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Surrey Minerals and Waste
Development Framework

Surrey Minerals Plan 2011

Minerals Site Restoration

Supplementary Planning Document

Part 1
(appendices contained in Part 2)

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CONTENTS

1 INTRODUCTION

1.0 This document replaces the Surrey County Council •Good Practice Guide for Mineral Site Restoration and Enhancement•.

Its purpose is to set out the county council•s vision of how existing and proposed mineral workings should be restored in Surrey during the

2 THE SURREY APPROACH

2.1 The county council promotes a restoration led approach when considering proposed mineral workings. It is seen as vital that the restoration and future use of the land is addressed at the outset. Not just at the pre application discussion stage of preparing planning applications, but well before this stage, as reflected in this SPD. Restoration has to be seen as an integral part of the management of the whole extraction process and phasing. A cornerstone of Surrey•s approach is the belief that the minerals industry is in a superb position to deliver substantial environmental and community benefits through site restoration & enhancements. This includes biodiversity, landscape, and recreational opportunities. This does not mean placing an added onus or burden upon the minerals industry, rather it ensures that the right restoration solutions are formulated and opportunities are realised.

2.2 Surrey•s successful philosophy to mineral restoration is based on four aspects:

¾ A Targeted Approach

2.3 By targeting the end use of the site from the very beginning of the planning process, the scheme is more likely to be successful and to a higher standard. It ensures that the right design and the right opportunities are identified, and then guide the delivery of the workings throughout the process. It also ensures that the necessary resources are identified early and then effectively used through the process.

2.4 It also means that the end restoration uses are likely to be sustained and more successful over the longer term, and provides a level of certainty and clarity for local residents.

2.5 However, with schemes often taking many years to complete, it is important to have regard to changing circumstances which may arise. There must be a flexibility to amend restorations where this would improve the quality of the end scheme. Such changes may occur as a result in amendments of Government Policy or the impact of climate change through to unforeseen site specific circumstances such as colonisation by an important species or a community need not known twenty years previously, which could be easily accommodated.

¾ A Proactive Approach

2.6 Surrey is the only MPA in the country that has a dedicated full time member of staff dealing exclusively with mineral and restoration enhancement work. It is a model which works very successfully, and enables a proactive approach to be taken.

2.7 Rather than waiting for restoration proposals to be submitted and then react to them, the restoration officer works proactively with the minerals industry, local residents, non - governmental organisations (NGOs) and others to help inform the whole process. This utilises the county council•s local knowledge and is proven to speed the whole planning application process. This can involve the identification & development of ideas & needs (targeting), through to giving specialist technical advice on the implementation of the scheme.

¾ Partnership Working

2.8 For a proactive approach to work, Partnerships between MPA, mineral operators, local communities, and NGOs are essential. Well managed multi-organisational projects based on trust, honesty, and pooling resources, can achieve significant results.

2.9 In order to effectively target a restoration in the first place, partnership working with a range of organisations is critical. Ensuring that restoration is then correctly delivered requires an active and close working with operators and others. Those sites where local liaison groups are established, involving the operator, local community, MPA and other interested parties, prove to operate more smoothly, resolve difficulties more easily, and deliver more effective restorations. Such groups are regarded as best practise by the county council. Invariably such liaison groups often evolve into management steering groups to help guide the restoration longer term.

¾ Promoting, recognising and rewarding excellence

2.10 In Surrey the highest standards of restoration are expected. An attitude and determination to achieve excellence is a pre-requisite, and Surrey expects every scheme to be formulated on the basis of winning an award.

2.11 Promoting successful schemes shows what is possible, and can inspire improvements in subsequent restorations and facilitate the sharing of knowledge and best practice. Surrey has its own mineral award scheme, and encourages companies to enter and champion their own national restoration awards system, through the Mineral Products Association. Surrey is proud of the fact that Laleham Farm Shepperton was awarded[4] the •Best of the Best• in the 40 year review of Industry•s own restoration award scheme, which benchmarks the standards expected.

2.12 These principles are embodied in the approach to the implementation of mineral site restoration:

[4] See http://www.mineralproducts.org/flipbook/restoration-awards09/index.html

¾ The Creation of Flagship sites

2.13 These are the role model, standard setting, and demonstrator sites. They are usually bigger sites, and often generate excellent publicity for the mineral company concerned. An example of a flagship site is the Molesey reservoirs.

¾ Pebbles in the Pool sites

2.14 These follow the principle of a pebble being dropped in a pool and ripples of good practice or influence spreading out from them. triggering other actions and benefits. These sites are often smaller, and their positive impacts are often by their nature more subtle and unnoticed. An example would be Papercourt & the Moors Schemes.

2.15 Individual sites can be both flagships and pebble sites. Indeed, their successful role often necessitates a wider than single site approach being adopted. The use of corridors and area -based approaches, rather than site by site planning, can also bring significant benefits. For example contributing to the recent South East England Biodiversity Forum (SEEBF) strategy of Biodiversity Opportunity Areas (BOAs). This is discussed in more detail in the following chapter.

2.16 Equally, the issue of multi or single use restorations is important. If a site is in multi use, then the compatibility of these has to be thoroughly understood. It may be important to zone different uses within a site, or across a series of sites, to avoid conflict, or apply temporal controls through conditions. For example summer watersports use and winter waterfowl use.

Restoration Uses

2.17 The majority of mineral workings lie in the Green Belt and therefore restoration after-uses are restricted to agriculture, forestry, recreation and nature conservation. It is unlikely that enabling development will be involved in restoration schemes, although residential development has been allowed at Newdigate Brickworks to obviate the working of consented high quality habitat, and at Holmethorpe, Redhill where the Green Belt Boundary was altered next to the urban area.

Agriculture

2.18 Historically, the majority of sites were restored by infilling with waste materials and returned back to the use they were in previously, namely agriculture.

2.19 The state of British agriculture is well documented, and particularly in the northern part of Surrey, issues of fragmented agricultural land and viability are important considerations. Conversely, there is a revival in

demand for local food, the impact of high global food costs, and Surrey residents preference to see •agricultural• restorations, usually well hedgerowed grazing regimes. This lends itself to opportunities to meet environmentally sensitive agriculture utilising the Government•s grant aid schemes. Horse grazing is prevalent as a grazing land use but it is important to distinguish such grazing for agricultural and livery purposes.

Forestry

2.20 Woodland restorations are few. This appears to be not because Surrey is England•s most heavily wooded county, but because such restorations are seen as delivering only a very long-term return. However, as an integral design, such planting can meet both landscape and biodiversity targets. The county council welcomes woodland restorations.

Recreation

2.21 Formal recreation provision can present expensive and technically challenging restorations, as well as Green Belt policy obviating large ancillary built developments. Equally, there is a paucity of information on what formal recreation demands are locally across Surrey. Informal recreation, such as open space provision, and particularly access (footpaths, bridleways & cycleways) is easier to meet and integrate into wider schemes. Opportunities for sites to meet SANGS[5] provision in the western part of the county will be examined where they do not conflict with other overriding interests or objectives.

Nature Conservation

2.22 End restorations can meet both National & Local Biodiversity Action Plan (BAP) targets. The RSPB•s Nature After Minerals programme[6] provides useful advice here. There should be a preference to meeting habitat (HAP) rather than species (SAP) targets, on the basis of getting the former right the latter will follow. PPS9 states that all developments should demonstrate how they contribute to meeting such biodiversity targets, so all restorations no matter what their end use, have a role to play here. The MPA also encourages all its members to champion biodiversity provision which Surrey sees as best practice. Geodiversity and geological conservation are also important.

2.23 Mineral site restoration presents opportunities to meet other party•s agendas. Biodiversity has already been referred to, but opportunities such as flood alleviation may also present themselves (PPS25).

[5] Suitable alternative natural green space (SANGS) is the name given to green space that is of a quality and type suitable to be used as mitigation within the Thames Basin Heaths Planning Zone.

[6] See{ HYPERLINK "http://www.afterminerals.com" }

Enhancements

2.24 Environmental enhancements are matters that can be achieved over and above the end restoration. These can be delivered both on operational land, and non-operational land, before or during the extraction process, and may be temporary or permanent. For example the creation of sandfaces for sand martins to nest in, deflecting the birds away from operational faces, or the provision of a permissive footpath.

2.25 Enhancements should not be seen as an onerous additional requirement being placed on the minerals industry, but something, as the sand martin example above demonstrates, can often benefit the industry too.

2.26 Enhancement also refers to past & older existing workings, where opportunities may be created to bring environmental and community benefits. Often as part of a wider area approach.

Area Restoration

2.27 A strategic view of restoration and enhancement takes a wider view beyond a single site. Such an approach looks for opportunities to develop synergies between the restoration of individual mineral workings and enhancements of land in their wider area. This approach is consistent with the concepts of Green Infrastructure, BOAs and •Living Landscapes• (South East Green Infrastructure Framework: A Living Landscape)

2.28 The potential for such an approach between particular sites is set out in the indicative restoration schemes for the preferred areas identified for mineral extraction in the SMP.

2.29 The previous Minerals Plan identified a total of 8 areas or individual sites for possible enhancements where considerable benefits have been subsequently delivered. A number of these are still ongoing, whist new opportunities for new areas have developed. Areas in Surrey where the restoration and enhancement of land can contribute to wider strategic projects are:

North West Surrey

2.30 The Thames Valley has been extensively worked for minerals leaving a legacy of filled and unfilled sites. Half of the previously identified enhancement areas were in NW Surrey. Many of the wet restorations have been designated for nature conservation purposes, and include the majority of the South West London Reservoirs & Gravel Pits SPA/RAMSAR designation. There is scope to reinforce, add to and enhance this.

2.31 Surrey is also the lead authority for the Green Arc South West London Project. Green Arc aims to significantly improve the environment and accessibility of the open space and countryside in and around London. It aims to bring enhancement to the Green Belt in north Surrey and south west London where landscape has become degraded especially on the urban fringe. The South West London project has identified five exemplar studies two of which are based on current and former mineral sites.

2.32 The Environment Agency is examining the issue of flooding along the Surrey Thames, through the Lower Thames Flood Relief Study. This is likely to involve mineral sites as well as present opportunities for windfall mineral reserves.

2.33 By adopting an area approach to mineral restoration and enhancement for this area, it will help focus resources for the above projects.

Nutfield Marsh

2.34 Nutfield Marsh lies to the east of Redhill, and is an area historically worked for sand and fullers earth extraction. Since 1996, it has been the subject of an enhancement partnership - the Nutfield Ridge & Marsh Project, between the county council, four mineral and waste companies,

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sites within the AONB. A number of these have recently finished, or will complete working during the Minerals Plan period.

2.37 The Surrey Hills Management Plan 2009 … 2014 seeks to minimise the impact of mineral working and promote restoration and after use in sympathy with the character of the AONB through its policy L5 and its Strategic Delivery Plan as identified in Landscape and Conservation Enhancement Outcome LC6.

2.38 The opportunity exists for a more targeted area approach to realise delivery of the various Plans aims and objectives.

2.39 A review of the Area of Great Landscape Value (AGLV) has shown that there are some AGLV areas that have identical or share the same characteristics as the AONB and some that do not. There are also some areas adjacent to AGLV that share the same characteristics. Pending clarification of the status of the AGLV, this initiative may include mineral sites within such a designation.

Brickworks

2.40 Historically, the Wealden clay areas across the south of the county were worked to provide bricks and tiles. By their nature, past planning consents for such sites involve extensive areas for extraction, including much ancient woodland, now valued for its landscape and ecological

3 VOID SPACE AND INERT INFILL

3.1 The proportion of the total inert waste stream that will be available sent to restore mineral workings is insufficient to restore all sites to their pre-existing levels. It is necessary therefore to understand the scale of the shortfall and how best to ensure that the waste material that will be available is distributed appropriately. The former can be estimated by comparing the amounts of minerals that will be worked in the plan period with the quantity of inert waste that is likely to be available for infill. The latter is achieved by identifying which sites will be restored to pre-existing levels and those which will not.

Availability of void space

Existing

3.2 Establishing an accurate estimate of the amount of void space in mineral workings is problematic and has to be approached with caution. The principal reason is that data in the area of waste can be unreliable. The county council consider that the most reliable estimate that is available was that in the county council•s AMR 2007/08[8] as indicated in the following table.

Table 1 Estimate of Inert Landfill Capacity in Surrey

Source	Survey year	Inert landfill capacity in Surrey	
		mcm	mt
Surrey County Council AMR 2007/08	2008	6.29	9.44

volume 0.714m3 and 1 tonne of soft sand has approximate volume 0.625m3).

3.4 Over the plan period 2010 - 2026 a calculation can be made of the void space that would be formed. The volume formed will be that created from the preferred areas in the Surrey Minerals Plan plus the amount of permitted reserves at the end of 2009. The recorded amount of permitted reserve at the end of 2008 was 8 mt. The SMP assumes that provision should be sought in 2009 for the policy requirement of 2.62 mtpa. There is an adjustment that has to be made this assessment. The recovery of sand & gravel from the Queen Mary and King George VI Reservoirs, which would contribute to the apportionment figures above, is void space that will not be available for the disposal of inert waste. The amount of sand & gravel to be worked in the reservoirs is 4.49 mt. The following table indicates the amount of void space that would be available over the period 2010 … 2026.

Existing and formed Void Space 2010 - 2026

	Concreting aggregate	Soft sand
Permitted reserve (end of 2009) mt	3.13	8.3

Availability of inert fill

Arisings and imports

3.7 The quantity of inert waste material requiring management in Surrey has been estimated[11] at around 1.9 mtpa in 2002. This material comprised around 0.8 mt of arisings and the remainder imports. It has been further estimated[12] that inert waste arisings in Surrey would grow by 8% pa to 2020.

3.8 The following assumes 8% pa arisings growth continues for the duration of the plan. It is also assumed that imports would remain at the 2002 level for the duration of the plan.

3.9 Over the plan period 2010 … 2026 the amount of inert waste managed would be:

Total imports = 20.08 mt
Total arisings = 14.60 mt

Aggregates recycling

3.10 The SMP sets out the commitment in Policy MC5: Aggregates Recycling to provide productive capacity for recycling 0.8 mtpa of recycled aggregates by 2016.

3.11 It was estimated[13] that about 0.34 mt of aggregates were recycled in 2006. It is assumed that a uniform increase will take place in the rate of recycling until 0.8 mtpa is reached in 2016.

3.12 Over the period 2010 … 2016 the amount of aggregates recycling would be:

Aggregates recycling = 4.39 mt

It is assumed that a uniform increase will take place in the rate of recycling from 2016 until 0.9 mtpa is reached at the end of the plan period.

3.13 Over the period 2017 to 2026 the amount of aggregates recycling would be:

Aggregates recycling = 8.37 mt

[11] http://www.surreycc.gov.uk/sccwebsite/sccwspages.nsf/LookupWebPagesByTITLE_RTF/Surrey+Waste+Plan+-+Assessment+of+Needs?opendocument
[12] http://www.surreycc.gov.uk/sccwebsite/sccwspublications.nsf/WebLookupFileResourcesByUNID/docid2ABA8DF927EF76928 0256DFD0041863D?openDocument
[13] http://www.surreycc.gov.uk/sccwebsite/sccwspages.nsf/LookupWebPagesByTITLE_RTF/Minerals+and+Waste+Planning+in+Surrey+-+Annual+Monitoring+Report+2006-07?opendocument

Disposal of inert fill to exempt [14] sites

3.12 It can be estimated[15] that the amount of arisings sent to exempt sites is about 15%.

3.13 Over the period 2010 … 2026 the amount that would be disposed to exempt sites:

Arisings exempt = 2.19 mt

It can further be estimated[16] that the amount of the imported material sent to exempt sites is also 15%.

3.14 Over the period 2010 … 2026 the amount that would be removed from the waste stream is:

Imports exempt = 3.01 mt

Total amount of inert fill

3.15 The total amount of inert waste available for disposal to landfill is therefore a calculation of:

Inert waste managed (Arisings plus imports)
Less Aggregates recycled
Less Exempt disposals

Total available for landfill = (20.08+14.60)-(4.39+8.37+2.19+3.01) mt
= 17.46 mt or 11.64[17] mcm

Conclusion

3.16 The degree of reliance that can be attached to waste monitoring data must be treated with caution as has been referred to above. However, the results arising from the preceding calculations and which are presented in Table 4 show that the scale of the gap between the amount of landfill void that would be available during the life of the plan significantly exceeds the amount of inert fill that is likely to become available. On this basis, should there be any inaccuracies in the reliability of the waste data, it is considered that it would be unlikely to affect the general position

[14] See http://www.aggregain.org.uk/applications/site_search/aggregain_search.rm?term=exempt+sites&whichsearch=aggregain&submit.x=6&submit.y=13
[15] Derived from Capita Symonds 2005 Report
[16] Environment Agency 2004 / 2005 Report
[17] 1m^3 of construction and demolition waste = 1.5 tonnes (1.0 tonne=0.67 m^3)

Watersplash Farm	0.89		¥	Agriculture & nature conservation
Common Field, Betchworth	0.49		¥	Agriculture
Mercers Farm	1.69		¥	Agriculture or nature conservation ¥
Runfold South Extension, Runfold	0.14		¥	Agriculture
Pendell	5.56	¥		Agriculture & nature conservation

Note. Two options are presented for Mercers Farm dependent on the advice from the Environment Agency.

4 INDICATIVE RESTORATION SCHEMES FOR PREFERRED AREAS OF MINERAL EXTRACTION IDENTIFIED IN THE SURREY MINERALS PLAN

4.1 The preferred areas are:

Addlestone Quarry Extension (Wey Manor Farm), Addlestone
Hamm Court Farm, Addlestone
Milton Park Farm, Egham
Whitehall Farm, Egham
Home Farm Quarry Extension, Shepperton
Homers Farm, Bedfont
King George VI Reservoir
Manor Farm, Laleham
Queen Mary Reservoir
Watersplash Farm, Halliford
Common Field, Betchworth
Mercers Farm, Nutfield Marsh
Runfold South Extension, Runfold
Pendell Farm, Bletchingley

4.2 A plan shows the outline of each preferred area. In some cases it is not just the excavation area but also the ownership area that is shown where there are opportunities for enhancements of non-operational land. Some of the constraints and opportunities for restoration are summarised and a potential restoration framework set out. Some potential alternative restoration ideas are also offered but these options are not exclusive and there is room for flexibility.

4.3 In preparing the restoration plans it is important to be mindful of the fact that it may be several years before some of the preferred areas are worked, and the situation in relation to the most appropriate restoration can change over time. This is also the case with regard to the availability of suitable fill material for the mineral workings. As has been referred to earlier and set out in more detail below, overall there is likely to be a significant deficit of suitable inert waste compared with the void space created by mineral workings. The availability of suitable fill material is likely to change over time and indicative restoration schemes will need to be kept under review, as adjustments may be necessary.

4.4 The indicative restoration schemes are intended as a starting point for further discussion when planning applications are prepared. Operators submitting planning applications for mineral extraction need to discuss in advance their restoration proposals and indicate how they intend to reflect the restoration advice in their application. The planning application will need to draw on the SPD advice and include additional detail over and above that set out.