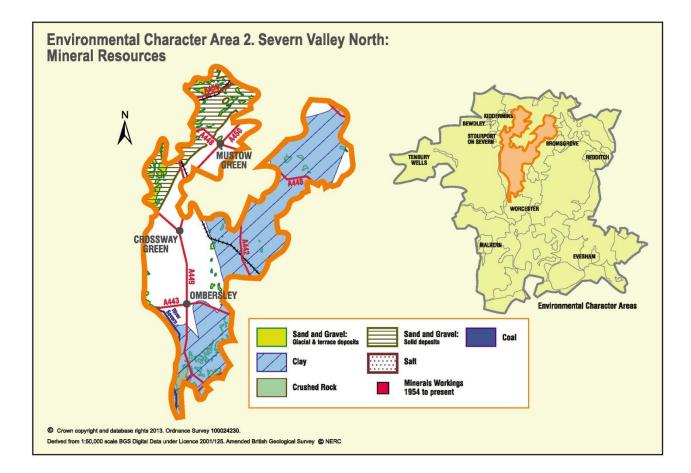
Appendix 2: Analysis of aggregate resources in ECA 2: Severn Valley North



ECA Summary for the Third Stage consultation on MLP (Spring 2015):

Sand and gravel

There are 31 resource areas identified for sand and gravel in Severn Valley North ECA:

- Key: 3
- Significant: 8
- Not significant: 11
- Compromised: 9

Crushed rock

There are no resource areas identified in Severn Valley North ECA for crushed rock.

Non-aggregates

BGS data indicates that there are deposits of clay in this ECA.

Overview of resource assessment for ECA 1

Sand and gravel resource areas:

Resource	Second Stage Consultation		Third Stage Consultation		
number*	Original estimated resource	Significance	Revised estimate of resource	Significance	
	tonnage (2 tonnes/m ³)		tonnage (1.65 tonnes/m ³)		
2/1	748,000	Key	617,100	Кеу	
2/2	3,050,000	Compromised	2,516,250	Compromised	
2/2 a	1,350,000	Significant	1,113,750	Significant	
2/3	1,600,000	Significant	1,320,000	Significant	
2/4	400,000	Significant	330,000	→ Not significant	
2/5	775,000	Significant	639,375	Significant	
2/5a	1,000,000	Compromised	825,000	Compromised	
2/6	390,000	Not significant	321,750	Not significant	
2/7	330,000	Not significant	272,250	Not significant	
2/8	570,000	Not significant	470,250	Not significant	
2/9	Depth not known	Not significant	Depth not known	Not significant	
2/10	1,550,000	Significant	1,278,750	Significant	
2/11	Depth not known	Not significant	Depth not known	Not significant	
2/12	Depth not known	Significant	Depth not known	Significant	
2/12 a	Depth not known	Compromised	Depth not known	Compromised	
2/12 b	Depth not known	Compromised	Depth not known	Compromised	
2/13	1,800,000	Significant	1,485,000	Significant	
2/13 a	1,480,000	Compromised	1,221,000	Compromised	
2/14	864,000	Significant	712,800	Significant	
2/15	225,000	Not significant	185,625	Not significant	
2/16	Depth not known	Not significant	Depth not known	Not significant	
2/17	882,000	Significant	727,650	Significant	
2/18	342,000	Not significant	282,150	Not significant	
2/19	522,000	Not significant	430,650	Not significant	
2/20	Depth not known	Not significant	Depth not known	Not significant	
2/21	4,384,912,000	Key	3,617,552,400	Key	
2/22	808,185,000	Key	666,752,625	Key	
2/23	323,990,000	Compromised	267,291,750	Compromised	
2/24	64,050,000	Compromised	52,841,250	Compromised	
2/25	899,100,000	Compromised	741,757,500	Compromised	
2/26	40,950,000	Compromised	33,783,750	Compromised	

Overview		
Resource number:	2/1	N 2/19 2/19
Resource name:	Barnett Hill	
Resource area:	11ha	Manor Manor
Resource depth:	Estimated 6.8m	
Location		C C
OS sheet reference:	SO 87 NE	
National grid ref:	388764, 277139	2/22 2/1 Bard Contraction Bell high for Derived from 1:50,000 ocale BeS Digital Data under Licence 2001/125 Amender Briten Geological Sorvey Io NERC (c) Crown copyright are telebase in the 2013 Ordan Survey 100024238
Resource description:	·	
Resource description:		gravel. A section on the west side of the road 700yds north east of Barnett Brook
		succession, false bedded sand with thin lenses of gravel 10' (3m), on false bedded sand eastern end of the deposit has previously been worked. (Total 6m to 7.6m)
	(Estimated resource de	epth based on midpoint of section at Barnett Brook: (6m to 7.6m = 6.8m)
Assessment of resourc		ultation on MLP (Autumn 2013)
	A small resource area i	intersected by a road. The eastern end of the deposit has previously been worked, this
Commentary:		intersected by a road. The eastern end of the deposit has previously been worked, this of the resource area.
Crude estimate of	A small resource area i is not included as part of Area: 11 ha x average	of the resource area.
-	is not included as part of	of the resource area. depth: 6.8 m ÷ 2
Crude estimate of	is not included as part of Area: 11 ha x average Estimated resource vol	of the resource area. depth: 6.8 m ÷ 2
Crude estimate of	is not included as part of Area: 11 ha x average Estimated resource vol	of the resource area. depth: 6.8 m ÷ 2 ume: 374,000 m ³
Crude estimate of resource:	is not included as part of Area: 11 ha x average Estimated resource vol Estimated resource to	of the resource area. depth: 6.8 m ÷ 2 lume: 374,000 m ³ onnage (at 2 t/m ³): 748,000 tonnes
Crude estimate of resource: Conclusion:	is not included as part of Area: 11 ha x average Estimated resource vol Estimated resource to Significant. Consider in defining are	of the resource area. depth: 6.8 m ÷ 2 ume: 374,000 m ³ onnage (at 2 t/m ³): 748,000 tonnes
Crude estimate of resource:	is not included as part of Area: 11 ha x average Estimated resource vol Estimated resource to Significant. Consider in defining are	of the resource area. depth: 6.8 m ÷ 2 ume: 374,000 m ³ onnage (at 2 t/m ³): 748,000 tonnes eas of search. onsultation on MLP (Spring 2015)
Crude estimate of resource: Conclusion: Assessment of resource	is not included as part of Area: 11 ha x average Estimated resource vol Estimated resource to Significant. Consider in defining are is for the Third Stage con Area: 11 ha x average	of the resource area. depth: $6.8 \text{ m} \div 2$ lume: $374,000 \text{ m}^3$ onnage (at 2 t/m ³): 748,000 tonnes eas of search. onsultation on MLP (Spring 2015) depth: $6.8 \text{ m} \div 2$
Crude estimate of resource: Conclusion: <u>Assessment of resourc</u> Revised estimate of	is not included as part of Area: 11 ha x average Estimated resource vol Estimated resource to Significant. Consider in defining are the Third Stage co Area: 11 ha x average Estimated resource vol	of the resource area. depth: $6.8 \text{ m} \div 2$ lume: $374,000 \text{ m}^3$ onnage (at 2 t/m ³): 748,000 tonnes eas of search. onsultation on MLP (Spring 2015) depth: $6.8 \text{ m} \div 2$

Overview			
Resource number:	2/2	The Wei 2/5 Fer	
Resource name:	Bevere	50 2/4	
Resource area:	61ha	He	
Resource depth:	Estimated 5m	La la construction de la constru	
Location			
OS sheet reference:	SO 85 NW	The 2/5a	
National grid ref:	384355, 258863	2/2 Clauses PH PH PH PH PH PH PH PH PH PH	
Resource description:			
Resource description:	Some 1 st terrace (Powe gravel.	erhouse) and 2 nd terrace (Worcester), but mostly 3 rd terrace (Holt Heath) sand and	
	A complex series of river terrace remnants occur in the Bevere area. 3 rd , 2 nd and 1 st terraces are present in a contiguous formation of terraces at varying levels which have an unclear relationship with the present course of the River Severn. There are no exposures or boreholes recorded in this resource area, although the memoir states that between Bevere Lane and the northern suburbs of Worcester, the 3 rd terrace is 7-8m thick. Boreholes into the 2 nd terrace in the west have recorded between 1.9m and 5.8m of sand and gravel with little overburden and between 1.4m+ and 5.8m+ in the 3 rd terrace.		
	7.5m, b) Boreholes in th	oth based on mean average of a) Memoir record at Bevere Lane: (mid-point of 7 to 8m) ne 2 nd terrace (mid-point 1.9m to 5.8m): 3.85m and c) Boreholes in 3 rd terrace (mid-point = 4.98m rounded to 5m.	
Assessment of resource		Itation on MLP (Autumn 2013)	
Commentary:		ce area intersected by roads with some ribbon development. The deposit continues to	
		rthwick/Claines area of Worcester, this is considered separately as resource area 2/2a.	
Crude estimate of	Area: 61ha x average d		
resource:	Estimated resource vol		
		onnage (at 2 t/m ³): 3,050,000 tonnes	
Conclusion:	Significant – key resour	ce.	

	Use to define areas of search.	
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 61ha x average depth: 5m ÷ 2	
resource:	Estimated resource volume: 1,525,000 m ³	
	Estimated resource tonnage (at 1.65 t/m ³): 2,516,250 tonnes	
Conclusion:	Significant – key resource.	

Overview		
Resource number:	2/2a	
Resource name:	Bevere a)	
Resource area:	27ha The Sa	
Resource depth:	Estimated 5m Grange	
Location		
OS sheet reference: National grid ref:	SO 85 NW 384355, 258863	
Resource description:	at ad	
Resource description:	Some 1 st terrace (Powerhouse) and 2 nd terrace (Worcester), but mostly 3 rd terrace (Holt Heath) sand and gravel.	
	A complex series of river terrace remnants occur in the Bevere area. 3 rd , 2 nd and 1 st terraces are present in a contiguous formation of terraces at varying levels which have an unclear relationship with the present course of the River Severn. There are no exposures or boreholes recorded in this resource area, although the memoir states that between Bevere lane and the northern suburbs of Worcester, the 3 rd terrace is 7-8m thick. Boreholes into the 2 nd terrace in the west have recorded between 1.9m and 5.8m of sand and gravel with little overburden and between 1.4m+ and 5.8m+ in the 3 rd terrace.	
	Estimated resource depth based on mean average of: a) Memoir record at Bevere Lane (mid-point of 7 to 8m): 7.5m, b) Boreholes in the 2 nd terrace (mid-point 1.9m to 5.8m): 3.85m and c) Boreholes in 3 rd terrace (mid-point of 1.4m to 5.8m): 3.6m = 4.98m rounded to 5m.	
Assessment of resourc	ce for the second consultation on MLP (Autumn 2013)	
Commentary:	A small resource area compromised by the settlement of Worcester.	
Crude estimate of	Area: 27ha x average depth: 5m ÷ 2	
resource:	Estimated resource volume: 675,000 m ³ Estimated resource tonnage (at 2 t/m ³): 1,350,000 tonnes	
Conclusion:	Compromised by development.	

Revised estimate of	Area: 27ha x average depth: 5m ÷ 2
resource:	Estimated resource volume: 675,000 m ³
	Estimated resource tonnage (at 1.65 t/m ³): 1,113,750 tonnes
Conclusion:	Compromised by development.

Overview	
Resource number:	2/3
Resource name:	Hawford South
Resource area:	32 ha
Resource depth:	Estimated 5m
Location	HE HERE THE THE THE THE THE THE THE THE THE TH
OS sheet reference:	SO 85 NW
National grid ref:	384264, 259539
Resource description:	
Resource description:	 2nd terrace (Worcester) and 3rd terrace (Holt Heath) sand and gravel. A complex series of river terrace remnants occur in the Bevere area. 3rd and 2nd terraces are present in this resource area in a contiguous formation of terraces at varying levels which have an unclear relationship with the present course of the River Severn. There are no exposures or boreholes recorded in this resource area, but nearby between Bevere lane and the northern suburbs of Worcester, the 3rd terrace is 7-8m thick. Boreholes into the 2nd terrace in the west have recorded between 1.9m and 5.8m of sand and gravel with little overburden and between 1.4m+ and 5.8m+ in the 3rd terrace. Estimated resource depth based on mean average of a) Memoir record at Bevere Lane (mid-point of 7 to 8m): 7.5m, b) Boreholes in the 2nd terrace (mid-point 1.9m to 5.8m): 3.85m and c) Boreholes in 3rd terrace (mid-point of 1.4m to 5.8m) 3.6m = 4.98m rounded to 5m.
Assessment of resourc	e for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area with some development on the periphery.
Crude estimate of	Area: 32 ha x average depth: 5 m ÷ 2
resource:	Estimated resource volume: 800,000 m ³
	Estimated resource tonnage (at 2 t/m ³): 1,600,000 tonnes
Conclusion:	Significant. Consider in defining areas of search.
	e for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of	Area: 32 ha x average depth: 5 m ÷ 2

resource:	Estimated resource volume: 800,000 m ³
	Estimated resource tonnage (at 1.65 t/m ³): 1,320,000 tonnes
Conclusion:	Significant.

Resource number:	2/4 23	Porter's
Resource name:	Egg Lane	Fm
Resource area:	16ha	
Resource depth:	Estimated 2.5m	
Location		
OS sheet reference:	SO 85 NE	
National grid ref:	383356, 259654	Hawford 2/3 50 50 50 50 50 50 50 50 50 50 50 50 50
Resource description:		
Resource description: Resource description:	4 th terrace (Kidderminster S	tation) sand and gravel. No exposures or boreholes, but soils indicate that the
Resource description: Resource description:		tation) sand and gravel. No exposures or boreholes, but soils indicate that the osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate
	upper part of 4 th terrace dep	
Resource description:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m
Resource description: Assessment of resource	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultation	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013)
Resource description: Assessment of resource Commentary:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultation A small resource area with s	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development.
Resource description: Assessment of resourc Commentary: Crude estimate of	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2
Resource description: Assessment of resource Commentary:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b for the second consultation A small resource area with second Area: 16 ha x average depth Estimated resource volumes	 posits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 200,000 m³
Resource description: Assessment of resource Commentary: Crude estimate of resource:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2
Resource description: Assessment of resourc Commentary: Crude estimate of	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna Significant.	 bosits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 c 200,000 m³ ge (at 2 t/m³): 400,000 tonnes
Resource description: Assessment of resource Commentary: Crude estimate of resource: Conclusion:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna Significant. Consider in defining areas of	<pre>bosits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 s 200,000 m³ ge (at 2 t/m³): 400,000 tonnes of search.</pre>
Resource description: Assessment of resource Commentary: Crude estimate of resource: Conclusion: Assessment of resource	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volume: Estimated resource tonna Significant. Consider in defining areas c e for the Third Stage consul	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 : 200,000 m ³ ge (at 2 t/m ³): 400,000 tonnes of search. Itation on MLP (Spring 2015)
Resource description: Assessment of resource Commentary: Crude estimate of resource: Conclusion:	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna Significant. Consider in defining areas of e for the Third Stage consul Area: 16 ha x average depth	<pre>bosits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 200,000 m³ ge (at 2 t/m³): 400,000 tonnes of search. Itation on MLP (Spring 2015) : 2.5 m ÷ 2</pre>
Resource description: Assessment of resource Commentary: Crude estimate of resource: Conclusion: Assessment of resource	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna Significant. Consider in defining areas of e for the Third Stage consul Area: 16 ha x average depth Estimated resource volumes	<pre>osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. n: 2.5 m ÷ 2 200,000 m³ ge (at 2 t/m³): 400,000 tonnes of search. tation on MLP (Spring 2015) : 2.5 m ÷ 2 200,000 m³</pre>
Resource description: Assessment of resourc Commentary: Crude estimate of resource: Conclusion: Assessment of resourc Revised estimate of	upper part of 4 th terrace dep that the terrace is between 2 Estimated resource depth b e for the second consultatio A small resource area with s Area: 16 ha x average depth Estimated resource volumes Estimated resource tonna Significant. Consider in defining areas of e for the Third Stage consul Area: 16 ha x average depth Estimated resource volumes	osits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate 2m and 3m thick in this location. ased on mid-point of BGS memoir estimates 2m to 3m: 2.5m on on MLP (Autumn 2013) some built development. h: 2.5 m ÷ 2 200,000 m ³ ge (at 2 t/m ³): 400,000 tonnes of search. Itation on MLP (Spring 2015) : 2.5 m ÷ 2 200,000 m ³ ge (at 1.65 t/m ³): 330,000 tonnes

Overview	
Resource number:	2/5
Resource name:	Fernhill Heath North
Resource area:	31 ha
Resource depth:	Estimated 2.5m
Location	Town Town
OS sheet reference:	SO 85 NE
National grid ref:	386232, 259559
	Heat File and way
	The 2/5a 13/2a 13/2a
	Grange
	Glange A Start
	Hindlin Pk
	Der Nach Contract 2000 scale BGS Diottal Data Shoer 2 1
	Licence 2001 Contempor Philish Geological Survey
Resource description:	
Resource description:	4 th terrace (Kidderminster Station) sand and gravel. No exposures or boreholes, but soils indicate that the
-	upper part of 4 th terrace deposits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate
	that the terrace is between 2m and 3m thick in this location.
	Estimated resource depth based on mid-point of BGS memoir estimates 2m to 3m: 2.5m
Assessment of resourc	ce for the second consultation on MLP (Autumn 2013)
Commentary:	A small deposit with some dispersed built development. The deposit extends to the south under the settlement
	of Fernhill Heath, this is considered as resource area 2/5a.
Crude estimate of	Area: 31 ha x average depth: 2.5 m ÷ 2
resource:	Estimated resource volume: 387,500 m ³
	Estimated resource tonnage (at 2 t/m ³): 775,000 tonnes
Conclusion:	Significant.
	Consider in defining areas of search.
	ce for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of	Area: 31 ha x average depth: 2.5 m ÷ 2
resource:	Estimated resource volume: 387,500 m ³
Conclusion:	Estimated resource tonnage (at 1.65 t/m ³): 639,375 tonnes
Conclusion	Significant.

Overview	
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/5a Fernhill Heath 40 ha Estimated 2.5m SO 85 NE 386375, 259082
Resource description:	
Resource description:	 4th terrace (Kidderminster Station) sand and gravel. No exposures or boreholes, but soils indicate that the upper part of 4th terrace deposits is pebbly sand, locally becoming more gravelly. The BGS memoirs estimate that the terrace is between 2m and 3m thick in this location. Estimated resource depth based on mid-point of BGS memoir estimates 2m to 3m: 2.5m
Assessment of resource	ce for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area compromised by the settlement of Fernhill Heath. The deposit extends to the north, this section is considered as resource area 2/5.
Crude estimate of resource:	Area: 40 ha x average depth: 2.5 m ÷ 2 Estimated resource volume: 500,000 m ³ Estimated resource tonnage (at 2 t/m ³): 1,000,000 tonnes
Conclusion:	Compromised by development.
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of resource:	Area: 40 ha x average depth: 2.5 m ÷ 2 Estimated resource volume: 500,000 m ³ Estimated resource tonnage (at 1.65 t/m ³): 825,000 tonnes
Conclusion:	Compromised by development.

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/6 Hawford North 13ha Estimated 3m SO 86 SW 384688, 260445	
Resource description:		
Resource description:	3 rd terrace (Holt Heath) sand and gravel. The memoir states that to the south at Hawford Farm there is a disused gravel pit about 3m deep. Estimated resource depth based on pit at Hawford Farm: 3m	
Assessment of resourc	e for the second consultation on MLP (Autumn 2013)	
Commentary:	A small resource area with some built development.	
Crude estimate of resource:	Area: 13 ha x average depth: 3 m ÷ 2 Estimated resource volume: 195,000 m ³ Estimated resource tonnage (at 2 t/m ³): 390,000 tonnes	
Conclusion:	Not significant: Small deposit with less than 300,000m ³ . Not for consideration in defining areas of search.	
	e for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of resource:	Area: 13 ha x average depth: 3 m ÷ 2 Estimated resource volume: 195,000 m ³ Estimated resource tonnage (at 1.65 t/m ³): 321,750 tonnes	
Conclusion:	Not significant.	

Overview	
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/7 Lucy's Wood 11ha Estimated 3m SO 86 SE 385715, 260947
Resource description:	
Resource description:	3 rd terrace (Holt Heath) sand and gravel. The memoir states that to the south west at Hawford Farm there is a
	disused gravel pit about 3m deep.
	Estimated resource depth based on pit at Hawford Farm: 3m
	ce for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area intersected by roads.
Crude estimate of	Area: 11 ha x average depth: 3m ÷ 2
resource:	Estimated resource volume: 165,000 m ³
O a ma hara'a m	Estimated resource tonnage (at 2 t/m ³): 330,000 tonnes
Conclusion:	Not significant: Small deposit with less than 300,000m ³ .
	Not for consideration in defining areas of search.
	ce for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of	Area: 11 ha x average depth: 3m ÷ 2
resource:	Estimated resource volume: 165,000 m ³
0	Estimated resource tonnage (at 1.65 t/m ³): 272,250 tonnes
Conclusion:	Not significant.

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/8 Porters Mill Lane 19ha Estimated 3m SO 86 SE 386523, 261327	Woodside Ho Ves Blossom Hunt 6 Phy Blossom Hunt 6 Phy Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley 27 Brockhill Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley Chatley C
Resource description:		
Resource description:	(,	sand and gravel. The memoir states that at Hawford Farm (approx. 1.7km to the south a) there is a disused gravel pit about 3m deep.
		th based on pit at Hawford Farm: 3m
		tation on MLP (Autumn 2013)
Commentary:		ith some built development.
Crude estimate of	Area: 19 ha x average d	
resource:	Estimated resource volu	me: 285,000 m nnage (at 2 t/m ³): 570,000 tonnes
Conclusion:		posit with less than 300,000m ³ .
	Not for consideration in a	
Assessment of resource		nsultation on MLP (Spring 2015)
Revised estimate of	Area: 19 ha x average de	
resource:	Estimated resource volu	
	Estimated resource tor	nnage (at 1.65 t/m³): 470,250 tonnes
Conclusion:	Not significant.	

Overview	
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/9 Holt Fleet South 12 ha Not known SO 86 SW 382372, 263605 SO 86 SW (a) C C C C C C C C C C C C C C C C C C C
Resource description:	
Resource description:	1 st terrace (Power House) sand and gravel. No information on thicknesses available in the BGS memoirs.
Assessment of resource	e for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area intersected by roads with some ribbon development.
Crude estimate of resource:	Depth not known.
Conclusion:	Not significant: Small deposit with no information to estimate the resource in this area. Not for consideration in defining areas of search.
Assessment of resource	e for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of resource:	No change to the assessment.
Conclusion:	Not significant.

Overview	
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/10 Holt Fleet North 31ha Estimated 5m SO 86 SW 381951, 264038
Resource description:	
Resource description:	3 rd terrace (Holt Heath) sand and gravel. Boreholes submitted with the planning application for Top Barn Farm (1979) to the south of this resource area showed a range between 2m and 8m of sand and gravel at the northern end of the site. The material averaged 80% sand and 20% gravel. Estimated resource depth based on borehole at Top Barn Farm: (mid-point 2m to 8m) 5m.
Assessment of resource	ce for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area intersected by roads.
Crude estimate of	Area: 31 ha x average depth: 5 m ÷ 2
resource:	Estimated resource volume: 775,000 m ³ Estimated resource tonnage (at 2 t/m ³): 1,550,000 tonnes
Conclusion:	Significant. Consider in defining areas of search.
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of resource:	Area: 31 ha x average depth: 5 m ÷ 2 Estimated resource volume: 775,000 m ³ Estimated resource tonnage (at 1.65 t/m ³): 1,278,750 tonnes
Conclusion:	Significant.

Overview	
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/11 Sneads Green 12ha Not known SO 86 NE 386178, 267701
Resource description:	
Resource description:	4 th terrace (Kidderminster Station) sand and gravel. No information on thicknesses available in BGS memoirs.
Assessment of resource	e for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area intersected by a road.
Crude estimate of resource:	Depth not known
Conclusion:	Not significant: Small deposit with no information to estimate the resource in this area. Not for consideration in defining areas of search.
Assessment of resource	e for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of resource:	No change to the assessment.
Conclusion:	Not significant.

Overview		
Resource number:	2/12	
Resource name:	Hartlebury Common	13/2a
Resource area:	88ha	
Resource depth:	Not known	Castle Castle
Location		2/12 a 2/12 a 2/29200 4+9 VIUS
OS sheet reference:	SO 87 SW	Jerty War I Day
National grid ref:	382270, 270826	Charlton 34 PH 34 PH 41/32 2/12 0 2/12 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Resource description:		
Resource description:	Station) sand and gravel a sand which appears to have sand covers a considerable	errace (Powerhouse), 2 nd terrace (Worcester) and 4 th terrace (Kidderminster nd Blown sand. Much of Hartlebury Common is covered by loose hummocky brown ve been blown up by wind from the low terraces of the Severn and Stour. This Blown e part of the 1 st and 2 nd terraces and extends up the escarpment of the lower keuper andstone) on to the 4 th terrace. No information on thicknesses available.
	This resource area is unde	rlain by solid sand deposits (assessed as resource areas 2/22 and 2/23).
Assessment of resourc		ion on MLP (Autumn 2013)
Commentary:		sected by roads with some built development. The resource area extends to the
		r the settlement of Stourport (assessed as resource areas 2/12a and 1/12b).
Crude estimate of resource:	Depth not known	
Conclusion:	Significant.	
	Consider in defining areas	
Assessment of resourc	e for the Third Stage cons	ultation on MLP (Spring 2015)
Revised estimate of resource:	No change to the assessm	ient.

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/12a Hartlebury Common a 15ha Not known SO 87 SW 382046, 271172	43/2 43/2 43/2 43/2 43/2 43/2 43/2 43/2 43/2 43/2 43/3 2/12 2/12 a 2/12 a 2/12 a 2/12 a 2/12 b 1/28 1/32 2/12 b 1/28 1/32 a 1/28 1/38 1/38 a 1/28 1/38 1/28 1/38 a 1/28 1/38 1/28 1/38 1/28 1/28 1/28 1/28 1/28 1/28 1/28 1/2
Resource description:		
Resource description:	Station) sand and gravel a sand which appears to hav sand covers a considerable sandstone (Bromsgrove sa	terrace (Powerhouse), 2 nd terrace (Worcester) and 4 th terrace (Kidderminster nd Blown sand. Much of Hartlebury Common is covered by loose hummocky brown ve been blown up by wind from the low terraces of the Severn and Stour. This Blown e part of the 1 st and 2 nd terraces and extends up the escarpment of the lower keuper andstone) on to the 4 th terrace. No information on thicknesses available.
Assessment of resource		ion on MLP (Autumn 2013)
Commentary:		rlain by the settlement of Stourport. The deposit extends to the south and west, this s resource areas 2/12 and 2/12b.
Crude estimate of resource:	Depth not known	
Conclusion:	Compromised by developr	
Assessment of resource	for the Third Stage cons	ultation on MLP (Spring 2015)
Revised estimate of resource:	No change to the assessn	nent.
Conclusion:	Compromised by develop	

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/12b Hartlebury Common b) 26ha Not known SO 87 SW 381859, 270404	1/3 a Derwysoff om 2400 900 scale BISS (biglial) an under Lucebox 2001/125 Amended BIS
Resource description:		
Resource description:	Station) sand and gravel sand which appears to h Blown sand covers a cor keuper sandstone (Brom	⁵ 1 st terrace (Powerhouse), 2 nd terrace (Worcester) and 4 th terrace (Kidderminster and Blown sand. Much of Hartlebury Common is covered by loose hummocky brown have been blown up by wind from the low terraces of the Severn and Stour. This insiderable part of the 1 st and 2 nd terraces and extends up the escarpment of the lower insgrove sandstone) on to the 4 th terrace. No information on thicknesses available. derlain by solid sand deposits (assessed as resource area 2/23).
Assessment of resource	e for the second consult	ation on MLP (Autumn 2013)
Commentary:	A small resource area st	erilised by the overlain by the settlement of Stourport. The deposit extends to the s considered as resource areas 2/12 and 2/12a.
Crude estimate of resource:	Depth not known	
Conclusion:	Compromised by develo	pment.
Assessment of resource		sultation on MLP (Spring 2015)
Revised estimate of resource:	No change to the assess	
Conclusion:	Compromised by develo	pment.
	•	

Overview	Nacru A (2/13 a) A A
Resource number:	2/13
Resource name:	Wilden
Resource area:	45ha
Resource depth:	Estimated 4m
Location	Si (Wilden S /)
OS sheet reference: National grid ref:	SO 87 SW 382948, 272567
Resource description:	
Resource description:	Resource area 2/13 is 4 th terrace (Kidderminster Station) sand and gravel. The BGS memoirs state that the deposit has been worked in 2 pits off Wilden Lane, at Stourhill, west of Summerfield (Hoo Farm), and at Wilden Top. Up to 4m of sand and gravel was exposed in the Stourhill pit with a similar depth at Wilden Top. Estimated resource depth based on exposures at pits off Wilden Land and at Stourhill: 4m. This resource area is underlain by solid sand deposits (assessed as resource area 2/22 and 2/24).
Assessment of resourc	e for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area with some built development. The deposit extends to the north under the Summerfield
	urban area this is considered as resource area 2/13a.
Crude estimate of	Area: 45 ha x average depth: 4 m ÷ 2
resource:	Estimated resource volume: 900,000 m ³
	Estimated resource tonnage (at 2 t/m ³): 1,800,000 tonnes
Conclusion:	Significant.
	Consider in defining areas of search.
Assessment of resourc	e for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of	Area: 45 ha x average depth: 4 m ÷ 2
resource:	Estimated resource volume: 900,000 m ³
	Estimated resource tonnage (at 1.65 t/m³): 1,485,000 tonnes
Conclusion:	Significant.

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/13 a Wilden a) 37 ha Estimated 4m SO 87 SW 382948, 272567	2/2 2/22 2/22 2/22 2/23 2/24 2/24 2/24 2
		And
Resource description: Resource description:	deposit has been worked in 2	terrace (Kidderminster Station) sand and gravel. The BGS memoirs state that the 2 pits off Wilden Lane, at Stourhill, west of Summerfield (Hoo Farm), and at Wilden ravel was exposed in the Stourhill pit with a similar depth at Wilden Top.
	Estimated resource depth ba	sed on exposures at pits off Wilden Land and at Stourhill: 4m.
	This resource area is underla	ain by solid sand deposits (assessed as resource area 2/21, 2/22, 2/24 and 2/25).
	e for the second consultatio	
Commentary:		ome built development. The deposit has been previously worked, this section is source area. The deposit also extends to the south, this section is considered as
Crude estimate of	Area: 37 ha x average depth:	
resource:	Estimated resource volume: Estimated resource tonnag	740,000 m ³ je (at 2 t/m³): 1,480,000 tonnes
Conclusion:	Compromised by developme	
	e for the Third Stage consul	
Revised estimate of	Area: 37 ha x average depth	
resource:	Estimated resource volume:	,
		ge (at 1.65 t/m³): 1,221,000 tonnes
Conclusion:	Compromised by developme	nt.

Overview	25/2 a2/25 A A A A A A A A A A A A A A A A A A A
Resource number:	
Resource name:	Wilden Pool
Resource area:	27ha
Resource depth:	Estimated 3.2m
Location	
OS sheet reference:	SO 87 SW
National grid ref:	382313, 272642
Resource description:	
Resource description:	 Resource area 2/14 is 1st terrace (Powerhouse) sand and gravel. A trial hole 550yds south of the bridge over the Stour adjacent to the Stourport to Crossway Green Road revealed 6 inches (15cm) of blue clay and 14'8" (4.5m) of sand and gravel on red sandstone. Further south at the powerstation (where the name Powerhouse member comes from), near the confluence of the Severn and Stour, 15 trial holes were sunk (in an area mapped as alluvium) which proved between 6' and 11' of alluvium resting on sands and gravels of the 1st terrace, with bedrock reached at depths varying from 12'-17'. The memoir does not state the thickness of the 1st terrace layer, but these measurements imply that the 1st terrace could range from 1' to 11' thick (0.3m to 3.4m, midpoint = 1.85m). Estimated resource depth based on mean average of a) trial hole south of the Stour: 4.5m and b) trial holes near confluence of Severn and Stour: 1.85m = 3.2m) This resource area is underlain by solid sand deposits (assessed as resource area 2/22 and 2/24).
	e for the second consultation on MLP (Autumn 2013)
Commentary:	A small resource area with some dispersed development and a narrow centre overlain by Wilden Industrial Estate.
Crude estimate of	Area: 27 ha x average depth: 3.2m ÷ 2
resource:	Estimated resource volume: 432,000 m ³
	Estimated resource tonnage (at 2 t/m ³): 864,000 tonnes
Conclusion:	Significant.

	Consider in defining areas of search.
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)
Revised estimate of	Area: 27 ha x average depth: 3.2m ÷ 2
resource:	Estimated resource volume: 432,000 m ³
	Estimated resource tonnage (at 1.65 t/m ³): 712,800 tonnes
Conclusion:	Significant.

esource name: 2/15 esource name: Mustow Green esource area: 15ha esource depth: Estimated 1.5m ocation S sheet reference: SO 87 SE ational grid ref: 386587, 274385	(::	
esource area: 15ha esource depth: Estimated 1.5m ocation S sheet reference: SO 87 SE ational grid ref: 386587, 274385	(
esource depth: Estimated 1.5m ocation S sheet reference: SO 87 SE ational grid ref: 386587, 274385		
S sheet reference: SO 87 SE ational grid ref: 386587, 274385		
S sheet reference: SO 87 SE ational grid ref: 386587, 274385		
ational grid ref: 386587, 274385	2	
Hote Hote Batt Ch		
Derived from 1:50,000 scale BG Digital to unreactive services and the service service of the service s	A BACC	
esource description:		
esource description: Glaciofluvial sand and gravel. The deposit is exposed in the banks of the road between Stone and Mustow Green. A borehole 450yds north west of the Mustow Green crossroads recorded a maximum thickness of (1.5m) of sand and gravel. Estimated resource depth based on borehole north west of Mustow Green crossroads: 1.5m		
ssessment of resource for the second consultation on MLP (Autumn 2013)		
ommentary: A small resource area intersected by roads.		
rude estimate of Area: 15 ha x average depth: 1.5m ÷ 2		
esource: Estimated resource volume: 112,500 m ³ Estimated resource tonnage (at 2 t/m ³): 225,000 tonnes	Estimated resource volume: 112,500 m ³	
onclusion: Not significant: Small deposit with less than 300,000m ³ .		
Not for consideration in defining areas of search.		
ssessment of resource for the Third Stage consultation on MLP (Spring 2015)	Area: 15 ha x average depth: 1.5m ÷ 2	
ssessment of resource for the Third Stage consultation on MLP (Spring 2015) evised estimate of Area: 15 ha x average depth: 1.5m ÷ 2		
ssessment of resource for the Third Stage consultation on MLP (Spring 2015)		
ssessment of resource for the Third Stage consultation on MLP (Spring 2015) evised estimate of Area: 15 ha x average depth: 1.5m ÷ 2		

Overview		
Resource number: Resource name: Resource area: Resource depth: Location	2/16 North of Stone 17ha Not known	
OS sheet reference: National grid ref:	SO 87 NE 385133, 275583	
Resource description:		
Resource description:	1 st terrace (Powerhouse) sand and gravel. No information on thicknesses available in BGS memoirs. This resource area is underlain by solid sand deposits (assessed as resource areas 2/21 and 2/25).	
Assessment of resource	for the second consultation on MLP (Autumn 2013)	
Commentary:	A small resource area with little built development.	
Crude estimate of resource:	Depth not known	
Conclusion:	Not significant: Small deposit with no information to estimate the resource in this area. Not for consideration in defining areas of search.	
	for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of resource:	No change to the assessment.	
Conclusion:	Not significant.	

Overview			
Resource number:	2/17	N 2195 10/11 Fm 2010	
Resource name:	Hurcott	225 2/19	
Resource area:	49ha	Broadwaters cott/ cod	
Resource depth:	Estimated 1.8m	THE CANER AND THE WEAK CONSIGNATION	
Location			
OS sheet reference:	SO 87 NE	2/18 2/18	
National grid ref:	385772, 277687	× 2/17 2110	
		38/2 76 69	
		30/2 A/O D9	
		2/25 Pace 11/ 10	
		Bissell,	
		Wood Do	
		Derived from 1150,000 scale BGS Digital Data under	
		Licence 20010 20 Antendee British Geological Survey	
		(c) Crown oppyright and ogtabas erights 2013 Orbande C	
		Survey 1000242301 Miles	
Resource description:			
Resource		rd terrace (Holt Heath) sand and gravel. An old pit 400yds west-north-west of the bridge	
description:		o (1.8m) of coarse gravel with many of the peoples vertical or steeply inclined in a	
•	manner suggestive of fro		
	Estimated resource dept	th based on old pit west-north west of bridge at Hurcott: 1.8m.	
	This resource area is une	derlain by solid sand deposits (assessed as resource area 2/21).	
Assessment of resour		tation on MLP (Autumn 2013)	
Commentary:	A small resource area intersected by roads and with some built development in the north.		
Crude estimate of	Area: 49 ha x average depth: 1.8m ÷ 2		
resource:	Estimated resource volu	me: 441,000 m ³	
	Estimated resource tor	nnage (at 2 t/m³): 882,000 tonnes	
Conclusion:	Significant.		
	Consider in defining area		
Assessment of resour		nsultation on MLP (Spring 2015)	
Revised estimate of	Area: 49 ha x average d	lepth: 1.8m ÷ 2	
resource:	Estimated resource volume: 441,000 m ³		
	Estimated resource to	nnage (at 1.65 t/m³): 727,650 tonnes	
Conclusion:	Significant.		

Overview			
Resource number:	2/18		
Resource name:	North of Bissell Wood		
Resource area:	19ha Wannerton Wannerton		
Resource depth:	Estimated 1.8m		
Location			
OS sheet reference: National grid ref:	SO 87 NE < from GIS >		
	Der Wed from 1.50.000 scale BGS Digital Data under Licehoe 2001/125 Amended British Geological Survey (c) NERC (c) Crown copyright and database rights 2038 Order 5 Survey 100024230		
Resource description:			
Resource description:			
	at Hurcott shows 6' or so (1.8m) of coarse gravel with many of the pebbles vertical or steeply inclined in a		
	manner suggestive of frost action. Estimated resource depth based on old pit west-north west of bridge at Hurcott: 1.8m.		
	This resource area is underlain by solid sand deposits (assessed as resource area 2/21).		
	ce for the second consultation on MLP (Autumn 2013)		
Commentary: Crude estimate of	A small resource area which extends under the railway line and A456.		
	Area: 19 ha x average depth: 1.8m ÷ 2 Estimated resource volume: 171,000 m ³		
resource:			
Conclusion:	Estimated resource tonnage (at 2 t/m ³): 342,000 tonnes		
	Not significant: Small deposit with less than 300,000m ³ . Not for consideration in defining areas of search.		
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 19 ha x average depth: 1.8m ÷ 2		
resource:	Estimated resource volume: $171,000 \text{ m}^3$		
	Estimated resource tonnage (at 1.65 t/m ³): 282,150 tonnes		
Conclusion:	Not significant.		
	Hot ogninount.		

Overview			
Resource number:	2/19	Woodhouse V 10/2	
Resource name:	Hurcott Wood	R 53 59 59 10/24 A	
Resource area:	29ha		
Resource depth:	Estimated 1.8m	10/7	
Location		10/7a Wannerton	
OS sheet reference: National grid ref:	SO 87 NE 385463, 278187	10/7a 2/19 10/7a 2/25 10/11 10/7a 2/19 2/19 2/19 2/19 2/19 2/19 2/19 2/21 2/21 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/18 2/19 2/17 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/17 2/18 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/17 2/18 2/18 2/18 2/18 2/18 2/17 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/18 2/	
Resource description:		(c) Crown copyright and databas e rights 2013 Oldance Survey 100024230	
Resource description:	Resource area 2/19 is a 3 rd terrace (Holt Heath) sand and gravel. An old pit 400yds west-north-west of the		
	bridge at Hurcott shows 6' or so (1.8m) of coarse gravel with many of the pebbles vertical or steeply inclined in a manner suggestive of frost action. Estimated resource depth based on old pit west-north west of bridge at Hurcott: 1.8m.		
		derlain by solid sand deposits (assessed as resource area 2/21).	
		tation on MLP (Autumn 2013)	
Commentary:		ith little built development.	
Crude estimate of	Area: 29 ha x average depth: 1.8 m ÷ 2		
resource:	Estimated resource volu		
	Estimated resource tonnage (at 2 t/m ³): 522,000 tonnes		
Conclusion:		posit with less than 300,000m ³ .	
	Not for consideration in defining areas of search.		
		nsultation on MLP (Spring 2015)	
Revised estimate of	Area: 29 ha x average de		
resource:	Estimated resource volur		
		nnage (at 1.65 t/m³): 430,650 tonnes	
Conclusion:	Not significant.		

Overview		
Resource number: Resource name: Resource area: Resource depth: Location OS sheet reference: National grid ref:	2/20 Wild Acres 11ha Not known SO 87 NE 387802, 277593	
Resource description: Resource description:	Glaciofluvial sand and gravel. No information on thicknesses available in BGS memoirs.	
	This resource area is underlain by solid sand deposits (assessed as resource area 2/21).	
	for the second consultation on MLP (Autumn 2013)	
Commentary: Crude estimate of	A small resource area with little built development. Depth not known	
resource: Conclusion:	Not significant: Small deposit with no information to estimate the resource in this area. Not for consideration in defining areas of search.	
Assessment of resource	for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of resource:	No change to the assessment.	
Conclusion:	Not significant.	

Overview			
Resource number:	2/21	The top of the second s	
Resource name:	North East of	10/23	
	Kidderminster	10/5 10/2019 10/3 10/15 10/15 10/15	
Resource area:	2303ha	10/25	
Resource depth:	Estimated 190.4m	10/26 10/24	
Location		THE PARTY AND	
OS sheet reference:	SO 87 NW, SO 87 NE, SO 87 SW, SO 87 SE, SO 88 SE	317 1 38/5 38/4 38/2 38/2 2/17 2/18 2/20 38/5 38/4 38/2 38/2 2/17 2/18 2/20 38/5 38/4 38/2 38/2 2/17 2/18 2/20	
National grid ref:	386333, 278041	2/25 38/2 25/2 b / 38/2 25/2 b / 38/2 25/2 b / 38/2 25/2 b / 38/2 Additional for the pass D gnal ata under 2/5 Addition 20/7 a C Common 20/7 b / 20/2 a C C Common 20/7 b / 20/2 a C C Common 20/2 a C C Common 20/2 a C C C C C C C C C C C C C C C C C C C	
Resource description: Resource description:	This resource area is predominantly Wildmoor Formation. In this part of the county there are large areas of		
	Wildmoor sandstone formation and Kidderminster formation solid sand of considerable geological complexit The Kidderminster and Wildmoor sandstones are partially but extensively overlain by terrace and glacial sar and gravel deposits, which are recorded as separate resource areas.		
This resource area is overlain by glacial or terrace sand and gravel deposits (assessed 10/7, 10/8 10/9, 10/10, 10/12, 10/13, 10/14, 10/15, 10/16, 2/16, 2/17, 2/18 and 2/19, 2		erlain by glacial or terrace sand and gravel deposits (assessed as resource area 10/6, 0/12, 10/13, 10/14, 10/15, 10/16, 2/16, 2/17, 2/18 and 2/19, 2/20, 38/1).	
	The Wildmoor Formation is generally described as red-brown and orange, fine to medium grained, feldspathic sandstone with sparse, thin mudstone beds. Generally the formation is characterised by an absence of pebbles, in contrast to the Kidderminster Formation, although sparse pebbly stringers are recorded. The fine grain-size and soft, poorly cemented nature of the sandstone in some places made it ideal for exploitation as moulding sand for use in the foundry industry.		
	The memoir states that the Wildmoor Sandstone formation ranges in thickness from 90m-120m, although there is some more detailed information about some sections of the deposit:		
	of red hard and se	orehole (north of the county boundary at grid reference 389940 281690) proved 175m oft sandstone. Some of this could be attributed to the underlying Kidderminster he lower boundary is indistinct.	
	 North west of Bla 	kedown: The Stapenhill Fault brings Wildmoor Sandstone into contact with the	

	 Kidderminster Formation. No details are recorded, but the presence of the fault and Wildmoor Sandstone contact means that the basement beds are unlikely to occur at the surface. No details of thickness or composition are recorded. The Churchill Trial Bore (north of the county boundary at grid reference 387070, 280160) found 1.1m of pebbly sand overlying 119m of red, soft, fine-grained, micaceous, cross-bedded sandstone (Wildmoor sandstone) and 122.2m of red-brown, medium-grained, cross-bedded sandstone with scattered pebbles and thin marl beds and beds of pebbly conglomerate in the lower part (Kidderminster formation) (total 242.3m). A 2nd borehole near to the Wagon and Horses Inn and Ismere Pumping Station (within this resource area at grid reference 387060, 280140) recorded 118.9m of red, soft sandstone cross-bedded with thin marl laminate (Wildmoor sandstone) overlying 18.8m of red-brown, medium- to coarse-grained sandstone with sparse pebbles (tentatively assigned to Kidderminster formation), 114.4m of red-brown, coarse-grained, pebbly sandstone with beds of pebble conglomerate up to 1.5m thick common in the lower part (Kidderminster formation), and 50.3m of red, soft, coarse-grained sandstone (Bridgnorth sandstone) (total 302.4m). A borehole at Sleepy Pool Mill (on the boundary between this resource area and 10/25 at grid reference 385480 280630) recorded 8m of sandy clay (alluvium) overlying 2m of red, soft sandstone (Wildmoor) and 40m of red sandstone (tentatively assigned to the Kidderminster formation) (total 42m). 	
A	242.3m, c) borehole near the Wagon and Horses Inn: 302.4m, d) borehole at Sleepy Pool Mill: 42m = 190.4m	
	e for the second consultation on MLP (Autumn 2013)	
Commentary:	A large resource area with some dispersed development. The Wildmoor and Kidderminster sandstone deposits are extensive and continue to the south and west of this resource area, beneath the settlements of Kidderminster, Stourport, Blakedown, Fairfield, Arley Kings, and between the northern sections of this resource area (these sections are considered as resource areas 1/32, 1/33, 2/22, 2/23, 2/24, 2/25, 2/26, 10/24, 10/25, 10/26 and 10/27) and to the north of the county boundary (shown as OUT on the image).	
Crude estimate of	Area: 2303 ha x average depth: 190.4 m ÷ 2	
resource:	Estimated resource volume: 2,192,456,000m ³	
	Estimated resource tonnage (at 2 t/m ³): 4,384,912,000 tonnes	
Conclusion:	Significant – key resource.	
	Use to define areas of search.	
Assessment of resourc	e for the Third Stage consultation on MLP (Spring 2015)	
Additional information	A 51ha site covering part of this resource area was submitted in response to the Second Stage Consultation. This stated that "The site consists of 4th River Terrace Deposits, Glacial sands and gravels and Upper Mottled Sandstone, as per the geological map based on detailed site investigation and laboratory gradings". No more detailed geological information was provided with the site submission. This site also covers the terrace sands of resource area 10/7 and a glacial deposit which was not assessed for the second consultation the MLP as it is less than 10ha and less than 200m wide.	

	A further 80ha site covering part of this resource area was submitted in response to the "Call for Sites" in summer 2014. No geological information was submitted to support the site proposal but the landowner's agent estimated that the 80ha site contained 1,000,000 tonnes of Terrace deposit and Fluvioglacial deposit.		
Revised estimate of	Area: 2303 ha x average depth: 190.4 m \div 2		
resource:	Estimated resource volume: 2,192,456,000m ³		
	Estimated resource tonnage (at 1.65 t/m ³): 3,617,552,400 tonnes		
Conclusion:	Significant – key resource.		

Overview		38/5 38/2	
Resource number:	2/22	T 10/3 TA Car IV IU ANA	
Resource name:	North of Stourport	10/25 18/3	
Resource area:	903 ha	321 32 2/25 35 Ab 381 2/21	
Resource depth:	Estimated 89.5m		
Location		131 4/	
OS sheet reference:	SO 77 SE, SO 87 NW, SO 87 SW		
National grid ref:	381793, 273013	Der ved from: 1:50,000 spale 2:50 of thai Dispuss to bioence 2001/1:25 American Britter Veological 2:07 2:17	
Resource description:		Crown copyright and patalifed any and crown copyright and patalifed any and crown copyright and patalifed any and crown copyright and crown copyri	
Resource description:	 n: Resource area 2/22 is Wildmoor Sandstone Formation and Kidderminster Formation solid sand. In this part of the county there are large areas of Wildmoor sandstone formation and Kidderminster formation solid sand of considerable geological complexity. The Kidderminster and Wildmoor sandstones are partially but extensively overlain by terrace and glacial sand and gravel deposits, which are recorded as separate resource areas (this resource area is overlain by resource areas 2/12, 2/13, 2/14 and 25/1, 25/2, 25/2a). The western part of this resource area (the land north west of Lickhill and north east of Burlish Park and a small area north of Foley Park) is mapped as Kidderminster Formation and the remainder of the resource area is mapped as Wildmoor Sandstone. Kidderminster Formation 		
	The Kidderminster Formation is generally described as well-rounded pebble to cobble size conglomerate and red-brown, medium to coarse sandstone. The lower part of the formation predominantly consists of clast-supported conglomerate composed largely of pebbles and cobbles of red, red brown and grey fine-grained quartzite together with red sandstone, milky quartz and rare porphyritic igneous rocks and re-worked conglomerate. The formation rests uncomformably on Bridgnorth Sandstone. The maximum thickness of the conglomerate dominated facies is probably about 20m but this is gradational into the overlying sandstone dominated facies, which also contains beds and lenses of pebble conglomerate. The thickness of the		

Bromsgrove, and 127-129m at Brockhill east of Bromsgrove. However, the upper boundary is difficult to recognise because of the lithological similarity of the Kidderminster sandstone to the predominantly non-pebbly Wildmoor Sandstone.

There is some information about exposures for some sections of the deposit in this area:

- At Burlish Park / Birchen Coppice: the Kidderminster Formation deposit runs north east to south west. An exposure in the railway cutting (Severn Valley Railway line, to the north of the resource area near Birchen Coppice) shows soft red sandstone with subordinate bands of pebbles and local lenses of marl (depth of sandstone not given).
- At Mount Pleasant (north west of Burlish Park): In the railway cutting south of the tunnel more than 50' (15.2m) of the Kidderminster formation deposit is exposed, including pebbly bands and beds of red sandstone with an occasional pebble and a few bands of marl up to 3" (0.08m) thick.
- The construction of a reservoir to the east of Mount Pleasant exposed 10' of coarse pebbly shingle and sand, 15' of soft red sandstone with thin marl bands, 2' of hard coarse sand with pebbles, 6' of red sandstone with few pebbles with some thin marl layers and 3' of coarse breccia with angular blocks of igneous rock (total 36', 11m).

Wildmoor Formation

The memoir describes the Wildmoor Formation as red-brown and orange, fine to medium grained, feldspathic sandstone with sparse, thin mudstone beds. Generally the formation is characterised by an absence of pebbles, in contrast to the Kidderminster Formation, although sparse pebbly stringers are recorded. The fine grain-size and soft, poorly cemented nature of the sandstone made it ideal for exploitation as moulding sand for use in the foundry industry. The memoir states that the Wildmoor Sandstone formation ranges in thickness from 90m-120m. The deposit is exposed in the road cutting 350yd SSE of Hoobrook and at intervals on the western edge of the gravel patch capping Stour Hill and Wilden. There is no more detailed information about depths for the Wildmoor deposit in this area.

Estimated depth

Estimated depth calculated as mean average of: a) depth of Kidderminster formation near Hagley (mid-point of 112m to 133m): 122.5m, b) depth of Kidderminster formation at Wildmoor: 155m, c) depth of Kidderminster formation at Brockhill (mid-point of 127m to 129m): 128m, d) Kidderminster formation at Mount Pleasant railway cutting: 15.2m, e) reservoir east of Mount Pleasant: 11m, f) BGS estimates of Wildmoor Sandstone formation (mid-point 90m to 120m): 105m = 89.5m

Assessment of resource for the second consultation on MLP (Autumn 2013)

Commentary:A large resource area with some dispersed development. The Wildmoor and Kidderminster sandstone
deposits are extensive and continue to the north and south of this resource area, beneath the settlements of
Kidderminster, Stourport, Blakedown, Fairfield, Arley Kings (these sections are considered as resource areas
1/32, 1/33, 2/21, 2/23, 2/24, 2/25, 2/26, 10/24, 10/25, 10/26 and 10/27) and to the north of the county

	boundary.		
Crude estimate of	Area: 903 ha x average depth: 89.5 m ÷ 2		
resource:	Estimated resource volume: 404,092,500 m ³		
	Estimated resource tonnage (at 2 t/m ³): 808,185,000 tonnes		
Conclusion:	Significant – key resource.		
	Use to define areas of search.		
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 903 ha x average depth: 89.5 m ÷ 2		
resource:	Estimated resource volume: 404,092,500 m ³		
	Estimated resource tonnage (at 1.65 t/m ³): 666,752,625 tonnes		
Conclusion:	Significant – key resource.		

Overview		2/25 2/25 2/25	
Resource number: Resource name: Resource area: Resource depth: Location	2/23 Stourport 362 ha Estimated 89.5m	Partielle 25112572 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 3 2/13 2/1	
OS sheet reference: National grid ref:	SO 77 SE, SO 87 SW 381062, 271777	Advantage of the second	
Resource description:			
Resource description:			
	The western part of this resource area is mapped as Kidderminster Formation and the remainder of the resource area is mapped as Wildmoor Sandstone.		
	This resource area is overlain by glacial or terrace sand and gravel deposits (assessed as resource area 2/12, 2/12a, 25/1a, 43/2 and 43/2a).		
	Kidderminster Formation		
	red-brown, medium to consupported conglomerate quartzite together with re conglomerate. The form	nation is generally described as well-rounded pebble to cobble size conglomerate and oarse sandstone. The lower part of the formation predominantly consists of clast- e composed largely of pebbles and cobbles of red, red brown and grey fine-grained ed sandstone, milky quartz and rare porphyritic igneous rocks and re-worked ation rests uncomformably on Bridgnorth Sandstone. The maximum thickness of the d facies is probably about 20m but this is gradational into the overlying sandstone	

dominated facies, which also contains beds and lenses of pebble conglomerate. The thickness of the formation varies, from 112m-133m in the north of the county near Hagley, to 155m at Wildmoor near Bromsgrove, and 127-129m at Brockhill east of Bromsgrove. However, the upper boundary is difficult to recognise because of the lithological similarity of the Kidderminster sandstone to the predominantly non-pebbly Wildmoor Sandstone.

There is some information about exposures for some sections of the deposit in this area:

- At Burlish Park / Birchen Coppice: the Kidderminster Formation deposit runs north east to south west. An exposure in the railway cutting (Severn Valley Railway line, to the north of the resource area near Birchen Coppice) shows soft red sandstone (depth not given) with subordinate bands of pebbles and local lenses of marl.
- At Mount Pleasant (north west of Burlish Park): In the railway cutting south of the tunnel more than 50' (15.2m) of the Kidderminster formation deposit is exposed, including pebbly bands and beds of red sandstone with an occasional pebble and a few bands of marl up to 3" (0.08m) thick.
- The construction of a reservoir to the east of Mount Pleasant exposed 10' of coarse pebbly shingle and sand, 15' of soft red sandstone with thin marl bands, 2' of hard coarse sand with pebbles, 6' of red sandstone with few pebbles with some thin marl layers and 3' of coarse breccia with angular blocks of igneous rock (total 36', 11m).

Wildmoor Formation

The Wildmoor Formation is generally described as red-brown and orange, fine to medium grained, feldspathic sandstone with sparse, thin mudstone beds. Generally the formation is characterised by an absence of pebbles, in contrast to the Kidderminster Formation, although sparse pebbly stringers are recorded. The fine grain-size and soft, poorly cemented nature of the sandstone made it ideal for exploitation as moulding sand for use in the foundry industry. The memoir states that the Wildmoor Sandstone formation ranges in thickness from 90m-120m. The deposit is exposed in the road cutting 350yd SSE of Hoobrook and at intervals on the western edge of the gravel patch capping Stour Hill and Wilden. There is no more detailed information about depths for the Wildmoor deposit in this area.

Estimated depth

Estimated depth calculated as mean average of: a) depth of Kidderminster formation near Hagley (mid-point of 112m to 133m): 122.5m, b) depth of Kidderminster formation at Wildmoor: 155m, c) depth of Kidderminster formation at Brockhill (mid-point of 127m to 129m): 128m, d) Kidderminster formation at Mount Pleasant railway cutting: 15.2m, e) reservoir east of Mount Pleasant: 11m, f) BGS estimates of Wildmoor Sandstone formation (mid-point 90m to 120m): 105m = 89.5m

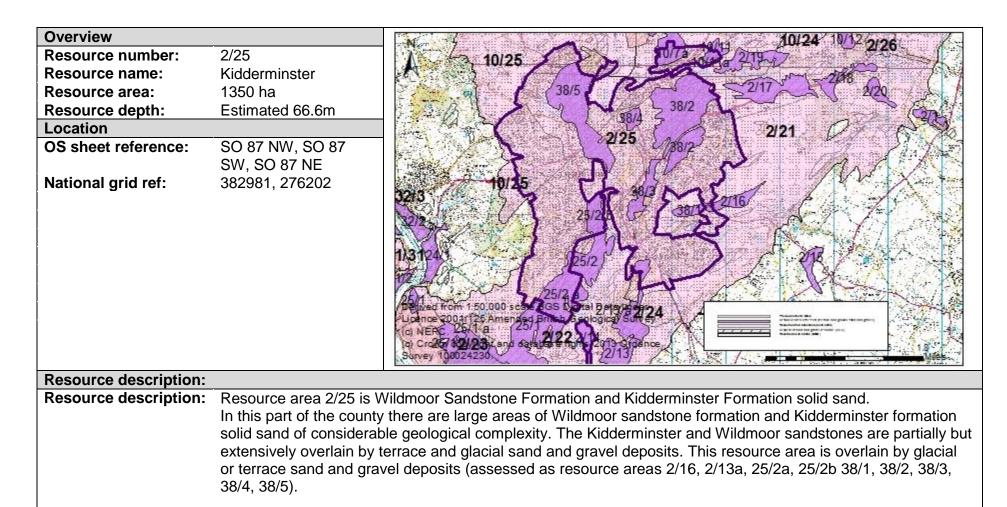
Assessment of resource for the second consultation on MLP (Autumn 2013)

Commentary: A large resource area overlain by the settlement of Stourport. The Wildmoor and Kidderminster sandstone deposits are extensive and extend in all directions beyond this resource area and beneath the settlements of

	Kidderminster, Blakedown, Fairfield, Arley Kings (these sections are considered as resource areas 1/32, 1/33, 2/21, 2/22, 2/24, 2/25, 2/26, 10/24, 10/25, 10/26 and 10/27) and to the north of the county boundary.	
Crude estimate of	Area: 362 ha x average depth: 89.5 m ÷ 2	
resource:	Estimated resource volume: 161,995,000 m ³	
	Estimated resource tonnage (at 2 t/m ³): 323,990,000 tonnes	
Conclusion:	Compromised by development.	
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 362 ha x average depth: 89.5 m ÷ 2	
resource:	Estimated resource volume: 161,995,000 m ³	
	Estimated resource tonnage (at 1.65 t/m ³): 267,291,750 tonnes	
Conclusion:	Compromised by development.	

Overview			
Resource number:	2/24	2/25 2 22 2	
Resource name:	Summerfield 2/25 A A A State S	EN	
Resource area:	61 ha	TIE	
Resource depth:	Estimated 105m 25/2 a 4 0 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Horize pve	
Location			
OS sheet reference: National grid ref:	SO 87 SW 381062, 271777 2/22 2/14 Derived fom ±0 000/scale BGS Digital Data under Licence RO 1/25 Amanded British Gaological Survey (c) NERC Crown bow ight and database rights 20/3 Ordance Survey 10024250	Summerfield	
Resource description:			
Resource description:			
	Wildmoor Formation		
	The Wildmoor Formation is generally described as red-brown and orar sandstone with sparse, thin mudstone beds. Generally the formation is pebbles, in contrast to the Kidderminster Formation, although sparse p grain-size and soft, poorly cemented nature of the sandstone made it is for use in the foundry industry. The memoir states that the Wildmoor S from 90m-120m. The deposit is exposed in the road cutting 350yd SSE western edge of the gravel patch capping Stour Hill and Wilden. There depths for the Wildmoor deposit in this area.	characterised by an absence of ebbly stringers are recorded. The fine deal for exploitation as moulding sand andstone formation ranges in thickness of Hoobrook and at intervals on the	
	Estimated resource depth based on BGS estimates of Wildmoor Sand	stone formation (mid-point 90m to	

	120m): 105m		
Assessment of resource for the second consultation on MLP (Autumn 2013)			
Commentary:	A medium-sized resource area overlain by the urban area of Summerfield. The Wildmoor and Kidderminster sandstone deposits are extensive and extend in all directions beyond this resource area and beneath the settlements of Kidderminster, Stourport, Blakedown, Fairfield, Arley Kings (these sections are considered as resource areas 1/32, 1/33, 2/21, 2/22, 2/23, 2/25, 2/26, 10/24, 10/25, 10/26 and 10/27) and to the north of the county boundary.		
Crude estimate of	Area: 61 ha x average depth: 105 m ÷ 2		
resource:	Estimated resource volume: 32,025,000 m ³		
	Estimated resource tonnage (at 2 t/m ³): 64,050,000 tonnes		
Conclusion:	Compromised by development.		
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)			
Revised estimate of	Area: 61 ha x average depth: 105 m ÷ 2		
resource:	Estimated resource volume: 32,025,000 m ³		
	Estimated resource tonnage (at 1.65 t/m ³): 52,841,250 tonnes		
Conclusion:	Compromised by development.		



Kidderminster Formation

The Kidderminster Formation is generally described as well-rounded pebble to cobble size conglomerate and red-brown, medium to coarse sandstone. The lower part of the formation predominantly consists of clast-supported conglomerate composed largely of pebbles and cobbles of red, red brown and grey fine-grained quartzite together with red sandstone, milky quartz and rare porphyritic igneous rocks and re-worked conglomerate. The formation rests uncomformably on Bridgnorth Sandstone. The maximum thickness of the conglomerate dominated facies is probably about 20m but this is gradational into the overlying sandstone dominated facies, which also contains beds and lenses of pebble conglomerate. The thickness of the formation varies, from 112m-133m in the north of the county near Hagley, to 155m at Wildmoor near Bromsgrove, and 127-129m at Brockhill east of Bromsgrove. However, the upper boundary is difficult to recognise because of the lithological similarity of the Kidderminster sandstone to the predominantly non-pebbly Wildmoor Sandstone.

There is some information about exposures for some sections of the deposit in this area:

- At Burlish Park / Birchen Coppice: the Kidderminster Formation deposit runs north east to south west. An exposure in the railway cutting (Severn Valley Railway line, to the north of the resource area near Birchen Coppice) shows soft red sandstone (depth not given) with subordinate bands of pebbles and local lenses of marl.
- At Mount Pleasant (north west of Burlish Park): In the railway cutting south of the tunnel more than 50' (15.2m) of the Kidderminster formation deposit is exposed, including pebbly bands and beds of red sandstone with an occasional pebble and a few bands of marl up to 3" (0.08m) thick.
- The construction of a reservoir to the east of Mount Pleasant exposed 10' of coarse pebbly shingle and sand, 15' of soft red sandstone with thin marl bands, 2' of hard coarse sand with pebbles, 6' of red sandstone with few pebbles with some thin marl layers and 3' of coarse breccia with angular blocks of igneous rock (total 36', 11m).
- Near Low Habberley and Franche: Along the east side of Habberley Valley a pronounced escarpment is formed by the Kidderminster Formation capping Wildmoor Sandstone and many exposures of the latter are visible in the lower part of the scarp. Crags of brown, current bedded sandstone are abundant on the floor of the valley, conspicuously at the Peckett Rock, 250m north-north-west of the Habberley Valley Inn, where over 50' (15.2m) of sandstone is exposed.

Numerous exposures are reported to occur in the valleys to the north west of Franche in the escarpment which bounds the Habberley Valley. In a road section south east of High Habberley over 140' (42.7m) of sandstone beds with some pebbles are exposed. A northerly trending fault throws these beds against 5' (1.5m) of reddish brown sandstone without pebbles (Wildmoor Sandstone). North west of this road cutting, in the grounds of High Habberley House, exposures near the base of the Kidderminster Formation show a conspicuous band of very coarse breccia containing large angular fragments up to 6" in diameter. A typical section in this location consists of: 6' of pebbly red sandstone overlying 8" of red sandstone with fewer pebbles, 4' of pebbly red sandstone, and 5' 6" of coarse breccia (total depth of 16'2", 4.9m).

The Kidderminster Formation, present as a calcareous grit, caps the Wildmoor Sandstone cliff at Ridgestone Rock and Jacob's Ladder at the northern end of Habberley Valley. Elsewhere, calcareous grit and conglomerate near the base of the Kidderminster Formation were formally exposed adjacent to the Kidderminster to Bridgenorth road about 650 yards north east of Lower Barns Farm, at the junction of Lower Lane and Honeybrook lane however, sandstone of Kidderminster type, with few or no pebbles is exposed.

Wildmoor Formation

The Wildmoor Formation is generally described as red-brown and orange, fine to medium grained, feldspathic sandstone with sparse, thin mudstone beds. Generally the formation is characterised by an absence of pebbles, in contrast to the Kidderminster Formation, although sparse pebbly stringers are recorded. The fine grain-size and soft, poorly cemented nature of the sandstone made it ideal for exploitation as moulding sand for use in the foundry industry. The memoir states that the Wildmoor Sandstone formation ranges in thickness

	from 90m-120m. The deposit is exposed in the road cutting 350yd SSE of Hoobrook and at intervals on the		
	western edge of the gravel patch capping Stour Hill and Wilden. There is no more detailed information about depths for the Wildmoor deposit in this area.		
	Estimated depth		
	Estimated depth calculated as mean average of: a) depth of Kidderminster formation near Hagley (mid-point of 112m to 133m): 122.5m, b) depth of Kidderminster formation at Wildmoor: 155m, c) depth of Kidderminster formation at Brockhill (mid-point of 127m to 129m): = 128m, d) Kidderminster formation at Mount Pleasant railway cutting: 15.2m, e) reservoir east of Mount Pleasant: 11m, f) Peckett Rock: 15.2m, g) road section south east of High Habberley: 42.7m, h) typical section at High Habberley House: 4.9m, i) BGS estimates of Wildmoor Sandstone formation (mid-point 90m to 120m): 105m = 66.6m.		
Assessment of resource	ce for the second consultation on MLP (Autumn 2013)		
Commentary:	A large resource area overlain by the settlement of Kidderminster. The Wildmoor and Kidderminster sandstone deposits are extensive and extend in all directions beyond this resource area and beneath the settlements of Stourport, Blakedown, Fairfield, Arley Kings (these sections are considered as resource areas 1/32, 1/33, 2/21, 2/22, 2/23, 2/24, 2/26, 10/24, 10/25, 10/26 and 10/27) and to the north of the county boundary.		
Crude estimate of	Area: 1350 ha x average depth: 66.6 m ÷ 2		
resource:	Estimated resource volume: 449,550,000 m ³		
	Estimated resource tonnage (at 2 t/m ³): 899,100,000 tonnes		
Conclusion:	Compromised by development.		
Assessment of resource	ce for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 1350 ha x average depth: 66.6 m ÷ 2		
resource:	Estimated resource volume: 449,550,000 m ³		
	Estimated resource tonnage (at 1.65 t/m ³): 741,757,500 tonnes		
Conclusion:	Compromised by development.		

Overview		N (87 107)	
Resource number:	2/26	Harborough	
Resource name:	Blakedown	T10/24	
Resource area:	39 ha	10/12	
Resource depth:	Estimated 105m	LIGE DE SANGER 94 CONTENT	
Location			
OS sheet reference:	SO 87 NE		
National grid ref:	387975, 278517		
		.84	
		A SEE PHA	
		B 410 51 101	
		Hackm	
		Knoll & LiGate	
		2/18 2 12 212 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Derived from 1.00,000 scale B/SS Digital Data under	
		(c) Clowin copyright and datables e rights 2013 Ofdance	
Resource description:			
Resource description:	Resource area 2/26 is Wildmoor Sandstone Formation. In this part of the county there are large areas of Wildmoor sandstone formation and Kidderminster formation solid sand of considerable geological complexity. The Kidderminster and Wildmoor sandstones are partially but extensively overlain by terrace and glacial sand and gravel deposits which are recorded as separate resource areas, however this section is not overlain by any other resource areas.		
	Wildmoor Formation		
	sandstone with sparse, the pebbles, in contrast to the grain-size and soft, poorly for use in the foundry ind	is generally described as red-brown and orange, fine to medium grained, feldspathic nin mudstone beds. Generally the formation is characterised by an absence of e Kidderminster Formation, although sparse pebbly stringers are recorded. The fine y cemented nature of the sandstone made it ideal for exploitation as moulding sand ustry. The memoir states that the Wildmoor Sandstone formation ranges in thickness a no more detailed information about depths for the Wildmoor deposit in this area.	
	120m): 105m	n based on BGS estimates of Wildmoor Sandstone formation (mid-point 90m to	
		ation on MLP (Autumn 2013)	
Commentary:		erlain by the settlement of Blakedown. The Wildmoor and Kidderminster sandstone nd extend in all directions beyond this resource area and beneath the settlements of	

	Kidderminster, Stourport, Fairfield, Arley Kings (these sections are considered as resource areas 1/32, 1/33, 2/21, 2/22, 2/23, 2/24, 2/25, 10/24, 10/25, 10/26 and 10/27) and to the north of the county boundary.	
Crude estimate of	Area: 39 ha x average depth: 105 m ÷ 2	
resource:	Estimated resource volume: 20,475,000 m ³	
	Estimated resource tonnage (at 2 t/m ³): 40,950,000 tonnes	
Conclusion:	Compromised by development.	
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of	Area: 39 ha x average depth: 105 m ÷ 2	
resource:	Estimated resource volume: 20,475,000 m ³	
	Estimated resource tonnage (at 1.65 t/m ³): 33,783,750 tonnes	
Conclusion:	Compromised by development.	