APPENDIX D

Demand for minerals over the plan period

For Aggregate minerals (sand and gravel, Sherwood Sandstone and limestone) the County Council is required to produce a Local Aggregates Assessment (LAA). The LAA is produced annually and sets out production data for the last 10 years, it also identifies any key local issues that may increase demand for aggregates such as increased house building. The data from the LAA is used to identify expected future demand over the plan period, using the last 10 and 3 year average production figures and any local issues that may impact on future output such as resource depletion or significant increases in house building.

Policy MP1 – 'Aggregate provision' sets out the expected demand over the plan period for aggregate minerals and this is set out in table 1 below.

	LAA derived annual production figures (Million Tonnes)	Estimated demand 2012-2030 (19 years) (Million Tonnes)
Sand and gravel	2.58	49.02
Sherwood Sandstone	0.46	8.74
Limestone	0.08	1.52

Table 1: Aggregate Provision

The 10 year period used to identify demand over the plan period is from 2002-2011 (inclusive). This was the most up to date information available when production on the plan was commenced and forms the baseline of the plan. Whilst more up to date information is now available, the 2002-2011data provides a robust period to forecast future demand due to the 5 years of high output and the 5 years of very low production due to the recession. More recent figures are much more heavily influenced by the recession and would not be representative of 'normal' economic conditions. If used it could result in under provision over the plan period, potentially allowing the minerals industry to apply for planning permission for sites that are not allocated in the plan. By using the proposed 10 year figure the plan retains an appropriate degree of flexibility to provide an adequate and steady supply of minerals as required by national policy.

It is also worth noting that the annual production figures, shown in table 1 above, are not targets but are an estimate of likely demand. Therefore if the economy remains flat and demand for mineral is low, the minerals industry is unlikely to invest in opening up new quarries. This would result in the allocations remaining unused and would only come forward once demand increases later in the plan period.

<u>Sand and gravel provision</u>

As identified in the table above, sand and gravel demand over the plan period is expected to be 49.02 million tonnes. Once existing sand and gravel reserves with planning permission as of December 2011 (19.31 million tonnes) have been subtracted, the shortfall over the plan period is expected to be 29.71 million tonnes.

The Preferred Approach document identified 12 proposed extensions and five new sites to meet expected demand.

Since this date, four extensions previously identified in the 2013 Preferred Approach consultation document as allocations (totalling 3.98 million tonnes) have been granted planning permission. This has resulted in proposed allocations either being reduced in size or removed completely. Permissions granted at Bawtry Road and Langford South have reduced the original size of the allocations. Permissions granted at Finningley and East Leake East have been removed from this stage of the Local Plan.

As a result, the Submission Draft consultation document is allocating 10 extensions to existing quarries and 5 new quarries totalling 28.68 million tonnes. Identified in table 2 below.

In total, 32.66 million tonnes of sand and gravel has been identified for allocation over the plan period to 2030 which is above the identified shortfall (29.71 million tonnes). This would ensure that the plan provides a 'buffer' over the plan period to enable a steady and adequate supply to meet demand over the plan period.

The new sites have been subject to detailed assessment and those identified as suitable in principal have been identified in the plan. All extensions to existing quarries put forward have been identified. Three greenfield sites originally put forward by the industry at Barton in Fabis, Little Carlton and Home Farm have not been included. The Barton in Fabis site and the Little Carlton site have not been included as the overall environmental impacts are considered more severe than other potential sites as set out in the Sustainability Appraisal which accompanies the Local Plan. The Home Farm site (near Kelham) is not being included as it is not considered deliverable due to the mineral company's existing permitted but unworked sites and proposed site allocations.

Site reference	Allocation name	Location
Extensions		
MP2b	Bawtry Road North	Idle Valley
MP2c	Scrooby North	Idle Valley
MP2d	Scrooby South	Idle Valley
MP2e	Besthorpe East	Newark
MP2f	Besthorpe South	Newark
MP2g	Langford Lowfields South	Newark
MP2h	Langford Lowfields West	Newark
MP2i	Langford Lowfields North	Newark
MP2j	East Leake North	Nottingham
MP2l	Cromwell South	Newark
New sites		
MP2m	Barnby Moor	Idle Valley
MP2n	Botany Bay	Idle Valley
MP2o	Coddington	Newark
MP2p	Flash Farm	Newark
MP2r	Shelford	Nottingham

Table 2: Proposed sand and gravel allocations

Throughout the consultation stages the minerals industry generally made representations stating that further mineral reserves should be identified to meet expected future growth, although members of the public and local action groups thought that the amount identified should be reduced due to the previous subdued economic conditions.

Sherwood Sandstone provision

Based on the Sherwood Sandstone requirement set out in the aggregate provision policy, the plan needs to provide 8.74 million tonnes of Sherwood Sandstone over the plan period. Once existing permitted reserves of 6.8 million tonnes are taken into account the shortfall over the plan period is 1.94 million tonnes. However because approximately 1.53 million tonnes of the 2 million tonnes of permitted reserves at Burntstump Quarry are likely to be worked beyond the plan period, 3.48 million tonnes are required over the plan period in order to achieve the annual apportionment figure.

To meet this figure, three extensions to existing quarries are being identified and are set out in the table below.

Site reference	Allocation name
MP3a	Bestwood 2 East
MP3b	Carlton Forest North
MP3c	Scrooby Top North

Table 3: Proposed Sherwood Sandstone allocations

Limestone provision

Adequate permitted reserves remain in the existing Nether Langwith Quarry and therefore no further reserves will need allocating within this plan period.

Secondary & recycled aggregates

Government policy continues to encourage the use of secondary and recycled materials in construction in order to reduce the need for material from traditional sources. Nationally there are substantial amounts of these materials that could contribute further to aggregate supply. In order to conserve natural resources, aggregates (and products manufactured from aggregates) should be recycled wherever possible.

The new Minerals Local Plan reflects the Government stance in encouraging the use of secondary and recycled aggregates through policy MP5 – Secondary and recycled aggregates. The minerals plan is not required to identify expected demand or allocate sites for secondary or recycled aggregates as this is addressed through the Waste Local Plan.

It is estimated that secondary and recycled aggregates make up 25-30% of aggregate use in the UK. This is around three times higher than the European average. Given the technical specifications required for many construction purposes and the availability of further suitable material it is thought that further significant growth in this sector is limited.

Due to the lack of local data, the plan assumes that secondary and recycled aggregates will continue to make a similar contribution to overall aggregate supply throughout the plan period and this is reflected in the level of identified sites.

Brick Clay provision

There is no national demand forecast or local apportionment for brick clay although the National Planning Policy Framework (NPPF) does require a 25 year landbank of permitted brick clay reserves to be identified for each brick works. In Nottinghamshire there are two brick works with associated clay pits operated by two national producers – Kirton near Ollerton and Dorket Head near Arnold. Neither clay pit has a 25 year landbank although reserves at Dorket Head are sufficient to cover the plan period.

The existing Kirton brick pit supplies clay directly to the adjacent brick works. Permitted reserves are only expected to be sufficient until 2023 and therefore an extension to the existing quarry has been identified in the plan. The extension would be worked in phases and is expected to have a 33 year life. Whilst this is longer than required 25 year landbank it would provide certainty to the minerals operator and provide greater scope to include additional screening and standoffs to sensitive areas such as residential properties.

Adequate permitted reserves exist at Dorket Head clay pit in this plan period, and therefore no specific allocations are being considered.

Industrial dolomite provision

Industrial dolomite is a high quality industrial grade limestone that is used in the iron and steel industry and for refractory products. The resource in the UK is rare, and is only worked in two locations in the UK, Thrislington, in Durham and Whitwell in Derbyshire. The quarry at Thrislington supplies the UK market whilst the on-site kilns at Whitwell quarry (operated by Lhoist) supply 28 countries spanning 4 continents.

There is no national demand forecast or local apportionment for industrial dolomite. However, the NPPF states that Minerals Planning Authorities should plan for a steady and adequate supply of industrial minerals.

No industrial dolomite is currently worked in Nottinghamshire; however a site containing industrial dolomite was identified by the minerals industry, at Holbeck close to the existing Whitwell quarry in Derbyshire. The site would act as a remote extension to the existing Whitwell quarry.

Although the site could provide significant reserves of industrial dolomite, it is located in close proximity to Creswell Crags which is categorised as a Scheduled Ancient Monument, a Site of Special Scientific Interest and forms part of the Registered Park and Garden of Welbeck Abbey. The Crags are also identified on a short list for a potential future World Heritage Site. Any proposal to allocate a site in this area would require careful consideration of the potential impacts on the historic environment, offset against the international need for the mineral. The Submission Draft contains a policy for industrial dolomite (MP9) which states that proposals will be supported where a need can be demonstrated. But a specific site has not been identified in the plan.

Hydrocarbons

Historically, conventional hydrocarbon extraction, in the form of oil (extraction) has taken place on a small scale in the county since the Second World War. More recently mine gas extraction has also taken place in the County at former colliery sites. These activities have typically raised few problems.

Unconventional hydrocarbon extraction such as coal bed methane extraction and shale gas has been made possible due to improvements in drilling methods and new equipment. Unconventional hydrocarbons have been exploited on a large scale in the USA, however the industry remains in its infancy in the UK and Europe.

Potential coal bed methane and shale gas resources lie under parts of the county and therefore need to be considered in the minerals plan. Policy MP12 ‘Hydrocarbon minerals’ sets out the County Council’s approach towards all types of this activity. The policy is in line with national policy and sets out how future developments should be addressed at the four key stages; exploration, appraisal, extraction and restoration.

Some representations to the consultation suggested that a separate policy for shale gas developments should be included in the plan, however national policy does not require this as the planning process involved is the same as for other forms of hydrocarbon development.

<u>Other minerals</u>

The plan also contains policies that deal with gypsum, building stone and coal provision however whilst these remain important minerals no further reserves / allocations are required over the plan period for these minerals.