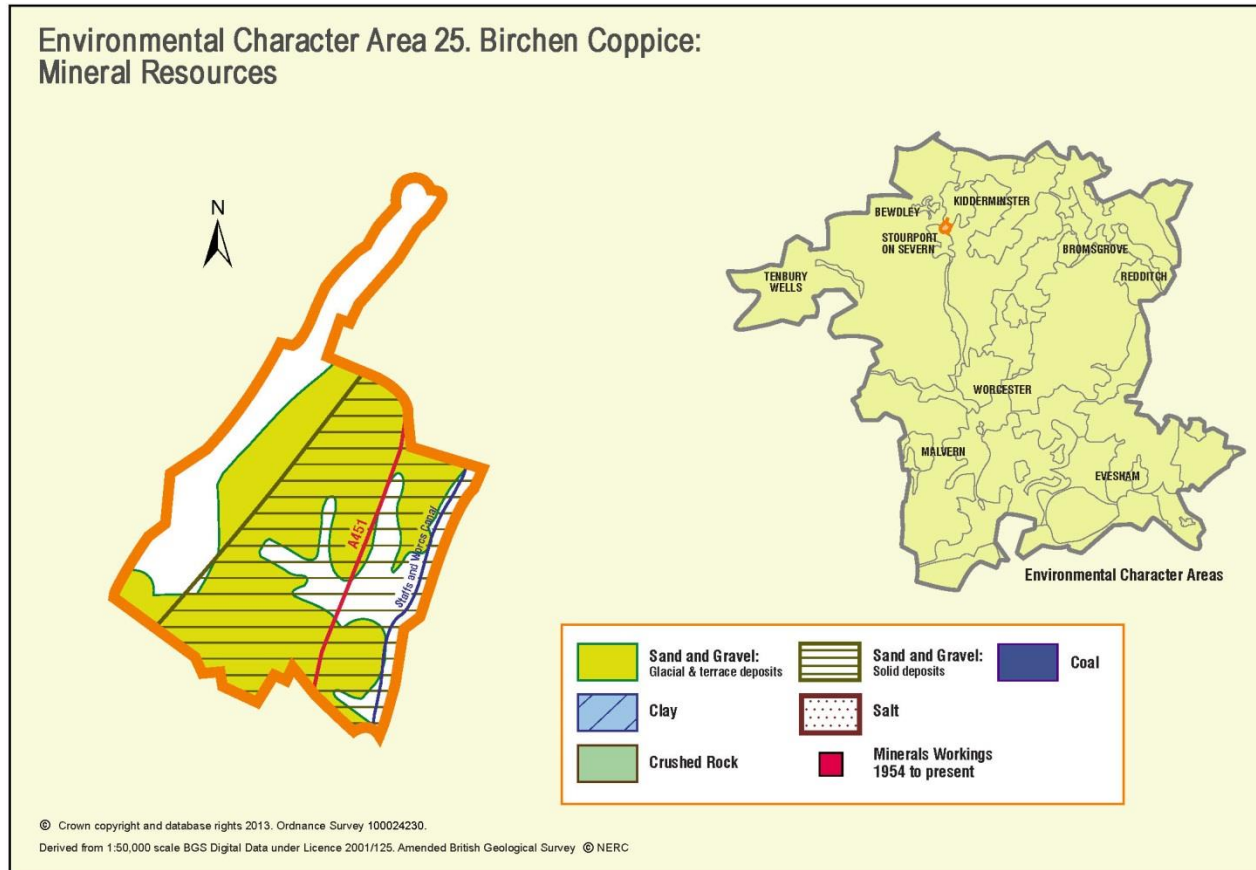


Appendix 25: Analysis of aggregate resources in ECA 25: Birchen Coppice



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

Sand and gravel

There are 5 resource areas identified for sand and gravel in Birchen Coppice ECA:

- Key: 1
- Significant: 1
- Compromised: 3

There are additional resource areas for solid sand and gravel which cross into this ECA, but are assessed as part of ECA 2 (Severn Valley North).

Crushed rock

There are no resource areas identified in Birchen Coppice ECA for crushed rock.

Non-aggregates

BGS data indicates that there are no non-aggregate mineral deposits in Birchen Coppice ECA.

Overview of resource assessment for ECA 25

Sand and gravel resource areas:

Resource number*	Second Stage Consultation		Third Stage Consultation	
	Original estimated resource tonnage (2 tonnes/m ³)	Significance	Revised estimate of resource tonnage (1.65 tonnes/m ³)	Significance
25/1	6,976,000	Key	5,755,200	Key
25/1 a	7,808,000	Compromised	6,441,600	Compromised
25/2	2,028,000	Key	1,673,100	→ Significant
25/2 a	3,016,000	Compromised	2,488,200	Compromised
25/2 b	1,040,000	Compromised	858,000	Compromised

Overview	
Resource number:	25/1
Resource name:	South of Birchen Coppice
Resource area:	109ha
Resource depth:	Estimated 6.4m
Location	
OS sheet reference:	SO 77 SE, SO 87 SW
National grid ref:	381363, 273416
Resource description:	
Resource description:	<p>A 3rd terrace (Holt Heath) sand and gravel deposit. The western end of the deposit has been worked at Blackstone and Brant Farm Quarries. The Birmingham Sand and Gravel (1967) application for Brant Farm Quarry included the results of trial holes which revealed depths of up to 12' (3.7m) of sand and gravel. The Roger Constant & Co Ltd (1997) application for Blackstone Quarry stated a maximum working depth of 9m.</p> <p>The deposit is underlain by solid sand deposits which are assessed separately as resource areas 2/22, 2/23 and 2/25.</p> <p>(Estimated resource depth based on average of: a) Brant Farm application: 3.7m, b) Blackstone Quarry application: 9m = 6.4m)</p>
Assessment of resource for the second consultation on MLP (Autumn 2013)	
Commentary:	<p>A medium-sized resource area that consists of 3 separate parts. The western end of the deposit has been worked, this is not included as part of the resource area. Much of the rest of the deposit is overlain by the settlements of Stourport and Kidderminster; these sections of the deposit are assessed separately as resource areas 25/1a, 25/2a and 25/2b. The deposit continues to the north of Birchen Coppice and this is considered as a separate resource areas (25/2) as it is separated from this resource area by over 500m.</p>
Crude estimate of resource:	<p>Area: 109 ha x average depth: 6.4 m ÷ 2 Estimated resource volume: 3,488,000 m³ Estimated resource tonnage (at 2 t/m³): 6,976,000 tonnes</p>
Conclusion:	Significant – key resource.

Use to define areas of search.

Assessment of resource for the Third Stage consultation on MLP (Spring 2015)

Revised estimate of resource: Area: 109 ha x average depth: 6.4 m ÷ 2
Estimated resource volume: 3,488,000 m³
Estimated resource tonnage (at 1.65 t/m³): 5,755,200 tonnes

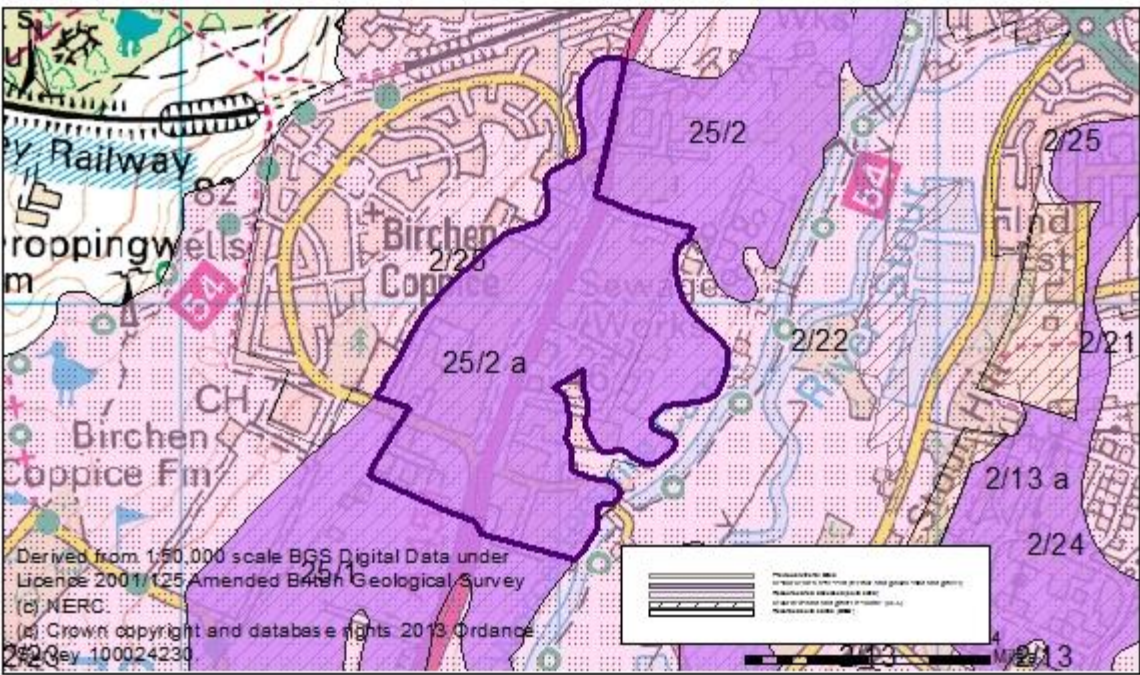
Conclusion: Significant – key resource.

Overview	
Resource number:	25/1a
Resource name:	South of Birchen Coppice a)
Resource area:	122ha
Resource depth:	Estimated 6.4m
Location	
OS sheet reference:	SO 77 SE, SO 87 SW
National grid ref:	381363, 273416
Resource description:	
Resource description:	<p>A 3rd terrace (Holt Heath) sand and gravel deposit. The western end of the deposit has been worked at Blackstone and Brant Farm Quarries. The Birmingham Sand and Gravel (1967) application for Brant Farm Quarry included the results of trial holes which revealed depths of up to 12' (3.7m) of sand and gravel. The Roger Constant & Co Ltd (1997) application for Blackstone Quarry stated a maximum working depth of 9m.</p> <p>The deposit is underlain by solid sand deposits which are assessed separately as resource areas 2/22, 2/23 and 2/25.</p> <p>(Estimated resource depth based on average of: a) Brant Farm application: 3.7m, b) Blackstone Quarry application: 9m = 6.4m)</p>
Assessment of resource for the second consultation on MLP (Autumn 2013)	
Commentary:	This resource area is overlain by the settlement of Stourport. Other sections of the deposit are assessed separately as resource areas 25/1, 25/2, 25/2a and 25/2b.
Crude estimate of resource:	<p>Area: 122 ha x average depth: 6.4 m ÷ 2</p> <p>Estimated resource volume: 3,904,000 m³</p> <p>Estimated resource tonnage (at 2 t/m³): 7,808,000 tonnes</p>
Conclusion:	Compromised by development.
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of resource:	<p>Area: 122 ha x average depth: 6.4 m ÷ 2</p> <p>Estimated resource volume: 3,904,000 m³</p>

	Estimated resource tonnage (at 1.65 t/m³): 6,441,600 tonnes
Conclusion:	Compromised by development.

Overview		
Resource number:	25/2	
Resource name:	North of Birchen Coppice	
Resource area:	39ha	
Resource depth:	Estimated 5.2m	
Location		
OS sheet reference:	SO 87 SW	
National grid ref:	382522, 274518	
Resource description:		
Resource description:	<p>A 3rd terrace (Holt Heath) sand and gravel deposit. Vales pit, south of the West Midland Sugar Company's works, exposed 15' (4.6m) of interbedded sand and gravel. Sections in Lea's gravel pits at Foley Park showed 11' (3.4m) of coarse pebbly gravel overlain by more than 8' (2.4m) of structureless brown sand without pebbles which does not appear to form part of the terrace and whose origin is uncertain.</p> <p>The deposit is underlain by solid sand deposits which are assessed separately as resource areas 2/22, 2/23 and 2/25.</p> <p>Estimated resource depth based on average of: a) Vales pit: 4.6m, b) sections in Lea's gravel pits: (3.4m + 2.4m = 5.8m) = 5.2m)</p>	
Assessment of resource for the second consultation on MLP (Autumn 2013)		
Commentary:	<p>A medium-sized resource area. Much of the deposit is overlain by the settlements of Stourport and Kidderminster, and these areas are considered separately as resource areas 25/2a, 25/2b and 25/1a. The deposit continues to the south west of Birchen Coppice and this is considered as a separate resource area (25/1) as it is separated from 25/2 by over 500m.</p>	
Crude estimate of resource:	<p>Area: 39 ha x average depth: 5.2 m ÷ 2 Estimated resource volume: 1,014,000 m³ Estimated resource tonnage (at 2 t/m³): 2,028,000 tonnes</p>	
Conclusion:	<p>Significant – key resource. Use to define areas of search.</p>	

Assessment of resource for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of resource:	Area: 39 ha x average depth: 5.2 m ÷ 2 Estimated resource volume: 1,014,000 m ³ Estimated resource tonnage (at 1.65 t/m³): 1,673,100 tonnes
Conclusion:	Change to conclusion: Significant.

Overview	
Resource number:	25/2a
Resource name:	North of Birchen Coppice a)
Resource area:	58ha
Resource depth:	Estimated 5.2m
Location	
OS sheet reference:	SO 87 SW
National grid ref:	382522, 274518
	
Resource description:	
Resource description:	<p>A 3rd terrace (Holt Heath) sand and gravel deposit. Vales pit, south of the West Midland Sugar Company's works, exposed 15' (4.6m) of interbedded sand and gravel. Sections in Lea's gravel pits at Foley Park showed 11' (3.4m) of coarse pebbly gravel overlain by more than 8' (2.4m) of structureless brown sand without pebbles which does not appear to form part of the terrace and whose origin is uncertain.</p> <p>The deposit is underlain by solid sand deposits which are assessed separately as resource areas 2/22 and 2/25.</p> <p>Estimated resource depth based on average of: a) Vales pit: 4.6m, b) sections in Lea's gravel pits: (3.4m + 2.4m = 5.8m) = 5.2m)</p>
Assessment of resource for the second consultation on MLP (Autumn 2013)	
Commentary:	A medium-sized resource area which is overlain by the settlement of Birchen Coppice, Kidderminster. The deposit extends to the north (assessed separately as resource areas 25/2 and 25/2b), and also continues to the south west of Birchen Coppice (considered separately as resource area 25/1 and 25/1a).
Crude estimate of resource:	<p>Area: 58 ha x average depth: 5.2 m ÷ 2</p> <p>Estimated resource volume: 1,508,000 m³</p> <p>Estimated resource tonnage (at 2 t/m³): 3,016,000 tonnes</p>
Conclusion:	Compromised by development.
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)	
Revised estimate of	Area: 58 ha x average depth: 5.2 m ÷ 2

resource:	Estimated resource volume: 1,508,000 m ³ Estimated resource tonnage (at 1.65 t/m³): 2,488,200 tonnes
Conclusion:	Compromised by development.

Overview		
Resource number:	25/2b	
Resource name:	North of Birchen Coppice b)	
Resource area:	20ha	
Resource depth:	Estimated 5.2m	
Location		
OS sheet reference:	SO 87 SW	
National grid ref:	382522, 274518	
Resource description:		
Resource description:	<p>A 3rd terrace (Holt Heath) sand and gravel deposit. Vales pit, south of the West Midland Sugar Company's works, exposed 15' (4.6m) of interbedded sand and gravel. Sections in Lea's gravel pits at Foley Park showed 11' (3.4m) of coarse pebbly gravel overlain by more than 8' (2.4m) of structureless brown sand without pebbles which does not appear to form part of the terrace and whose origin is uncertain.</p> <p>The deposit is underlain by solid sand deposits which are assessed separately as resource areas 2/22 and 2/25.</p> <p>Estimated resource depth based on average of: a) Vales pit: 4.6m, b) sections in Lea's gravel pits: (3.4m + 2.4m = 5.8m) = 5.2m)</p>	
Assessment of resource for the second consultation on MLP (Autumn 2013)		
Commentary:	A small resource area overlain by the Foley Park area of Kidderminster. The deposit continues to the south, these sections of the deposit are assessed separately as resource areas 25/1, 25/1a, 25/2 and 25/2a.	
Crude estimate of resource:	<p>Area: 20ha x average depth: 5.2 m ÷ 2</p> <p>Estimated resource volume: 520,000 m³</p> <p>Estimated resource tonnage (at 2 t/m³): 1,040,000 tonnes</p>	
Conclusion:	Compromised by development.	
Assessment of resource for the Third Stage consultation on MLP (Spring 2015)		
Revised estimate of resource:	<p>Area: 20ha x average depth: 5.2 m ÷ 2</p> <p>Estimated resource volume: 520,000 m³</p>	

	Estimated resource tonnage (at 1.65 t/m³): 858,000 tonnes
Conclusion:	Compromised by development.