

**Bedfordshire County Council and Luton
Borough Council Minerals Development
Framework**

**Sustainability Appraisal of the Issues and
Options**

Appendix 2: Sites Appraisal Tables

Cluster 1: Sites to the East of Bedford

Cluster 1 Site: MD3, Willington Lock				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Part of this site contains the County Wildlife Site, Blunham Disused Railway and EN has concerns about the impact on this site. Bedfordshire Wildlife Trust also feel that the site might have a significant impact on River Great Ouse CWS and Great Barford Pit CWS.</p> <p>The County Ecologist has indicated that this site falls within the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat. Although this site lies within a CWS, damage might conceivably be avoided or compensated for as only a small section of the CWS might be lost. However, care must be taken to ensure that this site would not lead to the loss of priority habitat or species. There is the potential to enhance the CWS over the long term through the use of a carefully designed restoration programme.</p>	R	R	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. There is an Area of Archaeological interest adjacent to / slightly overlapping the site. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong</p>	O	O	G

Cluster 1 Site: MD3, Willington Lock				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits the character of the area, in this case wetland.</p>			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23), the aims of Forest of Marston Vale (see MWLP appendix 4) and the Ivel and Ouse Countryside Project – see MWLP Appx 5. As already indicated, this is a priority area for the creation of wetland habitat. Although this site lies within a CWS, damage might conceivably be avoided or compensated for as only a small section of the CWS might be lost.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments and is also close to a navigable river is used for recreation purposes. If numerous sites were developed, it could affect this. Care must also be taken to avoid adverse effects on the Danish Camp Riverside Visitor Centre.	R	R	G
Transportation				

Cluster 1 Site: MD3, Willington Lock				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
<p>Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?</p> <p>Is the site near to the strategic highway network?</p>	<p>Sustrans Route 51 and proposed Great North Cycle Route run through the area – extraction could potentially provide opportunities for improvement even if this involved temporary diversion.</p> <p>The Bedfordshire Railway Transport Association would like to see full re-opening of the East West rail link serving Willington. This would mean that a large amount of quarrying material could be taken by rail. Consultees suggest that the cost and feasibility of this needs investigation. However, sand & gravel sites are intended to serve local markets and rail is unlikely to be a practical solution.</p> <p>This site is in close proximity to residential developments and access to this site would mean that vehicles would have to pass through either Great Barford or Willington to access the strategic road network. This would potentially give traffic and safety implications particularly on the A603 which at points can be quite narrow and dangerous. It would also have negative impacts on the local environment and residents. The Highways Authority is currently improving the A421 by realigning the carriage way to the west of the current A421 and consideration would need to be given to the impact this may have on the use of this strategic road to access the local roads.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>	R	R	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is within Flood Zones 3 of the River Ouse on the Environment Agency's Flood Map. Is within the Bedfordshire Internal Drainage Board area. There have been indications that the site could provide flood alleviation benefits further downstream. The nature of this impact is uncertain and would require further	O	O	O

Cluster 1 Site: MD3, Willington Lock				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD6, Blunham/Roxton				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There are no direct land take issues but there is a CWS adjacent to the site. There are also indications that there is potential for protected species including water vole and otter.</p> <p>The County Ecologist has indicate that this site falls within the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat.</p> <p>Care would need to be taken to ensure that long term gained is not offset by short term loss.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. A large area of the site is an Area of Archaeological interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.</p>	O	O	G
Land take				

Cluster 1 Site: MD6, Blunham/Roxton				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	Part of the site is Grade 1 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the Ivel and Ouse Countryside Project (see MWLP appendix 5). This is also a priority area for the creation of wetland habitat.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments. It is also close to a navigable river is used for recreation purposes. If numerous sites were developed, it could affect this.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. Access to these sites is by small local roads leading to the strategic road network. Any HGV's accessing these sites would have to travel in close proximity to the residential areas of Roxton and Tempsford raising traffic, noise and safety concerns for local residents. However, the A421 has now been dualled to by-pass Blunham. The old road is still in use for local access, so direct access could be a possibility. According to consultees, Sustrans Route 51 and the proposed Great North Cycle Route run through the area – extraction could potentially provide opportunities for improvement even if this involved temporary diversion. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through	N/A			

Cluster 1 Site: MD6, Blunham/Roxton				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
reserves <i>(this may be an issue related to silica sand only)</i>				
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the Main River Great Ouse and River Ivel. The site is in the Bedfordshire Internal Drainage Board area. The nature of this impact is uncertain and would require further investigation. There have been indications at consultation that the site could provide flood alleviation benefits further downstream.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD7, Blackcat, Chawston				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take affecting designated sites. The Beds Wildlife Trust are concerned over maintaining ground water levels, however, do feel that the site should go ahead due to afteruse potential. The County Ecologist has indicate that this site falls within the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat.</p> <p>Care would need to be taken to ensure that long term gained in not offset by short term loss.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. There are two Areas of Archaeological interest – one wholly within the site and one mostly within it. There are indications that the site has the potential for archaeological finds – it has a series of crop marks which are likely to represent later prehistoric and Roman settlement. If the site were developed mitigation would be required to preserve any remains found. The nature of the impact depends upon this mitigation.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.</p>	O	O	G

Cluster 1 Site: MD7, Blackcat, Chawston				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	This is a priority area for the creation of wetland habitat.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site is within close proximity to residential developments at Wyboston and also a navigable river which is used for recreation purposes.	R	R	O
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	<p>Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. This site has good access links to the A1 and A421. Currently there is relatively good site access linking it to the A421, as with other sites access implications to this site are not clear due to the proposed improvements by the Highways Agency especially at the Black Cat roundabout area. The site has the benefit of existing direct access to Black Cat roundabout. Consideration needs to be given to residential areas in close proximity to this site and the traffic, noise and safety concerns for local residents of Wyboston.</p> <p>There is a potential to incorporate routes for the Great North Cycleway and the Ouse Valley Way in after use proposals.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>	O	O	G

Cluster 1 Site: MD7, Blackcat, Chawston				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the Main River Great Ouse. The site is partly in the Bedfordshire Internal Drainage Board area. The nature of this impact is uncertain and would require further investigation. There were indications at consultation that the site could provide flood alleviation benefits further downstream.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD8, Willowhill Farm, Moggerhanger				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take issue regarding designated sites. There is one CWS adjacent to the site. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat.</p> <p>Care would need to be taken to ensure that long term gained in not offset by short term loss.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area The majority of the site is in an Area of Archaeological interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. The Ramblers Association feel that this site would be very visible from the high ground of the Greensand Ridge.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would</p>	O	O	G

Cluster 1 Site: MD8, Willowhill Farm, Moggerhanger				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	This site could contribute to the aims of Marston Vale (see MWLP appendix 4) and is a priority area for the creation of wetland habitat.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Moggerhanger. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. There are strategic highways issues with this site. Although this site is in fairly close proximity to the A421 and the A1, this site is near to residential developments and access would mean that vehicles would have to pass in close proximity to Willington or Moggerhanger on the A603 to access these strategic routes. Further consideration needs to be given to the amount of traffic using the A603 as this route can be narrow in some points and would create safety implications for local communities and existing traffic. As with other sites, access implications from the strategic network are not clear due to the proposed improvements by the highways agency on the A421. A bridleway falls within this site. However, this is a good opportunity to resolve the dead end nature of Willington Bridleway 8. It could be extended NE to the Sustrans cycleway.	O	O	G

Cluster 1 Site: MD8, Willowhill Farm, Moggerhanger					
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
			Short	Medium	Long
		The effect would last as long as the site is worked and would be reversible once the site is closed.			
Extent of remaining landbank					
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A				
Conservation and protection of water resources					
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is partly in the Bedfordshire Internal Drainage Board area. The nature of this impact is uncertain and would require further investigation.		O	O	.O
Waste management					
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A				
Other planning considerations					
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.		G	G	G

Cluster 1 Site: MD9, Dairy Farm				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take issues on the site. There was an indication at consultation that the site contains dried up river beds/willows. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat. Care would need to be taken to ensure that long term gained in not offset by short term loss.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	About 60% of the site is in an Area of Archaeological interest and there are Henge and Bowl Barrows on the site. The site also affects the setting of a scheduled ancient monument. If the site were developed mitigation would be required to preserve any remains found. The nature of the impact depends upon this mitigation.	R	R	R
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2 best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD9, Dairy Farm					
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect			
		Short	Medium	Long	
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23). This is a priority area for the creation of wetland habitat. Care would need to be taken to ensure that long term gained in not offset by short term loss.	O	O	G	
Human health and amenity					
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site is within close proximity to residential developments and brings development slightly closer to Willington school. It is also near to a navigable river is used for recreation purposes. If numerous sites were developed, it could affect this. Care must also be taken to avoid adverse effects on the Danish Camp Riverside Visitor Centre.	R	R	G	
Transportation					
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. The main concerns about this site for future mineral extraction are its close proximity to Willington and its links to the A421. This site has good strategic transport links with the newly opened A421 Great Barford Bypass. Renhold Footpath 23 and Willington footpath 2 both cross the site. There is an opportunity to provide additional public access at final restoration of the site. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G	
Extent of remaining landbank					
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A				
Conservation and protection of water resources					

Cluster 1 Site: MD9, Dairy Farm				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Great Ouse. The site is in the Bedfordshire Internal Drainage Board area. Consultation responses suggest that the site could provide flood alleviation benefits further downstream. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? (<i>this may be an issue related to silica sand only</i>).	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD10, Bridge Farm, Great Barford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take effects on designated areas. However, the site is adjacent to Barford Pit County Wildlife Site and there may be an impact on ground levels. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat and restoration of the site to wetland would be a benefit. Care would need to be taken to ensure that long term gained in not offset by short term loss.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	About 75% of the site is in an Area of Archaeological interest. There is also a scheduled monument adjacent to the site in the South. The site is also close to Barford Conservation Area. If the site were developed mitigation would be required to preserve any remains found. The nature of the impact depends upon this mitigation.	R	R	R
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				

Cluster 1 Site: MD10, Bridge Farm, Great Barford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	This is a priority area for the creation of wetland habitat and restoration of the site to wetland would be a benefit. Care would need to be taken to ensure that long term gained in not offset by short term loss.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Great Barford, bringing development closer to Great Barford and in particular the two schools in Great Barford. The site is also near a navigable river is used for recreation purposes. If numerous sites were developed, it could affect this. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. As with other sites previously discussed the main issues associated with this site are the proximity to residential areas. This site has good strategic transport links with the newly opened A421 Great Barford Bypass but appropriate routing strategies are needed to avoid site traffic passing through Great Barford. Great Barford footpaths 4 and 21 are both affected by the site and will be subject to disruption or diversion during the course of the site activity. There is an opportunity to provide additional public access at final restoration of this site. Ouse Valley Way long distance walk passes along the southern/eastern boundary of the site and would need to be incorporated into excavation and restoration plans. The effect would last as long as the site is worked and would be reversible once	O	O	G

Cluster 1 Site: MD10, Bridge Farm, Great Barford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	the site is closed.			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Great Ouse. The site is also in the Bedfordshire Internal Drainage Board area. Consultation responses indicated that the site could provide flood alleviation benefits further downstream. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD11, Land at Octagon Farm South				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take effects on designated areas. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat and long term restoration plans could provide a benefit. The site would have a positive long term benefit provided mitigation measures were put in place to limit short term impacts.	G	G	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	About 75% of the site is within an Area of Archaeological Interest. There is also a scheduled monument adjacent to the site to the South. Octagon Farmhouse is a Listed Building (Grade II) and because of the proximity of the proposed mineral workings its environment and setting would be affected by the proposed works. However, once landscape restoration has been completed the level of harm will be relatively limited. If the site were developed mitigation would be required to preserve any remains found. The nature of the impact depends upon this mitigation.	R	R	R
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G

Cluster 1 Site: MD11, Land at Octagon Farm South				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23) and the aims of Forest of Marston Vale (see MWLP appendix 4). As already indicated, this is a priority area for the creation of wetland habitat.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may have effects on Willington and Moggerhanger related to site access (see below). It is also in close proximity to property at Octagon Farm.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The site benefits from being strategically well located in close proximity to the A421 to the west of the site and the A1 is located to the east of the site. There is an established site access to existing Willington quarry. However, vehicles may need to travel along the A603 and pass through the residential developments of Willington and Moggerhanger giving rise to safety implications for local traffic and safety. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and	O	O	O

Cluster 1 Site: MD11, Land at Octagon Farm South				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
the extraction of the aggregate?	1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Great Ouse. The site is also in the Bedfordshire Internal Drainage Board area. The nature of this impact is uncertain and would require further investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	This site impacts upon a MOD safeguarding direction. No other constraints have been identified. This site is effectively an "infill" site – all the surrounding land is being, or has been, already worked. This could represent effective resource efficiency to complete extraction via the proposal site.	R	R	O

Cluster 1 Site: MD12, Land at Octagon Farm North				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take effects on designated areas. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat and long term restoration plans could provide a benefit. The site would have a positive long term benefit provided mitigation measures were put in place to limit short term impacts.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of the site is in an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is close to proposals for a river park as an extension to Priory Country Park. This could be beneficial with appropriate restoration. The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				

Cluster 1 Site: MD12, Land at Octagon Farm North				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site is not classed as best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23). It is also a priority area for wetland creation.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The existing site is closer to residential development than the proposed site. The site is within close proximity to a navigable river is used for recreation purposes. If numerous sites were developed, it could affect this. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. As with the site at Octagon Farm South this site again benefits from being strategically well located in close proximity to the A421. It is assumed access would via the existing arrangement. There is also a need to protect the railway. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Great Ouse. The site is also in the Bedfordshire Internal Drainage Board area. Consultation responses indicated that the site could	O	O	.O

Cluster 1 Site: MD12, Land at Octagon Farm North				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	provide flood alleviation benefits further downstream. The nature of this impact is uncertain and would require further investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified. This site is effectively an "infill" site – all the surrounding land is being, or has been, already worked. This could represent effective resource efficiency to complete extraction via the proposal site.	G	G	G

Cluster 1				
Site: MD30, Land north of Bedford Road, East of Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site is adjacent to the River Ouse CSW . The site contains woodlands, dried up river beds/willows. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat and long term restoration plans could provide a benefit. The site would have a positive long term benefit provided mitigation measures were put in place to limit short term impacts.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. The majority of this site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD30, Land north of Bedford Road, East of Willington							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23) and the aims of Forest of Marston Vale (see MWLP appendix 4).			O	O	G
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		The site is adjacent to residential developments and brings mineral development right up the edges of Willington and slightly closer to Willington school. The site could cause nuisance. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		Road transportation is the most likely form of transportation. There are strategic highways issues with this site. This site is strategically well placed to access the A421 however; there are concerns about its close proximity to Willington and the traffic management, noise and safety implications this would have on local residents and the safety implications of the increased number of vehicles using the A603. Willington footpath No 3 would be affected by the proposed scheme so the link to the Sustrans cycleway must be maintained or diverted. Under the restoration proposal a new bridleway should be dedicated linking Bedford Rd to the cycleway The effect would last as long as the site is worked and would be reversible once the site is closed.			R	R	G
Extent of remaining landbank							
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)		N/A					
Conservation and protection of water resources							

Cluster 1 Site: MD30, Land north of Bedford Road, East of Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is adjacent to the floodplain of the River Ouse and is in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i> .	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site does not fall within an airfield protection zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD31, Land south of Bedford Road, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site does not affect any CWS/SSSIs or NNRs. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored sensitively.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site lies within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	Part of or the site contains Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD31, Land south of Bedford Road, Willington							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4).			O	O	G
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		The site is in close proximity to residential developments at Cople and Willington and could cause nuisance. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		Road transportation is the most likely form of transportation. There are strategic highways issues with this site. This site is located in close proximity to residential developments and this could create noise, traffic and safety implications for residents living in the local area. Strategically this site is well located for access onto the A421 however with improvements to the A421 taking place there are concerns regarding the routing of these vehicles and the number of heavy goods vehicles in the local area. There is a right of way adjacent to the site. The effect would last as long as the site is worked and would be reversible once the site is closed.			R	R	G
Extent of remaining landbank							
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)		N/A					
Conservation and protection of water resources							
To what extent are water resources used or impacted upon for the extraction of the aggregate?		Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is in the			O	O	O

Cluster 1 Site: MD31, Land south of Bedford Road, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only.)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD32, Land south of Bedford Road, next to Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site does not affect any CWS/SSSIs or NNRs. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored sensitively.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with	Part or all of this site is Grade 2, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD32, Land south of Bedford Road, next to Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
areas of best and most versatile agricultural land?				
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4).	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	HGVs would need to pass through Willington therefore the traffic management , noise and safety implications this would have on local residents would need to be taken into account in the consideration of this site.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. There are strategic highways issues with this site. The site benefits from not being close to residential developments however, vehicles accessing the site from the A421 would need to pass through Willington therefore the traffic management , noise and safety implications this would have on local residents would need to be taken into account in the consideration of this site. The junction with the A603 is below standard. Willington Bridleway 8 runs along the NW boundary of the site. Care should be taken to ensure this right of way is not affected. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			

Cluster 1 Site: MD32, Land south of Bedford Road, next to Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is partly in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD33, Land between Sandy Road and Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take effects on designated sites. However, Beds WT believe there are Great Crested Newts in the area. The nature of the impact of this site depends on mitigation employed regarding water levels.	O	O	O
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with	Part or all of this site is Grade 1 and Grade 2, best and most versatile agricultural	R	R	R

Cluster 1 Site: MD33, Land between Sandy Road and Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
areas of best and most versatile agricultural land	land.			
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4).	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Willington. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. There are strategic highways issues with this site. The main concerns with this site are the proximity to residential developments and the access of traffic to the site. As with site MD32, although this site is well located for access onto the strategic network i.e. A421 and A1, traffic entering and leaving the site would pass through residential areas leaving traffic management implications. The noise levels and safety for local residents would also need to be taken into consideration. Willington Bridleway 8 runs through the site but should be restored on this line at completion of the workings. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			

Cluster 1 Site: MD33, Land between Sandy Road and Wood Lane, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD34, Land east of Cople, south of Bedford Road, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are no direct land take effects on designated sites. However, Beds WT believe there are Great Crested Newts in the area. The nature of the impact of this site depends on mitigation employed regarding water levels.	O	O	O
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with	This site impacts upon Grade 1, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD34, Land east of Cople, south of Bedford Road, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
areas of best and most versatile agricultural land?				
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4).	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site will bring mineral development closer to Cople and the school in Cople. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation The site is well placed to access the A421 without passing through any residential areas therefore not having any direct negative impacts on local residents. There is also a direct route from this site onto the A1 however, traffic using this route would pass through Willington and Moggerhanger creating negative noise, safety and traffic effects for local residents. There is a public bridleway adjacent to the site and care should be taken not to affect this. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				

Cluster 1 Site: MD34, Land east of Cople, south of Bedford Road, Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is also in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD35, Land north of Bedford Road, west of Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There are no direct land take effects on designated areas. The County Ecologist has indicate that this site falls within / very close to the floodplain of the River Ouse. This is a priority area for the creation of wetland habitat and long term restoration plans could provide a benefit.</p> <p>Care would need to be taken to ensure that long term gained in not offset by short term loss.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area . About 60% of the site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.</p>	O	O	G
Land take				

Cluster 1 Site: MD35, Land north of Bedford Road, west of Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site is not classed as best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to Bedford River Valley park (see BBC LP Policy NE23) and the aims of Forest of Marston Vale (see MWLP appendix 4).	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Willington. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. There are strategic highways issues with this site. It is well placed to access the A421 without traffic passing through any other residential areas. However, access to the A1 would mean traffic would pass through Willington and Moggerhanger creating negative noise, safety and traffic effects for local residents. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is also in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	O

Cluster 1 Site: MD35, Land north of Bedford Road, west of Willington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD39, Land at Cople				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored sensitively.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD39, Land at Cople					
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
			Short	Medium	Long
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	No synergies identified.		O	O	O
Human health and amenity					
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments, being only 170m away from the nearest development (Cople).		R	R	G
Transportation					
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	The site benefits from not being in close proximity to residential developments. There is also a direct route from this site onto the A1 however, traffic using this route would pass through Willington and Moggerhanger creating negative noise, safety and traffic effects for local residents. The effect would last as long as the site is worked and would be reversible once the site is closed.		O	O	G
Extent of remaining landbank					
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A				
Conservation and protection of water resources					
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.		O	O	.O
Waste management					
How much waste is likely to be produced per tonne of aggregate? (<i>this may be an issue related to silica sand only</i>)	N/A				

Cluster 1 Site: MD39, Land at Cople				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 1 Site: MD47, NEW SITE				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored sensitively.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the national countryside character area 88: Bedfordshire and Cambridgeshire Claylands and the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration.	O	O	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R

Cluster 1 Site: MD47, NEW SITE					
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect			
		Short	Medium	Long	
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4).	O	O	G	
Human health and amenity					
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments, being only 160m away from the nearest development.	R	R	G	
Transportation					
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. There is also a direct route from this site onto the A1 however, traffic using this route would pass through Willington and Moggerhanger creating negative noise, safety and traffic effects for local residents. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G	
Extent of remaining landbank					
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A				
Conservation and protection of water resources					
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is in the Bedfordshire Internal Drainage Board Area. The nature of this impact is uncertain and would require further investigation.	O	O	O	
Waste management					
How much waste is likely to be produced per tonne of aggregate? (<i>this may be an issue related to silica sand only</i>)	N/A				

Cluster 1 Site: MD47, NEW SITE				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 2: Sites in the Biggleswade Area

Cluster 2 Site: MD1, Land off New Road, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site does not involve direct land take from designated sites. However, Sandy Warren SSSI is located close to this site, on the opposite side of the River Ivel. English Nature has indicated that they would not wish to see any impacts on the SSSI so this proponent must demonstrate that this would not be the case. Many of the CWSs are reliant on consistent groundwater levels and the effect that quarrying would have on these should be taken into account.</p> <p>Nearby Warren Villas CWS is known to have populations of otters/water voles. If the quarry were restored in a low level manner might be an opportunity to link Warren Villas CWS with the site. This is an important river corridor and flood meadow and there would be an opportunity to restore the land to wetland.</p> <p>The spatial extent of this impact could be relatively far reaching depending on the effects on groundwater levels. The probability would be lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to wetland and linked to Warren Villas CWS.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>All of this site is in an Area of Archaeological Interest with the possibility of bronze age remains. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be</p>	O	O	O

Cluster 2 Site: MD1, Land off New Road, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent does the proposed site threaten the qualities of designated areas?	<p>poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	Part or all of this site is Grade 2, best and most versatile agricultural land. However, the applicants have stated that revised Defra specifications and current climate data are likely to result in a lower grading. This, however, is not a confirmed piece of evidence and needs further investigation.	O	O	O
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. As already indicated, this is a priority area for the creation of wetland habitat.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments as it abuts the village of Beeston and could cause nuisance to this area as well as residential properties in Seddington. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of	O	O	G

Cluster 2 Site: MD1, Land off New Road, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Is the site near to the strategic highway network?	<p>traffic on trunk roads. The site is well located in terms of its location to the strategic network; vehicles from the site can access the A1 via New Road although this would increase traffic already using the A1 and will add to the numbers of vehicles already using this network. Safety of these vehicles joining the A1 from New Road would need to be taken into consideration.</p> <p>The main concern with this location is the proximity to residential houses south of the site in Seddington and also to the north of the site in Beeston. A mineral extraction site in this location would increase numbers of HGV vehicles and emissions associated with them and increase noise level having negative impacts on local residents.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	<p>Part of this site is within Flood Zone 3 (high risk), 2 (low to medium risk) and 1 (low risk). The source of the flooding is from the main River level.</p> <p>The applicant feels that flood zone restoration of mineral workings either as reduced level or including a lake would enhance the capacity of the River level floodplain thus reducing downstream flood risks. This would need to be confirmed.</p>	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			

Cluster 2 Site: MD1, Land off New Road, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The family who live in Westray own the surrounding buildings and land. They strongly object to proposal and they own a covenant on the surrounding land which prevents such works. The site is not affected by an airfield safeguarding zone.	R	R	R

Cluster 2 Site: MD4, Sandy Heath Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take from designated wildlife sites. However, this is an area of strategic opportunity for heathland creation and adjacent to an agreed quarry heathland restoration. Proposals should provide restoration opportunities for creation of lowland heath and acid grassland habitats.</p> <p>The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to heathland.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>All of this site is in an Area of Archaeological interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site falls within an Area of Great Landscape Value. The site is within the landscape character designation of Type 6: Wooded Greensand Ridge. This is a large scale elevated landscape so development is likely to be visible from a large area. The guidelines for this character type states that quarry restoration schemes should respond to landscape character and increase the area of heathland on the ridge.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area, in this case heathland.</p>	R	R	O
Land take				

Cluster 2 Site: MD4, Sandy Heath Quarry							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?		The site does not conflict with areas of best and most versatile agricultural land.			G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. As already indicated, this is a priority area within the BAP for the creation of heathland.			O	O	G
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		The site may cause nuisance to residential developments and could cause negative impacts on Sandy from HGV traffic which would add to the traffic caused by an established operation at adjacent pit. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		Road transportation is the most likely form of transportation. Access to this site would have to be through Sandy either through Station Road or Bedford Road and would therefore have negative impacts on the local residents and the environment. Sandy Bridleway 29 borders the site to the SE. However, it is assumed that the route would be unaffected by the proposal. There are opportunities to create additional bridleway back along NE boundary of the site. The effect would last as long as the site is worked and would be reversible once the site is closed.			R	O	G
Extent of remaining landbank							
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)		N/A					

Cluster 2 Site: MD4, Sandy Heath Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	This site is above a major aquifer. The nature of this impact is uncertain and would require further investigation. However, there is an adjacent excavation which would suggest that mitigation can be suggested to make development in this area acceptable.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of mineral? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	O	O	O
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 2 Site: MD5, Holme Green				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?	There is no direct land take from designated wildlife sites. However, Bedfordshire Wildlife Trust feels that there is potential for water voles and otters in drainage channels.	O	O	G
To what extent does the proposed site threaten the qualities of designated areas?	Bedfordshire RCC feel that the site's after use could result in enhancements to biodiversity and amenity value of the area given good restoration. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored well.			
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.	O	O	O
To what extent does the proposed site threaten the qualities of designated areas?	Most of this site is in an Area of Archaeological interest and there is a Roman settlement nearby. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.			
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community.	O	O	O
To what extent does the proposed site threaten the qualities of designated areas?				

Cluster 2 Site: MD5, Holme Green				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and 2 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments and may affect Sustrans Route 12. These issues are also important in terms of recreation for Sandy residents.	R	R	O
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. There are a number of residential dwellings in close proximity to this potential site and this would raise traffic and safety concerns for local residents, particularly Beauford Farm, Holme Grove and Holme Lodge. Although in close proximity to the A1, access to the site is difficult and substandard. Traffic from this site would be routed into Biggleswade or under the railway, both of which would have environmental implications. A network of footpaths and bridlepaths are affected by the route and the site is on the line of proposed Great North Cycle route north-south through the centre of the site.	R	R	G

Cluster 2 Site: MD5, Holme Green				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	The effect would last as long as the site is worked and would be reversible once the site is closed.			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is above a major aquifer and is next to railway (which has potential contamination issues). The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is within the safeguarding zone for RAF Henlow. No other constraints have been identified.	R	R	O

Cluster 2 Site: MD15, Land south of Broom village				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site bounds the River Ivel and Hiz CWS and also the River Flit CWS. Care must be taken to avoid impacts on these sites. Public consultation has raised concern regarding trees which were planted at the intersection of field boundaries shortly after the enclosure at Southill in the late 18th century. These appear on the estate maps and still exist today.</p> <p>The Beds RCC feel that this is a site which could result in enhancements to the biodiversity and / or amenity value of the area given good restoration.</p> <p>The spatial extent of this impact could be widespread, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored well.</p>	R	R	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>All of this site is within an Area of Archaeological Interest and the site adjoins Ivel navigation – former canal with Industrial heritage and recent commemorative planting for Whitbread Estates. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in</p>	O	O	O

Cluster 2 Site: MD15, Land south of Broom village				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community. The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land.	Most of this site is Grade 1 and Grade 2, best and most versatile agricultural land. However a more detailed ALC has confirmed that large parts of the site are class 3b. Small areas of the best and most versatile agricultural land do exist within the site.	O	O	O
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments, mainly Stanford, Broom and Langford. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. Although the Land at Broom Quarry site is located well for access to the A1 it is also situated close to residential developments. Any vehicles using this site would need to access it using local roads creating traffic management and safety implications for residents in local villages. . Southill Footpath 6 and 7 are affected. There is a the potential to provide new	R	R	G

Cluster 2 Site: MD15, Land south of Broom village				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	public access along SE and eastern boundaries to link the Navigator's Way to the Kingfisher Way long distance walk. The effect would last as long as the site is worked and would be reversible once the site is closed.			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	This site impacts upon flood zone areas and the site is above a major aquifer. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is within the safeguarding zone for RAF Henlow. No other constraints have been identified.	R	R	O

Cluster 2 Site: MD16, Land east of Gypsy Lane, Broom				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take from designated wildlife sites. However, Care must be taken to protect water vole and otter.</p> <p>The site has been identified as wetland opportunity in BAP.</p> <p>The spatial extent of this impact would be limited (depending on the impact on water vole and otter), its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to wetland habitat.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is no constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The site is within the landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the</p>	O	O	O

Cluster 2 Site: MD16, Land east of Gypsy Lane, Broom				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>local community.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. This is also a BAP wetland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site abuts the village of Broom and could cause nuisance to the local community. These effects are likely to last as long as the development lasts	R	R	G
Transportation				
<p>Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?</p> <p>Is the site near to the strategic highway network?</p>	<p>Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. This site is well located for access to the A1 however, it is located in close proximity to residential developments which creates implications for traffic management, noise and safety for local residents.</p> <p>The boundary between MD16 and 28 is a very important bridleway and must be protected.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>	R	R	G

Cluster 2 Site: MD16, Land east of Gypsy Lane, Broom				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Part or all of this site contains flood zone areas and the site is above a major aquifer. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The circumstances of MD16 have now been taken over by the planning application which has been submitted, and the resolution of the County Council to grant planning permission for that development, subject to the prior completion of a legal agreement.	O	O	O

Cluster 2 Site: MD17, Land to the east of Potton Road, Potton				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There is no direct land take from designated wildlife sites. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to a suitable use.	O	O	O
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. Most of this site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the landscape character designation of Type 6: Wooded Greensand Ridge. This is a large scale elevated landscape so development is likely to be visible from a large area. The guidelines for this character type states that quarry restoration schemes should respond to landscape character and increase the area of heathland on the ridge. The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area, in this case heathland.	R	R	G
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G

Cluster 2 Site: MD17, Land to the east of Potton Road, Potton							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. It is also a BAP heathland / acid grassland opportunity area.			O	O	G
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		Everton is already suffering from traffic and this could be made worse if the site were developed. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		Road transportation is the most likely form of transportation. This site is close to residential areas. In order for any vehicles to access this location from the strategic road network vehicles would need to travel along the local network and as with many of the other sites already discussed, this would create traffic management issues, safety and noise concerns for local residents. It would also have particular safety concerns if vehicles were traveling through Everton towards the A1 and the safety of HGV vehicles crossing the railway line. The site is bounded on the north side by footpath Potton FP12. A satisfactory diversion would be needed The effect would last as long as the site is worked and would be reversible once the site is closed.			R	R	G
Extent of remaining landbank							
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)		N/A					
Conservation and protection of water resources							
To what extent are water resources used or impacted upon for		No water issues have been identified.			G	G	G

Cluster 2 Site: MD17, Land to the east of Potton Road, Potton				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
the extraction of the aggregate?				
Waste management				
How much waste is likely to be produced per tonne of mineral? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	O	O	O
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 2 Site: MD27, Land south of Beeston				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There is no direct land take from designated wildlife sites. However, consultation responses indicate that the site is important for farmland birds, otters and water voles. Beds RCC feel this is a site where additional biodiversity / amenity benefits could be bought with sensitive restoration. The spatial extent of this impact would be dependent upon mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored well.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. All of this site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community.	O	O	O

Cluster 2 Site: MD27, Land south of Beeston				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	Most of this site is within Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the lvel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. It is also a BAP opportunity area for woodland, neutral grassland and hedgerow linkage (greensand ridge wildlife corridor).	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments as it abuts and brings mineral development closer to Beeston, causing potential nuisance. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. This site is located in a good position to access the strategic road network particularly the A1. However, in order to access the A1 any vehicles generated by this site would either have to travel through Beeston which would impose traffic management, noise and safety issues for local residents or would pass small number of dwellings at Brook End. Footpaths Northhill 11 and 15 and Sandy 11 and 40 are affected. These form part of the County's premier promoted route, the Greensand Ridge Walk as well as routes promoted by local groups. If site is approved would see the opportunity at	R	R	G

Cluster 2 Site: MD27, Land south of Beeston					
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect			
		Short	Medium	Long	
	final restoration to provide some additional local circular routes. The effect would last as long as the site is worked and would be reversible once the site is closed.				
Extent of remaining landbank					
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	Not applicable.				
Conservation and protection of water resources					
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map and the site is within the Internal Drainage Board district. The nature of this impact is uncertain and would require further investigation.	O	O	O	
Waste management					
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A				
Other planning considerations					
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G	

Cluster 2 Site: MD28, Land at Brooklands Farm				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take from designated wildlife sites. However, consultation has indicated that there are trees and woodlands issues with this site and potential for water voles and otters to be colonising the site.</p> <p>The site has also been identified as a wetland opportunity in BAP.</p> <p>The spatial extent of this impact would depend upon mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to wetland habitat.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. However, about 50% of this site is in an Area of Archaeological Interest and this is part of a wide area of pre-Roman archaeology to the west of Biggleswade. There is also a medieval castle nearby. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community.</p>	O	O	O

Cluster 2 Site: MD28, Land at Brooklands Farm				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and Grade 2, best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. This is also a BAP wetland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments and would cause Brooklands Farm to be landlocked. This negative effect could be long term depending on the after use of the site.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. The site is located adjacent to the A1 and would have access from the B568, so has good access to the strategic network. There is an established HGV access from Broom Quarry. However, there is also a residential development in this location and consideration would need to be given towards any traffic, noise and safety implications, particularly from traffic turning westbound. Old Warden Footpath number 1 and 3 would be affected. The effect would last as long as the site is worked and would be reversible once	O	O	G

Cluster 2 Site: MD28, Land at Brooklands Farm				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	the site is closed.			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	There are flood risk zones within the site and the site is above a major aquifer. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is within the safeguarding zone for RAF Henlow. No other constraints have been identified.	R	R	O

Cluster 2 Site: MD36, Ivel Farm, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?	The site is adjacent to the River Ivel CWS and could have impacts on Biggleswade Common CWS which is adjacent to the site. Protected species recorded in the area include otter and water vole.	O	O	G
To what extent does the proposed site threaten the qualities of designated areas?	The County Ecologist has indicated that MD36 is an extension of an existing quarry that has a restoration in hand to a range of biodiversity habitats. It is also within an important opportunity area for wetland priority habitat. Appropriate restoration could then contribute to local and regional wetland targets. However, there would need to be mitigation to ensure that this long term benefit is not outweighed by short term damage.			
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. Most of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
To what extent does the proposed site threaten the qualities of designated areas?				
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community.	O	O	O
To what extent does the proposed site threaten the qualities of designated areas?				

Cluster 2 Site: MD36, Ivel Farm, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1 and 2, best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. The site is also within a BAP wetland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments adjacent to the site. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. This site is well located next to the A1 but would probably take access from the road to the superstore. However, further consideration must be given to this site due its location next to residential developments and the noise safety and traffic implications a mineral site on this site will have on local residents. At completion a possible new footpath including riverside length and connection to permissive path further north could be provided. The effect would last as long as the site is worked and would be reversible once	O	O	G

Cluster 2 Site: MD36, Ivel Farm, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	the site is closed.			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Ivel. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 2 Site: MD40, Land at Potton Road, Biggleswade				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	EN has concerns about this proposal as it is near to Sandy Warren SSSI. It is also near to Biggleswade Common CWS. Beds RCC feel that the site could provide a valuable biodiversity / amenity use at restoration. Careful mitigation is needed to ensure that long term gain is not outweighed by short term damage.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	There is a listed building in proximity to the site. All of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.	O	O	O
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration strategies need to be developed with the local community. The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character	O	O	O

Cluster 2 Site: MD40, Land at Potton Road, Biggleswade				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site impacts upon Grade 1, best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. This is also a BAP wetland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site is in close proximity to residential developments and according to public consultation responses is used extensively for informal recreation by the public. However, it is currently private agricultural land –so this will need further investigation. There is a proposed new housing site in close proximity to the site which would be affected.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. This site is located in close proximity to residential developments and further consideration would need to be given to the possible effects the location of a minerals site here might have on the local residents. There are strategic transport issues with this site any vehicles accessing the site from the A1 would pass through Biggleswade leaving negative impacts of noise and safety implications for local residents and also traffic management implications through Biggleswade with extra traffic using the site. There are no rights of way affected but it could provide a useful circuit and link to the east side of Biggleswade common at final restoration. The effect would last as long as the site is worked and would be reversible once the site is closed.	R	R	G

Cluster 2 Site: MD40, Land at Potton Road, Biggleswade				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Great Ouse. The site is above a major aquifer. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A.			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 2 Site: MD45, Land west of new road, Sandy				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is no direct land take from designated wildlife sites. However, the site is in the vicinity of Sandy Warren SSSI and could have some effects.</p> <p>The County Ecologist has indicated that this site is in a wetland opportunity area but is a small and relatively isolated site. This is a site of existing floodplain grassland and flood meadow and whilst not a designated site is an example of semi improved floodplain grassland. This site may be capable of becoming species rich if properly managed.</p> <p>Careful mitigation is needed to ensure that long term gain is not outweighed by short term damage.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p>	G	G	G
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within landscape character designation of Type 4: Clay River Valleys. The condition of the landscape is judged to be poor. The strategy for the area is to improve features of the landscape that evoke a strong sense of place such as areas of pasture which help to distinguish the valleys from the adjacent vales. The wetland character of the area also needs to be improved along with the ecological value of the river corridors. Minerals development can help to do this with sensitive restoration. However, there is a concern in the local community (voiced at the workshop in Biggleswade) that more wetlands would unbalance the local environment. Long term restoration</p>	O	O	O

Cluster 2 Site: MD45, Land west of new road, Sandy							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
		strategies need to be developed with the local community. The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.					
Land take							
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?		Part of the site is Grade 1, best and most versatile agricultural land.			R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims. This is also a BAP wetland opportunity area.			O	O	G
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		The site may cause nuisance to residential developments, particularly Sandy and Beeston. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. The site is well located in terms of its location to the strategic network; vehicles from the site can access the A1 via New Road. Safety of these vehicles joining the A1 from New Road would need to be taken into consideration. The main concern with this location is the proximity to residential houses in Sandy to the north of the site and Beeston to the south west of the site. A mineral extraction site in this location would increase numbers of HGV vehicles and emissions associated with them and increase noise level having negative impacts on local residents.			R	R	G

Cluster 2
Site: MD45, Land west of new road, Sandy

SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>No public paths cross the site but land alongside the river forms part of the Kingfisher Way by a permissive path. Site if approved offers an opportunity to formalize this arrangement.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The source of the flooding is from the main River Ivel. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 3: Sites in the Leighton Buzzard Area

Cluster 3 Site: MD13, Land North of Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The stakeholder workshops highlighted that the site is likely to contain badgers, a protected species. If development were to go ahead mitigation would be needed to avoid impact on the protected species. The spatial extent of this impact would be limited, its probability lessened by mitigation. This area would not be available for use as habitat or foraging for the badgers for as long as the site is worked however the impact is reversible if the site were restored to habitat suitable to badgers.</p>	O	O	O
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>The site is adjacent to an Area of Archaeological Interest at Billington to the South East. A small part of the site (less than 5% by area) is designated as an Area of Archaeological Interest. The public workshops indicated that there have been significant archaeological finds in Billington with roman and medieval pottery found on the south side of the site. There is a suggestion that the site may be near to a medieval priory although this has not been confirmed.</p> <p>The public workshops indicated that this is one of the last places where you can find Billington Plum which is rare and of ecological and cultural significance – it was used for dying in the 19th Century.</p> <p>The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. However, concerns were expressed at the public</p>	O	O	O

Cluster 3 Site: MD13, Land North of Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent does the proposed site threaten the qualities of designated areas?	workshops about the extent of damage to the landscape and loss of countryside and period of time for extraction from extracting specialist sands from this site. In addition, the site lies within the Landscape Character Area of <i>settled and farmed clay hills</i> (type 8) making the area relatively visible from a large area. Landscape condition is considered to be poor in this area. All of the area is within the Green Belt (as are most of the sites proposed in the County). The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is close to South Beds Local Plan Open Space Proposal (policy R7). In the long term the site could help to provide much needed green infrastructure in this Growth Area to the East of Leighton Buzzard. It is also in the Greensand Trust Area and could help meet its aims at the restoration stage.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	<p>Although the stakeholder workshops highlighted that the site is included within Policy R7 of the South Bedfordshire Local Plan (as new urban open space) further investigation has shown that this is not the case. Policy R7 refers to land which is west of the site. However, in the long term the site could help to provide much needed green infrastructure in this Growth Area to the East of Leighton Buzzard.</p> <p>The site is within close proximity to the residential area of Billington and will bring mineral development nearer to Billington. The development would completely surround one property, Wayside Farm. The site will also bring minerals development closer to proposed housing development at Pratt' Quarry and Grovebury Fam The public workshops indicated a concern that the site is part of open countryside which forms a natural boundary between Leighton Buzzard and</p>	R	R	G

Cluster 3 Site: MD13, Land North of Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>Billington – there are major concerns that this break would be lost, resulting in the village losing its identity. Given the history of redundant sandpits in the area (given over to housing), there would need to be a guarantee of future protection from such uses in order to retain this break in development. There will also be impacts on new residential development.</p> <p>The public workshops indicated a concern about health impacts from noise, dust and air pollution from more sand extraction in the area. There were particular concerns about impact on Wayside Farm, which would be surrounded by quarries.</p> <p>In the long term, the site could contribute to green infrastructure this would have a positive effect.</p>			
Transportation				
<p>Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?</p> <p>Is the site near to the strategic highway network?</p>	<p>Road transportation is the most likely form of transportation.</p> <p>Although this is an extension to an already existing quarry, from a land use and transport outlook this site is not well located. The current Pratts site sends mineral via road to WBB processing plant at Munday's Hill quarry to North of Heath and Reach (OSGR – 494265 228572). To do this vehicles go through Leighton Buzzard and along the Vandyke Road (next to narrow gauge railway) – this is unpopular with local residents. The only alternative would be to take A505 East to A5, then back into Munday's Hill via minor road junction at OSGR 495135 228769. This is also difficult, however, as junction is poor (blind summit) and has previously attracted HA objection – would require major junction improvements.</p> <p>Billington 7 footpath lies along the East boundary. There is a possible opportunity to provide a circular bridleway at the final restoration of the site.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>	O	O	G
Extent of remaining landbank				

Cluster 3 Site: MD13, Land North of Billington					
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect			
		Short	Medium	Long	
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves. <i>For silica sand, supply at sites needs to be looked at individually. A key question will be how benefit of mineral supply weighs against local impacts of working.</i>	The site will contribute over 3 million tonnes of industrial sand of mixed uses (this is likely to be similar to Pratt Quarry which produces sands for the water filtration market, along with sports sands and horticultural sands – it is unlikely to include material suitable for concrete aggregate production). The site would have significant effects on the amenity of the local population, particularly in terms of transport. The minerals planning process needs to weigh up the implications of this with the likely need for the material. More work is needed on the likely material yielded.	O	O	O	
Conservation and protection of water resources					
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site falls within the Nitrate Vulnerable Zone and is part of the River Ouzel Internal Drainage Board Area. The site is above a major aquifer and parts of the site are above a Source Protection Zone 3. The stakeholder workshops highlighted the fact that there may be an issue with there being sufficient water available for processing and issues regarding disruption of the water table. However, this is not likely to be an issue as the mineral would be processed at Munday's Hill, which has established plant with dedicated lagoon for water supply.	O	O	.O	
Waste management					
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	O	O	O	
Other planning considerations					
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. MD13 is within the Growth Area to the east of Leighton Buzzard and in the long term could provide much needed green infrastructure.	O	O	O	

Cluster 3 Site: MD14, Land at Mile Tree Farm, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. It is near to a SSSI/CWS but is unlikely to threaten the qualities of this site. South Beds District Council has indicated that there are at least two woodland areas on the site.</p> <p>The public feel that there is significant wildlife on the site – badgers, woodpeckers, deer, hare, buzzards (nesting in the copse on the eastern corner), little owls, foxes, voles, large amount of meadows and hedgerows and the last Black Poplars in the Parish but this would need to be confirmed by site surveys.</p> <p>The area is shown as an opportunity area for heathland and acid grassland and could have a positive effect in the long term if the site was worked and restored to this after use.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>The site is adjacent to an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p> <p>The public are also concerned that the development may affect the nearby narrow gauge railway, which is a tourist attraction for the town. The effect at this stage is uncertain and would need further investigation if development were to go ahead.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The entire site lies within the Green Belt.</p>	O	O	O

Cluster 3 Site: MD14, Land at Mile Tree Farm, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent does the proposed site threaten the qualities of designated areas?	This site is on the boundary between landscape type 5 (settled and farmed clay vales) and type 6 (woodland greensand ridge). The Bedfordshire Landscape Character Assessment Report Volume 1 states that further development on the base of the Greensand Ridge should be avoided to retain the dramatic visual contrast between flat plains and steep slopes. The effect of developing this site, therefore, could be significant affecting a widespread area. The long term effects of the development would depend on the restoration of the site. This is also reflected by public concern regarding particularly views to the Chilterns. There are currently open views across the A5.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	In the long term the site could help to provide much needed green infrastructure in this Growth Area to the East of Leighton Buzzard. It is also in the Greensand Trust Area and could, through restoration, contribute to its aims.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	Public consultation has revealed a concern about air pollution impacts and future potential use as landfill. There is likely to be a cumulative noise effect in association with the noise levels from existing plant at Double Arches Quarry. In the long term of the site could contribute to green infrastructure this would have a positive effect.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. However, South Beds District Council feel that the prospect of using Leighton Buzzard Narrow Gauge Railway to help transport extracted material should be investigated. This location benefits from being an extension to an existing site. This site is in close proximity to the A5 however, vehicles would need to use local roads to access it and this	O	O	O

Cluster 3 Site: MD14, Land at Mile Tree Farm, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>would add to already existing traffic using the local roads particularly through Heath and Reach. There are also safety implications of traffic joining the A5. Consideration would also need to be given to the effect that the Highways Agency's Dunstable Northern By-pass will have. Vehicles traveling along the A5 and onto the bypass towards the new M1 junction would pass through Hockliffe creating traffic management implications and safety for local traffic.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p> <p>Two important bridleways cross the site which provide access to Hockliffe, Pottsgrove and Battleden from Heath and Reach. The nature of the effect would depend upon mitigation.</p>			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves. <i>For silica sand, supply at sites needs to be looked at individually. A key question will be how the benefit of mineral supply weighs against local impacts of working.</i>	The site will contribute over 2.5 million tonnes of industrial sand of mixed uses (this is likely to be similar to Double Arches Quarry / Chamberlain's Barn which produces sands for horticultural, rootzone, sports and amenity products as well as other specialist applications- it is unlikely to include material suitable for concrete aggregate production). The site would have significant effects on the amenity of the local population, particularly in terms of transport. The minerals planning process need to weigh up the implications of this with the likely need for the material. More work is needed on the likely material yielded.	O	O	O
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site falls within the Nitrate Vulnerable Zone and is adjacent to the floodplain of the River Ouzel. Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. Winterborne Brook runs round edge of site. There are some concerns that the proposed site may affect the pumping station at Sandhouse and may damage the drainage pattern in this part of the floodplain. This will have to be investigated.	O	O	O
Waste management				

Cluster 3 Site: MD14, Land at Mile Tree Farm, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	○	○	○
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. MD14 is within the Growth Area to the East of Leighton Buzzard and in the long term could provide much needed green infrastructure.	○	○	○

Cluster 3 Site: MD21, Land East of A4146 Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas. EN are keen to ensure that the proposal does not have any impacts on the sensitive wetland SSSI of Nares Gladley Marsh SSSI located in the vicinity. This will need further investigation if the site is taken forward.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>The site is adjacent to an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site. There is a suggestion that the site may be near to a medieval priory although this has not been confirmed.</p> <p>The public workshops indicated that this is one of the last places where you can find Billington Plum which is rare and of ecological and cultural significance – it was used for dying in the 19th Century.</p> <p>The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>However, concerns were expressed at the public workshops about the extent of damage to the landscape and loss of countryside and period of time for extraction from extracting specialist sands from this site. In addition, the site lies within the</p>	O	O	O

Cluster 3 Site: MD21, Land East of A4146 Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>Landscape Character Area of <i>settled and farmed clay hills</i> (type 8) making the area relatively visible from a large area. Landscape condition is considered to be poor in this area. All of the area is within the Green Belt (as are most of the sites proposed in the County).</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p> <p>The long term effects of the development would depend on the restoration of the site.</p>			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is adjacent to South Beds Local Plan Open Space Proposal R7. In the long term the site could help to provide much needed green infrastructure in this Growth Area to the East of Leighton Buzzard. The site is also in the Greensand Trust Area and is a BAP wetland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	<p>The site may cause nuisance to residential developments, especially at Billington. Although the stakeholder workshops highlighted that the site is included within Policy R7 of the South Bedfordshire Local Plan (as new urban open space) further investigation has shown that this is not the case. Policy R7 refers to land which is west of the site.</p> <p>The public workshops indicated a concern that the site is part of open countryside which forms a natural boundary between Leighton Buzzard and Billington – there are major concerns that this break would be lost, resulting in the village losing its</p>	R	R	G

Cluster 3 Site: MD21, Land East of A4146 Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>identity. Given the history of redundant sandpits in the area (given over to housing), there would need to be a guarantee of future protection from such uses in order to retain this break in development. There will also be impacts on new residential development.</p> <p>The public workshops indicated a concern about health impacts from noise, dust and air pollution from more sand extraction in the area.</p> <p>In the long term of the site could contribute to green infrastructure this would have a positive effect.</p>			
Transportation				
<p>Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?</p> <p>Is the site near to the strategic highway network?</p>	<p>From a transport perspective this site is well located to the strategic road network and would be worked as an extension to the existing Grovebury Road quarry – this has an established access direct to the A505 – does not pass any residences - proposal site would not intensify HGV traffic over existing use.</p> <p>A right of way extends along part of the site boundary. The nature of the effect would depend upon mitigation.</p>	O	O	O
Extent of remaining landbank				
<p>To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves. <i>For silica sand, supply at sites needs to be looked at individually. A key question will be how the benefit of mineral supply weighs against local impacts of working.</i></p>	<p>The site will contribute over 1.5 million tonnes of industrial sand of mixed uses (this is likely to be similar to Grovebury Quarry which produces material suitable for concrete aggregate production as well as for other industrial purposes). The site would have significant effects on the amenity of the local population, particularly in terms of transport. The minerals planning process need to weigh up the implications of this with the likely need for the material, particularly taking into account the fact that the sites does yield concreting aggregate</p>	O	O	O
Conservation and protection of water resources				
<p>To what extent are water resources used or impacted upon for the extraction of the aggregate?</p>	<p>The site falls within the Nitrate Vulnerable Zone and is partly within the River Ouzel Internal Drainage Board Area. The public consultation workshops indicated that there is a concern about subsidence. This has not been confirmed and would</p>	O	O	O

Cluster 3 Site: MD21, Land East of A4146 Billington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	need further investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	O	O	O
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. The site is within the Growth Area to the East of Leighton Buzzard and in the long term could provide much needed green infrastructure. No other constraints have been identified.	O	O	G

Cluster 3 Site: MD43, Land between Gig Lane and Eastern Way, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The public feel that there is significant wildlife on and around the site: hedgerows in Gig Lane contain plants and shrubs of great age (18th century hedgerows), site of ancient meadows, uncultivated for many years and home to large wildflower population, badgers, bats and great crested newts (in pond in south west corner of site) believed to be on site, owl and bat habitats in trees. This would need to be confirmed by site surveys.</p> <p>The area is shown as an opportunity area for heathland and acid grassland and could have a positive effect in the long term if the site was worked and restored to this after use.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites. However, the public consultation workshops highlighted a concern over impacts on adjacent Heath Village conservation area, including listed buildings.</p> <p>Most of the site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area.</p> <p>The entire site lies within the Green Belt.</p>	O	O	O

Cluster 3
Site: MD43, Land between Gig Lane and Eastern Way, Heath and Reach

SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	This site is on the boundary between landscape type 5 (settled and farmed clay vales) and type 6 (woodland greensand ridge). The Bedfordshire Landscape Character Assessment Report Volume 1 states that further development on the base of the Greensand Ridge should be avoided to retain the dramatic visual contrast between flat plains and steep slopes. The effect of developing this site, therefore, could be significant affecting a widespread area. The long term effects of the development would depend on the restoration of the site. This is also reflected in concern shown at the public workshops. There is concern about impacts on one of few remaining areas in village with original landscape, i.e. not reprofiled/quarried/filled and concern that the development would spoil character of a particularly attractive area of countryside (small ancient meadows with pretty hedgerows) along the approach to the village via the Eastern Way			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	In the long term the site could help to provide much needed green infrastructure in this Growth Area to the East of Leighton Buzzard.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Heath and Reach. The site is within 500m of the school in Heath and Reach. This school is currently surrounded by active quarries. In the long term of the site could contribute to green infrastructure this would have a positive effect. This is one of the few remaining green areas that abut the village.	R	R	G
Transportation				

Cluster 3
Site: MD43, Land between Gig Lane and Eastern Way, Heath and Reach

SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
<p>Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate?</p> <p>Is the site near to the strategic highway network?</p>	<p>Road transportation is the most likely form of transportation. This site is in close proximity to the A5 however, vehicles would need to use local roads to access it and this would add to already existing traffic using these local roads and impose safety implications for vehicles joining the A5. Heath and Reach is a residential settlement which is in close proximity to this site and consideration would need to be given to local residents and the suitability of this site for mineral extraction. Consideration would also need to be given to the effect that the Highways Agency's Dunstable Northern By-pass will have. Vehicles traveling along the A5 and onto the bypass towards the new M1 junction would pass through Hockliffe creating traffic management implications and safety for local traffic.</p> <p>There are also concerns that Gig Lane remains only safe pedestrian route eastwards at south of village – and that this would be lost. Also concerns about impact on character of this road – single track, ancient, tree-lined lane.</p> <p>No public rights of way are affected but the site could possibly include an intravillage path at restoration.</p>	O	O	G
Extent of remaining landbank				
<p>To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves. <i>For silica sand, supply at sites needs to be looked at individually. A key question will be how the benefit of mineral supply weighs against local impacts of working.</i></p>	<p>It is uncertain how much material the site will contribute. The material is likely to be similar to Double Arches Quarry / Chamberlain's Barn which produces sands for horticultural, rootzone, sports and amenity products as well as other specialist applications- it is unlikely to include material suitable for concrete aggregate production. The site would have significant effects on the amenity of the local population, particularly in terms of transport. The minerals planning process need to weigh up the implications of this with the likely need for the material. More work is needed on the likely material yielded.</p>	O	O	O
Conservation and protection of water resources				
<p>To what extent are water resources used or impacted upon for the extraction of the aggregate?</p>	<p>The site falls within the Nitrate Vulnerable Zone and the site partly lies with the River Ouzel Internal Drainage Board. Public consultation workshops indicated</p>	O	O	O

Cluster 3 Site: MD43, Land between Gig Lane and Eastern Way, Heath and Reach				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>that the field is known as 'Spring Head' – there are multiple springs on the site feed ponds in other parts of the village and that Anglian Water previously expressed concerns over the proximity of the site from its installations at Sandhouse and Heath & Reach (Minerals and Waste Local Plan 1996, sheet 141). This needs to be confirmed before the effect of the site can be fully assessed as part of an EIA.</p> <p>Some consultees feel that the site may cause drainage and flooding issues in the village of Heath and Reach.</p>			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	○	○	○
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. The site is within the Growth Area to the East of Leighton Buzzard and in the long term could provide much needed green infrastructure.	○	○	○

Cluster 4: Sites in the Upper Ouse Valley

Cluster 4 Site: MD18, Bury Farm Pavenham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Stevington Marsh SSSI is located nearby which includes sensitive wetland communities. The nature of the effect on this resource is uncertain without further details. However, EN has stated that they would not wish to see any impacts upon this site. According to the Beds Wildlife Trust otter populations are known to be present on the site.</p> <p>In the long term the site could form part of a more widespread mitigation / restoration strategy in the Upper Ouse and this needs further investigation.</p> <p>The nature of the impact of the site is uncertain and needs further investigation. The effect would last as long as the site is worked and would be reversible if the site were restored to wetland habitat.</p>	R	R	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>All of this site is within an Area of Archaeological Interest. Limestone quarrying at Pavenham could provide stone for heritage purposes in buildings and for dry stone walling. Projects have been forced to use material from Northants.</p> <p>The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Part or all of this site lies within an Area of Great Landscape Value. The site is within landscape character type 3: Limestone river valley with open water. This area has a strong sense of character as recognised by the AGLV designation.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the</p>	R	R	O

Cluster 4 Site: MD18, Bury Farm Pavenham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	character of the area.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the Ivel and Ouse Countryside Project through more widespread mitigation / restoration strategy in the Upper Ouse and this needs further investigation.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	This site is more remote from communities than other sites and is a relatively small site. See below for details regarding transport impacts.	G	G	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. However, access to this site would mean that HGV's would need to use the local roads before it can access the strategic roads, having impacts upon noise and safety. The effect would last as long as the site is worked and would be reversible once the site is closed. Footpath Pavenham 7 bisects the site. This path gives access to the riverside and Radwell. It forms part of a locally promoted route and the long distance Ouse Valley Way. The original ground levels should be restored once the quarry is worked so there will be no long term effect.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (this may be an issue related to silica sand only)	N/A			

Cluster 4 Site: MD18, Bury Farm Pavenham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	<p>Part or all of this site contains flood zone areas and lies within a Nitrate Vulnerable Zone.</p> <p>In the long term consultees have argued that sites within the Upper Ouse Valley could provide opportunities to alleviate flood problems. The nature of this impact is uncertain and would require further investigation.</p>	O	O	G
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 4 Site: MD19, Land North of Bromham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site does not threaten the qualities of designated areas</p> <p>Beds RCC feel that the site could result in enhancements to the biodiversity and amenity value of the area given good restoration. However, care must be taken not to destroy water vole / otter habitat.</p> <p>The spatial extent of this long term impact could be fairly widespread if a planned restoration strategy were arranged for this whole area.</p>	O	O	G
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>This entire site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site is adjacent to an Area of Great Landscape Value. The site is within landscape character type 3: Limestone river valley with open water. This area has a strong sense of character as recognised by the AGLV designation. It is likely that mineral development at the site could threaten the qualities of this area.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>	R	R	O
Land take				
To what extent do land based resource blocks conflict with	This site affects Grade 2, best and most agricultural land.	R	R	R

Cluster 4 Site: MD19, Land North of Bromham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
areas of best and most versatile agricultural land?				
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the Ivel and Ouse Countryside Project – see MWLP Appx 5.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site could cause nuisance to the villages of Bromham and Oakley. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. This site is located close to the A421 and A6 however; to access these strategic routes would mean vehicles would have to pass through the residential areas of Bromham or Oakley and creating HGV traffic through these residential areas would have significant traffic, noise and safety implications. Housing development has been proposed off Lower Farm Road, Bromham which may add to the traffic problems in this area. There is permissive access along the Oakley Road edge of the field avoiding a busy road. May also affect Stevington Country Way. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				

Cluster 4 Site: MD19, Land North of Bromham				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent are water resources used or impacted upon for the extraction of the aggregate?	No water resource constraints have been identified.	G	G	G
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 4 Site: MD46, Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Development of this site will need to ensure there won't be an impact on the nearby CWS of Chellington Hill Farm. The County Ecologist has indicated that proposals to quarry this area should not go forward for further consideration. EN state that there is a need to ensure there won't be impacts on Felmersham Gravel Pits, a sensitive wetland SSSI located nearby. The site is also adjacent to Harrold Odell CWS.</p> <p>The spatial extent of this impact could be widespread if the development affects such valuable sites. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is an Ancient Monument within this site and part or all of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site affects an area of great landscape value and is also within close proximity to Harrold Odell Country Park. The park has been looking into buying this land as an extension. Consultees are not in agreement as to whether mineral development would help this or hinder it. The site is within landscape character type 3: Limestone river valley with open water. This area has a strong sense of character as recognised by the AGLV designation.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area, especially as an extension to Harrold Odell Country Park.</p>	R	R	G

Cluster 4 Site: MD46, Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Harrold, Carlton, Odell and Felmersham. These effects are likely to last as long as the development lasts. The site will also have an impact on amenity at Harrold-Odell Country Park.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	The northern part of the site is bordered and crossed by Felmersham Footpath 6. Both are well used and link to Harold Odell Country Park. This is a strategic link in Kingfisher Way long distance trail. It is unclear whether the development would have an impact on these routes. Road transportation is the most likely form of transportation. However, the site is not located close to the strategic road network. Access to this site can be gained by the A6 although this would increase traffic already using this road and will add to the numbers of vehicles already using this network. Safety of these vehicles joining the A6 would also need to be taken into consideration. Once off this route access to the site is via local roads and the route to the site passes through small villages giving traffic management, noise and safety implications, particularly in Felmersham. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				

Cluster 4 Site: MD46, Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Part or all of this site contains flood zone areas and lies within a Nitrate Vulnerable Zone. The site is also above a major aquifer and parts are above a Source Protection Zone 3. However, in the long term consultees have argued that sites within the Upper Ouse Valley could provide opportunities to alleviate flood problems. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 4 Site: MD49, New site adjacent to Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Development of this site will need to ensure there won't be an impact on the nearby SSSI of Chellington Hill Farm. The County Ecologist has indicated that proposals to quarry this area should not go forward for further consideration. EN state that there is a need to ensure there won't be impacts on Felmersham Gravel Pits, a sensitive wetland SSSI located nearby. The site is also adjacent to Harrold Odell CWS.</p> <p>The spatial extent of this impact could be widespread if the development affects such valuable sites. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>There is an Ancient Monument within this site and part or all of this site is an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site affects an area of great landscape value and is also within close proximity to Harrold Odell Country Park. The park has been looking into buying this land as an extension. Consultees are not in agreement as to whether mineral development would help this or hinder it. The site is within landscape character type 3: Limestone river valley with open water. This area has a strong sense of character as recognised by the AGLV designation.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the</p>	R	R	G

Cluster 4 Site: MD49, New site adjacent to Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	character of the area, especially as an extension to Harrold Odell Country Park.			
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Harrold, Carlton, Odell and Felmersham. These effects are likely to last as long as the development lasts. The site will also have an impact on amenity at Harrold-Odell Country Park.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	The site is bordered by a bridleway. Without details of mitigation it is unclear whether the development would have an impact on this route. Road transportation is the most likely form of transportation. However, the site is not located close to the strategic road network. Access to this site can be gained by the A6 although this would increase traffic already using this road and will add to the numbers of vehicles already using this network. Safety of these vehicles joining the A6 would also need to be taken into consideration. Once off this route access to the site is via local roads and the route to the site passes through small villages giving traffic management, noise and safety implications, particularly in Felmersham. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				

Cluster 4 Site: MD49, New site adjacent to Land at Hill Farm, Chellington				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Part or all of this site contains flood zone areas and lies within a Nitrate Vulnerable Zone. The site is also above a major aquifer and parts are above a Source Protection Zone 3. However, in the long term consultees have argued that sites within the Upper Ouse Valley could provide opportunities to alleviate flood problems. The nature of this impact is uncertain and would require further investigation.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is not affected by an airfield safeguarding zone. No other constraints have been identified.	G	G	G

Cluster 4 Site: MD48, NEW SITE				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	This site encompasses a small CWS. The CWS is based on a small old gravel pit – and restoration of the larger proposal site could extend CWS. Care would be needed to ensure that the site is developed sympathetically to the current designated site.	O	O	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. It does not affect an Area of High Archaeological Potential.	G	G	G
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is within an Area of Great Landscape Value and is within landscape character type 3: Limestone river valley with open water. This area has a strong sense of character as recognised by the AGLV designation. The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.	R	R	O
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	Part of the site is Grade 2 best and most versatile agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution	The site is within the Ivel and Ouse Countryside Project Area (see MWLP) and given appropriate restoration could contribute to the project aims.	O	O	G

Cluster 4 Site: MD48, NEW SITE				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
to amenity, landscape, biodiversity objectives through restoration).	The site is also a BAP wetland opportunity area.			
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	This site is more remote from communities than other sites. See below for details regarding transport impacts.	G	G	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Road transportation is the most likely form of transportation. However, access to this site would mean that HGV's would need to use the local roads before it can access the strategic roads, having impacts upon noise and safety. However, this is a short length of local road and HGVs would not have to pass residences. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Part or all of this site contains flood zone areas and lies within a Nitrate Vulnerable Zone. In the long term sites within the Upper Ouse Valley could provide opportunities to alleviate flood problems. The nature of this impact is uncertain and would require further investigation	O	O	G
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			

Cluster 4 Site: MD48, NEW SITE				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is in an airfield safeguarding zone. No other constraints have been identified.	R	R	O

Cluster 5: Other Areas

Cluster 5 Site: MD2, College Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Part of this site contains the County Wildlife Site (CWS), Salford Wood (an area of ancient woodland). English Nature has concerns about damage/loss to the CWS. The County Ecologist has indicated that proposals to quarry this site are clearly contrary to the principles of PPS9 and the site should not go forward for further consideration.</p> <p>The spatial extent of this impact could be widespread if the development affects such a valuable site. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. A small part of this site is within an Area of Archaeological Interest.</p> <p>The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. This site is within landscape character type 5 (settled and farmed clay vales). Development wouldn't necessarily be at odds with the landscape character but sensitive mitigation is needed.</p> <p>The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>	O	O	O
Land take				
To what extent do land based resource blocks conflict with	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G

Cluster 5 Site: MD2, College Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
areas of best and most versatile agricultural land?				
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4). It is also a BAP opportunity area for woodland, neutral grassland and hedgerows.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Salford. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	There are rights of way along parts of the site boundary and there is uncertainty as to whether the development would affect these. In terms of transportation, the location of this site creates strategic issues. The site is an extension to existing working with established HGV access. However, in order to access this site, traffic would have to pass through the village of Salford via the local road which is accessed via the A421 or it could travel west to join A5130 near Milton Keynes – this would avoid need to pass residences on local roads. The Highways Authority is proposing to improve the A421 by realigning the carriageway to the west of the current A421 and consideration would need to be given to the impact this may have on the use of this strategic road to access the local road. Vehicles entering the site via the local road would have implications for traffic management through Salford, and on reaching the Strategic A421 signing at the complex M1 junction and safety for local traffic. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through	N/A			

Cluster 5 Site: MD2, College Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
reserves <i>(this may be an issue related to silica sand only)</i>				
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	There are possible surface water drainage issues and the site affects a nitrate vulnerable zone. Parts of this site are also within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map and the site is within the IDB district. The site is likely to have a significant medium term effect on water resources. Long term effect would depend on restoration.	O	O	O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	This site affects an airport safeguarding zone. However, it is an extension of an existing working which has not caused problems. No other constraints have been identified.	O	O	O

Cluster 5 Site: MD20, Land at Whitsundoles Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of designated areas. However, the site is within the vicinity of Salford Wood CWS and care should be taken to ensure that development does not affect the site.	G	G	G
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. The site is not within an Area of Archaeological potential.	G	G	G
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	The site is not constrained by designated areas and does not threaten the qualities of a designated area. This site is on landscape character type 5 (settled and farmed clay vales). Development wouldn't necessarily be at odds with the landscape character but sensitive mitigation is needed.	O	O	O
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	This site affects Grade 2, best and most agricultural land.	R	R	R
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4). The site is also a BAP opportunity area for woodland, neutral grassland and hedgerows.	O	O	G

Cluster 5 Site: MD20, Land at Whitsundoles Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site is further away from residential developments than most of the other sites. For traffic impacts see below.	G	G	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	There are rights of way within this site. Mitigation will need to be included to ensure that the rights of way network is not disturbed. In terms of transportation, the location of this site creates strategic issues. The site is an extension to existing working with established HGV access. However, in order to access this site, traffic would have to pass through the village of Salford via the local road which is accessed via the A421 or it could travel west to join A5130 near Milton Keynes – this would avoid need to pass residences on local roads. The Highways Authority is proposing to improve the A421 by realigning the carriageway to the west of the current A421 and consideration would need to be given to the impact this may have on the use of this strategic road to access the local road. Vehicles entering the site via the local road would have implications for traffic management through Salford, and on reaching the Strategic A421 signing at the complex M1 junction and safety for local traffic. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	There are possible surface water drainage issues with this site, part or all of this site is a Nitrate Vulnerable Zone and part or all of this site contains flood zone areas. The nature of these impacts is uncertain and would require further investigation.	O	O	O

Cluster 5 Site: MD20, Land at Whitsundoles Farm Salford				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	The amount of waste which would be produced as part of this operation is uncertain. Further details should be requested from the site operator regarding estimates of waste per tonne.	O	O	O
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	Part or all of this site lies within an airfield safeguarding zone. This area has been identified as a potential area for the Milton Keynes expansion under option 6. The site is an "infill" to land already worked / working for minerals and this would optimise resource exploitation from the site as a whole.	O	O	O

Cluster 5 Site: MD22, Land at Warren Woods, South of Clophill				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site lies within the County Wildlife Site of Warren Wood (ancient woodland which is likely to contain wet woodland, a national priority habitat). The County Ecologist has indicated that proposals to quarry this site are clearly contrary to the principles of PPS9 and the site should not go forward for further consideration.</p> <p>The spatial extent of this impact could be widespread if the development affects such a valuable site. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. English Nature has expressed concern that the site may also affect the Flit Valley an area of high archaeological significance.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. The site is within the landscape character designation of Type 6: Wooded Greensand Ridge. This is a large scale elevated landscape so development is likely to be visible from a large area. The guidelines for this character type states that quarry restoration schemes should respond to landscape character and increase the area of heathland on the ridge.</p> <p>The spatial extent of this impact may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>	O	O	O
Land take				

Cluster 5 Site: MD22, Land at Warren Woods, South of Clophill				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not affect areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	This site is within the Greensand Trust Area and could contribute to its aims through restoration.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Clophill. These effects are likely to last as long as the development lasts.	O	O	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Public footpath FP3 runs diagonally across the site in part along an avenue of Hornbeams which have historical value. Mitigation will be key to ensuring the network of public rights of way. Road transportation is the most likely form of transportation. The site has a good strategic link to the A6. However, consideration needs to be given to the vehicles using this site as the existing road network. Traffic generated by the site is also likely to use the A507 which is a single carriageway route and in some parts is unimproved, an increase in traffic to and from this site will also add to the congestion that already exists where the A507 meets the A6. The effect would last as long as the site is worked and would be reversible once the site is closed.	R	R	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				

Cluster 5 Site: MD22, Land at Warren Woods, South of Clophill				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is adjacent to the floodplain but not within it. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	The site is within the safeguarding zone for RAF Henlow. No other constraints have been identified.	R	R	O

Cluster 5 Site: MD23, Land to the West of Houghton Conquest				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>English Nature object to this potential site, as it is very close to Kings Wood and Glebe Meadows SSSI. Beds Wildlife Trust state that Great Crested Newts are known to be present in the Marston Vale therefore an ecological assessment will be required if the site is to be development.</p> <p>The spatial extent of this impact could be widespread if the development affects such a valuable site. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area.</p> <p>A small part of this site is within an Area of Archaeological Interest. The nature of the effect is uncertain without further investigation into the likelihood of archaeological finds on the site.</p>	O	O	O
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated areas and does not threaten the qualities of a designated area. However, the wider landscape of the Marston Vale would be affected by this proposal.</p> <p>The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>	O	O	O
Land take				
<p>To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?</p> <p>To what extent do land based resource blocks help achieve the</p>	<p>The site does not conflict with areas of best and most versatile agricultural land.</p> <p>The site may have a negative cumulative impact as it is on the other side of the road to the NIRAH development. NIRAH is a freshwater sanctuary, a resource for</p>	O	O	O

Cluster 5 Site: MD23, Land to the West of Houghton Conquest							
SA Objective and Criteria		Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).			Significance of the effect		
					Short	Medium	Long
objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).		conservation and education. However, NIRAH is only a proposal at this time and the site (Quest Pit) is currently an active clay extraction site. There is also likely to be cumulative impacts given the proximity of existing clay pits, (Quest, Rookery) and also Stewartby landfill.					
Human health and amenity							
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?		The site may cause nuisance to residential developments at Houghton Conquest. These effects are likely to last as long as the development lasts.			R	R	G
Transportation							
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?		There are rights of way within the site and mitigation is needed to ensure that the rights of way network is not affected. The current operation at Quest (the pit subject of the Nirah proposal) uses conveyor belt to transport clay to Stewartby Brickworks and therefore it is possible that a similar method could be used from proposal site, although this would have to cross over or under road. If road transportation were used the site is well located in terms of the strategic road network with the main A421 in close proximity however; access to the site is likely to be disrupted with the Highway Agencies improvements to the A421. Vehicles would use the B530 to access the A421 although, in the longer term with the A421 improvements taking place the B530 may not access the A421 (N). This location is also close to The Wixams new development, and there are proposals for new roundabout access points connecting the B530 to the A6 and this may have implications on the access for this site. The effect would last as long as the site is worked and would be reversible once the site is closed.			O	O	G
Extent of remaining landbank							
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (this may be an issue related to silica sand only)		N/A					

Cluster 5 Site: MD23, Land to the West of Houghton Conquest				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is adjacent to the floodplain but not within it. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	All of this site lies within an MOD safeguarding direction. No other constraints have been identified.	R	R	O

Cluster 5 Site: MD24, Sundon Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Part of or all of this site lies within the County Wildlife Site of Sundon Chalk Pits. English Nature object to this potential site as it will destroy Sundon Chalk Quarry SSSI and Sundon Chalk Pits CWS. The County Ecologist has indicated that proposals to quarry this site are clearly contrary to the principles of PPS9 and the site should not go forward for further consideration.</p> <p>There are significant regenerative trees and woodland in the site which are likely to have significant nature conservation value in the light of the CWS and SSSI designations.</p> <p>The spatial extent of this impact could be widespread if the development affects such valuable sites. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. The site does not contain Areas of Archaeological Potential.</p>	G	G	G
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site lies within the Green Belt and lies partly within the Chilterns AONB. Most of the land is designated as open access land under the CROW act.</p> <p>The spatial extent of this impact is significant and may be widespread as the site could be visible from a large area. The effect would last as long as the site is worked and would be reversible if the site were restored to a landscape type which suits for the character of the area.</p>	R	R	O
Land take				

Cluster 5 Site: MD24, Sundon Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?	The site does not conflict with areas of best and most versatile agricultural land.	G	G	G
To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	The site is a BAP calcareous grassland opportunity area.	O	O	G
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments at Sundon. In addition, growth to be delivered as a result of the Milton Keynes and South Midlands SRS to the north of Dunstable, Houghton Regis and Luton will bring residential development closer to the quarry site.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	There is "another route with public access" running east-west across the site from Upper Sundon to the Midland Mainline. There is also a footpath running in roughly the same direction from Upper Sundon to Chalton. The site affects a number of routes which form part of the regionally important Chiltern and Icknield Way. Mitigation would be needed. Road transportation is the most likely form of transportation. The HA state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. Although this location is close to the M1 there are no junctions to access it that are in close proximity. With this being the current situation any traffic generated by the site would have to pass through the local roads and small villages which causes negative traffic, noise and safety implications for local residents. The Highways Agency is proposing to construct a new two-lane dual carriageway running east from the A5 at its junction with the A505 to the M1 at a new junction 11a. The new Junction 11a from the consultation route is proposed on the M1 to the south east of this site location creating implications on the access of this site.	O	O	G

Cluster 5 Site: MD24, Sundon Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	<p>The site is located on a railway and material extracted on the site could potentially be transported this way (comment by South Beds DC). This should be investigated.</p> <p>The effect would last as long as the site is worked and would be reversible once the site is closed.</p>			
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves <i>(this may be an issue related to silica sand only)</i>	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	The site is above a major aquifer. The nature of this impact is uncertain and would require further investigation.	O	O	.O
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A	O	O	O
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	All of this site lies within an airfield safeguarding zone. No other constraints have been identified.	R	R	O

Cluster 5 Site: MD25, Houghton Regis Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>Part of this site lies within the County Wildlife Site of Houghton Regis Chalk Pits and part of the site is SSSI. The County Ecologist has indicated that proposals to quarry this site are clearly contrary to the principles of PPS9 and the site should not go forward for further consideration. English Nature also object to this potential site.</p> <p>The spatial extent of this impact could be widespread if the development affects such valuable sites. Mitigation could not reduce the impact. The effect would be long term and would be irreversible.</p>	R	R	R
Archaeology and cultural heritage				
<p>To what extent are land based resource blocks constrained by designated sites or Conservation Areas?</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>The site is not constrained by designated sites or Conservation Areas and does not threaten the qualities of a designated area. The site is not within an Area of Archaeological Potential.</p>	G	G	G
Landscape				
<p>To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?).</p> <p>To what extent does the proposed site threaten the qualities of designated areas?</p>	<p>This site lies within the Green Belt. This site is on landscape character type 5 (settled and farmed clay vales). Development wouldn't necessarily be at odds with the landscape character but sensitive mitigation is needed.</p>	O	O	O
Land take				
<p>To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land?</p> <p>To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution</p>	<p>The site does not conflict with areas of best and most versatile agricultural land.</p> <p>No issues have been identified.</p>	G	G	G
		O	O	O

Cluster 5 Site: MD25, Houghton Regis Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
to amenity, landscape, biodiversity objectives through restoration).				
Human health and amenity				
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Houghton Regis, and some recently completed houses in Millers Way. It is likely that allocations in the Local Plan will bring further housing development closer to the site. Residential growth as part of the MKSMSRS would also bring development closer to the northern flank of the site. This would largely surround the site with residential development which would bring mineral development into direct conflict with a large number of houses.	R	R	O
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	Houghton Regis footpaths 1,3 and 31 all affect the site. In addition these form part of the Chiltern and Icknield Ways plus provide important link to Blue Waters woodland open space for residents. Mitigation would be needed. Road transportation is the most likely form of transportation. The Highways Agency is proposing to construct a two-lane dual carriageway running east from the A5 at its junction with the A505 to join the M1 with a new Junction 11a. The consultation route shows two routes that have been proposed a southern route option and a northern route option. The Houghton Regis Quarry site proposed for future mineral extraction forms part of the land on which the southern option route for the Dunstable Eastern bypass is intended.	R	R	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for	This site affects a Nitrate Vulnerable Zone. A reservoir appears to exist in this	R	R	R

Cluster 5 Site: MD25, Houghton Regis Quarry				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
the extraction of the aggregate?	quarry which would appear to prejudice its re-opening. The site is also above a major aquifer.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	All of this site lies within an airfield safeguarding zone. No other constraints have been identified.	R	R	O

Cluster 5 Site: MD26, Land at Medbury Farm, Elstow				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
Biodiversity and earth science				
To what extent are land based resource blocks constrained by designated areas e.g. National Nature Reserves, SSSIs, and SACs etc.? To what extent does the proposed site threaten the qualities of designated areas?	There are trees and woodland issues with this site and likely to be water voles present. The spatial extent of this impact would be limited, its probability lessened by mitigation. The effect would last as long as the site is worked and would be reversible if the site were restored to habitat suitable to water voles.	O	O	O
Archaeology and cultural heritage				
To what extent are land based resource blocks constrained by designated sites or Conservation Areas? To what extent does the proposed site threaten the qualities of designated areas?	All of this site is within an Area of Archaeological Interest including a likely Roman/medieval settlement. It also forms part of the John Bunyan Trail and affects the setting of Elstow ancient monument. This is a long term irreversible impact.	R	R	R
Landscape				
To what extent are land based resource blocks constrained by designated areas e.g. National Parks etc.?). To what extent does the proposed site threaten the qualities of designated areas?	This site is on landscape character type 5 (settled and farmed clay vales). Development wouldn't necessarily be at odds with the landscape character but sensitive mitigation is needed.	O	O	O
Land take				
To what extent do land based resource blocks conflict with areas of best and most versatile agricultural land? To what extent do land based resource blocks help achieve the objectives of the wider development framework (i.e. contribution to amenity, landscape, biodiversity objectives through restoration).	Nearly all of this site is within Grade 2 and Grade 3, best and most versatile agricultural land. With appropriate restoration the site could contribute to the aims of Forest of Marston Vale (see MWLP appendix 4). The site is also a BAP opportunity area for wetland and woodland, neutral grassland & heathland.	R	R	R
Human health and amenity				

Cluster 5 Site: MD26, Land at Medbury Farm, Elstow				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
What level of nuisance or effect on quality of life or human health (for both existing or planned residential areas) is likely to occur as a result of the proposed site?	The site may cause nuisance to residential developments in Elstow and Shortstown. These effects are likely to last as long as the development lasts.	R	R	G
Transportation				
Which mode of transport (rail, road or water) is most likely to be used in the transportation of the aggregate? Is the site near to the strategic highway network?	There are rights of way issues within this site and mitigation would be needed to ensure the integrity of the rights of way network. Road transportation is the most likely form of transportation. The Highways Agency state that they would need to be satisfied that the site would not be detrimental to the flow of traffic on trunk roads. Currently this site is strategically well placed however; access to the strategic network from this site is likely to change in the future. The Wixams is a new development is planned for 3 miles south of Bedford between the A6 and the B530. The site will be centered around the old industrial and storage site called the Elstow Storage Depot which is in close proximity to this site. A section of the new settlement's eastern boundary of the A6 will be realigned and upgraded to remove high volumes of traffic from the frontages of properties along the Old Bedford Road. The realignment of the A6 will have consequences to the access of this site, it is anticipated within the development plans that a new roundabout will be provided on the A6 at the existing access road that meets the A6, consequently maintaining good access to the site. Vehicles would need to make good use of this access to relieve traffic from Elstow village. The effect would last as long as the site is worked and would be reversible once the site is closed.	O	O	G
Extent of remaining landbank				
To what extent does the proposed site minimise impacts on existing landbanks? i.e. contribute to landbanks through reserves (<i>this may be an issue related to silica sand only</i>)	N/A			
Conservation and protection of water resources				
To what extent are water resources used or impacted upon for the extraction of the aggregate?	Parts of this site are within Flood Zones 3 (High Risk), 2 (Low to medium risk) and 1 (Little or no Risk) of the Environment Agency's Flood Map. The site is also	O	O	.O

Cluster 5 Site: MD26, Land at Medbury Farm, Elstow				
SA Objective and Criteria	Summary of impact (including nature and spatial extent of the impact, probability, duration, frequency and reversibility).	Significance of the effect		
		Short	Medium	Long
	within the IDB district. The nature of this impact is uncertain and would require further investigation.			
Waste management				
How much waste is likely to be produced per tonne of aggregate? <i>(this may be an issue related to silica sand only)</i>	N/A			
Other planning considerations				
To what extent are resource blocks affected by other constraints e.g. CAA Guidance CAP680?	All of this site lies within a MOD safeguarding direction. It is also close (c 1km) to Met Office meteorological station at Cardington Airfield (OSGR 508130 246349), which is highly dust sensitive.	R	R	O