## vectos.

Figures























## vectos.

Appendix A

A bus senice operated 1 by

| Bicester - Oxford |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Glorf Fam Bicester Reod (NW-bound) | 05.2 | 05.58 | 06.18 | 06.30 | 06.46 | 06.56 | 07:16 |  | 07:41 | 08.11 |  | 08.51 |  | 0926 | 09.56 |  | 10.26 |  | 10.56 | $11: 26$ |  | $11: 56$ |  | 12.26 | 12:56 |  | 13.26 |  | 13.56 | 14.26 |  | 14.56 |  | 15.26 | 16.01 |  | 1636 |  | 17:11 171 | $17: 418.01$ | 1821 | 18.4119 | 19.0 | 23.02 |
| Glor famm opp Scampton Close | 052 | 05.58 | 06.180 | 06.30 | 06.46 | 06.56 | 07.16 | 0726 | 07:41 | 08.11 |  | 08.51 |  | 09.26 | 09.56 |  | 10.26 |  | 10.56 | $11: 26$ |  | 11.56 |  | 12.26 | 12.56 |  | 13.26 |  | 13.56 | 14.26 |  | 14.56 |  | $15: 26$ | $16: 01$ |  | $16: 36$ |  | 17:11 | 17:4118:01 | 1821 | 18419 | 1902 |  |
| Gloy farm, opp Benson close | 052 | 05:58 | 06.180 | 0630 | 06.46 | 0.56 | 07:16 | 0726 | 07:41 | 08.11 |  | 08.51 |  | 09.26 | 09.56 |  | 10.26 |  | 10.56 | $11: 26$ |  | 11.56 |  | 12.26 | 12.56 |  | ${ }_{13,26}$ |  | 13.56 | 14.26 |  | 14.56 |  | 15.26 | 16.01 |  | 1636 |  | 17:11 | $17.4118: 01$ | 1821 | 18419 | 1902 |  |
| $G$ Gloy Famm, opp fulmar Court | 05.2 | 00559 | 06.19 | 06.31 | 06.47 | 06.57 | 07:17 | 0727 | 0742 | 08.12 |  | 08.52 |  | 0927 | 09.57 |  | 10.27 |  | 10.57 | $11: 27$ |  | $11: 57$ |  | 12.27 | 12.57 |  | 13.27 |  | 13.57 | 14.27 |  | 14.57 |  | 1527 | 16.02 |  | 16.37 |  | 17:12 | 17.4218 .02 | 1822 | 18.4219 | 19.03 | ${ }^{3.0}$ |
| Glory farm, opp Duxtord Clise | 052 | 0059 | 06.190 | 0631 | 06.47 | 0.57 | 07:17 | 0727 | 0742 | 08.12 |  | 08.52 |  | 0927 | 09.57 |  | 10.27 |  | 10.57 | $11: 27$ |  | 11.57 |  | 1227 | 12.57 |  | ${ }_{1327}$ |  | 13.57 | 14.27 |  | 14.57 |  | 1527 | 16.02 |  | 1637 |  | 17:12 | 17.4218 .02 | 1822 | 184219 | 19.03 | 23.03 |
| Gloy Farm, opp Curiss Close | ${ }_{0} 53$ | 06.00 |  | 0632 | 0648 | 06.58 | 07:18 | 0728 | 0743 | 08:13 |  | 08:53 |  | 0928 | 09.58 |  | 10.28 |  | 10.58 | $11: 28$ |  | 11.58 |  | 12.28 | 12.58 |  | $13: 28$ |  | ${ }^{13,58}$ | 14.28 |  | 14.58 |  | 15.28 | 16.03 |  | 1638 |  | 17:13 | 17:4318:03 | 1823 | 184319 | 1904 | 3,04, |
| Glory Farm, opp Rochtord Gardens | 053 | 0600 |  | 0633 | 0648 | 06.58 | 07.18 | 0728 | 0743 | 08.13 |  | 08.53 |  | 0928 | 09958 |  | 10.28 |  | 10.58 | $11: 28$ |  | 11.58 |  | 12.28 | 12.58 |  | 13.28 |  | 13.58 | 14.28 |  | 14.58 |  | 15.28 | 16.03 |  | 1638 |  | 17:13 | 1774318.031 | 1823 | 184319 | 19.04 |  |
| Gloy Farm, op Lincoln Close | 053 | 06.00 | 062006 | 0632 | 06.48 | 0.58 | 07:18 | 0728 | 0743 | 08,13 |  | 08.53 |  | 09.28 | 09.58 |  | 10.28 |  | 10.58 | $11: 28$ |  | 11.58 |  | 12.28 | 12.58 |  | 13.28 |  | 13.58 | 14.28 |  | ${ }^{14.58}$ |  | 15.28 | 16.03 |  | 16.38 |  | 17:13 | 17:43 18:03 | 1823 | 184319 | 19.04 | 23.4 |
| Gloy Farm, ajij Whitey Cresent | 053 | 06.01 | 062106 | 0633 | 0649 | 06.59 | 07.19 | 0729 | 0744 | 08.14 |  | 08.54 |  | 0929 | 09.59 |  | 10.29 |  | 10.59 | $11: 29$ |  | 11.59 |  | 12.29 | 12.59 |  | 13.29 |  | 13.59 | 14.29 |  | 14.59 |  | $15: 29$ | 16.04 |  | 1639 |  | 17:14 | 17:4418:04 | 1824 | $18: 44$ | 19.05 |  |
| Gloy Farm, adj Ruskin Walk | $0_{53}$ | 06002 | 06.2208 | 0634 | 06.50 | 07:00 0 | 0720 | 0730 | 0745 | 08:15 |  | 08:55 |  | 0930 | 10:00 |  | 10.30 |  | 11:00 | ${ }^{1130}$ |  | 12:00 |  | 1230 | ${ }_{13} 100$ |  | ${ }_{13,30}$ |  | 14.00 | 14.30 |  | $15: 00$ |  | 1535 | 16.05 |  | $16: 40$ |  | 17:15 | 17:45 18:05 | 1825 | 1845 | 19.06 |  |
| Glory fam, opp St Peters Cressent | 053 | 06.02 | 06.220 | 06.34 | 0.55 | 07:01 0 | 07.21 | 0731 | 0746 | 08.16 |  | 08.56 |  | 0931 | $10: 01$ |  | 10.31 |  | 11:01 | $11: 31$ |  | $12: 01$ |  | 12.31 | ${ }_{13.01}$ |  | ${ }_{13,31}$ |  | 14.01 | 14.31 |  | 15.01 |  | 1531 | 16.06 |  | $16: 41$ |  | 17:16 | 17:4618:06 | 1826 | 1846 | 19.07 |  |
| Bicester, afj Buckingham Cesesent | ${ }_{0} 53$ | $06: 03$ | 062306 | 06.34 | 06.52 | 07:02 0 | 0722 | 0732 | 0747 | 08:17 |  | 08.57 |  | 0932 | 10.02 |  | 10.32 |  | 11:02 | ${ }_{1132}$ |  | ${ }_{12} 202$ |  | 12.32 | ${ }_{13.02}$ |  | ${ }_{13,32}$ |  | 14.02 | 14.32 |  | 15.02 |  | 1532 | 16.07 |  | 16.42 |  | 17:17 | 17:47 18.071 | 1827 | 184719 | 19.08 |  |
| Bicester North Station (0/s) | ${ }_{0} 053$ | 06004 | 06.24 | 0635 | 0.53 | 0703 | 0723 | 0733 | 0748 | 08:18 |  | 08.58 |  | 0933 | 10.03 |  | 10.33 |  | 11:03 | ${ }^{11: 33}$ |  | 12.03 |  | ${ }^{1233}$ | ${ }_{13,03}$ |  | ${ }_{13,33}$ |  | 14.03 | 1433 |  | 15.03 |  | 1533 | $16: 08$ |  | 16.43 |  | 17:18 | 17:48888:08 | 1828 | 1848 | 19.09 |  |
|  | 053 | 06.06 | 06.260 | 06.36 | 06.56 | 07.06 | 07.26 | 0736 | 07.51 | 0821 |  | 0901 |  | 093 | 10.06 |  | 10.36 |  | 11:06 | ${ }^{1136}$ |  | 12.06 |  | 1236 | 13.06 |  | 1336 |  | 14.06 | 14.36 |  | 15.06 |  | 1536 | 16:11 |  | $16: 46$ |  | $17: 21$ | $17.5118: 11$ | 1831 | 18.51 | $19: 11$ |  |
| Bicester Manostied Road Stand 3) | 0594 | $06: 10$ | 063006 | $06: 40$ | 07:00 | 07:10 0 | 07:30 0 | 07:40 | 07.5508 .05 | 08.25 | 08.45 | 0905 | 0925 | 09900955 | 10:10 | 1025 | $10: 40$ | $10: 55$ | 11:10 11:25 | 11:40 | 11.55 | $12: 10$ | 12.25 | 12.4012 .55 | $13: 10$ | 13.25 | $13: 40$ | 13.55 | 14.1014 .25 | 14.40 | 14.55 | $15: 10$ | 15.25 | $15.4016: 00$ | $16: 15$ | 16.35 | 16.50 | 17:10 | 17:25 17:40 | 17.55 18.15 | $18: 35$ | 18.55 | $19: 15$ |  |
| Kin's End Queens Averue (SW-bound) |  |  | 0633 |  | 07.03 |  | 07.33 |  | 07.58 | 0828 | 08.48 | 09.08 | 0927 | 099420957 | $10: 12$ | 1027 | 10.42 | 10.57 | 11:12 11:27 | ${ }^{1: 42}$ | 1157 | $12: 12$ | 1227 | 12.4212 .57 | $13: 12$ | 13.27 | 13.42 | 13.57 | 14.1214 .27 | 14.42 | 14.57 | 15.12 | 1527 | 15.4216 .02 | $16: 17$ | 16.37 | $16: 52$ | 17:12 | $17: 271774$ | 17.5718 .171 | 1837 | 18.5719 | $19: 17$ |  |
| King's End, o/s Community Hospital |  |  | 06.33 |  | 0704 |  | 07.34 |  | 07.59 | 08.29 | 08.49 | 0909 | 0928 | 09930958 | 10:13 | 1028 | 10.43 | 10.58 | 11:13 11:28 | 11:43 | $11: 58$ | 12:13 | 1228 | 12.4312 .58 | 13:13 | 13.28 | 13.43 | 58 | 14.1314 .28 | 14.43 | 14.58 | $15: 13$ | 15.28 | 15.4316 .03 | $16: 18$ | 16.38 | $16: 53$ | 17:13 | 17:28 17:43 | 17:588 18.18 | 1838 | 18.58 | $19: 18$ |  |
| Bicester Village (SW-bound) |  |  | 0634 |  | 07.05 |  | 07.35 |  | 08.00 | 0830 | 08.50 | 09.10 | 0929 | 09.440959 | $10: 14$ | 10.29 | 10.44 | 10.59 | 11:14 11:29 | $11: 4$ | $11: 59$ | $12: 14$ | 12.29 | $12: 4412.59$ | 13.14 | 13.29 | 13.44 | 13.59 | 14.1414 .29 | 14.44 | 14.59 | $15: 14$ | 15221 | 15.4416 .04 | 16.19 | $16: 39$ | $16: 54$ | 17:4 | $17: 29$ | 17.5918 .19 | 1 | 18.59 | \% 19 |  |
| ${ }^{\text {Bicester Lakevew Dive (sw-bound) }}$ |  |  | 0635 |  | 07.06 |  | 0736 |  | 08.01 | 0831 | 08.51 | $09: 11$ | 0930 | 099410.00 | 10:15 | 1030 | 10.45 | 11:00 | 11:15 11:30 | 11:45 | 12.00 | 12.15 | 1230 | $12.45 \quad 13: 00$ | $13: 15$ | 1330 | 13,45 | 1400 | 14.1514330 | 14.45 | 15.00 | $15: 15$ | 153 | 15.4516 .05 | 1620 | $16: 40$ | 16.55 | 17:15 | 1730 | 18.0018 .20 | 1 | 19.00 | 1920 |  |
| Bicester, opp Vendee Dive |  |  | 0636 |  | 07:08 |  | 0738 |  | 08.03 | ${ }_{0} 833$ | 0853 | $09: 13$ | 0931 | 094610001 | $10: 16$ | 1031 | 10.46 | $1: 01$ | $11: 16$ | $11: 46$ | 12.01 | $12: 16$ | 1231 | $12: 46$ | $13: 16$ | 13.31 | 13.46 | 1401 | 14.1614 .3 | 1446 | 15.01 | 15.16 | 1531 | 15.46 | 16221 | $16: 41$ | 16.56 | 1:16 1 | 1731 | 18011821 |  | 19.019 | 9.21 |  |
| Hightield, o/s Brookside School | ${ }^{5} 54$ | 06.12 |  | 06442 |  | 07:12 |  | 0742 | 08.07 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Highfied The Approach (sw-bound) | 05.4 | 06.13 |  | 0643 |  | $07 / 13$ |  | 0743 | 08.08 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Highfield, opp Gearge Street | 054 |  |  | 06.44 |  | 07:14 |  | 44 | 08.09 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Highfield Blenteim Orive ( W-bound) | 05.45 | 06.15 |  | 0 |  | 07:15 |  | 0745 | $08: 10$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hightield, opp Greenwood dive | 05.4 | 06.16 |  | 0646 |  | 07:16 |  | 0746 | $08: 11$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hightield, opp Bowmont Square | 05.47 | 06.17 |  | 06.47 |  | 07:17 |  | 0747 | $08: 12$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 30 minutes |  |
| Highfield, ad. Wear Road | O5,4 | 06.17 |  | 06.47 |  | 07:17 |  | 0747 | 08.12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kingmere Whiteands Way Noth (SE-bound) | 05.48 | 06.18 |  | 0648 |  | 07.18 |  | 0748 | 08.13 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kingmere Cente (SE-bound) | 055 | 0620 |  | 06.50 |  | 0720 |  | 07.50 | 08.15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kingsmere Whiteands Way South (sw-bound) | 055 | 10621 |  | 06.52 |  | 0722 |  | 07.52 | $08: 17$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kingsmere Bicester Park and Ride (Stop A) | 05.5 | 0623 |  | 06.55 | 07:10 0 | 07250 | 0740 0 | 07.55 | 580.050820 |  | 08.55 | $09: 15$ | 0933 | 09:48 10.03 | 10:18 | 1033 | 10.48 | 11:03 | 11:18 11:3 | 11:48 | 12.3 | $12: 18$ | 1233 | 12.4813 .03 | $13: 18$ | ${ }^{1333}$ | 13.48 | 1403 | 14.181433 | 14.48 | 1503 |  |  | 15.48 16.08 | 16.23 | 1643 |  |  | 17:33 17:48 | 18.031823 | 1843 | 19.0319 | 1922 |  |
| Wendebury Chesterton Tur South (sw-bound) | 05.5 | 0623 | 06388 | 06.55 | 07:10 0 | 07250 | 0740 | 07.55 | 0805 08.20 | 0835 | 08.55 | $09: 15$ | 0933 | 09.48 10.03 | $10: 18$ | 1033 | 10.48 | $11: 03$ | $\begin{array}{ll}11: 18 & 11: 3\end{array}$ | 11:48 | 12.03 | $12: 18$ | 1233 | $12.48 \quad 13.03$ | 13.18 | ${ }_{133}^{133}$ | $13: 48$ | 1403 | 14.1814 .33 | 1448 | 15.03 |  |  | 15.4816 .08 | 1623 | $16: 43$ |  |  | 17:33 17:48 | 18.0318 .23 | 1843 | 19.0319 | 1922 |  |
| Wendebury Tur (sw-bound) | 0.55 | 06.25 | 06.4006 | 06.58 | 07:13 0 | 07280 | 0743 | 07.58 | $\begin{array}{ll}0808 & 0823\end{array}$ | 0838 | 08.58 | $09: 17$ | 09350 | 09.5010 .05 | $10: 20$ | 1035 | 10.50 | $11: 05$ | 11:20 11:35 | 11.50 | 12.05 | 12.20 | 1235 | $12.50 \quad 13.05$ | $13: 20$ | 13.35 | 13.50 | 1405 | 142014335 | 14.50 | 15.05 | 15.20 |  | $15.5016: 10$ | 16.25 | 16.45 |  |  | 17:35 17:50 | 18.0518 .251 <br> 1 | 1845 |  |  |  |
| Gosford, opp Kings Ams | 06.0 | ${ }^{6635}$ | 06.50 | 07:10 | 07.25 | 0740 0 | 07.55 | 08.10 | ${ }^{0820} 08835$ | 08.50 | 09:10 | 0925 | 0943 | 09.58 10.13 | 1028 | 10.43 | 10.58 | 11:13 | 11:28 11:33 | 11.58 | $12: 13$ | 12.28 | 12.43 | 12:58 13:13 | 13.28 | 13.43 | 13.58 | $14: 13$ | 14.2814 .43 | 14.58 | $15: 13$ | 15.28 | 15.43 | ${ }_{15,58}^{15: 18}$ | 16.33 | 16.531 | 17:08 | 1728 | 17:43 17:58 | $18: 1318.331$ | 18.53 | 19.13 | 1932 |  |
| Garden City Biestef Poad ( 5 -bound) | 060 | 0637 | 06.520 | 07:12 | 07270 | 0742 | 0757 | 08.12 | 08220837 | 08.52 | $09: 12$ | 0927 | 0945 | 10.0010 .15 | 1030 | 10.45 | 11:00 | 11:15 | 11:30 11:45 | $12: 00$ | $12: 15$ | 1230 | 12.45 | 13:00 13:15 | 13.30 | 13.45 | 1400 | 14.15 | 1433014.45 | 15.00 | $15: 15$ | 1530 | 1545 | $16: 001620$ | 1635 | 16.55 | 17:10 | 7730 | 17.451800 | $18: 1518385$ | 18.55 | 19.15 | 1934 |  |
| Water Eaton Oxtord Parkway Railway Station (Stop D) | 060 | 0638 | 06.53 O | 07:15 | 07,30 0 | 074 0 | 08:00 | $08: 15$ | 0822 08.40 | 08.55 | 0914 | 0929 | 0947 | $10.0210: 17$ | $10: 32$ | 10.47 | 11:02 | 1:17 | 11:32 1:177 | $12: 02$ | $12: 17$ | 1232 | 12.47 | 13:02 13:17 | $13: 32$ | 13.47 | 1402 | $14: 17$ | 14.3214 .47 | $15: 02$ | $15: 17$ | 1532 |  | $16: 0216: 22$ | 16.37 | 16.571 | 17:12 |  | 17:471802 | $18: 1718.37$ | 18.56 | 19.16 | 1935 |  |
| Cutesoswe, opp Jordan Hill | 060 | 0040 |  | 07:17 | 0732 | 07.47 | 08.02 | 08.17 | 08.270842 | 08.57 | 09.16 | 0931 | 0949 | 10.0410 .9 | 1034 | $10: 49$ | 1:04 | 11:19 | 11:34 11:49 | 12.04 | $12: 19$ | 1234 | 1249 | 13:04 13:19 | 13.34 | 13.49 | 14.04 | 14.19 | 143411449 | 15.04 | $15: 19$ | 1534 |  | 16.041624 | 1639 | 16.59 | 17:14 |  | 17:49 18.04 | 18.1918 .39 | 18.58 |  |  |  |
| Cuttesowe, opp five Mie Dive | 060 | 0641 | 0.560 | 07:18 | 0733 | 0748 | $0_{08}^{08}$ | $08: 18$ | 08.280843 | 0858 | $09: 16$ | 0931 | 0949 | $10.0410: 19$ | $10: 34$ | $10: 49$ | 1:04 | 11:19 | 11:34 11:99 | 12.04 | $12: 19$ | 1234 | 12.49 | 13:04 $13: 19$ | 13.34 | $13: 49$ | 1404 | 14.19 | 14.3414 .49 | 15.04 | $15: 19$ | 1534 | 1549 | 16.0416 .24 | 1639 | 16.591 | 17:14 | 1734 | 1774918.04 | $18: 19$ $18: 39$ | 18.59 | 19.19 | 1938 |  |
| Cuttesolow, adj Harefields | 060 | 06.41 | 06.560 | 07:19 | 0734 | 0749 | 0804 | 08.19 | 0882988.4 | 0859 | 09.17 | 0932 | 0950 | 10.0510 .20 | 1035 | 10.50 | 11:05 | $11: 20$ | $11: 3511: 50$ | 12.05 | 1220 | 12.35 | 12.50 | 13:05 13:20 | 13.35 | 13.50 | 14.05 | 1420 | 14.3514 .50 | 15.05 | $15: 20$ | 1535 | 15.50 | $16: 0516.25$ | 16:40 | 17:00 1 | 17:15 | 1735 | 17.50 18.05 | $18: 2018: 40$ | 18.59 | 19,19 | 1938 |  |
| Summetown, opp Upland Pak Road | 06.17 | 0642 | 06.57 | 0720 | 07.350 | 07.50 | 08.05 | 0820 | 08.3008 .45 | 09.00 | 09.17 | 0932 | 0950 | 10.0510 .20 | $10: 35$ | 10.50 | 11:05 | $11: 20$ | $11: 3511: 50$ | 12.05 | 12.20 | 12.35 | 12.50 | 13:05 13.20 | $13: 35$ | 13.50 | 14.05 | 1420 | 1433514.50 | 15.05 | $15: 20$ | 1535 | 15.50 | 16:05 16.25 | 16.40 | 17:00 1 | 17:15 | 17351 | 17.50 18:05 | $18: 20$ $18: 40$ | 19.00 | 1920 | 1939 |  |
| Summertow, opp Suuithey Lane east | 06.1 | 06.42 | 06.570 | 0721 | 07.36 | 07.51 | 08.06 | 0821 | 08331 08.46 | 09.01 | 09.18 | 0933 | 0951 | 10.061021 | 1036 | 10.51 | 11:06 | $11: 21$ | 11:36 11:51 | 12.06 | 1221 | 12381 | 12.51 | 13.0613 .21 | 13.36 | 13.51 | 14.06 | 1421 | 14.3614 .51 | 15.06 | 15.21 | 1536 | 15.51 | $16: 0616.26$ | 16.41 | 17:01 | 17:16 |  | 17.5118 .06 | $18: 2118411$ | 19.00 | 1920 | 1939 |  |
| Summetown, adj Hamiton Road | ${ }_{0} 0611$ | 10643 | 06.580 | 07.22 | 0737 | 07.52 | 08070 | 0822 | 08320847 | 09.02 | 09.19 | 0934 | 09.52 | 10.0710 .22 | 1037 | 10.52 | $11: 07$ | $11: 22$ | $11: 3711.52$ | 12.07 | 1222 | 1237 | 12.52 | 13.07 | 13.37 | 3,52 | 1407 | 1422 | 14.3714 .52 | 15.07 | 15.22 | 1537 | $15: 52$ | 16.071627 | 16.42 | 17:02 1 | 17: |  | 17.5218 .07 | ${ }_{18}^{1822} 18481$ | 19.01 | 19.219 | 19.40 |  |
| Summertown Shops STiop $C$ | 06.1 | 26644 | 06590 | 07230 | 07380 | 0753 | ${ }^{0808} 0$ | 0823 | 083308488 | 09.30 | 0920 | 0935 | 0953 | 10.0810 .23 | 1038 | 10.53 | $11: 08$ | 1123 | $11: 3811: 53$ | 12.08 | 12.23 |  |  | 13:0813:23 | $13: 38$ |  | 1408 |  | 1433814.53 | 15.08 | 15.23 | 1538 |  | 16.081628 | $16: 43$ |  | 17:18 |  | 17.5318 .08 | 18231843 1824 1834 | 19.02 |  | 1941 |  |
| Summetown, opp Thoncifife | 06.12 |  |  | 07.24 | 07390 | 07.54 | 08090 | 0824 | 08340849 | 0904 | 0921 | 0936 | 0954 | $\begin{array}{llll}10.09 & 1024\end{array}$ | $10: 39$ |  | $11: 9$ | ${ }^{11224}$ | 11:39 11:54 | 12.09 |  |  |  | $13.09{ }^{13,24}$ | 13.39 |  | 1409 |  | $14.39{ }^{14.54}$ | 15.09 |  | 1539 |  | 16.0916 .29 | $16: 44$ |  |  |  | 17:54 18:0 | 18.241844 |  |  | 19.41 |  |
| Oxford opp lathuy Road east | ${ }_{0}^{06,11}$ |  |  |  | ${ }^{07740} 0$ | ${ }^{07.55} 008$ | 08.10 0 | ${ }^{0822}$ | ${ }^{08335} 08.50$ | 5 | 0922 | ${ }^{0937}$ | ${ }^{0955}$ | $10: 10$ $10: 10$ 10.25 1026 | $10: 40$ 1041 | 10.55 10.56 | 11:10 | $11: 25$ <br> $11: 26$ | $\begin{array}{ll}11: 40 & 11: 55 \\ 11: 41 \\ 11: 56\end{array}$ | 12:101 | 1225 <br> 1226 <br> 122 <br> 12 | 1240 1235 | 12.55 |  | $13: 40$ | ${ }_{13,55}^{13,56}$ | 14.10 | 14225 | ${ }_{14}^{14.40} 114.55$ |  | 1525 15 15 |  |  | 16:10 16.30 |  |  |  |  | 17.55 17.56 .10 18.11 | 1825 1824 1885 1846 | 19.03 |  | ${ }_{19,42}$ |  |
| Oxtord, opp St Margarets Road east | ${ }_{06,1}$ | 06.47 | 07:04 0 | 0728 | 07433 0 | 0758 0 | 08:13 | ${ }_{0} 828$ | 08.38 | 090.08 | 0924 | о939 | 0957 | 10:12 10.27 | 10.42 | 10.57 | 1:12 | $11: 27$ | 11:42 11:57 | $12: 12$ | 12.27 | 12.42 | 1257 | 13:12 13.27 | 13.42 | 13.57 | 14.12 | 1427 | 14.4214 .57 | $15: 12$ | 15.27 | 1542 | 15.57 | ${ }_{8}^{16: 12} 16,32$ | $16: 47$ | 17.07 | $17: 2217$ | 17:42 1 | 17.57 18:12 | 18.2718 .47 | 19.05 | 1925 | 19.44 |  |
| Oxtord, ajj Pakk Town | 06.1 | 06,48 | 07:05 0 | 07:30 | 07,45 | 08.00 | 08.15 | 0830 | 08.40 08.55 | 09.10 | 0925 | 09:40 | 0958 | 10:13 10.28 | $10: 43$ | 10.58 | 1:13 | 11:28 | 11:43 11:58 | 12:13 | 1228 | $12: 43$ | 12.58 | 13:13 13:28 | 13:43 | 13.58 | 14:13 | 1428 | 14.4314 .58 | $15: 13$ | $15: 28$ | 15.43 | 15.58 | 16:13 16:33 | 16:48 | 17:08 | 1723 | 17:43 | 17:58 18:13 | 18.28 $18: 48$ | 19.06 | 192619 | 19.45 |  |
| Oxtord, opp Eevington Road | 06.1 | 0649 | 07070 | 0731 | 07.46 | 08.01 | 08.16 | 0831 | 08.4108 .56 | 09.11 | 0927 | 0942 | 10.00 | $10: 1510: 30$ | $10: 45$ | 11:00 | 1:175 | 1130 | 11:45 12:00 | $12: 15$ | 1230 | 12.45 | 13.00 | 13:15 13.30 | 13.45 | 14.0 | 14.15 | 1430 | 14.4515 .00 | $15: 15$ | 1530 | 1545 | $16: 00$ | 16:15 1635 | 16.50 | 17:70 | 1725 | 17.45 | 18.001815 | 18.3018 .50 | 19.07 | 192719 | $19: 46$ |  |
| Oxtord, adj Kelele Road | 06.1 | 0650 | 0709 | 0734 | 0749 | 08.04 | 08.19 | 0834 | 08.440859 | 09.14 | 0928 | 0943 | 10.01 | $10: 1610.31$ | $10: 46$ | $11: 01$ | 11:16 | $11: 31$ | 11:46 12:01 | $12: 16$ | 12331 | 12.46 | 13.01 | $13: 161331$ | 13.46 | 14.01 | 14.16 | 1431 | 14.461501 | 15.16 | 15.3 | 15.46 | 1601 | $16: 161636$ | 16.51 | 17:11 | 17.26 | 17.4 | 18.0118 .1 | 183118.51 | 19.08 | 192819 | 19.47 |  |
| Oxtord Magdaen Street East (Stop C6) | ${ }^{662}$ |  | 07:12 0 | 07.37 | 07.520 | 08.070 | 0822 | 0837 | ${ }^{0847} 09.02$ | 09.17 | ${ }^{0931}$ | 0946 | 10.04 | $10: 1910.34$ | $10: 49$ | $11: 04$ | 11:19 | 1134 | 11:49 12:04 | $12: 19$ | 1234 | 12.49 | 13.04 | ${ }^{13: 19} 113: 34$ | 13.49 | 1404 | $14: 19$ | 1434 | 14.491504 | $15: 19$ | 1534 | 15.49 | 16.0 | $16: 191639$ | 16.54 | 7.14 | 17:29 | 17:49 | 18:04 18:19 | 18.3418 .54 | $19: 10$ | 1930 | 19.49 |  |
| Oxford - Bicester |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oxtord Magdaen Street (Stop (4) | 0630 | 07.05 | 07.25 | 07.45 08 | 08.0508 | 08.2508 | 0840 09 | 09.00 | 09.150930 | 0945 | 10.00 | 10.15 | 1030 | 10.45 11:00 | 11:15 | $11: 30$ | 11:45 | $12: 00$ | $12.15 \quad 1230$ | $12: 45$ | 13.00 | $13: 15$ | $13: 30$ | 13.4514 .00 | 14.15 | 1430 | 14.45 | 15.00 | 15.151535 | 15.45 | 16.00 | $16: 15$ | 6.30 | 16:45 17:00 | 17:15 17 | 17:30 | 17.45 | 8.00 | $18: 1518.35$ | 18.5519 .15 | 19.45 |  |  | 3.45 |
| Oxtord, Opp Kelele Road | ${ }_{063}$ | 07.06 | 07.2607 | 07:46 08 | 08.0608 | 08.2608 | $08: 4109$ | 09.01 | 09.160931 | 0946 | 10.01 | $10: 16$ | 10.3110 | $10: 46$ 1:01 | $11: 16$ | $11: 31$ | $11: 46$ | $12: 1$ | $12: 161231$ | $12: 46$ | 13.01 | 13.16 | 1331 | $13: 461401$ | 14.16 | 1431 | 14.46 | 15.01 | 15.161531 | $15: 46$ | 1601 | 16.16 | 6.3116 | 16:46 17:01 | 17:16 | 17.31 | 17.46 | 18.01 | $18: 161836$ | 18.5619916 | $19: 46$ |  |  | 23:46 |
| Oxtord, adj Eevington Road | 0632 | 0707 | 07.27 | 07:47 08 | 08.0708 | 08.2708 | 08420 | 09.02 | 09.170932 | 0947 | 10.02 | $10: 17$ | 10.3210 | $10.4711: 02$ | $11: 17$ | 1138 | $11: 47$ | 12.22 | $12: 171238$ | $12: 47$ | 13.02 | $13: 17$ | $13: 32$ | 13.4714 .02 | 14.17 | 1432 | 14.47 | 15.02 | $15: 171538$ | $15: 47$ | 16.02 | $16: 1716$ | 6.32 | 16:47 17:02 | 17:17 | 1732 | 17.47 | 8.02 | $18: 171837$ | 18.5719 .17 | 19.47 |  |  | 3,47 |
| Oxtord, opp Pakk Toun | 0633 | 07.08 | 07.2807 | 0748 08 | 08.0808 | 08.2908 | $08: 44$ | 09.04 | 09.190934 | 0949 | 10.04 | $10: 19$ | 1034 | $10: 49$ 11:04 | 11:19 | 1134 | $11: 49$ | 1204 | $12: 19123$ | $12: 49$ | 13.04 | $13: 19$ | 13.34 | 13.4914 .04 | $14: 19$ | 1434 | 14.49 | 15.04 | $15: 19153$ | $15: 49$ | 16.04 | $16: 19$ | ${ }^{6} 34$ | 16:49 17:04 | 17:19 | 1734 | $17: 49$ | 18.04 | 18:19 18:38 | 18:58 19:18 | 19:48 |  |  | :48 |
| Oxtord, adj 5 Margarets Poad east | 0634 | 0709 | 07.2907 | 0749 0 | 08.0908 | 08.29 | 08.44 | 09.04 | 09.190934 | 0949 | 10.04 | $10: 19$ | 1034 | 10:49 11:04 | 11:19 | 1133 | 11:49 | 12.04 | $12: 19123$ | $12: 49$ | 13.04 | 13.19 | 1334 | 13.4914 .04 | $14: 19$ | 1434 | 14.49 | 15.54 | $15: 19153$ | 15.49 | 1604 | $16: 19$ | 6.34 | $16: 491704$ | 17:19 | 1734 | 1749 | 8.04 | $18: 191839$ | $18.5919: 19$ | 19:48 |  |  | 3,48 |
| Oxtord Linton Road (N-bound) | 06.35 | 07:10 | 07.3007 | 07.50 | 08:10 08 | 08.30 | 08.45 | 09.05 | 09200935 | 0950 | 10.05 | $10: 2$ | $10: 35$ | 10.50 11:05 | $11: 20$ | $11: 35$ | 11:50 | 12.05 | 12.201235 | 12.50 | 13.05 | 13.20 | 13,35 | 13.5014 .05 | 14.20 | 1435 | 14.50 | 15.05 | $15.20 \quad 1535$ | 15.50 | 16.05 | $16: 20$ | 6.35 | 16:50 17:05 | $17: 2017$ | 17.35 | 17.50 | 18.05 | 18:20 18:40 | 19.901920 | 19.49 |  |  | 3:49 |
| Oxtord, adj Lathbur Read east | 06.35 | 07:10 | 07.30075 | 07.50 | 08:10 08 | ${ }^{083} 3108$ | ${ }^{0846}$ | 09.06 | 09210936 | 0951 | 10.06 | 10.21 | 103610 | 10.511106 | $11: 21$ | 1136 | $11: 51$ | 12.06 | $12.21 \quad 1236$ | 12.51 | 13.06 | 13.21 | 13.36 | 13.5114 .06 | 14.21 | 1436 | 14.51 | 15.06 | 15.211536 | 15.51 | 1600 | $16: 2116$ | 6.36 | 16:51 17:06 | $17: 2117$ | 17.36 | 17:51 18 | 8:06 | 18:21 18:40 | 19.001920 | 149 |  |  | 49 |
| Summertown Shops Stiop A) | 06.37 | 07:12 | 07.32 or | 07.52 08 | 08:12 08 | 08:33 08 | 08.48 | 09.08 | 09230938 | 0953 | 10.08 | 10.23 | $10: 38$ | $10.5311: 08$ | $11: 23$ | 1138 | 11:53 | 1208 | 12.2312388 | 12.53 | 13.08 | 13.23 | 1338 | 13.5314 .08 | 14.23 | 1438 | 14.531 | 15.08 | 15.231538 | 15.53 | 1608 | $16: 2316$ | 6.38 | 16:53 17:08 | 1723 | 17.38 | 17.5318 | 18.8 | $18: 2318: 42$ | 19.0219 .22 | 19.51 |  |  | 2351 |
| Summertow, adj Suut Parade east | 0637 | 07:12 | 07.3207 | 07.5208 | $28: 1208$ | 08:33 08 | 0848 | 09.08 | $0923 \quad 0938$ | 0953 | 10.08 | 10.23 | $10: 38$ | 10.53 11:08 | $11: 23$ | $11: 38$ | $11: 53$ | 1208 | 122381238 | 12.53 | 13.08 | 13.23 | 13,38 | $13: 5314.08$ | 14.23 | 1438 | 14.53 | 15.08 | $15: 2315: 38$ | 15.53 | 1608 | 1623 | 6.38 | 16:53 17:08 | 1723 | 17.38 | 17.5318 | 18.08 | 18231884 | 19.021922 | 19.51 |  |  | 析 |
| Summetown, opp Hamiton Road | 0637 | 07:12 | 07.3207 | 07:52 08 | 08.120 | 0833 | 0848 | 09.08 | 0923 0938 | 0953 | 10.08 | 1023 | $10: 38$ | 10.53 11:08 | 1123 | 1138 | $11: 53$ | 12.08 | 122312388 | 12.53 | 13.08 | 13.23 | 1338 | 13.5314 .08 | 14.23 | 14.38 | 14.53 | 15.08 | 15.231538 | 15.54 | 1609 | 1624 | 6.39 | 16:54 17:09 | 1724 | 1739 | 1754 | 8.0 | $18: 24184$ | 19.021922 | 19.51 |  |  | 23.51 |
| Summertown, adj Squitchey Lene east | 0638 | 07:13 | 0733 | 9:53 | 08:13 | 0834 | 08:49 09 | 09 | 09240939 | 0954 | 1 | 10.24 | 10,39 | 10.54 11:09 | $11: 24$ | 1139 | $11: 54$ | 12.91 | 122341239 | 12.54 | 13.0 | 13.24 | 1339 | 14.09 | 14.24 | 143 | 14.54 | 15.0 | 15.241539 | 15.54 | $16: 09$ | 1624 | 6.3918 | 16:54 17:09 | 172 | 1739 | 17.5418 | 8.0918 | 18.4 | 19.03 | $19: 52$ |  |  | 23.52 |
| Summetown, adj Upland Park Read | 0638 | 07:13 | 073307 | 07.53 | 08.13 | ${ }^{083} 80$ | 0849 | 0909 | 09240939 | 0954 | 10.09 | 1024 | $10: 39$ | 10.54 11:09 | 1124 | 1139 | $11: 54$ | $12: 09$ | 122241239 | $12: 54$ | 13.09 | 1324 | 1339 | 13.5414 .09 | 1424 | 1439 | 14.54 | 15.09 | 15.241539 | 15.55 | $16: 10$ | 1625 | $6: 4016$ | 16:55 17:10 | 1725 | 17:40 | 17.55 | 8.10 | $18.2518: 4$ | 19.031923 | 19.52 |  |  |  |
| .tesolowe, opp Harefieds |  | 07:14 | 07.34 | 0754 |  | 0835 | 0850 | 0910 | 09250940 | 0955 | 10.10 | 1025 | $10: 40$ | $10: 55$ 11:10 | 1125 | 11:40 | $11: 55$ | $12: 10$ | 122512.40 | 12.55 | 13.10 | 13.25 | 13.40 | $13: 5514.10$ | 14.25 |  | 14.55 | $15: 10$ | $15.2515: 40$ | 15.56 | $16: 11$ | 1626 | 16.41 | $16: 56$ 17:11 | 1722 | 17:41 | 17.56 | 18.11 | 182618.45 | 19.041924 | 19.53 |  |  | 23.53 |

22110102021, 15:29













# $\begin{array}{lll}\text { p7:05 } & 07: 40 \\ 08.00\end{array}$ <br> $09.0109: 16$ 

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$\begin{array}{lllllllllll}17: 42 & 18: 03 & 18: 12 & 18: 33 & 18: 42 & 18: 59 & 19: 30 & 19: 33 & 19: 27 & 19: 47 & 20: 15\end{array}$


 $\begin{array}{lllllllllllll}17: 38 & 18: 08 & 18: 18 & 18: 38 & 18: 48 & 19: 08 & 19: 18 & 19: 33 & 19: 53 & 20: 21\end{array}$ $\begin{array}{llllllllll}17: 48 & 18: 08 & 18: 18 & 18.38 & 18: 48 & 9: 08 & 19.18 & 19: 33 & 19: 53 & 20.21 \\ 17: 49 & 18: 0 & 18: 1 & 18: 39 & 18: 49 & 19: 09 & 19: 19 & 19: 34 & 19: 54 & 20.22\end{array}$








Bicester North Station (opp) Bicester, opp Buccingham Crescent
Glor Famm, ad St Peeers Cresent
Glory Farm, opp Ruskin Walk
Gloy Farm, opp Whitey Cresceen
Giory Farm, ad Lincoll Close
Slory Farm, adj Rochford Gardens
Farm, adj Duxtord Close
Glory Farm, adj fumar Court
${ }^{\text {Glory Farm, adj Benson Close }}$
Glory Farm, adj Sampton Close
Imetable data from Stagecoach Oxtordshire, 21 October 202
Water Faton oxtord Pakkway Railway Sation (Stoon
Garden C Ciy Bicester Road (N-bound)

## Wesford, O/S Kings Arms

Kingsmere Bicester Park and Ride (Stop B)
Bicester Vendee Divie NE-bunno
Bicester, opp Lakevee Drive Bicester Village (NE-bound) King's End Queens Avenue (NE-bound) Kingsmere Whitelands Way South (NE-bound) Highfield, opp Wear Road
Hightield, os Bowmont Square
$\frac{H \text { highield o o/s Bowmont Square }}{\text { Highield adj }}$
Hightield Blenheim Divive (E-bound)
Highield, adj George street
Highfield The Approach (NE-bounc)
Highifidd, opp rookside School
Bicester Manorsfield Road (Stand 2)
$\begin{array}{lll}\text { 07:10 } & 07: 45 \\ 07: 11 & 07: 46\end{array}$


$\begin{array}{lll}077.14 & 07.49 \\ 07: 15 \\ 075: 50\end{array}$
$07: 16 \quad 07.51$
07:17 07.52
$\begin{array}{ll}07.18 & 07.53 \\ 07.18 \\ 0.753\end{array}$

07:56
${ }_{0836}$
${ }^{10: 13}$
${ }^{10: 13}$
$10: 14$
$10: 15$$16: 14$

$16: 15$| 16.16 |
| :--- |
| $16: 17$ |$16: 18$

$16: 18$
$16: 19$
16.18
$16: 20$
16.21

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA ONS Crown Copyright Reserved [from Nomis on 9 August 2021]
population
units
date
place of work

All usual residents aged 16 and over in employment the week before the census Persons
2011
E02005936 : Cherwell 016 (2011 super output area - middle layer)

## Method of travel to work

All categories: Method of travel
Public Transport
Underground, metro, light rail o
Train
Bus, minibus or coach
Taxi
Motorcycle, scooter or moped
Driving a car or van
Passenger in a car or van
Bicycle
On foot
Other method of travel to work
Work mainly at or from home

## Percentage

100\%
5\%
0\%
1\%
4\%
0\%
1\%
80\%
8\%
2\%
4\%
usual residence
England and
Wales

3,465
174
4 37
133
8
21
2,772
266
77
136
11

England

## Wales

| 3,460 | 5 |
| ---: | :--- |
| 4 | 0 |
| 37 | 0 |
| 133 | 0 |
| 8 | 0 |
| 21 | 0 |
| 2,767 | 5 |
| 266 | 0 |
| 77 | 0 |
| 136 | 0 |
| 11 | 0 |
| 0 | 0 |



## vectos.

Appendix B

## BREEAM 2018 Tra01/02 Accessibility Index calculator

Using the drop down boxes make the relevant selections and press the 'Select' button


NODE 1



## vectos.

## Appendix C



## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Selected using Manual Selection



## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and $\mathbf{3 1 / 0 7 / 2 0 2 1}$ (67) months

## Selection:

Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection

Selection: Notes:

Selected using Manual Selection

Monday 30/05/2016 Time 1432 Sligh
E: 455100 N: 219047 Junction Detail: 0 Control
Fine without high winds Road surface Dry

| Vehicle Reference 1 | Car |
| :--- | :--- |
| Vehicle Reference 2 | Car |
| Vehicle Reference 3 | Car |
| Vehicle Reference 4 | Car |

Casualty Reference: 1 Age: 42 Female
Vehicle Reference 5 Car
Casualty Reference: 2

| Age: | 42 | Female |
| :--- | :--- | :--- |
|  |  |  |
| Age. | 24 | Female |

Daylight

| Moving from | $S$ | to | NE | Stopping |
| :--- | :--- | :--- | :--- | :--- |
| Moving from | $S$ | to | NE | Stopping |
| Moving from | $S$ | to | NE | Stopping |
| Moving from | $S$ | to | NE | Stopping |

Moving from $S$ to NE Stopping

Moving from $S$ to $N E$
Driver/rider

Severity: Slight Injured by vehicle: 4
Going ahead other
Severity: Slight Injured by vehicle: 5

E: 455326 N: 219302 Junction Detail: 1 Control 2
Fine without high winds Road surface Wet/Damp Daylight

| Vehicle Reference 1 | Car |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Vehicle Reference 2 | Motorcycle over 500cc |  |  |  |
| Casualty Reference: | 1 | Age: | 49 | Male |


| Moving from | $S$ | to SE |
| :--- | :--- | :--- | :--- |
| Moving from | S | to |

Going ahead right bend
Going ahead other
Severity: Slight Injured by vehicle: 2

## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection

| Tuesday | 31/05/2016 |  |  | Slight |  |  | M40 NBOUND ENTRY SLIP RD AT BEND APPROX 75M N OF EXIT FROM A34 / M40 WENDLEBURY INTERC |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E: 455187 | N: 219313 Junct | n Detail: |  | Control |  |  |  |  |  |  |  |  |  |
| Raining without high winds |  |  |  | Road surface | Wet | Damp |  | Daylight |  |  |  |  |  |
|  | Vehicle Reference 1 | Goods 7.5 tonnes mgw and over |  |  |  | Moving from |  |  | $S$ to | N | Changing lane to left |  |  |
|  | Vehicle Reference 2 | Car |  |  |  | Moving from |  |  | S to | N | Going ahead left bend |  |  |
|  | Casualt | Reference: |  | 1 | Age: | 5 | Female | Passenger |  |  | Severity: Slight | Injured by vehicle: | 2 |
|  | Casual | Reference: |  | 2 | Age: | 33 | 33 Female | Passenger |  |  | Severity: Slight | Injured by vehicle: | 2 |
|  | Casual | Reference: |  | 3 | Age: | 33 | 3 Male | Driver/rider |  |  | Severity: Slight | Injured by vehicle: | 2 |
| Tuesday | 14/06/2016 | Time | 1446 | Slight | at A |  | A34 WENDLE | URY INTERCHANGE RBT AT J/W M40 SBOUND ENTRY SLIP RD |  |  |  |  | WENDELBURY |
| E: 455378 | N: 219224 Junct | Junction Detail: | 1 | Control | 2 |  |  | Daylight |  |  |  |  |  |
| Fine withou | ut high winds |  |  | Road surface | Dry |  |  |  |  |  |  |  |  |
|  | Vehicle Reference 1 | Car |  |  |  |  |  | Moving from | NE to | S | Changing lane to left |  |  |
|  | Vehicle Reference 2 | Car |  |  |  |  |  | Moving from | NE to | S | Going ahead other |  |  |
|  | Casual | Reference: |  | 1 | Age: | 49 | 9 Male |  | Driver/rider |  | Severity: Slight | Injured by vehicle: | 2 |
|  | Casual | Reference: |  | 2 | Age: | 76 | 6 Female |  | Passenger |  | Severity: Slight | Injured by vehicle: | 2 |

Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection

Wednesday 27/07/2016 Time 0422 Fatal at M40 SOUTHBOUND AT MP97/7 AT EXIT SLIP ROAD TO A34 WENDLEBURY INTERCHANGE E: 455183 N: 219540 Junction Detail: $5 \quad$ Control 4 Raining without high winds Road surface Wet/Damp

Vehicle Reference $1 \quad$ Goods 7.5 tonnes mgw and over

| Casualty Reference: | 1 | Age: | 37 | Male |
| :--- | :--- | :--- | :--- | :--- |
| Casualty Reference: | 2 | Age: | 27 | Male |
| Casualty Reference: | 3 | Age: | 37 | Male |

Darkness: no street lighting
Moving from N to S

Going ahead other
Pedestrian
Pedestrian
Pedestrian

Severity: Slight Injured by vehicle: 1
Severity: Fatal Injured by vehicle: 1
Severity: Serious Injured by vehicle: 1

## WESTON ON THE GREEN



Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection



## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection



## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection

| Sunday | 11/06/2017 | Time | 1645 | Slight |  |  | A34 NBOUND | APPROX 300 | 0M SW OF |  | 0 / A34 WENDLEB | RY INTERCHAN |  | WESTON ON THE C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E: 455053 | N: 218999 Junc | on Detail: | 0 | Control |  |  |  |  |  |  |  |  |  |  |
| Fine withou | ut high winds |  |  | Road surface | Dry |  |  | Daylight |  |  |  |  |  |  |
|  | Vehicle Reference 1 | Car |  |  |  |  |  | Moving from | ( S to |  | Going ahead other |  |  |  |
|  | Casual | Reference: |  | 1 | Age: | 56 | 6 Female |  | Driver/rider |  | Severity: Slight | Injured by vehicle: | 1 |  |
|  | Vehicle Reference 2 | Goods | 3.5 to | onnes mgw a | d under |  |  | Moving from | m S to | NE | Going ahead but held |  |  |  |
|  | Vehicle Reference 3 | Car |  |  |  |  |  | Moving from | m to | NE | Going ahead but held |  |  |  |
| Thursday | 29/06/2017 | Time | 1524 | 4 Slight |  |  | M40 NBOUND | AT MP97/3 | WENDLE | BURY |  |  |  |  |
| E: 455256 | N: 219246 Junction | Detail: | 0 | Control |  |  |  |  |  |  |  |  |  |  |
| Fine withou | out high winds |  |  | Road surface | Dry |  |  | Daylight |  |  |  |  |  |  |
|  | Vehicle Reference 1 | Car |  |  |  |  |  | Moving from | - SE to | N | Going ahead other |  |  |  |
|  | Casual | Reference: |  | 2 | Age: | 53 | 3 Male |  | Driver/rider |  | Severity: Slight | Injured by vehicle: | 1 |  |
|  | Vehicle Reference 2 | Car |  |  |  |  |  | Moving from | - SE to | N | Going ahead other |  |  |  |
|  | Casual | Reference: |  | 1 | Age: | 28 | 8 Female |  | Driver/rider |  | Severity: Slight | Injured by vehicle: | 2 |  |

Selected using Manual Selection

| Sunday | 23/07/2017 | Time | 1435 | 5 Slight |  |  | BOUND | APPROX 100 | 0M SW OF | BT | / M40 / A41 WEN | EBURY INTERC | AHNG | WENDLEBUR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E: 455126 | N: 219073 Junc | on Detail: | 0 | Control |  |  |  |  |  |  |  |  |  |  |
| Fine withou | ut high winds |  |  | Road surface | Dry |  |  | Daylight |  |  |  |  |  |  |
|  | Vehicle Reference 1 | Car |  |  |  |  |  | Moving from | m S to | NE | Going ahead other |  |  |  |
|  | Casual | Reference: |  | 4 | Age: | 53 | Female |  | Passenger |  | Severity: Slight | Injured by vehicle: | 1 |  |
|  | Vehicle Reference 2 | Car |  |  |  |  |  | Moving from | m S to | NE | Going ahead but held |  |  |  |
|  | Casual | Reference: |  | 1 | Age: | 26 | Female |  | Driver/rider |  | Severity: Slight | Injured by vehicle: | 2 |  |
|  | Casual | Reference: |  | 2 | Age: | 26 | Female |  | Passenger |  | Severity: Slight | Injured by vehicle: | 2 |  |
|  | Casual | Reference: |  | 3 | Age: | 25 | Female |  | Passenger |  | Severity: Slight | Injured by vehicle: | 2 |  |
|  | Vehicle Reference 3 | Goods | 3.5 ton | onnes mgw | nd unde |  |  | Moving from | $m$ S | NE | Going ahead but hel |  |  |  |
| Wednesday | y 09/08/2017 | Time | 0815 | 5 Slight |  | M | NBOUND | EXIT SLIP R | ROAD APP |  | OF RBT J/W AT A | / M40 WENDLEB | URY IN | TERCHANGE |
| E: 455349 | N: 219037 Junc | on Detail: | 0 | Control |  |  |  |  |  |  |  |  |  |  |
| Fine withou | out high winds |  |  | Road surface | Wet | amp |  | Daylight |  |  |  |  |  |  |
|  | Vehicle Reference 1 | Car |  |  |  |  |  | Moving from | m SE to | N | Going ahead other |  |  |  |
|  | Vehicle Reference 2 | Car |  |  |  |  |  | Moving from | m SE to | N | Going ahead other |  |  |  |
|  | Casual | Reference: |  | 1 | Age: | 43 | Male |  | Passenger |  | Severity: Slight | Injured by vehicle: | 2 |  |
|  | Casual | Reference: | : 2 | 2 | Age: | 63 | Female |  | Passenger |  | Severity: Slight | Injured by vehicle: | 2 |  |

## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection


Selected using Manual Selection


Selected using Manual Selection


Selected using Manual Selection



E: 457126 N: 221261 Junction Detail: 0 Control
Fine without high winds Road surface Wet/Damp
Darkness: street lights present and lit

| Vehicle Reference 1 | Car |  |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Vehicle Reference 2 | Pedal Cycle |  |  |  |
| Casualty Reference: | 1 | Age: | 83 | Male |


| Moving from N to SE | Going ahead other |
| :---: | :---: | :---: |
| Moving from NE to S | Going ahead other |
| Driver/rider | Severity: Seriou |

[^0]
## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection



Selected using Manual Selection


Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


Selected using Manual Selection



Selected using Manual Selection


Selected using Manual Selection


Saturday $07 / 09 / 2019$ Time 1605 atight A34 SBOUND APPOX 175M SW OF A34 / M40 WENDLEBURY INTERCHANGE WENDLEBURY E: 455085 N: 219001 Junction Detail: 0 Control
Fine without high winds Road surface Dry Daylight

| Vehicle Reference 1 | Car |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Vehicle Reference 2 | Car |  |  |  |  |
| Casualty Reference: | 1 | Age: | 35 | Male |  |

Moving from NE to $\mathrm{S} \quad$ Changing lane to left
Moving from NE to N Going ahead other
Severity: Slight Injured by vehicle: 2

| Accidents between dates | $\mathbf{0 1 / 0 1 / 2 0 1 6}$ and $\mathbf{3 1 / 0 7 / 2 0 2 1}$ | (67) months |
| :--- | :--- | :--- | :--- |
| Selection: |  | Notes: |

Selected using Manual Selection


Selected using Manual Selection




## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection


## AccsMap - Accident Analysis System

Accidents between dates 01/01/2016 and 31/07/2021 (67) months

## Selection:

Notes:
Selected using Manual Selection

Tuesday 20/10/2020 Time 1430 Sligh
E: 455143 N: 219085 Junction Detail: 0 Control
Fine without high winds Road surface Dry

| Vehicle Reference 1 | Car |
| :--- | :--- |
| Vehicle Reference 2 | Goods 3.5 tonnes mgw and under |
| Vehicle Reference 3 | Goods 3.5 tonnes mgw and under |

Casualty Reference: 1 Age:
65
Male
Goods 3.5 tonnes mgw and under
at A34 NORTHBOUND APPROX 75M SW OF J/W J9 M40 WENDLEBURY

Daylight

| Daylight |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Moving from | S | to | N | Going ahead other |  |
| Moving from | S | to | N | Going ahead other |  |
| Moving from | S | to | N | Going ahead other |  |
| Driver/rider |  |  |  | Severity: Slight | Injured by vehicle: |
| Moving from | S | to | N | Going ahead other |  |

Moving from S to $\mathrm{N} \quad$ Going ahead other

Monday $19 / 04 / 2021$ Time 1302 Serious at A41 RBT J/W M40 WENDLEBURY INTERCHANGE WENDLEBURY
E: 455322 N: 219303 Junction Detail: $1 \quad$ Control 4
Fine without high winds Road surface Dry

| Vehicle Reference 1 | Car |
| :---: | :--- |
| Vehicle Reference 2 | Motor Cycle over 125 cc and up to 500 cc |
| Casualty Reference: | 1 |

Casualty Reference: $1 \quad$ Age: 26 Female
Daylight
Moving from $N$ to $E \quad$ Turning left
Moving from $N$ to $E \quad$ Turning left
Severity: Serious Injured by vehicle: 2

Accidents between dates $01 / 01 / 2016$ and $31 / 07 / 2021$

## Selection:

Selected using Manual Selection
67) months

Notes:

Accidents involving:

|  | Fatal | Serious | Slight | Total |
| :--- | ---: | ---: | ---: | ---: |
| Motor vehicles <br> only (excluding <br> 2-wheels) | 5 | 7 | 74 | 86 |
| 2-wheeled motor <br> vehicles | 0 | 3 | 4 | 7 |
| Pedal cycles | 0 | 1 | 0 | 1 |
| Horses \& other | 0 | 0 | 1 | 1 |
| Total | 5 | 11 | 78 | 94 |

## Number of casualties meeting the criteria:

160

Casualties:

|  | Fatal | Serious | Slight | Total |
| :--- | ---: | ---: | ---: | ---: |
| Vehicle driver | 4 | 6 | 79 | 89 |
| Passenger | 1 | 5 | 53 | 59 |
| Motorcycle rider | 0 | 3 | 4 | 7 |
| Cyclist | 0 | 1 | 0 | 1 |
| Pedestrian | 1 | 2 | 1 | 4 |
| Other | 0 | 0 | 0 | 0 |
| Total | 6 | 17 | 137 | 160 |



## vectos.

Appendix D


## vectos.

## Appendix E

Tritax Symmetry Oxford North Ltd
Grange Park Court
Roman Way
Northampton
NN4 5EA

| Name <br> Department | Axel Scholler <br> MR Magnet Technology |
| :--- | :--- |
| Telephone <br> E-mail | +44 (0)1865 880880 |
| Axel.scholler@siemens-healthineers.com |  |

Dear Sir or Madam,
As a result of the Covid-19 pandemic, Siemens Healthineers has seen many benefits of flexible, remote working in its office-based roles and in late 2020 launched the Healthineers Ways of Working (HWOW). This has been implemented by MR Magnet Technology in Eynsham and has resulted in a broad 70/30 split of office/remote based working going forward, allowing our staff to continue to enjoy a greater work-life balance through reduced travel time whilst ensuring the business continues to function optimally.

For further details, please find attached the overview about the new Healthineers Way of Working and how it is set up.

Yours faithfully,


Ralph Seidler
Managing Director

## Siemens Healthcare Limited

 MR Magnet TechnologyAxel Scholler
Finance Director


Wharf Road, Eynsham, Witney

## SIEMENS Healthineers $\because$

## Healthineers Way of Working

## Cornerstone Paper

\#thewaywework

December 2020


## We will enable employees to decide when to work from which place for best team performance and individual preference.

## Why?

## Pick up the momentum

...from the transformation of our work environment

Healthineers Way of Working combines onsite and offsite working with existing processes and initiatives:

- Innovation: Onsite and offsite for individual thinking for team creation and for ideas from community activities
- Customer Relationship: Plan your "Customer Journey" offsite \& online - fitting best to individual needs and preferences
- Sustainability: Smaller environmental footprint from less commuting, less travel, less office space
- Diversity \& Inclusion: More room for individual preferences and less importance of physical location
- Digitalization: Healthineers Way of Working and Digitalization promote each other
- HPS: Enhancement of HPS methods in onsite and offsite trainings
- Great Place to work: Talent attraction and retention from improved work-life balance for our diverse workforce


## What?

## Five Cornerstones

.. define our Healthineers Way of Working

- Pick the best place for yourself and for team performance
- Place follows activity
- Face-to-face goes online
- Digital user experience anywhere
- Healthy and safe everywhere

Individual performance and efficiency are essential criteria for mobile working. Onsite job roles e.g. in production, development and labs will continue to be vital for our success. We will dedicate as much effort to our onsite environment as we will work on our choice of offsite and online options.

## How? <br> Implementation is local

...and will follow local regulations, local business rationale and local timelines

- The cornerstones for Healthineers Way of Working have been defined on a global level.
- Local implementation projects will be guided by local HR, RE and IT with support from EHS and CC under consideration of data privacy and cybersecurity
- Ongoing location projects have been transformed into Healthineers Way of Working implementation projects since June 2020.
- The Healthineers Way of Working will apply to all Healthineers in different ways. The degree of onsite presence depends on the job profile and will vary, e.g. among office workers and production related workers.


## What Healthineers Way of Working is about

The overall positive experience from offsite working under COVID-19 conditions has accelerated changes in our way of working.
Cultural acceptance for offsite working and individual preferences have been transformed on a global scale. Healthineers Way of Working builds on the momentum from this transformation and leverages key drivers of performance.

Onsite job roles e.g. in production, development and labs will continue to be vital for our success. We will dedicate as much effort to our onsite environment as we will work on our choice of offsite and online options.

Healthineers Way of Working enables employees to decide when to work from which place for best team performance and individual preference.

Talent attraction and retention from improved worklife balance for our diverse workforce.

Environmental footprint reduction from less travel, less commuting and less office space.

We expect that in the future significantly more office workers will work offsite at their preferred location and time in alignment with their team leads. In line with our People Leadership Practices (PLP) our Healthineers Way of Working promotes the established culture of trust and performance. We believe that working offsite and working onsite are equally valid options. We will enable employees to collaborate efficiently and enjoy virtual community life from anywhere through our \#DigitalTogether initiatives.

This cornerstone paper defines Healthineers Way of Working in terms of Places, People, Digital Experience and Health \& Safety on a global scale while implementation will follow local regulations, local business rationale and local timelines.
"It's a team sport with onsite, offsite and online action depending on everyone's position and preferences."

## Cornerstones

Health \& Safety



## Digital Experience

About this cornerstone paper
This cornerstone paper defines
core elements of our global
Healthineers Way of Working.



## Digital Experience

About this cornerstone paper
This cornerstone paper defines
core elements of our global
Healthineers Way of Working.





## Digital Experience

About this cornerstone paper
This cornerstone paper defines core elements of our global Healthineers Way of Working.


## Job requirements and personal preference play an important role when deciding on working onsite or offsite



## Healthineers Way of Working will apply to all Healthineers in different ways

- Administrative office workers will have a large degree of onsite/offsite choice
- Production related job profiles will call for a higher degree of onsite presence to ensure team interaction
- Directly production related workers will have a very high degree of onsite presence


## We will leverage opportunities for onsite job roles

- Implement more time flexible shift systems in the future
- Enhance factory location with employee health \& well-beings offers (e.g. gym, dry-cleaner, kiosk, coffee bar)
- Ensure that factory related job functions with offsite potential are still available to colleagues on the shop floor at any time (e.g. rolling system)


## Note:

Options and limitations to individual job roles as well as performance regarding offsite working need to be discussed and aligned between employees and managers.

## The advantages of Healthineers Way of Working for employees

## Being able to pick the best place for performance will ...

## strengthen caring culture

by recognizing employee needs, building stronger trustful relationships, and increasing employee empowerment

## drive digitalization

by improving our digital tools and making best use of them

## enhance work-life balance

by allowing for flexibility between personal and business activities

## reduce commuting time

by working offsite or by commuting during non-peak hours
... support personal well-being
by accommodating for personal needs such as socializing, healthy exercising and nutrition
improve personal efficiency
by choosing the best place for each activity such as for collaboration or concentration


Digital Experience

About this cornerstone paper
This cornerstone paper defines
core elements of our global
Healthineers Way of Working.


Large share of offsite activities and specific onsite space for various types of activities will shape the way we work



## CyberSec Ops and Data Privacy as well as Connectivity and Hybrid Cloud build the backbone of our digital working environment and therefore the foundation for our Healthineers Way of Working.

## Digital User Experience

We provide an inspiring user experience for all employees:

- Global IT Dedicated Service Desk
- Vending Machines for IT accessories
- \#DigitalTogether University
- \#DigitalTogether Champions network


## Modern Workplace

We provide a working environment to combine onsite and offsite working:

- Workplace Booking App
- IT equipment onsite and offsite (mobile phones, headsets)
- MS Teams Soft Phone technology
- IT enabled innovation rooms


## CyberSec and Data Privacy

We ensure secured working from anywhere with any approved device:

- State-of-the-art IT security
- Security awareness trainings
- Mobile Secured Log-In, Healthineers-ID
- Work instructions for a high level of data privacy and cybersecurity


## Connectivity and <br> Hybrid Cloud

We enable reliable, secure and high-performance access:

- Remote solutions (Zscaler)
- Connection of Cloud and data center (Quantum Leap Polaris)
- Acceleration of cloud migration for applications (Ascend)


Digital user experience -

## Technologies and best practices for exciting collaboration

\#DigitalTogether
Foster Microsoft 365 knowledge and usage for offsite collaboration

- Masterclasses, Hands-On-Workshops and videos
- Events such as \#DigitalTogether University
- Yammer user groups to exchange knowledge
- \#DigitalTogether Navigator to pick the right tool


## Best practices for virtual interaction

- Etiquette for usage of camera, backgrounds, etc.
- Regular virtual coffee breaks and team building events
- Ask-me-anything sessions, Virtual Water-cooler, informal exchange formats like Lean Coffee


## Teams Rooms

- Standard meeting rooms with stationary setup Equipped with standard table(s) and chairs
- Technically equipped for Teams meetings
- Meetings with presentations on screen and video/picture of the participants


## Hybrid Collaboration Rooms

- Flexible setup - Furniture can be moved around
- Working on content in the complete group including offsite participants
- Digital Whiteboard for real time collaboration Even for offsite participants on the same Whiteboard (Microsoft Surface Hub)
- Typically used for smaller groups doing retrospectives, brainstorming and interactive co-creation



## People




## Digital Experience

About this cornerstone paper
This cornerstone paper defines core elements of our global Healthineers Way of Working.


## We support ...

... a healthy and safe working environment


- Developing appropriate standards for healthy and safe offsite workplaces
- Supporting ergonomical workplace equipment for home office workplaces
- Providing platforms to foster social interaction and networking


## We enable ...

... employees to take care of their own health and safety

- Raising awareness and competencies to create healthy and safe offsite workplaces
- Raising awareness and competencies to establish a healthy improved work-life balance
- Providing flexible sport and virtual health promotion offerings, virtual formats for Employee Assistance Programs and Medical Services


## Cornerstones

Health \& Safety


People



## Digital Experience

About this cornerstone paper
This cornerstone paper defines
core elements of our global
Healthineers Way of Working.


Healthineers Way of Working combines onsite and offsite working with existing processes and initiatives

## Innovation

Onsite and offsite for individual thinking, for team creation and for ideas from community activities.

Customer Relationship Plan your "Customer Journey" offsite \& online - fitting best to individual needs and preferences.
HPS
Enhancement of HPS methods
in onsite and offsite trainings.

Sustainability
Smaller environmental footprint from less commuting, less travel, less office space.

Diversity \& Inclusion
More room for individual preferences and less importance of physical location.

## Digitalization

Healthineers Way of Working and Digitalization promote each other.


## Digital Experience

About this cornerstone paper
This cornerstone paper defines
core elements of our global
Healthineers Way of Working.


## Implementation of Healthineers Way of Working is defined by all five cornerstones and by business rationale

All five cornerstones together define the essence and idea of Healthineers Way of Working. Individual journeys to implementation will require adaptation while following the direction as marked by the cornerstones.

HR, IT and RE will help to identify and prioritize suitable areas for implementation and provide guidance and support.

Implementation decisions are based on business cases. HR, IT and RE will guide and support the adequate consideration of qualitative and quantitative drivers such as productivity from less commuting time, talent retention, space reduction and related cost.

The Project Management Office for Healthineers Way of Working will be available for the setup of implementation projects and provide guidance with tools, templates, best practices and lessons learned.

Implementation will follow local regulations (laws, regulations, certifications and contracts with customers), local business rationale and local timelines.

## vectos.

Appendix F


## vectos.

## Appendix G

# SYMMETRY PARK, OXFORD NORTH 

Proposed A41 Traffic Signal Junction

Stage 1 Road Safety Audit
Requested by Vectos

November 2021

## Gateway TSP <br> 

Road Safety Engineering

| Project: | Symmetry Park, Oxford North <br> Proposed A41 Traffic Signal Junction |
| :--- | :--- |
| Client: | Vectos |
| Project Sponsor: | Oxfordshire County Council |
| Document: | Stage 1 Road Safety Audit |
| Gateway TSP ref: | SG/WP/2110057 RSA1 v1.1 |
| Issue date: | $10 / 11 / 2021$ |
| Status: | Issued as Version 1.1 |
| Authorised by: | SG |

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## Gateway TSP <br> 

## Road Safety Engineering

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## Gateway TSP

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3 Previous Road Safety Audit ..... 4
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Appendix B: Designer's Response

## INTRODUCTION

1.1 This report describes a Stage 1 Road Safety Audit (RSA) of a proposed highway scheme on the A41 at Wendlebury, Oxfordshire. The works are associated with a proposed 53,830 sqm commercial building to be operated by Siemens, together with associated vehicular access and landscaping.
1.2 The works will comprise a new traffic signal-controlled junction with two 'ahead' lanes in each direction, together with dedicated left- and right-turning lanes for vehicles wishing to enter the site.
1.3 This section of the A41 is a dual carriageway subject to the national speed limit of 70 mph , although a 50 mph limit commences on the north-eastbound carriageway approximately 800 metres northeast of the proposed junction, further reducing to 40 mph as it approaches the Vendee Drive roundabout. The Designers advise that Oxfordshire County Council (OCC) propose a 50 mph speed limit from the Wendlebury Interchange, where the A41 and M40 meet at a grade separated and signal-controlled roundabout M40 junction.
1.4 The A41 carriageway is lit and follows a largely straight alignment, providing tapers from three lanes to two on its approach to, and exit from, the Wendlebury Interchange. The proposed access junction would be approximately 650 metres east of this junction.
1.5 The Designers also advise that the site access has been designed in such a way that it would not prejudice the delivery of a new all movements junction where Wendlebury Road meets the south-westbound A41. This is intended to provide the southwest start/termination point of the planned South East Perimeter Road.
1.6 This Road Safety Audit was carried out by Steve Giles and Wendy Palmer and consisted of a desktop study and a site visit, which was carried out on Monday $1^{\text {st }}$ November 2021, between the hours of 10.45 and 12.00 , when the weather was fine/cloudy and the road surface dry. Traffic flows were moderate to steady, and no pedestrians or cyclists were observed.

## Gateway

1.7 The terms of reference for this RSA are as described in the Design Manual for Roads and Bridges (DMRB) document GG119. The Audit Team is independent of the project design team and has not been involved in the design process in any other capacity. The audit considers only the potential road safety implications of the scheme and has not verified compliance of the design with any other criteria.
1.8 The Audit Team has not been made aware of any Departures from Standard. Whilst reference may be made to design standards, this report is not intended to provide a design check.
1.9 Recommendations are aimed at addressing the identified potential road safety problems. However, there may be other acceptable ways to overcome a problem, considering wider constraints and opportunities; the Auditors would be pleased to discuss such alternative solutions as appropriate. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

## Gateway

TSP

| Document ref. | Rev. | Originator | Title |
| :--- | :--- | :--- | :--- |
| $205223 /$ PD0 0 | C | Vectos | Proposed Signalised Junction, Site Access |

Additional/background information provided to the Audit Team

- Drawing 13-222-SGP-ZZ-ZZ-DR-A-131000 rev. B - Site Plan - Phase 1 (SGP Architects)
- Accidents Location Plan (Oxfordshire County Council, drawn 13/09/2021)
- Forecast site access flows, 2024 \& 2031 (spreadsheet provided by Vectos) The audit team is not aware of any previous road safety audit on these proposals.
4.1 The Oxfordshire County Council Accident plot provided by Vectos shows a cluster of collisions around the Wendlebury Interchange and four at various locations along the westbound carriageway between the Interchange and the location of the proposed junction. One, close to the proposed junction, was fatal, whilst the other three resulted in slight injuries.
4.2 Personal Injury Collision (PIC) information was also obtained from the online Crashmap database (www.crashmap.co.uk) for the latest available 5 -year period. This information is consistent with the OCC plot.
4.3 The fatal collision occurred in August 2018, in daylight and dry weather conditions. It involved a pedestrian, who sustained serious injuries, and a car losing control/ striking a tree. The driver of the car was killed.


## General Matters

### 5.1 Problem

New kerbline would retain surface water leading to loss of control collisions.
Location: Proposed kerbline on south-westbound approach to signals
It is proposed to install a shared pedestrian/cycle route from Wendlebury Road junction to the proposed southwest-bound bus stop and crossing point. The existing A41 carriageway abuts grass verge along this section; the Audit Team is concerned that a new kerbline would retain surface water leading to loss of control collisions.

## Recommendation

Carriageway crossfalls should be assessed and drainage provided along the new kerbline as necessary.

## Local Alignment

### 5.2 Problem

Potential for side-impact or shunt type collisions due to weaving
Location: North-eastbound approach to new junction
The Audit Team notes that the A41 north-eastbound taper from three lanes to two commences approximately 430 metres south-west of the new junction, and that one lane is gained (the dedicated left-turn lane) on the approach to the new junction. If the weaving distance is not adequate in relation to vehicle speeds, side impact or braking/shunt type collisions could occur.

## Recommendation

Assess the weaving section of the A41 north-eastbound carriageway, between the Wendlebury Interchange and the new junction, to ensure that it provides for safe weaving/manoeuvring when considering lane drops/gains and speeds. Provide lane destination signage on the approach to the new junction.

## Junctions

### 5.3 Problem

Encroachment of foliage into forward visibility splays may lead to vehicle collisions
Location: Approaches to signals/stop lines
Vegetation/foliage may encroach into forward visibility envelopes toward the signal heads, in both the verges and the central reservation, which could lead to vehicle turning or braking/shunt type collisions.

## Recommendation

Remove or cut back vegetation/foliage with sufficient clearance to maintain adequate forward visibility to the signal heads, allowing for future regrowth.

### 5.4 Problem

Vehicle collisions due to inadequate lane width between traffic islands
Location: Right turn lane into the site
Vehicle swept path analysis has not been provided and it is not clear whether large vehicles will be able to negotiate the right turn manoeuvre without mounting kerbs, which could lead to collisions with pedestrians or other road users.

## Recommendation

Provide vehicle swept path analysis for the right turn lane and, if necessary, adjust carriageway areas to accommodate the largest vehicles expected to perform this manoeuvre.

### 5.5 Problem

Potential for vehicles to collide with signal heads or other items of street furniture
Location: Traffic island at south-westbound stop lines
The central traffic island appears narrow, and it is not clear whether it will be adequate to accommodate signal heads, particularly if twin heads are required. Inadequate clearance may lead to vehicles striking the signal heads or other items of street furniture, resulting in loss of control collisions.

## Recommendation

Ensure that traffic islands are of adequate width to accommodate signal heads and other street furniture.

## $5.6 \quad$ Problem

Parapet and vehicle restraint system (VRS) adjacent to shared facility
Location: South-westbound approach to signals
Existing VRS with bridge parapet are located within the verge on the south-westbound approach to the signals. These would be located within the proposed shared facility creating a pinch point for cyclists and pedestrians, reducing the clearance to the edge of carriageway leading to pedestrians and cyclists being struck.

Cyclists adjacent to the parapet may also be at risk of falls from height should they lose control.

## Recommendation

The alignment of the shared facility adjacent to the VRS should be assessed. The parapet should also be of a suitable height adjacent to a shared cycle facility.

Walking, Cycling and Horse Riding

### 5.7 Problem

Potential for pedestrian/cycle collisions with vehicles
Location: south-west and north-west arms of the new junction
Traffic signal details have not been provided and it is not clear whether the crossings will operate within an 'all red' traffic stage or will 'walk with traffic'. It is also not obvious from the drawings whether appropriate dropped kerbs and tactile paviours are proposed. If uncertainties exist, pedestrians and cyclists may be vulnerable to collisions with vehicles, particularly those with mobility/sensory impairments.

## Recommendation

Clarify pedestrian/cyclist crossing arrangements including signal stages/phases, and provide dropped kerbs with appropriate tactile paving and signs/markings within the detailed design.

### 5.8 Problem

Potential for cycle collisions with vehicles
Location: Shared foot/cycleways at the bus stops
The shared footway/cycleways terminate at the bus stops, but it is unclear if or how cyclists are to proceed. Cyclists joining the carriageway at full-height kerbs may fall and collide with passing high-speed vehicles.

## Recommendation

Provide measures to prevent or discourage cyclists from joining the A41 carriageway.

### 5.9 Problem

Ditch parallel to shared facility may increase injury severity.
Location: Wendlebury Road
The proposed shared route starting at Wendlebury Road is 3 m wide and offset from the edge of carriageway by 1 m . there appears to be a ditch in dense vegetation at the back of the existing grass verge from the Wendlebury Road junction in a southwesterly direction. The drop adjacent to the shared cycleway/ footway would increase the severity of any injuries should a cyclist lose control.

## Recommendation

Railing should be provided to protect cyclists without restricting the width of the shared facility.

## Traffic Signs, Carriageway Markings and Lighting

5.10 The Audit Team raises no concerns at this Stage 1 RSA in respect of traffic signs, markings and lighting.

## Gateway

AUDIT TEAM STATEMENT
We certify that this Road Safety Audit has been carried out in accordance with DMRB document GG119.

## Audit Team Leader



Date: $\quad 10^{\text {th }}$ November 2021

Audit Team Member(s)
Wendy Palmer
MCIHT, MSoRSA, HE Cert Comp
Road Safety Engineer


Date: $\quad 10^{\text {th }}$ November 2021

## APPENDIX A <br> Location Plan(s)




## APPENDIX B <br> Designer"s Response

Project: Symmetry Park, Oxford North
Proposed A41 Traffic Signal Junction
Client:
Document:
Gateway TSP ref:
Status:
Issue date:

Vectos
Stage 1 Road Safety Audit
SG/WP/2110057 RSA1 v1.1
Issued as Version 1.1
10/11/2021

| Item <br> No. | Audit Team Recommendation | Designer's Response | Overseeing Organisation's Comments |
| :--- | :--- | :--- | :--- |
| 5.1 | Carriageway crossfalls should be assessed and <br> drainage provided along the new kerbline as <br> necessary. | Noted and accepted. Appropriate drainage <br> will be included at detailed design. |  |
| 5.2 | Assess the weaving section of the A41 north- <br> eastbound carriageway, between the <br> Wendlebury Interchange and the new <br> junction, to ensure that it provides for safe <br> weaving/manoeuvring when considering lane <br> drops/gains and speeds. Provide lane <br> destination signage on the approach to the <br> new junction. | Vehicles exiting the roundabout will be <br> travelling at slower speeds and as such will <br> also allow drivers adequate time to get into <br> the correct lane. <br> Signage will be provided to ensure drivers are <br> in the correct lane and avoid weaving through <br> lanes. Further details of this will be included <br> at the detailed design stage. |  |
| 5.3 | Remove or cut back vegetation/foliage with <br> sufficient clearance to maintain adequate <br> forward visibility to the signal heads, allowing <br> for future regrowth. | It will be ensured that vegetation will be cut <br> back to maintain adequate forward visibility. <br> Forward visibility splays will be provided at <br> detailed design stage. |  |
| 5.4 | Provide vehicle swept path analysis for the <br> right turn lane and, if necessary, adjust <br> carriageway areas to accommodate the | Drawing 205223_PD09_AT01 demonstrates <br> that a 16.5m articulated lorry can enter and <br> exit the site in all directions using the |  |

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|  | largest vehicles expected to perform this <br> manoeuvre. | proposed signalised junction. This drawing is <br> attached to this response. |  |
| :--- | :--- | :--- | :--- |
| 5.5 | Ensure that traffic islands are of adequate <br> width to accommodate signal heads and other <br> street furniture. | It is noted that the preliminary design shows <br> some of the traffic islands are 2.2m wide. As <br> part of detailed design, it will be ensured <br> that traffic islands are 2.3m, which is the <br> required width for high-speed sites such as <br> this, i.e. over 40mph. |  |
| 5.6 | The alignment of the shared facility adjacent <br> to the VRS should be assessed. The parapet <br> should also be of a suitable height adjacent to <br> a shared cycle facility. | It is noted that there is an existing VRS on the <br> central island and each nearside verge to <br> protect errant drivers from falling in to the <br> culvert/ditch. | As part of works at this location it is expected <br> that the existing barrier will be replaced with <br> new terminals at the least. It is anticipated <br> that on the south-westbound approach, the <br> VRS will be moved to the rear of the new <br> cycleway. The realigned VRS will be 500mm <br> clear of the rear of the cycleway. |

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|  |  | information on the VRS which will expand on <br> the above. |  |
| :--- | :--- | :--- | :--- |
| 5.7 | Clarify pedestrian/cyclist crossing <br> arrangements including signal stages/phases, <br> and provide dropped kerbs with appropriate <br> tactile paving and signs/markings within the <br> detailed design. | The signal staging of the proposed signalised <br> junction will be 'walk with traffic'. <br> Tactile paving and sign/markings will be <br> provided as part of detailed design |  |
| 5.8 | Provide measures to prevent or discourage <br> cyclists from joining the A41 carriageway. | It is very unlikely that cyclists will be <br> travelling towards M40 J9 as it is considered <br> that there is little desire to do so. The <br> primary function of the pedestrian/cycleway <br> at this location is to serve the proposed <br> development. <br> Notwithstanding this, signage will be provided <br> to indicate no cycling beyond this point (end <br> of route). Cyclists travelling towards M40 J9 <br> will be encouraged to use the toucan crossing <br> to re-join the A41. <br> Further details of signage and surfaces will be <br> provided at the detailed design stage. |  |

Project: Symmetry Park, Oxford North Proposed A41 Traffic Signal Junction
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Client:
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| 5.9 | Railing should be provided to protect cyclists <br> without restricting the width of the shared <br> facility. | The final form of the shared <br> pedestrian/cycleway will be subject to a <br> Section 278 Agreement with the Council. Any <br> departures from standards will be agreed with <br> OCCH. <br> It is also recognised that LTN $1 / 20$ allows for <br> flexibility in the width of shared <br> pedestrian/cycleways that are lightly used in <br> more rural locations. As such, it will not be <br> expected to meet the same criteria required <br> in a built-up urban location. <br> An appropriate restraint for pedestrians and <br> cyclists will be investigated and this could be <br> delivered through a parapet of some sort of <br> railing. <br> The final form will be subject to detailed <br> design. |  |
| :--- | :--- | :--- | :--- |
| 5.10 | n/a |  |  |

## Gateway

| Project: | Symmetry Park, Oxford North <br> Proposed A41 Traffic Signal Junction |
| :--- | :--- |
| Client: | Vectos |
| Document: | Stage 1 Road Safety Audit |
| Gateway TSP ref: | SG/WP/2110057 RSA1 v1.1 |
| Status: | Issued as Version 1.1 |
| Issue date: | $10 / 11 / 2021$ |

Designer's Statement:
I confirm that I have considered the items that have arisen in the Stage 1/2 Road Safety Audit Report and my response to its recommendations are set out above.


Designer: James Bancroft
Date:
11 ${ }^{\text {th }}$ November 2021

Highway Authority/Project Sponsor/ Client Organisation Statement: I accept/do not accept the Designer's Response (delete as appropriate)
[Name], on behalf of Highway Authority/Project Sponsor/Client Organisation (delete as appropriate)

Date:


## vectos.

Appendix H



[^0]:    Severity: Serious Injured by vehicle: 2

