay to TD 42/95 of the DMRB (Vol6 SEC2 Part6 Ch7).

3.0 Auditors Statement

We certify that we have examined the drawings and documents listed. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme. The problems identified have been noted in this report together with associated safety improvement suggestions that we recommend should be studied for implementation. No one on the Audit Team has been involved with the scheme design.

Audit Team Leader
Jamie Fisher MIHE — Signed:
Principal Highway Engineer — Date: 16 June 2016
Traffic Management, Road Safety & Highways Adoptions

Audit Team Members
Mark Tune — Signed:
Team Manager — Date: 16 June 2016
Traffic Management, Road Safety & Highways Adoptions

Appendix 19

Plan Showing Proposed Pedestrian and Cycle Linkages

NOTES:
Reproduced from Appletons Peel Hall Indicative Landscape Components Plan (Rev.M).

KEY:

Existing PRoW

Proposed Pedestrian Links

Proposed Shared Footway/Cycleway

ISSUE	REASON FOR REVISION	DATE

PROJECT:
PEEL HALL, WARRINGTON

CLIENT:
SATNAM MILLENNIUM LTD

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	ES T8	NOT TO SCALE

HighgateTransportation
www.highgatetransportation.co.uk
Box 13, 42 Triangle West
Park Street, Bristol BS8 1ES
07973 375 937 / 07595 892 217

TITLE:
ILLUSTRATIVE PLAN SHOWING PROPOSED PEDESTRIAN AND CYCLE LINKAGES

DATE:	DRAWN BY:	CHECKED:
28/06/16	FB	DT

Appendix 20

Bus Gate Examples in Current Use

Appendix 20

Bus Gate Examples in Current Use

Example 1 – Ravenswood Bus Gate

Example 2 -