



## **CLIENT PROJECT REPORT CPR2366**

### **Oxfordshire Minerals and Waste Local Plan: Part 1 - Core Strategy incorporating Proposed Main Modifications**

#### **Sustainability Appraisal Report Update**

Appendix G: Evidence Base Documents for Post-Examination Hearings Assessments of Minerals and Waste Spatial Strategy Alternatives

February 2017

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Appendices G.1, G.2 and G.3 contain information used to inform the development and assessment of alternatives for the distribution of provision for sharp sand and gravel across the county in 'Policy M3 Principle locations for working aggregate minerals'.

Appendix G.1 provides evidence on the distribution of demand for aggregates and reserves of aggregate which were used to develop the reasonable alternatives

Appendix G.2 sets out information for the different sharp sand and gravel resource areas on the average area required per million tonnes (sheet 1) and the average distance to main markets (sheet 2) which have been used to inform the assessments.

Appendix G.3 provides information to explain how the transport distances in Appendix G.2 (sheet 2) have been derived.

## **Appendix G.1**

### **Oxfordshire Minerals & Waste Local Plan: Part 1 – Core Strategy (submitted 2015)**

#### **Evidence Base for Spatial Strategy Alternatives for Delivery of the Requirement for Sharp Sand and Gravel Oxfordshire County Council – December 2016**

##### **A. Indicators of Distribution of Demand for Aggregates in Oxfordshire**

Oxford is the biggest centre of population and employment in Oxfordshire and occupies a central location within the county, being readily accessible by road from most other parts of the county. The shape and geography of Oxfordshire, in particular the location of the river Thames with its limited crossing points and restrictions on many of the bridges, particularly upstream from Oxford, points to an analysis of demand for construction aggregate materials outside Oxford based on a subdivision of the county as follows:

- West Oxfordshire and Cherwell Districts (northern Oxfordshire); and
- Vale of White Horse and Southern Oxfordshire Districts (southern Oxfordshire).

Oxford City straddles these two parts of Oxfordshire and within a two-way split of the county can be assumed to contribute equally to each part.

The following analysis sets out four indicators of demand, split between northern Oxfordshire (West Oxfordshire and Cherwell Districts and the north half of Oxford City) and southern Oxfordshire (Vale of White Horse and South Oxfordshire Districts and the south half of Oxford City):

1. Forecast population growth 2013 – 2031;
2. Forecast housing growth 2013 – 2031;
3. Total employment 2011-2031;
4. Existing & planned provision of land for economic development 2014.

**Table 1: Forecast population growth in Oxfordshire by District 2013 – 2031**

District	Population 2016	% of total population	Population 2031(*)	% of total population	Population increase 2016–2031	% of total increase in population
<b>Cherwell</b>	147,713	21.6%	199,791	23.2%	52,078	29.6%
<b>West Oxfordshire</b>	109,149	15.9%	139,782	16.2%	30,633	17.4%
<b>Oxford City (north 50%)</b>	80,456	11.8%	86,219	10%	5,763	3.3%
<b>SUB TOTAL</b>	<b>337,318</b>	<b>49.3%</b>	<b>425,792</b>	<b>49.5%</b>	<b>88,474</b>	<b>50.2%</b>
<b>South Oxfordshire</b>	138,380	20.2%	174,973	20.3%	36,593	20.8%
<b>Vale of White Horse</b>	128,247	18.7%	173,547	20.1%	45,300	25.7%
<b>Oxford City (south 50%)</b>	80,456	11.8%	86,220	10%	5,764	3.3%
<b>SUB TOTAL</b>	<b>347,083</b>	<b>50.7%</b>	<b>434,740</b>	<b>50.5%</b>	<b>87,657</b>	<b>49.8%</b>
<b>TOTAL</b>	<b>684,401</b>	<b>100%</b>	<b>860,532</b>	<b>100%</b>	<b>176,131</b>	<b>100%</b>

(\*) OCC Estimates, Oct 2016

**Table 2: Forecast housing growth in Oxfordshire by District 2013 – 2031**

District	Total number of houses 2011	% of total	Proposed number of houses per annum	Total number of proposed houses 2031	% of total	Housing increase 2011–2031(*)	% of total increase
<b>Cherwell</b>	60,400	22%	1140	83,200	22%	27,200	27.2%
<b>West Oxfordshire</b>	45,990	17%	660	59,190	16%	15,950	15.9%
<b>Oxford City (north 50%)</b>	29,165	11%	700	43,165	12%	6,850	6.8%
<b>SUB TOTAL</b>	<b>135,555</b>	<b>50%</b>	<b>2,500</b>	<b>185,555</b>	<b>50%</b>	<b>50,000</b>	<b>50%</b>
<b>South Oxfordshire</b>	56,370	21%	775	71,870	19%	20,450**	20.4%
<b>Vale of White Horse</b>	50,980	19%	1,028	71,540	19%	22,760	22.7%
<b>Oxford City (south 50%)</b>	29,165	11%	700	43,165	12%	6,850	6.8%
<b>SUB TOTAL</b>	<b>136,515</b>	<b>50%</b>	<b>2,503</b>	<b>186,575</b>	<b>50%</b>	<b>50,060</b>	<b>50%</b>
<b>TOTAL</b>	<b>272,090</b>	<b>100%</b>	<b>5,003</b>	<b>372,130</b>	<b>100%</b>	<b>100,060</b>	<b>100%</b>

(\*)Table 90 SHMA, April 2014 and as updated by the post SHMA strategic work programme 2016.

**Table 3: Total employment in Oxfordshire by District, 2011-2031**

District	2011	% of total jobs 2011	2021	% of total jobs 2021	2031	% of total jobs 2031	Growth in employment 2011-2031	% of growth 2011-2031
Cherwell	79,400	21%	91,400	21%	100,900	22%	21,500	24%
West Oxfordshire	45,700	12%	49,800	12%	53,500	11%	7,800	9%
Oxford City (north 50%)	61,600	16%	68,100	16%	73,800	16%	12,200	14%
<b>Sub Total</b>	<b>186,700</b>	<b>49%</b>	<b>209,300</b>	<b>49%</b>	<b>228,200</b>	<b>49%</b>	<b>41,500</b>	<b>47%</b>
South Oxfordshire	65,100	17%	71,400	17%	76,500	16%	11,400	13%
Vale of White Horse	67,200	18%	81,600	19%	90,200	19%	23,000	26%
Oxford City (south 50%)	61,600	16%	68,100	16%	73,800	16%	12,200	14%
<b>Sub Total</b>	<b>193,900</b>	<b>51%</b>	<b>221,100</b>	<b>51%</b>	<b>240,500</b>	<b>51%</b>	<b>46,600</b>	<b>53%</b>
<b>Oxfordshire</b>	<b>380,600</b>	<b>100%</b>	<b>430,500</b>	<b>100%</b>	<b>468,800</b>	<b>100%</b>	<b>88,200</b>	<b>100%</b>

Source: Tables B.1, C.1, D.1, E.1, F.1, G.1 Oxfordshire Economic Forecasting Report, Cambridge Econometrics, February 2014

**Table 4: Existing & planned provision of land for economic development in Oxfordshire by District, 2014**

<b>District</b>	<b>Land for economic development 2011 - 2031 (hectares)</b>	<b>% of total</b>
Cherwell	138.5	29.9%
West Oxfordshire	60	12.9%
Oxford City (north 50%)	34.19 (*)	7.4%
<b>SUB TOTAL</b>	<b>232.69</b>	<b>50.1%</b>
South Oxfordshire	33.47	7.2%
Vale of White Horse	163.97	35.3%
Oxford City (south 50%)	34.19	7.4%
<b>SUB TOTAL</b>	<b>231.63</b>	<b>49.9%</b>
<b>TOTAL</b>	<b>464.32</b>	<b>100%</b>

Source: Cambridge Econometrics, Economic Forecasting to Inform the Oxfordshire Strategic Economic Plan and Strategic Housing Market Assessment, Final Report for Vale of White Horse District Council and Partners 28 February 2014.

(\*) Oxford City totals were 68.04ha + 0.38ha i.e. a site which doesn't include an increase net growth in floor space.

## **Section A. Conclusions**

The four factors shown in the tables 1 – 4 above all indicate a nearly equal split in demand for construction aggregate materials between northern Oxfordshire (Cherwell, West Oxfordshire and north Oxford City) and southern Oxfordshire (Vale of White Horse, South Oxfordshire, south Oxford City) to 2031.



**B. Table 5: Current Permitted Sand and Gravel Reserves with Estimated Annual Production Capacities and Rates of Depletion**  
(Individual quarry figures are confidential and therefore are not shown)

Broad Sand & Gravel Resource Area	Sites with permitted reserves remaining at start 2016	Estimated production rate (mtpa)	Estimated Sharp sand & gravel reserves, at start 2016 available over plan period (mt) (including permissions in 2016)	Reserves remaining at the end of each year of the Plan Period based on estimated annual production rates																
				2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
Northern Oxfordshire (West Oxfordshire and Cherwell Districts)	Cassington Quarry (SRA 6)																			
	Stonehenge Farm, Stanton Harcourt (SRA 6)																			
	Gill Mill Quarry, Ducklington (SRA 6)																			
	Finmere Quarry (not in SRA)																			
<b>Total northern Oxfordshire Permitted Reserves (mt)</b>			7.699 * (65%)	7.04 4	6.38 9	5.73 4	5.07 9	4.50 6	3.93 3	3.38 3	3.03 3	2.68 3	2.33 3	1.98 3	1.63 3	1.28 3	0.93 3	0.58 3	0.233	
<b>Total northern Oxfordshire Production Capacity (mtpa)</b>		0.655 (55%)		0.65 5	0.65 5	0.65 5	0.65 5	0.57 3	0.57 3	0.55 0	0.35 0	0.35 0	0.35 0	0.35 0	0.35 0	0.35 0	0.35 0	0.35 0	0.35 0	0.350
Southern Oxfordshire (Vale of White Horse and South Oxfordshire Districts)	Bridge Farm, Sutton Courtenay (SRA 5)																			
	Sutton Wick Quarry (SRA 5)																			
	Caversham Quarry extension (SRA 4)																			
	Thrupp Farm Quarry (Not in SRA)																			
	Moorend Lane, Thame (Not in SRA)																			
	Faringdon Quarry (Not in SRA)																			
<b>Total southern Oxfordshire Permitted Reserves (mt)</b>			4.153 (35%)	3.62 8	3.10 3	2.45 8	2.21 8	1.87 8	1.58 8	1.29 8	1.00 8	0.71 8	0.42 8	0.13 8	0.05 8	0	0	0	0	
<b>Total southern Oxfordshire Production Capacity (mtpa)</b>		0.535 (45%)		0.52 5	0.52 5	0.36 5	0.36 5	0.29 0	0.29 0	0.29 0	0.29 0	0.29 0	0.29 0	0.29 0	0.08 0	0	0	0	0	
<b>Total Oxfordshire Permitted Reserves (mt)</b>			11.852 *	10.6 72	9.49 2	8.19 2	7.29 7	6.38 4	5.52 1	4.68 1	4.04 1	3.40 1	2.76 1	2.12 1	1.69 1	1.28 3	0.93 3	0.58 3	0.233	
<b>Total Oxfordshire Production Capacity (mtpa)</b>		1.190		1.18 0	1.18 0	1.02 0	1.02 0	0.86 3	0.86 3	0.84 0	0.64 0	0.64 0	0.64 0	0.64 0	0.43 0	0.35 0	0.35 0	0.35 0	0.350	
<b>LAA / Policy M2 annual provision requirement for sharp sand &amp; gravel (mtpa)</b>				1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.01 5	1.015	
<b>Shortfall in Production Capacity (mtpa)</b>				-	-	-	-	0.15 2	0.15 2	0.17 5	0.37 5	0.37 5	0.37 5	0.37 5	0.58 5	0.66 5	0.66 5	0.66 5	0.665	

\* Permitted reserves exclude 1.15 mt at Gill Mill Quarry assumed to be worked post 2031

### **C. Strategy Options / Reasonable Alternatives**

Table 5 above shows the following:

The current split of permitted reserves available over the plan period is 65% in northern Oxfordshire (four sites) and 35% in southern Oxfordshire (six sites).

The current split of production capacity is 55% in northern Oxfordshire (four sites) and 45% in southern Oxfordshire (six sites).

The total estimated shortfall in production over the plan period (sum of annual production capacity shortfall figures) is 5.224 mt.

Estimated annual production capacity will fall below the LAA / Policy M2 annual provision requirement of 1.015 mtpa from 2020. In this year, the split in estimated annual production capacity is 66% in northern Oxfordshire (573,000 tpa) and 34% in southern Oxfordshire (290,000 tpa).

Based on current permitted reserves and estimated annual rates of production capacity, at the end of the plan period (end of 2031) only Gill Mill Quarry in West Oxfordshire District will remain in production, with an estimated production capacity of 0.35mtpa (and remaining permitted reserves of approximately 1.15 mt). All current permitted reserves in southern Oxfordshire are expected to have been worked before the end of the plan period (with production ceasing during 2027). In order to meet the annual provision requirement (LAA figure) of 1.015 mtpa, additional total annual production capacity of 0.665 mtpa will be required in the later part of the plan period (2028 – 2031).

Table 6 at the end of this paper, which provides details of the aggregate provision required over the plan period, shows that the current shortfall in permitted reserves of sharp sand and gravel over the plan period is 5.011 mt.

The Part 2 Plan – Site Allocations Document will allocate sites with an estimated tonnage of potentially workable mineral resource but the likely annual production capacity of sites will not be known, or will be uncertain. Therefore options for delivery of the additional requirement to meet the annual provision requirement (LAA figure) should be framed in terms of quantity of potentially workable mineral resource, which can be equated to area of land required, rather than potential additional annual production capacity. For the purposes of establishing and assessing the reasonable alternatives, the additional requirement for sharp sand and gravel (5.011 mt) has been rounded to 5 mt.

The information above points to the following four strategy options for provision of the additional requirement for sharp sand and gravel over the plan period to 2031, which were taken forward for consideration as reasonable alternatives.

Option	northern Oxfordshire	southern Oxfordshire	Balance of production capacity* at 2031 (mtpa)	
			northern (0.35mtpa remaining)	southern (0mtpa remaining)
1	5.0 mt (all of requirement)	0.0 mt (none of requirement)	1.015 mtpa	0.0 mtpa
2	3.25 mt (65% requirement)	1.75 mt (35% requirement)	0.78 mtpa (0.35 + 65% of 0.665)	0.23 mtpa (0 + 35% of 0.665)
3	1.25 mt (25% requirement)	3.75 mt (75% requirement)	0.52 mtpa (0.35 + 25% of 0.665)	0.50 mtpa (0 + 76% of 0.665)
4	0.0 mt (none of requirement)	5.0 mt (all of requirement)	0.35 mtpa	0.665 mtpa

\* assumes % additional production capacity requirement is equal to % additional resource requirement

N.B. where a contribution to the additional requirement is provided for by an extension to an existing quarry, this assumes an 'increase' in production capacity, in that the production capacity that would have 'dropped out' through closure of the quarry will by virtue of the extension be continued further through the plan period.

Option 2 would continue the current split in permitted reserves, and consequent contribution to supply over the plan period between northern and southern Oxfordshire.

Option 3 would provide an approximately 50 / 50 split in production capacity between northern and southern Oxfordshire.

Options 1 and 4 are the extreme positions, which have been suggested by respondents to the plan.

#### Factors included in the assessment of reasonable alternatives

The assessment of the reasonable alternatives includes a detailed assessment of travel distance from potential mineral extraction areas to main market locations using the most appropriate lorry routes and the average area required from alternative potential mineral extraction areas to extract a given volume of aggregate. This is done by reference to the sites that have been nominated by mineral operators and landowners for possible allocation in the Part 2 Plan.

**Table 6: Aggregate provision required over plan period 2014 – 2031**

	Sharp Sand & Gravel (million tonnes)	Soft Sand (million tonnes)	Crushed Rock (million tonnes)
A. Annual Provision (from policy M2 / LAA)	1.015	0.189	0.584
B. Requirement 2014 – 2031 (A x 18 years)	18.270	3.402	10.512
C. Sales in 2014 and 2015	1.407	0.463	1.975
D. Remaining requirement (B – C)	16.863	2.939	8.537
E. Permitted Reserves at end 2015	12.487	1.594	8.597
F. Permissions granted from end 2015 to September 2016	0.515	0	0
G. Total permitted reserves available (from beginning 2016) (E + F)	13.002	1.594	8.597
H. Estimated permitted reserves available to be worked during remainder of plan period (from beginning 2016 to end 2031)	11.852	1.594	8.597
I. Remaining requirement to be provided for in Plan (D – H)	5.011	1.345	0

## Notes:

- Permissions granted since end 2015 in row F comprise:  
 Sharp sand and gravel:  
 Extension to Sutton Wick Quarry (0.35 million tonnes) – permission granted 18 March 2016);  
 Deeper working at Bridge Farm, Sutton Courtenay Quarry (0.165 million tonnes) – permission granted 17 May 2016.

2. The planning application for an extension to Gill Mill Quarry submitted in 2013 and permitted in 2015 is for the working of a total of 7.8 million tonnes of sharp sand and gravel (including 2.8 million tonnes previously permitted and 5.0 million tonnes in the extension area). Information in the application indicates this will be worked over 22 years from 2013, giving an average rate of working of approximately 0.35 million tonnes per annum. Mineral working at Gill Mill Quarry is therefore expected to extend beyond the end of the plan period (2031); of the total of 7.8 million tonnes, it is estimated approximately 6.65 million tonnes will be worked within the plan period and approximately 1.15 million tonnes will remain to be worked after 2031. The permitted reserves of sharp sand and gravel available to be worked during the plan period have therefore been reduced by 1.15 million tonnes, from 13.002 million tonnes (row G) to an estimated 11.852 million tonnes (row H).

# Appendix G.2 - sheet 1

## Weighted average area per million tonnes of resource

Resource Area	Nomination	A. Mineral resource (m. tonnes)	B. Average mineral thickness (metres)	C. Volume of resource per hectare (m3)	D. Mass of resource per hectare at 1.76t/m3 (tonnes/ha)	E. Area of total resource (ha)	F. Area required per million tonnes (ha)
<b>NORTHERN OXFORDSHIRE SITES</b>							
SRA 6	SG-08 Land at Lower Road	2.5	3.0	30,000	52,800	47.35	18.94
SRA 6	SG-18 Land at Standlake	0.5	2.6	26,300	46,288	10.80	21.60
SRA 6	SG-20 Land between Eynsham and Cassington	1.5	3.3	32,500	57,200	26.22	17.48
SRA 6	SG-20a Wharf Farm, Cassington	1.6	3.3	32,500	57,200	27.97	17.48
SRA 6	SG-20b Land at Eynsham	1.9	3.8	38,000	66,880	28.41	14.95
SRA 6	SG-23 Windrush North Gill Mill	0.8	4.5	45,000	79,200	10.10	12.63
SRA 6	SG-27 Vicarage Pit, Cogges Lane	1.6	3.1	31,000	54,560	29.33	18.33
SRA 6	SG-28 Guy Lakes North, adj. B4449	0.4	2.2	22,000	38,720	10.33	25.83
SRA 6	SG-29 Sutton Farm, Sutton	5.0	2.5	25,000	44,000	113.64	22.73
SRA 6	SG-30 Home Farm, Brighthampton	0.4	1.4	14,000	24,640	16.23	40.58
SRA 6	SG-31 Land East of Sutton	9.0	2.8	28,000	49,280	182.63	20.29
<b>Subtotal Nomination Resource SRA6</b>		<b>25.2</b>				<b>503.01</b>	
<b>SRA6 - Weighted average area (ha per million tonnes)</b>							<b>19.96</b>
Bampton/Clanfield	SG-15 Dairy Farm, Clanfield	5.4	3.8	38,000	66,880	80.74	14.95
Bampton/Clanfield	SG-58 Chestlion Farm, Clanfield	5.1	3.2	32,000	56,320	90.55	17.76
Bampton/Clanfield	SG-58a Manor Farm, Clanfield	12.0	5.3	53,000	93,280	128.64	10.72
<b>Subtotal Nomination Resource Bampton/Clanfield</b>		<b>22.5</b>				<b>299.94</b>	
<b>Bampton/Clanfield - Weighted average area (ha per million tonnes)</b>							<b>13.33</b>
<b>Subtotal Nomination Resource ALL NORTHERN OXFORDSHIRE</b>		<b>47.7</b>				<b>802.95</b>	
<b>Northern Oxfordshire - Weighted average area (ha per million tonnes)</b>							<b>16.83</b>
<b>SOUTHERN OXFORDSHIRE SITES</b>							
SRA5 (Radley)	SG-42 Nuneham Courtenay	4.4	2.1	21,000	36,960	119.05	27.06
SRA5 (Radley)	SG-41 North of Lower Radley	1.5	1.5	15,000	26,400	56.82	37.88
SRA5 (Drayton St. Leonard/Berinsfield)	SG-09 Land North of Drayton St. Leonard and Berinsfield.	4.5	2.4	24,000	42,240	106.53	23.67
SRA5 (Drayton St. Leonard/Berinsfield)	SG-59 Stadhampton	1.5	2.5	25,000	44,000	34.09	22.73
SRA5 (Benson)	SG-03 Land adj. Benson Marina	0.07	3.0	30,000	52,800	1.33	18.94
SRA5 (Cholsey)	SG-60 White Cross Farm, Wallingford	0.5	2.3	23,000	40,480	12.35	24.70
SRA5 (Cholsey)	SG-33 Land South of Wallingford, New Barn Farm	3.9	4.8	48,000	84,480	46.16	11.84
SRA 5 (Culham)	SG-17 Land at Culham	4.0	2	20,000	35,200	113.64	28.41
SRA5 (Culham)	SG-19 Bridge Farm Appleford	0.5	2.5	24,600	43,296	11.55	23.10
SRA5 (Culham)	SG-62 Appleford, Didcot	1.1	3.8	38,000	66,880	16.45	14.95
<b>Subtotal SRA 5</b>		<b>21.97</b>				<b>517.97</b>	
<b>SRA5 - Weighted average area (ha per million tonnes)</b>							<b>23.58</b>
SRA 4 (Caversham)	SG-11 Land East of Spring Land, Sonning Eye (Caversham 'C').	2.1	5.0	50,000	88,000	23.86	11.36
<b>Subtotal SRA 4</b>		<b>2.1</b>				<b>23.86</b>	
<b>SRA4 - Weighted average area (ha per million tonnes)</b>							<b>11.36</b>
<b>Subtotal Nomination Resource SOUTHERN OXFORDSHIRE</b>		<b>24.07</b>				<b>541.83</b>	
<b>South - Weighted average area (ha per million tonnes)</b>							<b>22.51</b>
<b>Total Nomination Resource - SRA4, SRA5 and SRA6</b>		<b>49.27</b>					
<b>SRA4, SRA5 and SRA6 - Weighted average area (ha per million tonnes)</b>							<b>21.21</b>
<b>Grand total with Bampton/Clanfield</b>		<b>71.77</b>					
<b>Total - Weighted average area (ha per million tonnes)</b>							<b>18.74</b>

### Mineral thickness (metres) information source (MAR = BGS Mineral Assessment Report)

MAR 28: block C average = 3.6; block F average = 2.3; Av. = 3.0 (approx.)  
 MAR 28: block A = 3.3; site nomination information indicates 2.63  
 MAR 28: block C average = 3.6; site nomination information indicates 3.25  
 MAR 28: block C average = 3.6; site nomination information indicates 3.25  
 MAR 28: block C average = 3.6; withdrawn planning application information states 3.8  
 MAR 23: block C average = 4.2; site nomination information from site geolocal reports calculates as 4.5  
 MAR 23: block C average = 4.2; site nomination information from site geolocal reports calculates as 3.1  
 MAR 23: block C average = 4.2; site nomination information from site geolocal reports calculates as 2.2  
 MAR 28: block B average = 2.8; site nomination information from site geolocal reports calculates as 2.5  
 MAR 23: block G average = 1.6; site nomination information from site geolocal reports calculates as 1.4  
 MAR 28: block B average = 2.8; site nomination information indicates 2.8

MAR23: block D average = 2.9; site nomination information indicates 3.8  
 MAR23: block B average = 4.7; site nomination information indicates 3.2  
 MAR23: block B average = 4.7; site nomination information indicates 5.3

MAR 38: block A average = 2.2; site nomination information indicates 2.1  
 MAR 38: block A average = 2.2; site nomination information indicates 1.5

MAR 38: block D average = 2.6; site nomination states 2.4  
 MAR 38: block D average = 2.6; site nomination states 2.5

MAR 81: block C average = 3.0

MAR 64: block B average = 3.6; site nomination information indicates 2.3; Scoping opinion request MW.0137/15 indicates 2.3 is more likely  
 MAR 64: block A average = 3.9; updated nomination information (email 28.05.15) calculates at 4.8m; planning application MW.0094/16 data calculates at 5.1 for smaller area

MAR 38: block B average = 2.0; planning application MW.0039/16 data calculates at 1.8 for smaller area  
 MAR 38: block B average = 2.0; site nomination information indicates 2.46  
 MAR 38: block B average = 2.0; site nomination information indicates 3.8

MAR 32: block D average = 5.0; site nomination information indicates 5.0

SRA6: ha for 5 mt 99.80  
 SRA4&5: ha for 5 mt 112.55  
 %age difference 12.8%

Source for density of 1.76 tonne per cubic metre **1.76**  
<http://www.myersgroup.co.uk/nm/technicalpage.asp?pageID=15>

**Calculating the weighted averages**  
 The weighted average area for each SRA (and combinations of SRAs) is calculated by adding all values in "F. Area required per million tonnes (ha)" and then dividing by the total resource (million tonnes) in that SRA (combination of SRAs).

## Appendix G.2 - sheet 2

### Weighted averages for distance to markets

#### NORTHERN OXFORDSHIRE SITES

Resource Area	Nomination	Resource (million tonnes)	Distance to Banbury (miles)		Distance to Bicester (miles)		Distance to Oxford (miles)		Distance to Abingdon (miles)		Distance to Didcot (miles)		Distance to Wantage-Grove (miles)	
			Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles		
SRA 6	SG-08 Land at Lower Road	2.5	29.4	73.5	15	37.5	7.9	19.75	15.6	39	22.6	56.5	21.2	53
SRA 6	SG-18 Land at Standlake	0.5	32.5	16.25	18.1	9.05	11	5.5	18.7	9.35	25.7	12.85	24.3	12.15
SRA 6	SG-20 Land between Eynsham and Cassington	1.5	26.7	40.05	12.3	18.45	5.2	7.8	12.9	19.35	19.9	29.85	18.5	27.75
SRA 6	SG-20a Wharf Farm, Cassington	1.6	26.7	42.72	12.3	19.68	5.2	8.32	12.9	20.64	19.9	31.84	18.5	29.6
SRA 6	SG-20b Land at Eynsham	1.9	26.7	50.73	12.3	23.37	5.2	9.88	12.9	24.51	19.9	37.81	18.5	35.15
SRA 6	SG-23 Windrush North Gill Mill	0.8	35.5	28.4	21.1	16.88	14	11.2	21.7	17.36	28.7	22.96	27.3	21.84
SRA 6	SG-27 Vicarage Pit, Cogges Lane	1.6	35.5	56.8	21.1	33.76	14	22.4	21.7	34.72	28.7	45.92	27.3	43.68
SRA 6	SG-28 Guy Lakes North, adj. B4449	0.4	35.5	14.2	21.1	8.44	14	5.6	21.7	8.68	28.7	11.48	27.3	10.92
SRA 6	SG-29 Sutton Farm, Sutton	5.0	30.9	154.5	16.5	82.5	9.4	47	17.1	85.5	24.1	120.5	22.7	113.5
SRA 6	SG-30 Home Farm, Brighthampton	0.4	37.9	15.16	23.5	9.4	16.4	6.56	24.1	9.64	31.1	12.44	29.7	11.88
SRA 6	SG-31 Land East of Sutton	9.0	30.9	278.1	16.5	148.5	9.4	84.6	17.1	153.9	24.1	216.9	22.7	204.3
<b>SRA6 Resource Nomination Total Resource / Average Distance (million tonne miles)</b>		<b>25.2</b>	<b>30.6</b>	<b>16.2</b>	<b>9.1</b>	<b>16.8</b>	<b>23.8</b>	<b>22.4</b>						
Bampton/Clanfield	SG-15 Dairy Farm, Clanfield	5.4	43.2	233.3	28.8	155.5	21.7	117.2	29.4	158.8	36.4	196.6	35.0	189.0
Bampton/Clanfield	SG-58 Chestlion Farm, Clanfield	5.1	43.2	220.3	28.8	146.9	21.7	110.7	29.4	149.9	36.4	185.6	35.0	178.5
Bampton/Clanfield	SG-58a Manor Farm, Clanfield	12.0	43.2	518.4	28.8	345.6	21.7	260.4	29.4	352.8	36.4	436.8	35.0	420.0
<b>Bampton/Clanfield Total Resource / Average Distance (million tonne miles)</b>		<b>22.5</b>	<b>43.2</b>	<b>28.8</b>	<b>21.7</b>	<b>29.4</b>	<b>36.4</b>	<b>35.0</b>						
<b>All Northern Oxfordshire Total Resource / Average Distance (million tonne miles)</b>		<b>47.7</b>	<b>36.5</b>	<b>22.1</b>	<b>15.0</b>	<b>22.7</b>	<b>29.7</b>	<b>28.3</b>						

To add to Oxford distance for all northern sites (as they all use Wolvercote roundabout)

Ban	Bic	Ab	Did	Wan
21.5	7.1	7.7	14.7	13.3

#### SOUTHERN OXFORDSHIRE SITES

Resource Area	Nomination	Resource (million tonnes)	Distance to Banbury (miles)		Distance to Bicester (miles)		Distance to Oxford (miles)		Distance to Abingdon (miles)		Distance to Didcot (miles)		Distance to Wantage-Grove (miles)	
			Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles	Million tonne miles				
SRA5 (Radley)	SG-42 Nuneham Courtenay	4.4	32.5	143	18.1	79.64	5.5	24.2	7.4	32.56	17.4	76.56	18.9	83.16
SRA5 (Radley)	SG-41 North of Lower Radley	1.5	33.6	50.4	19.2	28.8	7.6	11.4	2.4	3.6	10.5	15.75	15.1	22.65
SRA5 (Drayton St. Leonar	SG-09 Land North of Drayton St. Leonard and Berinsfield.	4.5	35.1	157.95	20.7	93.15	8.1	36.45	6.7	30.15	14.8	66.6	21.5	96.75
SRA5 (Drayton St. Leonar	SG-59 Stadhampton	1.5	35.1	52.65	20.7	31.05	8.1	12.15	6.7	10.05	14.8	22.2	21.5	32.25
SRA5 (Benson)	SG-03 Land adj. Benson Marina	0.07	39.7	2.779	25.3	1.771	12.7	0.889	9.6	0.672	10.4	0.728	21.4	1.498
SRA5 (Cholsey)	SG-60 White Cross Farm, Wallingford	0.5	43.3	21.65	28.9	14.45	16.3	8.15	13.2	6.6	6.8	3.4	17.9	8.95
SRA5 (Cholsey)	SG-33 Land South of Wallingford, New Barn Farm	3.9	43.4	169.26	29	113.1	16.4	63.96	13.3	51.87	6.5	25.35	17.5	68.25
SRA 5 (Culham)	SG-17 Land at Culham	4.0	38	152	23.6	94.4	11.1	44.4	3.7	14.8	16.1	64.4	24.5	98
SRA5 (Culham)	SG-19 Bridge Farm Appleford	0.5	41.4	20.7	27	13.5	15.3	7.65	7.8	3.9	1.8	0.9	10.2	5.1
SRA5 (Culham)	SG-62 Appleford, Didcot	1.1	41.4	45.54	27	29.7	15.3	16.83	7.8	8.58	1.8	1.98	10.2	11.22
<b>SRA 5 Subtotal (Average) Resource / Average Distance (million tonne miles)</b>		<b>21.97</b>	<b>37.1</b>	<b>22.7</b>	<b>10.3</b>	<b>7.4</b>	<b>12.6</b>	<b>19.5</b>						
SRA 4 (Caversham)	SG-11 Land East of Spring Lane, Sonning Eye (Caversham 'C').	2.1	55.4	116.34	41	86.1	28.4	59.64	25.3	53.13	20.7	43.47	31.7	66.57
<b>SRA 4 Subtotal (Average) Resource / Average Distance (million tonne miles)</b>		<b>2.1</b>	<b>55.4</b>	<b>41</b>	<b>28.4</b>	<b>25.3</b>	<b>20.7</b>	<b>31.7</b>						
<b>All Southern Oxfordshire Total Resource / Average Distance (million tonne miles)</b>		<b>24.07</b>	<b>38.7</b>	<b>24.3</b>	<b>11.9</b>	<b>9.0</b>	<b>13.4</b>	<b>20.5</b>						
<b>SOUTHERN AND NORTHERN OXFORDSHIRE</b>														
<b>A. Total SRA4, SRA5 and SRA6 / Average Distance (million tonne miles)</b>		<b>49.27</b>	<b>34.6</b>	<b>20.2</b>	<b>10.4</b>	<b>13.0</b>	<b>18.7</b>	<b>21.5</b>						
<b>B. Grand total with Bampton/Clanfield / Average Distance (million tonne miles)</b>		<b>71.77</b>	<b>37.3</b>	<b>22.9</b>	<b>14.0</b>	<b>18.1</b>	<b>24.2</b>	<b>25.7</b>						
<b>Difference between A and B (million tonne miles)</b>			<b>2.7</b>	<b>2.7</b>	<b>3.5</b>	<b>5.2</b>	<b>5.6</b>	<b>4.2</b>						
<b>Difference between SRA6 and SRA4&amp;SRA5 (i.e total south) (million tonne miles)</b>			<b>-8.2</b>	<b>-8.2</b>	<b>-2.8</b>	<b>7.8</b>	<b>10.4</b>	<b>1.8</b>						

To convert Banbury distance to Bicester distance  
Used in Column H. 14.4

## Appendix G.3

### Oxfordshire Minerals and Waste Local Plan: Part 1 – Core Strategy Evidence Base Document

#### Distances from Site Nominations to Main Markets for Aggregates

The tables below provide details of the routes chosen to determine the distances from the aggregate site nominations to each of the main markets for aggregates in Oxfordshire. Separate tables are provided for the site nominations in west Oxfordshire and south Oxfordshire. The west Oxfordshire site nominations include three sites in the Bampton /Clanfield area that are not included in a strategic resource area.

In addition to the route selected, the tables also include the distance of each route.

In determining the distances the following criteria have been used when identifying the most appropriate routes from the site nominations to the main markets:

- No use of Swinford Toll Bridge from west Oxfordshire sites to Oxford, Abingdon, Didcot or Wantage/Grove.
- No use of Newbridge from west Oxfordshire sites as it has an 18T weight restriction.
- For routes through Marcham as it is classified in the Oxfordshire Lorry Route Map as an “Environmentally sensitive area: avoid if at all possible”.
- No routes through Faringdon as the town is classified in the Oxfordshire Lorry Route Map as an “*Environmentally sensitive area: avoid if at all possible*”.
- Didcot ‘north bypass’ (A4130) used for routes from south Oxfordshire sites to A34 Milton interchange and on to Wantage/Grove
- No use of B4015 to access A415 from A4074 southbound (i.e. from Nuneham Courtenay) as it has a 7.5T weight restriction. Access to A415 at Berinsfield roundabout.
- No use of Featherbed Lane to cut corner between A4130 and A417 on routes from A34 Milton interchange to Wantage/Grove as it has a 7.5T weight restriction.



### Routes from west Oxfordshire sites to markets

Site Nomination – West Oxfordshire	Bicester and Banbury	Oxford	Abingdon	Didcot	Wantage - Grove
<b>SG-08 Land at Lower Road</b>	Lower Road to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 / M40 – Banbury <b>29.4 miles.</b> A34 / A41 – Bicester <b>15 miles.</b>	Lower Road to A40 at Eynsham. A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>7.9 miles.</b>	Lower Road to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to North Abingdon junction. Town centre via Oxford Road. <b>15.6 miles.</b>	Lower Road to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 Milton interchange. Town centre via A4130 and B4493. <b>22.6 miles.</b>	Lower Road to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>29.4 miles.</b>
<b>SG-18 Land at Standlake</b>	B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 / M40 – Banbury <b>32.5 miles.</b> A34 / A41 – Bicester <b>18.1 miles.</b>	B4449 to A40 at Eynsham. A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>11 miles.</b>	B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to North Abingdon junction. Town centre via Oxford Road. <b>18.7 miles.</b>	B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 Milton interchange. Town centre via A4130 and B4493. <b>25.7 miles.</b>	B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>24.3 miles.</b>
<b>SG-20 Land between Eynsham and Cassington.</b> <b>SG-20a Wharf Farm, Cassington</b> <b>SG-20b Land at Eynsham</b>	A40 to Wolvercote roundabout and then to A34 at Peartree. A34 / M40 – Banbury <b>26.7 miles.</b> A34 / A41 – Bicester <b>12.3 miles.</b>	A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>5.2 miles.</b>	A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to North Abingdon junction. Town centre via Oxford Road. <b>12.9 miles.</b>	A40 to Wolvercote roundabout and then to A34 at Peartree. A34 Milton interchange. Town centre via A4130 and B4493. <b>19.9 miles.</b>	A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>18.5 miles.</b>

Site Nomination – West Oxfordshire	Bicester and Banbury	Oxford	Abingdon	Didcot	Wantage - Grove
<p><b>SG-23 Windrush North Gill Mill</b></p> <p><b>SG-27 Vicarage Pit, Cogges Lane</b></p> <p><b>SG-28 Guy Lakes North, adj. B4449</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout. Wolvercote roundabout to A34 at Peartree.</p> <p>A34 / M40 – Banbury <b>35.5 miles.</b></p> <p>A34 / A41 – Bicester <b>21.1 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>14 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 to North Abingdon junction. Town centre via Oxford Road. <b>21.8 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 Milton interchange. Town centre via A4130 and B4493. <b>28.7 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>27.3 miles.</b></p>
<p><b>SG-29 Sutton Farm, Sutton</b></p> <p><b>SG-31 Land East of Sutton</b></p>	<p>B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 / M40 – Banbury <b>30.5 miles.</b></p> <p>A34 / A41 – Bicester <b>165 miles.</b></p>	<p>B4449 to A40 at Eynsham. A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>9.4miles.</b></p>	<p>B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 to North Abingdon junction. Town centre via Oxford Road. <b>17.1 miles.</b></p>	<p>B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 Milton interchange. Town centre via A4130 and B4493. <b>24.1 miles.</b></p>	<p>B4449 to A40 at Eynsham. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>22.7 miles.</b></p>
<p><b>SG-30 Home Farm, Brighthampton</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 / M40 – Banbury <b>37.9 miles.</b></p> <p>A34 / A41 – Bicester <b>165 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>16.4 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 to North Abingdon junction. Town centre via Oxford Road. <b>24.1 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 Milton interchange. Town centre via A4130 and B4493. <b>31.1 miles.</b></p>	<p>A415 to A40 at Witney. A40 to Wolvercote roundabout and then to A34 at Peartree.</p> <p>A34 Milton interchange. Town centre via A4130 and B4493. <b>29.7 miles.</b></p>

Site Nomination – West Oxfordshire	Bicester and Banbury	Oxford	Abingdon	Didcot	Wantage - Grove
<b>SG-15 Dairy Farm, Clanfield</b> <b>SG-58 Chestlion Farm, Clanfield</b> <b>SG-58a Manor Farm, Clanfield</b>	B4020 and then B4477 to A40 (bypassing Carterton and Brize Norton). A40 to Wolvercote roundabout and then to A34 at Peartree. A34 / M40 – Banbury <b>43.2 miles.</b> A34 / A41 – Bicester <b>28.8 miles.</b>	B4020 and then B4477 to A40 (bypassing Carterton and Brize Norton). A40 to Wolvercote roundabout. Woodstock Road into Oxford city centre. <b>21.7 miles.</b>	B4020 and then B4477 to A40 (bypassing Carterton and Brize Norton). A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to North Abingdon junction. Town centre via Oxford Road. <b>29.4 miles.</b>	B4020 and then B4477 to A40 (bypassing Carterton and Brize Norton). A40 to Wolvercote roundabout and then to A34 at Peartree. A34 Milton interchange. Town centre via A4130 and B4493. <b>36.4 miles.</b>	B4020 and then B4477 to A40 (bypassing Carterton and Brize Norton). A40 to Wolvercote roundabout and then to A34 at Peartree. A34 to Botley interchange. A420 and A338 to Wantage/Grove. <b>35 miles.</b>

### Routes from south Oxfordshire sites to markets

Site Nomination – South Oxfordshire	Bicester and Banbury	Oxford	Abingdon	Didcot	Wantage - Grove
SG-42 Nuneham Courtenay	A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>32.5 miles.</b> A41 to Bicester. <b>18.1 miles.</b>	A4074 to Eastern bypass. Abingdon Road into city centre. <b>5.5 miles.</b>	A4074 to Eastern bypass. A34 to Abingdon North. Oxford Road to Abingdon town centre. <b>7.4 miles.</b>	A4074 to A4130 via Wallingford bypass. Station Road to Didcot town centre. <b>17.4 miles.</b>	A4074 to Eastern bypass. A34 Hinksey to Milton interchange. A4130 and A417 to Wantage/Grove. <b>18.9 miles.</b>
SG-41 North of Lower Radley	Radley Road, Twelve Acre Drive and Oxford Road to A34 Abingdon North. A34 to M40 J9. M40 to Banbury. <b>33.6 miles.</b> A41 to Bicester. <b>19.2 miles.</b>	Radley Road, Twelve Acre Drive and Oxford Road to A34 Abingdon North. A34 to Hinksey. Eastern By-pass and Abingdon Road to city centre. <b>7.6 miles.</b>	Radley Road and Audlett Drive to Abingdon town centre. <b>2.4 miles.</b>	Radley Road, Twelve Acre Drive, Dunmore Road, Colwell Drive and Marcham Road to A34. A34 to Milton. A4130 and B4493 to Didcot town centre. <b>10.5 miles.</b>	Radley Road, Twelve Acre Drive, Dunmore Road, Colwell Drive and Marcham Road to A34. A34 to Milton. A4130 and A417 to Wantage/Grove. <b>15.1 miles.</b>
SG-09 Land North of Drayton St. Leonard and Berinsfield.	A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>35.1 miles.</b> A41 to Bicester. <b>20.7 miles.</b>	A4074 to Eastern bypass. Abingdon Road into city centre. <b>8.1 miles.</b>	A4074 to A415 at Berinsfield roundabout. A415 to Abingdon town centre. <b>6.7 miles.</b>	A4074 to A4130 via Wallingford bypass. Station Road to Didcot town centre. <b>14.8 miles.</b>	A4074 to Eastern bypass. A34 Hinksey to Milton interchange. A4130 and A417 to Wantage/Grove. <b>21.5 miles.</b>
SG-59 Stadhampton	A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>35.1 miles.</b> A41 to Bicester. <b>20.7 miles.</b>	A4074 to Eastern bypass. Abingdon Road into city centre. <b>8.1 miles.</b>	A4074 to A415 at Berinsfield roundabout. A415 to Abingdon town centre. <b>6.7 miles.</b>	A4074 to A4130 via Wallingford bypass. Station Road to Didcot town centre. <b>14.8 miles.</b>	A4074 to Eastern bypass. A34 Hinksey to Milton interchange. A4130 and A417 to Wantage/Grove. <b>21.5 miles.</b>

SG-03 Land adj. Benson Marina	A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>39.7 miles.</b> A41 to Bicester. <b>25.4 miles.</b>	A4074 to Eastern bypass. Abingdon Road into city centre. <b>12.7 miles.</b>	A4074 to A415 at Berinsfield roundabout. A415 to Abingdon town centre. <b>9.6 miles.</b>	A4074 to A4130 via Wallingford bypass. Station Road to Didcot town centre. <b>10.4 miles.</b>	A4074 to A4130 via Wallingford bypass. A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>21.3 miles.</b>
SG-60 White Cross Farm, Wallingford	A329, Nosworthy Way and A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>43.3 miles.</b> A41 to Bicester. <b>28.9 miles.</b>	A329, Nosworthy Way and A4074 to Eastern bypass. Abingdon Road into city centre. <b>16.3 miles.</b>	A329, Nosworthy Way and A4074 to Berinsfield roundabout. A415 to Abingdon town centre. <b>13.2 miles.</b>	A329 and A4130 to Didcot. Station Road to Didcot town centre. <b>6.8 miles.</b>	A329 and A4130 to Didcot. A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>17.8 miles.</b>
SG-33 Land South of Wallingford, New Barn Farm	A329, Nosworthy Way and A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>43.4 miles.</b> A41 to Bicester. <b>29 miles.</b>	A329, Nosworthy Way and A4074 to Eastern bypass. Abingdon Road into city centre. <b>16.4 miles.</b>	A329, Nosworthy Way and A4074 to Berinsfield roundabout. A415 to Abingdon town centre. <b>13.3 miles.</b>	A329 and A4130 to Didcot. Station Road to Didcot town centre. <b>6.5 miles.</b>	A329 and A4130 to Didcot. A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>17.5 miles.</b>
SG-17 Land at Culham	A415 to Berinsfield roundabout. A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>38 miles.</b> A41 to Bicester. <b>23.6 miles.</b>	A415 to Berinsfield roundabout. A4074 to Eastern bypass. Abingdon Road into city centre. <b>11.1 miles.</b>	A415 to Abingdon town centre. <b>3.7 miles.</b>	A415 to Berinsfield roundabout. A4074 to A4130 via Wallingford bypass. Station Road to Didcot town centre. <b>16.1 miles.</b>	A415 to Berinsfield roundabout. A4074 to Eastern bypass. A34 Hinksey to A34 Milton. A4130 and A417 to Wantage/Grove. <b>24.5 miles.</b>
SG-19 Bridge Farm Appleford	A4130 Didcot bypass to Milton. A34 Milton to M40 J9. M40 to Banbury. <b>41.4 miles.</b> A41 to Bicester. <b>27 miles.</b>	A4130 Didcot bypass to Milton. A34 Milton to Hinksey. Eastern By-pass and Abingdon Road to city centre. <b>15.3 miles.</b>	A4130 Didcot bypass to Milton. A34 Milton to A34 Marcham. Marcham Road into Abingdon town centre. <b>7.8 miles.</b>	A4130 Didcot bypass. Station Road to Didcot town centre. <b>1.8 miles.</b>	A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>10.2 miles.</b>

SG-62 Appleford, Didcot	A4130 Didcot bypass to Milton. A34 Milton to M40 J9. M40 to Banbury. <b>41.4 miles.</b> A41 to Bicester. <b>27 miles.</b>	A4130 Didcot bypass to Milton. A34 Milton to Hinksey. Eastern By-pass and Abingdon Road to city centre. <b>15.3 miles.</b>	A4130 Didcot bypass to Milton. A34 Milton to A34 Marcham. Marcham Road into Abingdon town centre. <b>7.8 miles.</b>	A4130 Didcot bypass. Station Road to Didcot town centre. <b>1.8 miles.</b>	A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>10.2 miles.</b>
SG-11 Land East of Spring Lane, Sonning Eye (Caversham 'C').	A4155, A4074 to Eastern bypass. A34 Hinksey to M40 J9. M40 to Banbury. <b>55.4 miles.</b> A41 to Bicester. <b>41 miles.</b>	A4155, A4074 to Eastern bypass. Abingdon Road into city centre. <b>28.4 miles.</b>	A4155, A4074 to Berinsfield roundabout. A415 to Abingdon town centre. <b>25.3 miles.</b>	A4155, A4074 and A4130 to Didcot. Station Road to Didcot town centre. <b>20.7 miles.</b>	A4155, A4074 and A4130 to Didcot. A4130 Didcot bypass to Milton. A4130 and A417 to Wantage/Grove. <b>31.7 miles.</b>