DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

Towards a Minerals Local Plan:

Spring 2018 Consultation

CHAPTER 6

6.2 Sand and Gravel

December 2017


DERBYSHIRE
County Council


Derby City Council

Introduction

6.2.1 National policy requires that we provide for a steady and adequate supply of aggregate minerals to help meet local need for these resources, whilst continuing also to supply a quantity of minerals to those parts of the country that do not have their own resources of aggregate minerals.

6.2.2 Sand and gravel is an important aggregate mineral. It is used mainly locally (within a 25 mile radius of a site) in the production of concrete, mortar and asphalt and in the manufacture of concrete products which have national markets. Around 75% of the sand and gravel produced in Derbyshire is used to produce concrete with the remainder being used to produce mortar, asphalt and also as a fill material.

6.2.3 The strategy for ensuring a steady supply of sand and gravel through the provision of new sites is constrained by the fact that minerals can only be quarried where they occur. This means that sand and gravel sites can only be located in the alluvial sand and gravel resource of the Trent, Derwent and Lower Dove Valleys in the southern part of the Plan area. There are also more limited reserves of hard rock sand in the Sherwood Sandstones near Mercaston.

6.2.4 There are significant opportunities for a more strategic and coordinated approach to the restoration and aftercare of sand and gravel workings in the Trent Valley. The Trent Valley Strategy seeks to promote partnership working to deliver this approach.

6.2.5 This chapter sets out the consultation process which has informed the development of the issues and policies regarding sand and gravel production in Derbyshire and Derby. It then sets out the draft policies and supporting text, having taken the results of the consultation process into account.

Vision and Objectives

6.2.6 The Vision will help to define the direction of the Plan by stating where we want to be in terms of mineral development by the end of the Plan period. It will set out what the Plan area will be like in terms of mineral development in 2030 if the policies and proposals of the Plan have been delivered successfully over the Plan period. The Objectives will set out how the Vision will be delivered and implemented.

The policies in this chapter will seek to help deliver the following objectives of the Plan:

Objective 1 - Ensuring a Steady and Adequate Supply of Minerals

Objective 2 - Delivering Sustainable Minerals Development

Objective 3 - Achieving the most Appropriate Spatial Distribution of Mineral Development

Objective 5 – Minimising Impacts on Communities

Objective 6 - Protecting the Natural and Built Environment

Further information regarding the Vision and Objectives is set out in Chapter 3 of Towards a Minerals Local Plan: Spring 2018 Consultation.

Evidence Base

6.2.7 Derbyshire County Council and Derby City Council obtained information on sand and gravel from a variety of sources as a foundation for preparing the new Minerals Local Plan as a replacement for the adopted Derby and Derbyshire Minerals Local Plan, 2000. A summary of the information obtained is presented below.

Sand and Gravel in Derbyshire

6.2.8 Derbyshire and Derby have substantial resources of sand and gravel in the river valleys of the Trent, Lower Derwent and the Lower Dove, occurring within the fluvial/alluvial and terrace deposits. The formation of these drift deposits took place following the last ice age when considerable amounts of sand, gravel, silt and clay, in the form of glacial and weathered rock deposits, were eroded rapidly by glacial melt waters and deposited in wide tracts in the areas alongside these rivers. The thickness of the river valley deposits varies considerably, ranging from less than one metre thickness in some areas to as much as eight or nine metres thick in other areas. The gravel content of the deposits is usually high (50%-70%), the remainder being sand and fine silts. There has been little mineral working in the Lower Dove Valley, with

most to date having taken place in the Trent and the Lower Derwent Valleys, with reserves being of particularly high quality, both in geological and commercial terms, in the area of the Trent Valley between Long Eaton and Willington and on into Staffordshire.

6.2.9 Deposits of sand and gravel also occur in the solid bedrock of the Sherwood Sandstones. These are much older than the river valley deposits, having been laid down around 230 million years ago in the Triassic geological period. Their thickness varies considerably from 100m to virtually nothing. The proportion of gravel also varies greatly but is usually much less than in the river valley deposits. It is an important source of soft building sand and there is currently only one operation in the county. This is located at Mercaston in an area between Derby and Ashbourne. The operator of this quarry has indicated that it has sufficient reserves to last this Plan period and beyond and has, therefore, not put forward any proposals for extensions to this quarry during this Plan period.

6.2.10 Mineral resource information for the Plan area was compiled by the British Geological Survey in 1995[1]. Resource information for sand and gravel in the Plan area has been defined from available geological information. Parts of the sand and gravel resource in the Plan area have, however, been evaluated by mineral companies and, therefore, knowledge of the economic potential of the resource has been established with a high level of confidence. In practice, mineral planning authorities are largely reliant on the mineral companies to supply detailed authoritative information on the quality and quantity of the resource. Further more detailed information regarding sand and gravel can be found in the following background paper.

Towards a Minerals Local Plan: Spring 2018 Consultation

Sand and Gravel Background Paper, December 2017

6.2.11 Information regarding mineral production and reserves is collected annually through the Aggregates Survey organised by the Aggregates Working Party.

[1] British Geological Survey, Mineral Resource Information for Development Plans, Derbyshire: Resources and Constraints, 1995

6.2.12 As table 1 below shows, production of sand and gravel in Derbyshire between 2007 and 2016 has averaged 1.04 million tonnes (mt).

Table 1: Annual Production of Sand and Gravel in Derbyshire 2007-2016 (figures in million tonnes)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average
1.22	1.10	0.91	1.04	1.1	0.81	0.82	0.95	1.13	1.29	1.04

6.2.13 At the end of 2016, Swarkestone, Shardlow, Willington and Mercaston were the active sand and gravel quarries. There are also two sites which are currently inactive; Elvaston and Potlocks Farm. These sites together have reserves of 12.53 million tonnes of sand and gravel. ("Reserves" are the part of the resource that has planning permission to be worked) (**NB Potlocks Farm is currently the subject of a revocation order. Once this has taken effect, reserves will be reduced to 10.33 mt.)**

6.2.14 This stock of reserves is known as the landbank. The term "reserve" includes sand and gravel at current inactive sites which have an extant (live) planning permission, but excludes those sites where mineral working cannot take place until there has been a review of the planning conditions attached to their planning permission (dormant sites). Government guidance requires landbanks to be maintained for all aggregate minerals, with the recommended landbank period for sand and gravel being at least 7 years. The current length of the landbank for sand and gravel in the Plan area is 12 years (total permitted reserves of 12.53mt divided by annual provision rate of 1.04mt).

6.2.15 Mineral planning authorities such as Derbyshire County Council and Derby City Council are required to determine the level of sand and gravel that they should provide in order to maintain a steady and adequate supply, taking account of the previous 10 years' sales, published national and sub national guidelines and other relevant information and set these out in a Local Aggregate Assessment. The levels set should

be reasonable and realistic and should be set within the overall context of the national requirement for minerals.

6.2.16 As set out above, for the 10 year period from 2007 to 2016, sales of sand and gravel extracted from quarries in Derbyshire averaged 1.04 million tonnes. The Local Aggregate Assessment indicates, therefore, that, based on an annual provision rate of 1.04mt, Derbyshire and Derby should provide 14.56 million tonnes of sand and gravel from 2017 to 2030 (i.e. 14 x 1.04). There are already permitted reserves of 12.53 million tonnes, which means that additional provision will have to be made in the Minerals Local Plan for around 2.03 million tonnes of sand and gravel to 2030.

6.2.17 The sand and gravel resources in the Trent and Derwent Valleys are expected to be able to meet this additional provision over the Plan period and it is most likely that extensions to one or two existing sites in these areas would meet this provision. There are also significant resources of sand and gravel in the Lower Dove Valley, yet to be worked to any significant extent. Given the level of remaining requirement it is unlikely that these will be worked during this Plan period, but it is worth noting should operators decide to bring sites forward in this area for various operational reasons.

National Planning Policy Framework

6.2.18 As well as the views of stakeholders being taken into account in the development of this Plan, the Councils must also have regard to the Government's national planning objectives and policies. Government policy on planning changed after the Issues and Options Paper was published in 2010. The National Planning Policy Framework (NPPF) was published in March 2012, replacing planning and mineral policy statements.

6.2.19 The parts of national policy which are relevant to the provision of an adequate and steady supply of sand and gravel are:

- Through the preparation of a Local Aggregate Assessment, to plan for an adequate and steady supply of minerals in order to assist in promoting sustainable economic growth and improving our quality of life.
- Provision should take the form of specific sites, preferred areas and/or areas of search as appropriate.
- To encourage the provision of secondary and recycled aggregates to minimise the requirement for primary aggregates.
- To safeguard minerals of national and local importance and develop policies to encourage the extraction of important minerals prior to development.
- To ensure that mineral extraction does not have unacceptable adverse effects on communities and the environment and high standards of restoration and aftercare of mineral sites are promoted.
- To maintain a landbank of sand and gravel, which will provide a sufficient supply for at least seven years.

National Planning Policy Guidance

6.2.20 The National Planning Practice Guidance (NPPG) was published in March 2014 and contains revised and updated planning policy and practice guidance on a wide range of planning issues, including planning for the extraction of minerals. It acknowledges that minerals are a finite resource with restricted availability, such that locations where they are economically viable and where extraction would be environmentally acceptable may be limited. It also repeats the statement in the NPPF that minerals make an essential contribution to the country's prosperity and quality of life.

6.2.21 It also sets out that a Local Aggregate Assessment (LAA) should include a forecast of the demand for aggregates based on both the rolling average of 10-years sales data and other relevant local information and an analysis of all aggregate supply options. It should also look at average sales over the most recent three years to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply.

6.2.22 It also sets out that aggregate landbanks should be used as a trigger for a mineral planning authority to review the current provision of aggregates in its area and consider whether to conduct a review of the allocation of sites in any existing adopted Plan.

6.2.23 It states that mineral planning authorities should plan for the steady and adequate supply of minerals by one of three ways. In order of priority these are; designating specific sites where viable resources are known to exist, designating preferred areas (areas of known resources where planning permission might reasonably be anticipated), or designating areas of search for areas where knowledge of mineral resources may be less certain but within which planning permission may be granted.

6.2.24 It sets out that the suitability of each proposed site, whether an extension to an existing site or a new site, must be considered on its individual merits, taking into account issues such as:

- the need for the specific mineral;
- the economic considerations (such being able to continue to extract the resource, retaining jobs, being able to utilise existing plant and other infrastructure);
- the positive and negative environmental impacts (including the feasibility of a strategic approach to restoration);
- the cumulative impact of proposals in an area.

Consultations Undertaken and Comments Received

6.2.25 The development of the new Minerals Local Plan has included a series of consultations to ascertain the views of relevant local authorities, organisations and bodies with an interest in mineral development and the potential implications of mineral development and the people of Derbyshire and their representatives.

Stakeholder Workshop 2009

6.2.26 In July 2009, Derbyshire County and Derby City Councils held a workshop for key stakeholders. This helped to identify the key issues and themes that people thought the new Minerals Local Plan should address, and sought the input of stakeholders in developing the vision and objectives for the Plan. The outcomes of the workshop were published on the Council's website and in a newsletter that was circulated to stakeholders.

6.2.27 In terms of sand and gravel, the main issues that stakeholders have identified as being necessary for the Plan to address were firstly the need for mineral and how this is calculated and secondly where broadly the sites should be to provide for the requirement for sand and gravel and whether these should be either extensions to existing workings or new workings. These issues will now be considered in terms of how they have developed during the preparation of the Plan.

Calculating the Provision Figure for Sand and Gravel

Issues and Options 2010

6.2.28 When the Issues and Options report was published in 2010, provision figures for aggregates were produced on a national basis so we were not in a position to determine these ourselves or for the public to have a say. This changed with the publication of the NPPF in 2012 which set out the requirement to determine aggregate requirements on a local basis through a Local Aggregate Assessment (LAA).

Responses to Derby and Derbyshire Minerals Plan Issues and Options Consultation Paper, January 2011

Drop-in Sessions Autumn 2012

6.2.29 In autumn 2012, we were at the initial stages in preparing the first LAA. We asked communities at the drop-in sessions whether they thought future provision should be based purely on the average production of the previous 10 years, or whether an additional 10% should be applied to this figure in order to provide a degree of flexibility

to make provision for future economic recovery. There was no clear opinion, however, regarding the approach that people thought should be taken in this respect.

6.2.30 As a result of this response, and taking account of guidance available at the time, we suggested, on balance, that a 10% allowance should be applied to the apportionment figures in the draft LAA.

Summary of Issues Raised at Sand and Gravel Drop-in Sessions, July 2013

Further Consultation on the LAA, 2013/2014

6.2.31 We published the first LAA for comment in March 2013. It set out that sites would have to be allocated to meet the identified shortfall in the need for sand and gravel at that time, including a 10% flexibility allowance.

6.2.32 At this stage, again there was some public support expressed for the 10% flexibility allowance to allow for increased demand to assist the economic recovery. There were also an equal number of reservations regarding this approach, responses stating that annual monitoring of sales figures and other information through the LAA would identify any significant increase in demand, enabling a review of the apportionment figure and, if necessary, further provision of sites later in the Plan period. In accordance with the NPPG, people said that consideration of average sales over the most recent three years would identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply. People also cited a lack of evidence as to why a figure of 10% should be used as opposed to any other figure.

6.2.33 At the time that the draft LAA was published for comment, the East Midlands Aggregates Working Party (EMAWP) agreed an approach whereby the future apportionments should be based on the average sales figure of the previous 10 years.

6.2.34 Having taken account of comments received at the community drop-in sessions and those received through the publication of the draft LAA, the interim Sustainability Appraisal (September 2013), as well as the approach agreed at the Aggregates Working Party in February 2013, and also taking account of the most recent sales figures, it was considered now that the most appropriate approach would be to use the average figure of the previous 10 years of sales on which to base future apportionment of aggregates and to not apply an additional 10%. In the LAA, it is set out that annual monitoring of sand and gravel sales and landbanks would be undertaken and that this would identify any significant increase or decrease in demand for sand and gravel. The provision figure could be revised accordingly during the course of the Plan period.

6.2.35 **Towards a Minerals Local Plan – Rolling Consultation 2015/2016**

- Two people questioned the method by which the provision figures have been calculated, suggesting that the figure should be higher, using the previous SRA figure until a robust forecast methodology has been developed and to include an element of flexibility. Concerned, therefore, about under provision over the course of the Plan period.
- Support was also expressed for the provision figure.
- One comment set out that the Plan should indicate that production can be maintained at more than 1mtpa.

6.2.36 **Assessment of Comments and Outcomes for the Plan**

1 & 2. The provision figure has been considered through public consultation and also discussed and agreed through the Aggregates Working Party. Given this overall support and mandate, we consider, therefore, that the figure is appropriate and robust for the Plan period, but it will be monitored on an annual basis and if necessary can be reviewed through the Plan period. The Councils maintain that the 10 year average figure has been widely accepted as being a realistic and robust figure by which to estimate future demand for sand and gravel. It includes figures from periods of growth, recession and recovery and therefore does not only include information from lower periods of growth. It is considered that it should be used to plan for sand and gravel production in Derbyshire over this Plan period. It will be reviewed on an annual

basis and any significant changes will be managed. The Plan is likely to include areas of search for future mineral extraction and in the event of under provision occurring at some point through the Plan period, these could be considered as potential allocations.

3. A deliverability schedule will be included showing estimated annual production of sand and gravel over the Plan period.

Provision of Sites for Sand and Gravel

Issues and Options 2010

6.2.37 In 2010, in responses to the Issues and Options Paper, there was overall support (80%) for a strategy that allocated extensions to existing sites in the eastern part of the valley up to 2020 and then, beyond this time, to identify broader areas of search, possibly dispersing to new areas in the Lower Dove Valley. This was reported in "The Analysis of Responses to the Issues and Options Consultation" in 2011 and, as a result of the support shown, we indicated that this was the approach which we would seek to develop further. At this time, the provision of aggregates was determined at a national, rather than a local, level. These figures only covered to 2020. This meant that the identification of broader areas of search for the period beyond 2020, for which levels of provision were not available, would have been a reasonable option at this time.

Drop-in Sessions - Autumn 2012

6.2.38 Given changes to Government policy in 2012 and other considerations, it was appropriate to present the revised issues to communities in the area covered by the sand and gravel resource, and to ask for their views.

The following two options were presented at the 2012 drop-in sessions regarding the future location of sites:

- whether for the period to 2030, all sites continue to be located in the Trent and Derwent Valleys in the more eastern parts of the river valley resource where sand and gravel extraction currently takes place, or
- whether to 2030, some sites continue to be located in the Trent and Derwent Valleys but also that some new sites are identified in the Lower Dove Valley in the more western part of the resource to relieve some of the impact of mineral working on areas in the Trent and Derwent Valleys.

6.2.39 Responses provided at these drop-in sessions gave no clear steer regarding the general location for future sand and gravel sites i.e. whether all new sites should be allocated in the Trent/Derwent Valleys over the Plan period or whether some sites should also be worked in the Lower Dove Valley, where there are currently no active sites. As a result, we concluded that the site assessments should give no specific weighting to sites depending on whether they are located in either the Trent or Lower Dove valleys.

6.2.40 A number of site specific comments were also made, and these were used in the detailed assessments of the sites and helped to determine those sites which should be allocated for mineral extraction in the Plan.

6.2.41 All of this information set out above was used in the development of the draft strategy for sand and gravel which was published as part of the Rolling Consultation in 2015.

Summary of Issues Raised at Sand and Gravel Drop-in Sessions, July 2013

Towards a Minerals Local Plan – Rolling Consultation 2015/2016

- Concern was expressed for opening up sites in the Lower Dove Valley and also in the area around Repton where the road network would not be considered suitable for heavy lorries.
- One comment of support was expressed for the proposal to favour extensions to existing sites over new ones.
- One offered support for the overall approach taken in the Plan.
- One operator supports the allocations at Swarkestone and Elvaston but suggests their potential for working should be regraded to medium/high.
- Three individuals and one organisation object to the allocation at Swarkestone South
- One objects to an allocation at Egginton
- There are three comments about Chapel Farm (Site now withdrawn for consideration)
- One organisation objects to the proposed allocation at Repton/Foremark
- One provides a comment on the ecological value of the Willington site.
- The rest offer suggestions for how the sites should be worked and restored should the allocations proceed

Assessment of Comments and Outcomes for the Plan

6.2.42 All comments received have been taken into account in the assessment of the sites and the preparation of this chapter.

6.2.43 Further details of the responses received during this consultation can be found in the following document:

Towards a Minerals Local Plan: Spring 2018 Consultation

Report of Representations, December 2017

Duty to Cooperate

6.2.44 In order to obtain as much relevant information as possible about the scale, nature and location and supply of sand and gravel resources, Derbyshire County Council and Derby City Council have engaged in meetings and discussions with relevant authorities, mineral operators and other stakeholders. Discussions have focused on the issue regarding the need to maintain a steady and continuous supply of sand and gravel over the Plan period which has included discussion regarding future site allocations.

6.2.45 We have also corresponded with organisations and individuals with relevant knowledge and experience of sand and gravel in order to help develop our evidence base.

Sustainability Appraisal

6.2.46 The Sustainability Appraisal process is a way of testing the impact of the Plan against a series of Sustainability Objectives. Where the process recommends improvements to the Plan these will be incorporated. A sustainability appraisal was undertaken on all the Papers that constituted the Towards a Minerals Local Plan Rolling consultation 2014-2017, including those concerning sand and gravel. This reported on the draft sand and gravel strategy as follows:

Applying consistent criteria ensures a fair assessment of sites against sustainability factors and is likely therefore to inform an appropriate strategy. The preference applied to extensions could have mixed effects; on the one hand it will ensure that new development is located in accessible locations, make use of existing infrastructure and continue to provide employment. However, there is potential for continued negative effects on biodiversity, landscape etc. It would however protect new areas from adverse impacts and the potential effects of extensions should be well understood. Furthermore, the approach to restoration should also help to ensure that a managed strategy for restoration is implemented across the area.

6.2.47 This has been taken into account in the development of this approach. The full appraisal is set out in the following document:

Towards a Minerals Local Plan: Spring 2018 Consultation
Interim Sustainability Appraisal (SA) Report, December 2017

The Proposed Approach

The Supply of Sand and Gravel

6.2.48 There are substantial resources of sand and gravel in the river valleys of the Trent, Lower Derwent and the Lower Dove, occurring within the fluvioglacial deposits, as shown on Figure 1 below. The formation of these drift deposits took place following the last ice age when considerable amounts of sand, gravel, silt and clay, in the form of glacial and weathered rock deposits, were eroded rapidly by glacial melt waters and deposited in wide tracts in the areas alongside these rivers. The thickness of the river valley deposits varies considerably, ranging from less than one metre thickness in

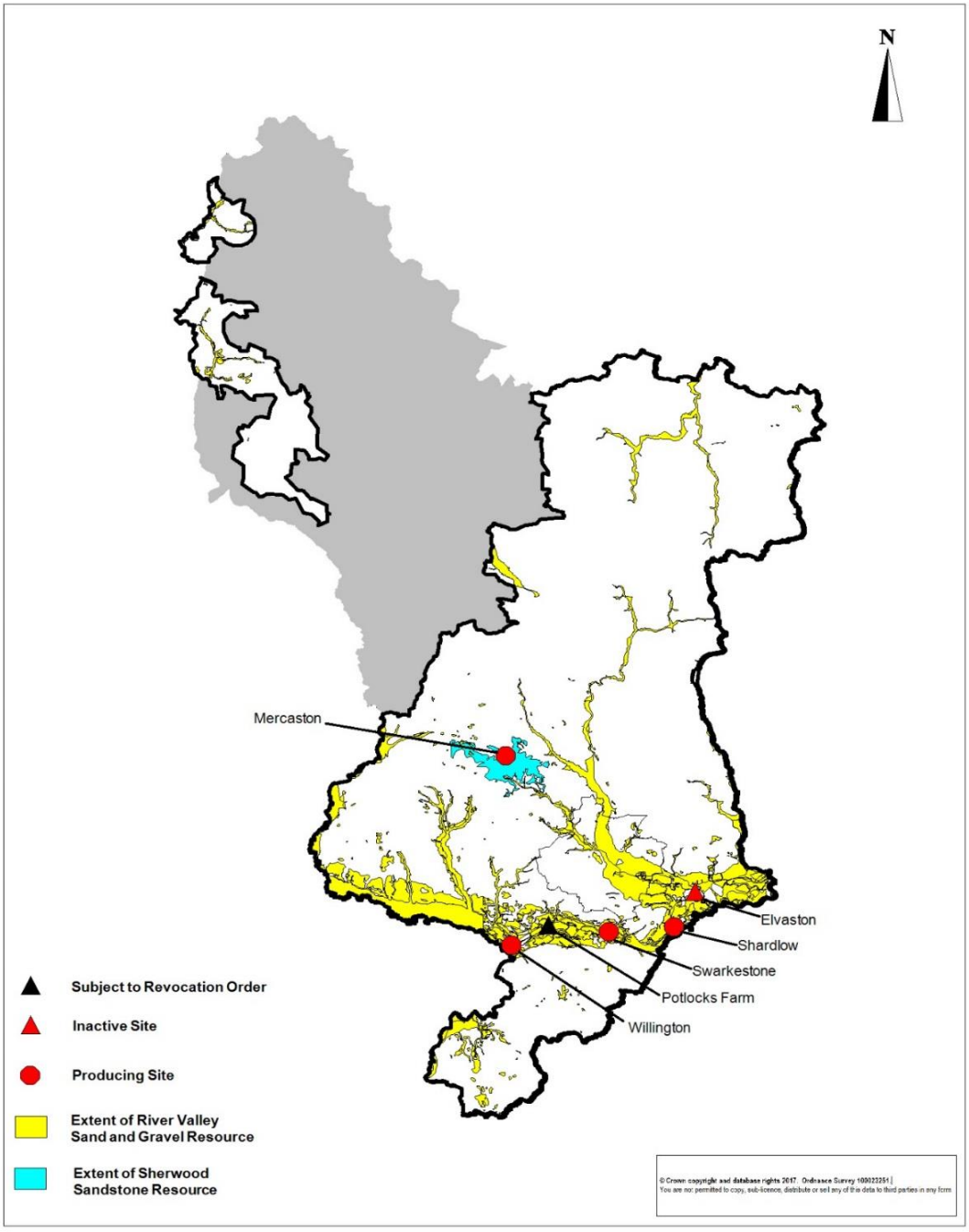
some areas to as much as eight or nine metres thick in other areas. The gravel content of these deposits is usually high (50%-70%), the remainder being sand and fine silts.

6.2.49 There has been little mineral working in the Lower Dove Valley, with most to date having taken place in the Trent and the Lower Derwent Valleys, reserves being of particularly high quality in the area of the Trent Valley between Long Eaton and Willington and then on into Staffordshire. There are currently no sand and gravel workings in Derby City.

6.2.50 Deposits of sand and gravel also occur in the solid bedrock of the Sherwood Sandstones. These are much older than the river valley deposits, having been laid down around 230 million years ago in the Triassic geological period.

6.2.51 There are four sites which are currently producing sand and gravel in Derbyshire. Three of these are in the fluvioglacial resources in the river valleys at Shardlow, Willington and Swarkestone. One is in the Sherwood Sandstones at Mercaston.

6.2.52 Average sales from sand and gravel operations within Derbyshire over the last 10 years (2007-2016) were 1.04 million tonnes per annum. Sales of aggregate within the County remained fairly constant over the period 2006 to 2011, with levels of sand and gravel generally averaging around 1.1 million tonnes per annum. Sales for the period 2012 to 2014 show the effects of the economic recession as production slowed. During this period, sales of sand and gravel fell to an average of 0.81 million tonnes per annum. Sales for 2015 and 2016 showed signs of improvement, with production in 2016 being the highest since 2007.



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Sand and Gravel Resources in Derbyshire with Sand and Gravel Sites

Figure 1: Sand and Gravel Resources and Sites

6.2.53 Sand and gravel operations within Derbyshire tend to serve local markets. 48% of sales in 2016 were within Derbyshire and Derby. The main destinations for material

exported beyond the County were neighbouring areas located close to the County, in particular Nottinghamshire and the West Midlands.

6.2.54 Local factors such as population forecasts, household projections, future house building, local economic objectives and major infrastructure projects have been considered and these suggest that a continued supply of sand and gravel will be required from Derbyshire.

6.2.55 It is considered appropriate to base the provision of sand and gravel in this Plan on average sales over the last 10 years. The situation will, however, be monitored closely through the Local Aggregate Assessment, as any increase in annual outputs very much depends on operational and economic factors outside the control of the County Council. If a higher production rate continues for an extended period, then the overall requirement will need to be re-evaluated.

Existing Reserves

6.2.56 Estimated permitted reserves of sand and gravel in Derbyshire as at the end of 2016 were 12.53 million tonnes. This is sufficient permitted material to last around 12 years, based on the average rate of production over the last 10 years. There is currently a planning application being considered for an extension to Swarkestone Quarry. Reserves at Attenborough Quarry were exhausted in 2016 and this quarry has now ceased production.

Additional Requirements

6.2.57 Table 2 below provides a calculation of potential future requirements for sand and gravel within Derbyshire based on average sales over the last 10 years. The requirements are derived from the latest Local Aggregate Assessment. The calculation is based on making provision for the period up to 2030. The calculations take account of the level of permitted reserves as at 31st December 2016. The table indicates that there would be a shortfall of sand and gravel reserves over the period to 2030 of some 2.03 million tonnes.

Table 2: Sand and gravel provision – reserves and requirements

	Sand and Gravel	Million Tonnes
A	Annual Requirement	1.04
B	Total Production Requirement 2017-2030 (Ax14)	14.56
	Reserves	
C	Permitted Reserves (Landbank) at 31/12/2016	12.53[2]
	Shortfall	
E	Shortfall 2017 – 2030 (B-C+D)	2.03

Policy MS1: Supply of Sand and Gravel

The Plan will ensure a steady and adequate supply of sand and gravel is made by:

(i) making provision over the Plan period for the extraction of sand and gravel in accordance with the most recent Local Aggregate Assessment;

(ii) maintaining a landbank of at least 7 years based on the past 10 years average sales;

(iii) giving priority to proposals for extraction to be worked as extensions to existing site operations.

6.2.58 The shortfall will be addressed through the allocation of additional sites as set out below.

[2] EMAWP Survey 2016 figures. (This will reduce to 10.33 once the Revocation Order for Potlocks Farm has come into force)

Location of Sand and Gravel Operations over the Plan Period

6.2.59 Mineral deposits can only be worked where they occur and so the options for a spatial strategy for future sand and gravel extraction and associated development are limited to a large extent by the geological distribution of resources within the Plan area.

6.2.60 Historically, workings have been located in the more eastern parts of the river valleys in the south of the Plan area, particularly the Trent Valley and the Derwent Valley. Resources exist in the western part of the river valleys, particularly the Lower Dove Valley, but, whilst sufficient resources remain to satisfy need at existing operations in the east, these have yet to be exploited to any significant extent. They are likely to be considered beyond this Plan period once reserves at existing sites become depleted.

Existing Sites

6.2.61 The existing sites are well located in proximity to urban areas within the Plan area and proposed urban growth areas, in particular those to the south of Derby. All of the existing operations are located close to the County's main strategic road network (M1, A50 and A38) and the road traffic generated by the quarries generally avoids residential areas and minor roads.

6.2.62 An approach of giving priority to proposals for sand and gravel extraction to be worked as extensions to existing site operations is considered to offer benefits due to reduced environmental disturbance (especially where access and mitigation measures are already in place), retention of existing employment and greater resource recovery. Its disadvantage is the potential cumulative impact that continued extraction could have on an area if successive extensions are permitted. Overall, however, it is concluded that preference will be given to extensions to existing sites in this Plan

6.2.63 The existing active sites together have a total potential production capacity of around 1.1 million tonnes per annum if they are producing at full capacity. They would not, however, be able to meet the overall future requirements for the plan period without the benefit of extensions to at least some of the currently permitted operations.

Proposed Sites

6.2.64 This means that additional land for the extraction of sand and gravel needs to be identified in order to ensure continuity of production to 2030.

6.2.65 The site proposed as the extension to Willington Quarry emerged from the site assessment process as having the greatest potential for working. The majority of this now has planning permission and it is proposed to allocate the remaining part of this site. This would yield around 0.8 million tonnes of sand and gravel. This will be the final extension to Willington Quarry so to not allocate the site in this Plan may lead to the sterilisation of these remaining resources.

6.2.66 Swarkestone North and Elvaston also emerged as having high potential for working, however it has become clearer through discussions with the operators during the preparation of the Plan that, for various reasons, these sites are unlikely to be able to be delivered until the latter part of the Plan period. As discussed later, however, they will be included as Preferred Areas to allow for flexibility in the Plan in the latter part of the Plan Period.

6.2.67 More information on the assessment of these sites can be found in the following Paper:

Towards a Minerals Local Plan: Spring 2018 Consultation

Sand and Gravel Site Assessments, December 2017

6.2.68 Swarkestone South can be delivered early in the Plan period. This site was assessed as having medium potential for working. It is proposed, therefore, to allocate this site (the eastern part of the site which was assessed in the Site Assessments document). This would be an extension to the existing sand and gravel extraction operation at Swarkestone. This site would yield around 2.5 million tonnes.

6.2.69 The Councils have assessed both these proposals and consider that the proposed areas set out in Policy MS2 below would be acceptable in overall planning terms, subject to particular issues having been addressed satisfactorily. This includes:

- an assessment of how the sites would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts;
- an ecological assessment of the designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network;
- an assessment of the effects of the development on the water environment;
- an assessment of the landscape and visual impact of the site including the provision of suitable landscaping measures;
- an assessment of the results of a pre-determination archaeological investigation of the site and protection from significant adverse impacts;
- a transportation assessment including an assessment of the existing access arrangements and the potential impact upon the Strategic Road Network; and
- an account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare.

6.2.70 In order to assess the suitability of promoted sites for inclusion in the Plan as allocations, the MPA has prepared a Site Assessment Methodology and undertaken Assessments of the sites. Further details of the assessment process and proposed site allocations are set out in the Site Assessments Paper referred to in the blue box above.

Policy MS2: Allocation of Sites for Sand & Gravel

Land is allocated for sand and gravel extraction at Willington and Swarkestone Quarries, as shown on the maps in Appendix 1 below.

The extensions can only be worked following cessation of mineral working within the existing site, unless it has been demonstrated that there are operational reasons why this is not practicable or there would be significant environmental benefits to be gained from alternative phasing.

Additional Sites

6.2.71 The allocation of this site will help to provide sufficient reserves of sand and gravel to ensure a steady and adequate supply over the majority of the Plan period. However, our deliverability forecast indicates that although there will be sufficient reserves available in overall terms, production may be uneven over this time so that in the latter part of the Plan period from 2027 to 2030, there may be insufficient production capacity at existing and proposed sites to meet the proposed annual provision rate.

6.2.72 The timescale involved means that this may change (i.e. the annual provision rate may reduce or sites may not come forward as quickly in the first part of the Plan period as expected) so it would not be appropriate to allocate a specific additional site at this time to cater for this uncertain need. However, it is proposed to identify **Preferred Areas** where sites may come forward towards the end of the Plan period, if needed. (This position will continue to be monitored on an annual basis throughout the Plan period and provision made nearer the time in accordance with the policy set out below).

6.2.73 There may be also instances where allocated sites cannot be developed or existing sites are lost through closure, which may require the need for the release of additional reserves, particularly where this has led to a shortfall in the required landbank.

6.2.74 In order, therefore, to provide a degree of flexibility and to reinforce the Councils' commitment to ensuring the delivery of a steady and adequate supply of sand and gravel for aggregate purposes over the Plan period, the ability to obtain planning permission during the plan period outside the areas identified in Policy MS2 is not ruled out. In accordance with Policy MS1, the Councils' preference would be for proposals for extraction to be worked as extensions to existing site operations. The Council has identified **Preferred Areas** in which these sites may be developed. These are in the areas around Swarkestone and Elvaston as shown in Appendix 2. These have been assessed through the site assessment process and are likely to be able to be delivered in the latter part of the Plan period. It is acknowledged that sites other than these may also come forward.

Policy MS3: Other Sites for Sand & Gravel Extraction

Outside allocated areas, planning permission will be granted for sand and gravel extraction for aggregate purposes provided that the site is required to meet a specific identified shortfall in the landbank and:

• the site forms an extension to an existing site; or

• where the proposal is for a new quarry, the site is required to replace an existing site that is exhausted or nearing exhaustion.

Monitoring

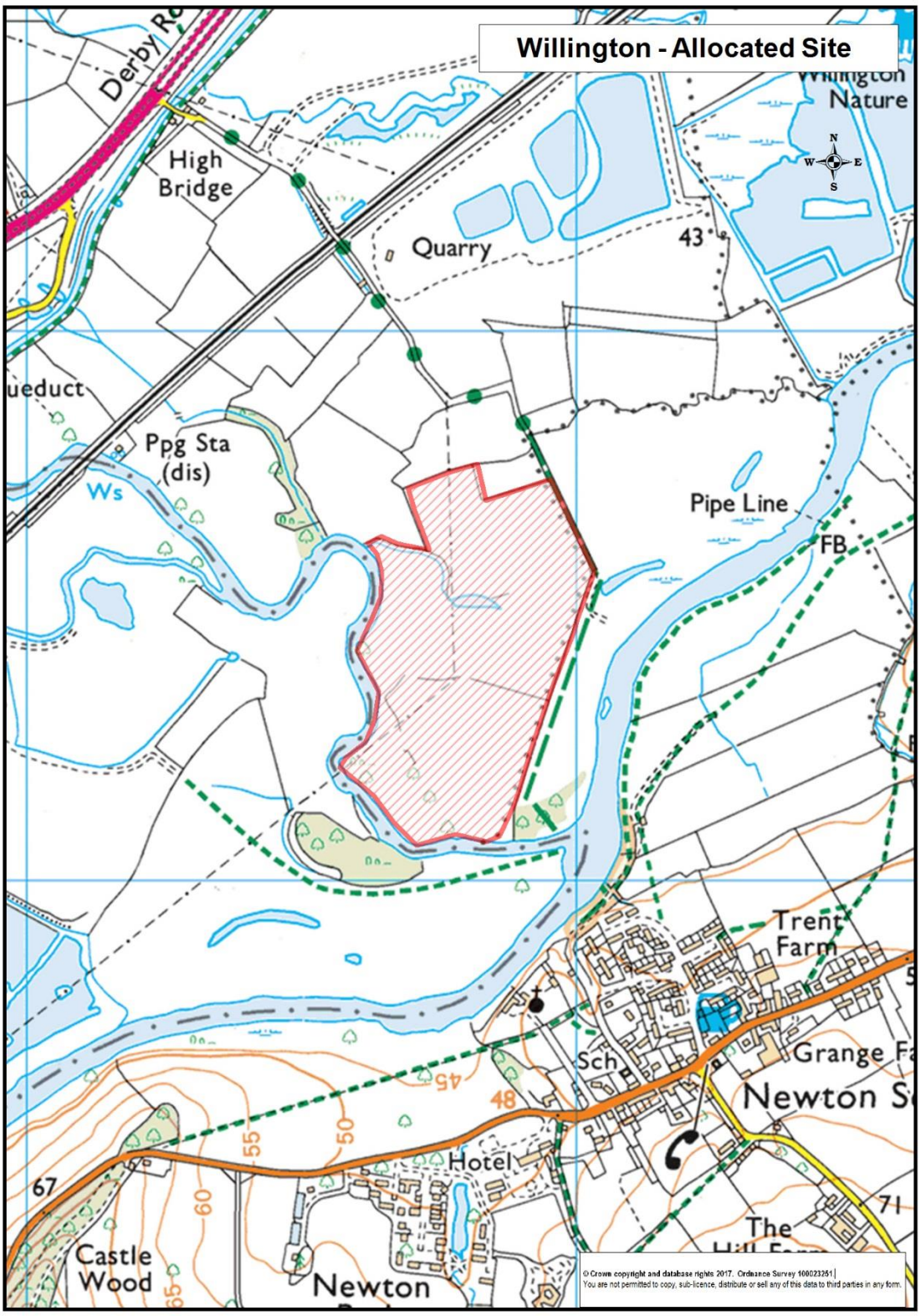
6.2.75 The Plan, as set out at in Chapter 3, will contain a number of objectives to be achieved over the Plan period, in order to achieve the Plan's overall Vision. The effectiveness of the Plan's polices and proposals, put in place to meet those objectives, will be monitored so that, if necessary, issues can be identified and addressed through a revision of the Plan, either in whole or part.

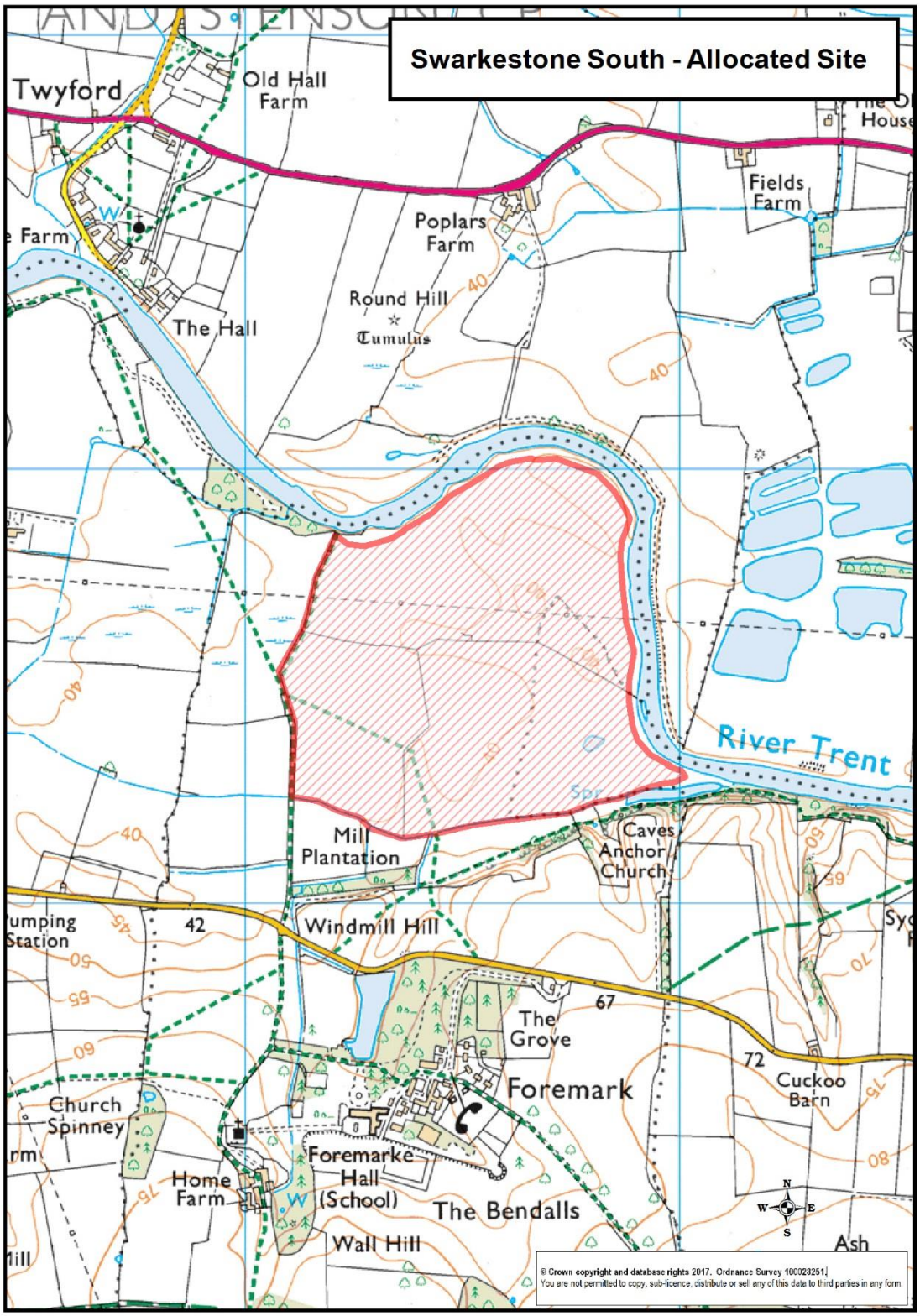
6.2.76 Policy MS2 requires an adequate and steady supply of sand and gravel to be maintained throughout the Plan period. The maintenance of stocks of permitted reserves (landbanks) is a way of ensuring supply. A minimum 7 year landbank of sand and gravel should be maintained. Through the Local Aggregate Assessment, the MPA

will monitor the supply of sand and gravel and liaise with the relevant adjoining MPAs to ensure that supply is maintained. Further information on this issue can be found in the Duty to Cooperate Report.

Do you have any comments on the approach to ensuring the supply of sand and gravel, as set out in this Chapter?

Appendix 1 – Allocated Sites (Sand & Gravel)





Appendix 2 – Preferred Areas (Sand & Gravel)