The need for inert wastes to restore aggregate mineral workings

Position Statement from the Quarry Products Association

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A steady and adequate supply of aggregate minerals is a prerequisite for the delivery of society’s current and future needs for the built environment. It is Quarry Products Association policy that secondary and recycled aggregates should form the first element of supply. However, even though the UK produces 17 million tonnes per annum more recycled and secondary aggregates than any other European country, these materials cannot meet the entire demand for aggregates, either in terms of quality, but more significantly, in terms of quantity. Consequently, the continuing extraction of primary aggregates is essential. However, the ability to secure permission to extract minerals comes with the requirement to be able to restore the site back to a beneficial after-use. If a minerals site cannot be restored, permission to extract that mineral will not be granted. The supply of up to approximately 30 million tonnes of aggregates per annum is at risk if extraction sites are unable to be restored using inert waste.

The restoration of many sand and gravel sites, as well as some hard rock sites, is reliant on the use of inert waste, such as soils and excavation waste. The occurrence of groundwater in many sand and gravel sites means that other waste disposal activities such as non-hazardous waste disposal, are not an option. The Civil Aviation Authority CAP 680 policy on bird strike also restricts potential minerals restoration schemes. Over 50% of all current sand and gravel workings are intersected or occur within aerodrome safeguarding zones which are established to prevent bird strike.

Restoration using inert waste makes a significant contribution to the aims of sustainable development by returning land to agricultural, recreational and conservation uses, and enabling beneficial use of inert wastes. Restored agricultural land is often of a higher grade than that which was present before mineral extraction, and restoration can also contribute to achieving biodiversity and geodiversity benefits; some 700 SSSIs were originally quarries or part of land owned by mineral operators. Mineral workings that are appropriately restored are rightly regarded as a temporary “borrowing” of the land, ensuring that the land is available for the use of generations to come.

However, the use of inert waste for quarry restoration, particularly in sand and gravel workings, is increasingly threatened by the cumulative effects of unnecessary restrictive regulation and inappropriate guidance as to the applicability of those regulations, including the implementation of the Landfill Directive. This is impacting on the ability to restore minerals sites. Approximately up to 30 million tonnes of inert waste per annum are required for use in quarry restoration, and there is currently estimated to be in the order of 16 million tonnes per annum deficit between the need for inert waste and the current availability of such waste.

There has been a failure by Government to recognise that the use of inert waste for restoration is a recovery operation, as opposed to disposal. The already existent provisions in the Waste Framework Directive relating to the beneficial use of inert waste, specifically Annex II B, R10 - Land treatment resulting in benefit to agriculture or ecological improvement, and in the Landfill Directive, Article 3 (2) and supportive recitals 3 and 15, have not been applied to the use of inert waste for quarry restoration in the UK. The QPA believe that this activity should be classed as

QPA considers that the use of inert waste for the restoration of mineral workings should be classed as a recovery of that waste, as provided for in the Waste Framework Directive under R10 - Land treatment resulting in benefit to agriculture or ecological improvement.

A level playing field must be created by bringing all inert waste recovery and disposal activities under one proportionate and risk-based regulatory regime.
recovery rather than disposal. While this activity remains classified as disposal, changes in the regulatory regime mean that the industry is faced with a growing burden of disproportionate and excessive regulation when compared to the risk that the use of inert waste presents to the environment.

The current regulatory burden must be seen in contrast to the minimal controls in place for the use of Waste Management Licensing Regulation exemptions under Schedule 3, Paragraphs 9A and 19A. All these activities are handling the same wastes and putting them to very similar uses. The level of controls deemed necessary, varies significantly, along with the cost of complying with those controls. Inert landfills must now operate under a Pollution Prevention Control Permit (PPC) which requires that waste is only accepted if it is on the approved inert list, or is proved to be inert through Waste Acceptance Criteria (WAC) testing. Waste producers are reluctant to pay for the cost of WAC testing (approximately £350 a sample) and testing turnaround times hinder the process, particularly for inert waste arisings that are produced in a short space of time or are unplanned. Waste producers will dispose of their waste at a site which does not require testing, such as an exempt site or a recovery or treatment site operating under a Waste Management Licence. QPA members estimate that they have experienced a 30% decrease in the amount of inert material accepted at PPC sites, thought to be due to the effects of WAC testing. The implications of WAC testing also present significant concerns for the Construction and Demolition (C&D) waste recycling sector. C&D waste recycling residues must undergo WAC testing prior to disposal, a significant cost burden for a lower value production process. Additional burdens come from the unnecessary restrictive interpretation of the Groundwater Directive and the need to always line inert landfills with clay due to the supposed risk of contaminated rogue loads. Government must recognise that a greater emphasis is required in educating and enforcing against waste producers who wrongfully dispose of non-inert materials at inert sites.

The cumulative effects of restrictive regulations has resulted in the use of inert waste for quarry restoration being over-regulated. Industry is facing a lack of inert material for use in quarry restoration, placing a significant risk on aggregate mineral operators who may not be able to fulfil their obligations to restore.

The QPA commissioned a study of the Trent Valley area to evaluate what had previously been anecdotal evidence that insufficient inert material was available across the study area to ensure the progressive restoration of sand and gravel workings. The study showed that for the period 2003/04 actual disposals of inert waste to licensed inert landfills in the Trent Valley (the majority of which were for quarry restoration) amounted to only 58% of the nominal capacity of these sites, representing an approximate 1 million tonne per annum deficit in inert material for quarry restoration. Total disposals of inert waste to both licensed inert and non-hazardous landfill sites amounted to a little under 50% of the nominal capacity, representing a total 1.55 million tonne deficit in inert materials in the Trent Valley Area. The study suggested that this difference between the need for inert waste and the actual availability for the restoration mineral workings was unlikely to change within the next five years. Up to 3.5 million tonnes per annum of sand and gravel production is now threatened by the lack of inert waste for quarry restoration in the Trent Valley study area.

Action to address these effects is urgently required to ensure that continuing supplies of aggregate are available to meet society’s needs. If the materials required for quarry restoration are not available, the future ability to extract further minerals is increasingly brought in to doubt.

There must be recognition that the use of inert waste for quarry restoration is a recovery activity, and it must be proportionately regulated as such. Such a beneficial use of waste must be seen at the same level of the waste hierarchy as recycling. This will address the barriers currently being faced by the industry and help to ensure the continued availability of inert waste for restoration. Being classed as a recovery activity will remove quarry restoration schemes from Landfill Directive and IPPC Directive requirements in the UK, creating a regulatory ‘level playing field’ for the beneficial use of inert waste. The effects of WAC testing, the unnecessary engineering requirements for quarry restoration, and the lower levels of controls for exempt sites will all be rebalanced. The application of the Groundwater Directive to the use of inert waste for quarry restoration must also be reviewed.
The Quarry Products Association welcomes comments and requests for further information about the industry’s work.

Providing Essential Materials for Britain

The trade association for companies involved in supplying crushed rock and sand and gravel from land and marine sources, asphalt and flexible paving, ready-mixed concrete, silica sand, agricultural lime, industrial lime, mortar, slag, recycled materials and construction and quarrying plant.

Gillingham House
38 - 44 Gillingham Street
London SW1V 1HU
Tel 020 7963 8000
Fax 020 7963 8001
info@qpa.org
www.qpa.org

For further information contact
Sarah Baldry

Cover: Kohlrabi being harvested at Laleham Farm, Shepperton, Surrey, a former sand and gravel quarry restored to high-quality farmland using inert material as the topsoil.