



PROPOSED EXTENSION
OF GILL MILL QUARRY,
DUCKLINGTON,
WITNEY,
OXFORDSHIRE









Environmental Statement - Non Technical Summary

proposal: Extension of Gill Mill Quarry, Ducklington, Witney, Oxfordshire

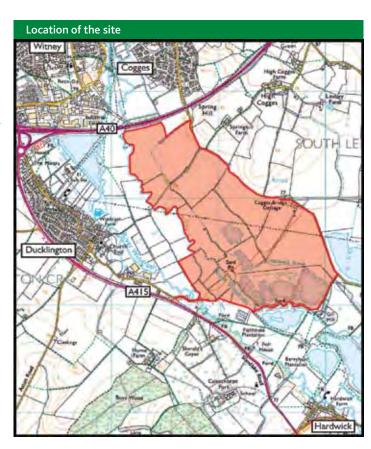
SMITHS are a long established, local, family run company. Smiths are the main supplier of primary aggregates and recycled aggregates in west Oxfordshire and Oxford. Gill Mill Quarry is the company's largest and only sand and gravel operation tying in with their soft sand, crushed rock and walling stone quarries elsewhere in the county. The company employs a staff of over 100 people and their business activities include haulage, site excavations and groundwork, plant hire and recycling.

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Front cover photographs clockwise:
Gill Mill processing plant across the valley,
Aerial view towards Witney,
Water monitoring & coot, and
Rushy Common nature reserve.

1.0 Introduction

- 1.1 This document is the Non-Technical Summary of the Environmental Statement (ES) prepared to accompany the planning application for the development proposal to extend Gill Mill Quarry by Smith & Sons (Bletchington) Ltd, the Applicant.
- 1.2 An Environmental Impact Assessment (EIA) of the potential environmental impacts of the development was undertaken and the findings of that EIA exercise are presented as a separate Environmental Statement (ES) document.
- 1.3 The requirement for an EIA is derived from European legislation, translated in the UK into the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. The 1999 Regulations and accompanying guidance require the ES to have a Non-Technical Summary.
- I.4 The Non-Technical Summary (NTS) is a stand-alone document. It provides a brief summary of the development and the results of the EIA research and technical papers developed in the Environmental Assessment in non-technical language.
- 1.5 The original proposals for an extension to Gill Mill covered land to the east, north and west of the current permitted quarry extending to over 140 hectares and with reserves of 9.26 million tonnes of sand and gravel. The final proposals have been shaped by iterative process with the EIA work and as a consequence are significantly different with a reduced extension area of 97ha and reserves of 5 million tonnes of sand and gravel. The work of the technical specialists involved with the EIA together with the



comments from the on-going community consultation exercise has informed decisions on the areas to work, how to work them and what they should be used for after mineral working has finished. The current proposals reflect the result of this comprehensive interactive approach.

2.0

Proposals

- The site is located in open countryside in the Lower Windrush Valley in West Oxfordshire. It lies to the south of Witney and the A40 and is just east of the village of Ducklington off the A415. The primary surrounding landuses are the existing mineral operations and agriculture. Nearby are the residential areas of Witney and Ducklington. Other notable features in the vicinity of the site include Ducklington Mead Site of Special Scientific Interest (SSSI) lying between the site and Ducklington village.
- 2.2 The proposal is for:

The extraction of sand, gravel and clay as an extension to the existing Gill Mill site with the retention of processing plant, offices with welfare accommodation, weighbridge, sheeting bay, maintenance and storage facilities, vehicle parking areas, fuel storage, conveyor and haul road system, and existing site access, with the crushing, screening, washing, grading and blending of products for sale, retention and extension of existing water management provision including clean water lagoons and silt ponds, retention and extension of stockpiling areas, merchanting of imported aggregates, a concrete products factory, aggregate bagging plant, installation of wheel wash, erection of concrete batching plant and erection of recycled aggregate plant and the import of inert materials for recycling and non-recyclable waste materials for restoration of worked out mineral voids and the manufacture and sale of soils from site and imported materials. Restoration to a combination of nature conservation, including reed bed, meadows and woodland areas, with ecotourism development and recreational uses including retention of existing office complex building and new footpath and bridleway links.

- The Site and Development working area extension together with the plant complex and unworked areas of the existing Gill Mill Quarry complex. In area it totals 184ha. Over half of this is the new extension area (97ha) with the remainder comprising the existing workings including the plant site, lagoon system, site access and unworked areas of reserves. The proposed total extraction area is approximately 108 ha, with nearly 74ha of this in the new extension.
 - The total sand and gravel reserves of the development site are 7.8 million tonnes (mt), with 5mt of new sand and gravel reserves in the extension area. The output of sand and gravel will be 350,000 tonnes per annum (tpa) and the total output of the quarry will be up to 500,000 tpa including clay and recycled aggregates (up to 150,000tpa of recycled aggregates). Approximately 1.25 million cubic metres of inert material would be brought to the site for restoration purposes, to supplement 1.85million cubic metres of 'on-site' restoration materials. The proposal will extend the "life" of Gill Mill to approximately 25 years. Vehicles leaving the site with customer deliveries will average 172 per day (with a further 40 additional deliveries when the new recycling plant has been built. This already has planning permission).
 - The working scheme revises the working programme for the existing quarry and incorporates the new extension area with a total of 14 working phases. The current workings near the plant site will be completed first with working then moving into the new extension area to the east before completing working in the western areas. The scheme provides for progressive restoration utilising on-site and imported materials to maximise land reinstatement and reduce open areas of water. The proposals include water management and monitoring to ensure the hydrological system of the Lower Windrush Valley, including the setting and hydrology of Ducklington Mead SSSI, are not affected by the operations.



Gill Mill Processing plant & washed gravels



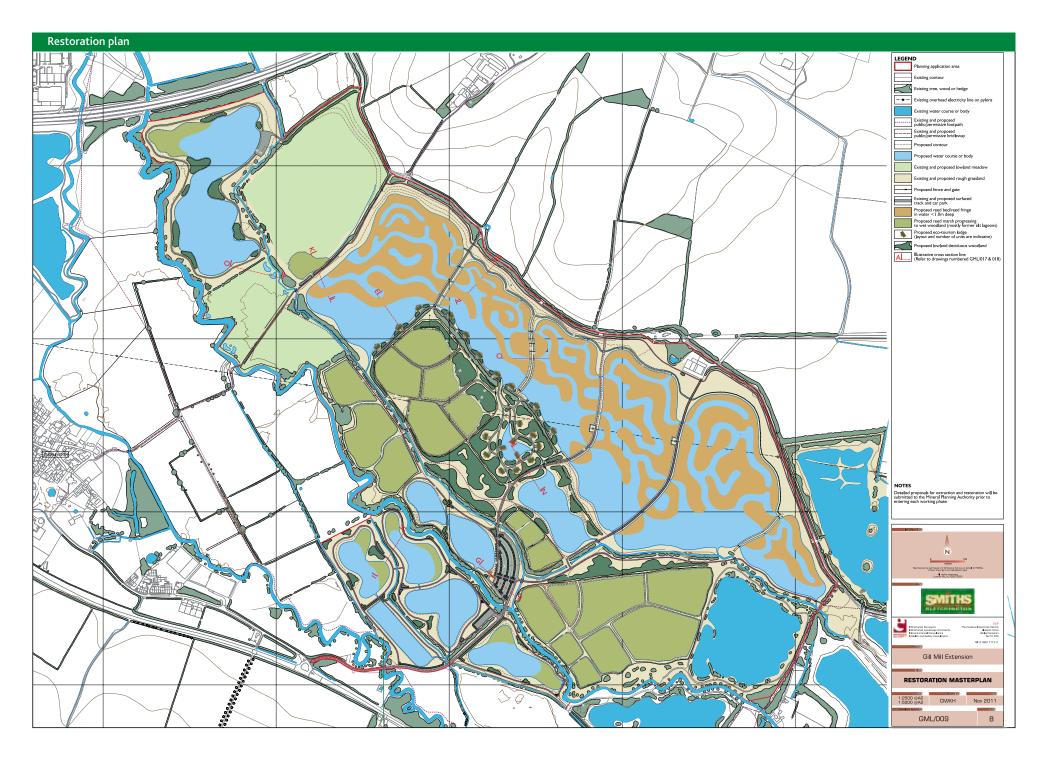


Fritillaries on Ducklington Mead



Phased working plan

- The development provides long term security of reserves for the site allowing major investment and securing continuity of employment for over 40 locally based staff employed at the site, plus many other associated service jobs which the quarry indirectly provides. The incorporation of the extension area provides the opportunity to deliver a revised restoration scheme that maximises after-use benefits and reduces operational impact as far as possible. The proposal will secure the long term supply of essential aggregates to local markets in Oxfordshire.
- 2.7 Restoration will see new nature conservation habitats of over 120ha created together with areas of recreational use and an ecotourism development. New paths of over 11km will also be created. After working, an extended management period of 25 years would be provided by Smiths for the areas restored to reedbeds. Permanent provision would be made for the management of water bodies and habitat to reduce bird hazards to aircraft. Provision to permanently fund the management of the nature conservation areas will be made through ecotourism.





3.0

Findings

3.1

The ES has looked at the need for aggregates, including the available supply and available alternatives, and similarly the need for the inert waste recovery and recycling facilities the proposal provides.

Gill Mill quarry already makes a substantial contribution to sand and gravel supply in Oxfordshire, primarily to local markets with around 75% of sales destinations within 16miles of the site. There are only two other main quarries providing similar sand and gravel materials in the county, both some distance away to the south of Oxford. The amount of sand and gravel reserves with planning permission (known as the landbank) is below levels which indicate further reserves are needed. The proposal will secure continuity of building materials supplies to the local area and help meet the need identified by policy.

Similarly Gill Mill also provides an important source of recycled aggregates from construction and demolition wastes. Capacity and technology is available to process waste material into recycled aggregates and to recover the non-recyclable element for use in site reinstatement works. In Oxfordshire there is an acknowledged capacity 'gap' in recycling facilities and this proposal will enable increased recycling which will make a substantial contribution towards closing that capacity gap and helping meet Oxfordshire's aggregate needs sustainably.

Traffic

Gill Mill quarry has a purpose designed access built when the quarry originally opened. The access joins the A415 at the southern end of the Ducklington by-pass and all the traffic from Gill Mill is routed northwards on the A415 towards the A40 at Witney. A Transport Assessment (TA) was undertaken as part of the EIA covering the impact on the highway network with regard to the traffic generation from the proposals. The assessment looked at existing traffic levels and safety records on the A415,

Main Ethe traffic generated by the groposals and the configuration of the existing access arrangements. The TA noted daily traffic

of the existing access arrangements. The TA noted daily traffic movements (one way) of approximately 172, the majority of which represent existing traffic movements at the quarry. The existing access was considered to be operating efficiently and no safety concerns arose from the assessment. The TA concluded that the development proposal would not result in any increased traffic generation and would not present any detrimental impact on the operation of the local road network.

3.5 Dust

Dust level readings for both coarse and fine dust were collected at a number of locations round the development site to measure background levels and confirm dust generation from the existing quarry operations. The monitoring locations were on the Ducklington 'side' of the plant site and at Cogges Lane at both the Beef Unit farm buildings and Tar Farm Cottages. Monitoring found that the fine dust associated with site operations was well within the current national Air Quality Objectives levels. Coarse (nuisance) dust was below levels where possible complaints might occur. The highest levels of deposited dust were found to arise from road traffic and agricultural activities not quarry operations.

3.6 The assessment noted the success of current dust management practices at the quarry using 'good housekeeping' techniques. These have been incorporated into a detailed Dust Management Plan (DMP) to manage and control potential dust emissions, monitor dust levels and assess sources. Overall, the dust assessment for the proposals show a very low likelihood of breach of national limits for fine dust and do not raise any concerns of coarse dust nuisance.

3.7 Biodiversity

An ecological assessment of the site and the proposed development was undertaken. It included a survey of the flora and fauna of the site and the surrounding land which found none of the land to be of significant ecological value and that no designated nature conservation sites were within the development site. The assessment looked at sites outside the site to see if any would be affected by the proposals. It concluded that no nearby local wildlife site would be affected

but the most important nearby site, Ducklington Mead Site of Special Scientific Interest (SSSI), was one that could potentially be affected. The Mead contains special floodplain meadow plants which are in part dependant on the local water regime. The assessment noted this but accepted that with the designed groundwater mitigation works the special interest of the site will not be affected.

The ecological assessment evaluated the impact of the proposals on the site's wildlife and habitats. The impacts, with mitigation, ranged from a category of 'no significance' to 'moderately beneficial'. The assessment noted that the restoration works have the potential to bring substantial benefits to biodiversity with extensive new habitats replacing land of previously low ecological value and delivering a major ecological enhancement in the Lower Windrush Valley. It will be of benefit to Oxfordshire's BAP (Biodiversity Action Plan) targets for both habitats and species.

3.9 Landscape

The landscape of the area, and how the proposal will impact this during and after working, has been fully assessed in accordance the Guidelines for Landscape and Visual Impact Assessment of the Institute of Environmental Management and Assessment and the Landscape Institute. The assessment considers the overall sensitivity of the landscape setting as 'medium' and the magnitude of change arising from the development is rated as 'large' which could translate into an impact significance rating of 'substantially adverse'. But this is without the designed mitigation measures which changes the impact rating to 'slightly beneficial'.

The landscape impact of the development is mitigated by a number of factors: progressive and phased working and a restoration scheme limiting the area of disturbed land at any one time; sensitive operational design (use of conveyors, soil bunds and low level working); avoiding the more sensitive landscape areas (such as the river meadows along the Windrush); retaining and enhancing riverside vegetation and hedgerows; and, reducing the over dominance of extensive water body areas in the restoration proposals. Upon restoration the new landscape will help reduce the influence of some of the existing

weak or detracting features of the surrounding landscape (such as the dominant electricity pylons and commercial sheds at Ducklington Mill). The landscape assessment considers that the range of after-uses will integrate successfully with the character of the surrounding landscape producing improvements to biodiversity and public access.

impacts on the landscape, is limited and so does not affect the setting of Ducklington Mead nor Ducklington village which is partly designated as a conservation area. Views for people living and visiting the area will be affected to a limited degree, a few views have been identified to have a potential unmitigated adverse impact. Overall, with mitigation, no visual impacts will exceed the level of 'slightly adverse' and these will be only temporary whilst long term effects on the visual amenity, particularly for existing exterior viewpoints, will be 'negligible' to 'substantially beneficial'.

3.12 Groundwater

The site is set in a river valley and the proposals involve pumping out water (dewatering) from the working areas to aid efficient recovery of the sand and gravel and subsequent reinstatement. Detailed work has been carried out on the groundwater environment to ensure no adverse impacts will occur from changes to water levels caused by dewatering. As part of the work, in addition to extensive water monitoring information already collected at Gill Mill, further water monitoring has been undertaken, weather information reviewed and discussions with the Environment Agency have taken place. This has culminated in the production of the groundwater model which assesses the impact of the existing quarry and the potential impact of the extension area and the mitigation measures required to protect the hydrogeological regime.

The groundwater model examines various features; groundwater levels (typically ranging from 0.5 to 1.5m below surface levels); the rate of water movement through the ground; rainwater influence; chemical analysis; surface waters (such as the River Windrush and tributaries); and, other features such as private water supplies, ponds and Ducklington Mead. The mitigation





Sand & gravel extraction



measures which have been proposed include: returning water into rivers and streams; 'sealing' the edge of excavations; water management systems in the restored landscape; the use of recharge trenches (a long ditch between the workings and adjoining land to be protected which is kept full of water to maintain the level of the water table in the adjoining land); and, 'wet' working in certain phases (i.e. no dewatering). A comprehensive monitoring programme continues to be operated to ensure the mitigation measures are effective and adjusted as required.

3.14 No private water supplies, nor Ducklington Pond, will be affected by the development proposals. Ducklington Mead does have the potential to be adversely impacted by changes to water levels but the mitigation measures are designed to ensure there is no adverse change to the Mead habitat both during and after working. The proposals will not impact on groundwater resources nor result in a significant change to river flows nor will they exacerbate recent groundwater flooding levels. The hydrological assessment findings are that, with the mitigation measures in place, there will be no significant impacts on the hydrological regime.

3.15 Flooding

A Flood Risk Assessment (FRA) was undertaken as part of the EIA work and as a requirement of the planning application process which requires that all development on sites over 1ha has a FRA. The FRA involved extensive modelling of the Lower Windrush Valley to establish the implications for flooding both on and off site and ensure that the proposals, with appropriate mitigation measures, will not increase flood risk and will ideally reduce flood risk. The modelling work has been subject to extensive discussion with the Environment Agency.

The findings of the FRA have informed the design of the proposals including matters such as location of bunds outside the flood plain where possible or, if not, appropriate alignment with flood flows. Sustainable drainage systems and emergency evacuation plans have also been incorporated into the proposals. The FRA confirmed, even with allowances for climate change and potentially increased water levels, that the proposals would

not increase flood risk either on or off site. An increase in flood levels of 0.01m would be experienced at the concrete works on the Gill Mill site which is considered not significant and there is no increased 'off site' flooding to any receptors and one property will experience a slight reduction in flooding (0.01m drop). The FRA notes that the quarry workings and the restored land provide significant flood water storage in times of flood which will reduce flood risk to the surrounding area both during and at completion of mineral working.

3.17 Noise

The background noise levels were measured at a number of locations round the site including Ducklington, Cogges Lane and to the south of the site. The monitoring results identified road and aircraft noise as the main influences on noise level with the existing quarrying operations audible at Cogges Cottage and to the south of the site. Working from the background noise levels, and taking account of the future contribution of the existing quarry and processing plant noise, calculations were made of anticipated noise limits. The predicted noise from the proposed development was assessed against limits established by government guidance and was found to meet all acceptable criteria.

The assessment found government noise limits could easily be complied with at all locations except Cogges Cottage when working is at its closest (i.e. within 150m) to the property. An assessment was made of mitigation measures, such as the construction of an acoustic as a screening bund. This, it was determined would reduce the predicted noise levels and maintain them within guidance limits. The assessment noted that good housekeeping practices would continue for the operations together with the implementation of a protocol for the use of reversing bleepers. The assessment concludes that with the proposed mitigation and control measures, potential noise impacts from the development would remain within acceptable limits.

3.19 Bird Strike

Being close to the runway of Brize Norton the EIA work has included an assessment of bird strike impact arising from the

proposal. The work on bird strike has looked at bird survey information for the site (with particular regard to hazardous species for bird strike), the location of the site in relation to the airfields and other wetlands, and the design of development proposals and the change to landuse and habitats created upon restoration.

- 3.20 The assessment considers there is high potential bird strike risk but states this can be minimised by a number of mitigation measures incorporated into the proposals design. The mitigation measures primarily relate to the restored landform and uses. They include creating areas of 'active' use which will discourage birds and limiting the size of open water bodies. The design of lakeside margins affects bird use and will be constructed to restrict feeding and nesting areas for those birds which are considered to represent a particular bird strike threat, such as Canada geese. The location of the site relative to other water bodies is also considered, as their location to the south means that bird movements within the valley will be down valley and not across flight path routes.
- 3.21 The main mitigation feature is a Bird Management Plan which the applicant prepared to implement and maintain during the life of Brize Norton airbase. There is no such provision for the existing Gill Mill site and indeed the approved working and restoration proposals were not designed to take account of bird strike. The bird strike assessment concludes that by incorporating the mitigation measures the development does not pose any additional bird strike risk from the currently consented position and may indeed reduce the risk from the existing permitted operations.

3.22 Agriculture

The majority of the site, which is not currently part of the existing operations, is used for agriculture and the EIA includes an assessment of how the proposal will affect agriculture. The current agricultural quality of the land, soils and farming across the site is detailed and the impacts of the changes have been assessed. The main adverse impact of the development is the loss of areas of good quality agricultural land through the creation of new water bodies. The impact is assessed as moderately adverse. However the assessment concludes that the

associated impact on farm holdings will only be neutral to minor adverse. No residual impact is identified on the soil resource either in absolute terms or in terms of quality.

3.23 Archaeology

Whilst there are no designated archaeological features in the application area or immediate area, the previous workings have discovered significant archaeological finds, notably a Roman settlement based round Gill Mill itself. The EIA reviews the archaeological findings from the area and the results of geophysical investigations and field evaluation of parts of the area. The report includes an agreed programme of further evaluation work during the development to ensure that if further archaeological features are found, they will be evaluated and recorded.

3.24 Cumulative Impacts

Throughout the EIA the various technical assessments have considered the potential for cumulative impacts of the proposals. No significant adverse impacts from cumulative impacts arising from the development proposals have been identified.

3.25 Community and Social Effects

The EIA assesses how the development proposal will impact upon the local community and it's social effects. The proposal fits in well into the local area in terms of landuse and also provides continuing social and community benefits through employment. The local community will also see accessibility gains with the new footpaths and recreational areas created. The proposal meets many of the priorities of the Sustainable Community Strategy for West Oxfordshire and contributes to aims in the Tourism Strategy benefiting the local and wider visitor community. The proposal provides direct and indirect benefits to the local community.



Excavating human remains









4.0 Conclusions

- 4.1 The EIA work was undertaken by independent specialist technical consultants to provide a comprehensive assessment of the potential environmental impacts of the development proposals for extended quarrying at Gill Mill. The assessment has covered a wide range of environmental issues and has taken into account the site's location and setting and the detailed proposals including the effect of proposed mitigation measures. The majority of the impacts have been assessed as "minor" or "negligible" taking into account the proposed mitigation, or of a short term or temporary nature. The only impact identified as "moderately adverse" is the loss of high quality agricultural land which must be weighed against the wider sustainability benefits brought by the proposals.
- 4.2 The proposal will have a minimal impact on the site's surroundings and will ensure a continued supply to the local area of essential building and construction materials, both primary and recycled, as well as providing a facility to deal with construction wastes. The proposal will bring continued economic benefits to the community particularly of continued employment and further benefits with new recreational areas, footpaths and new economic activities after restoration. The greatest benefit of the proposal upon restoration will be the extensive biodiversity gains providing major areas of new habitat enhancing the landscape and wildlife of the local area together with opportunities for ecotourism.





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Some statistics

BACKGROUND

In the course of preparing the planning application a number of common questions have arisen about the proposals. This section provides a set of Frequently Asked Questions to provide a quick reference on the main queries. The technical work in the Environmental Statement and the Planning Supporting Statement goes into greater detail on these topics.

Basic facts and figures: (some figures rounded and approximate) Application Area......184ha Existing permitted quarry complex area.....195ha Existing permitted area included in application......87ha Total extension area sand and gravel 5.0 million tonnes Total imported restoration materials......1.25 million cubic metres Annual importation of restoration materials......50,000 cubic metres On site clay restoration materials838,000 cubic metres Remaining permitted reserves estimated life8 years Overall estimated life of quarry operations25 years Sand and gravel annual output350,000 tonnes Recycled aggregates annual output (current)......50,000tonnes Washed recycled aggregates capacity (future) annual output150,000tonnes Typical thickness of sand and gravel4-6m Range of thickness of sand and gravel.....1-7m Average yield of sand and gravel per hectare72,000 tonnes Area restored to reed beds

Area restored to other nature conservation and agricult	ture66ha
Area restored for recreational use	41ha
Area restored for ecotourism	6ha
New bridleways	5.2km
New footpaths	6km
Current loaded vehicles leaving site (two-way)	172 (344)
Additional permitted movements	40 (80)
Distance sand and gravel delivered to	
customers from Gill Mill74% of deliveri	ies within 16 miles
Working hours: processing plant	06.00 to 19.00hrs
Working hours: extraction	07.00 to 18.00hrs
Working hours: customer deliveries	06.30 to 18.00hrs
Saturdays:	06.30 to 13.00hrs

Frequently asked questions

No working on Sundays or bank holidays

Why do you need to extend the quarry now when you've still unworked reserves?

We will soon have finished our current permitted workings to the south and need to reorganise site operations. Unworked permitted reserves lie beneath the plant site and west, on the other side of the river so at this point in time it makes better sense to work the proposed new reserves to the north and east. To do so we need to apply for planning permission to include the eastern and northern areas now.

Why does the application cover the land you already have planning permission for?

The working of the new areas to the east and north requires us to reorganise the permitted programme of phased working which we are currently following. We also want to improve our restoration proposals. To achieve all this the planning permission for the existing areas needs to be changed.

Why do you need to make such a big application now?

By making a single application now, rather than a series of applications on smaller areas over time, allows us to better plan and deliver the progressive working and restoration scheme. It also gives the company a basis for making investment decisions and importantly allows us to design an afteruse for the land after completion of mineral working which is sustainable in the long term.

Will there be an increase in traffic?

No. We are not proposing any changes to the day to day operations which we currently have permission for so there will be no increase in traffic. The proposal is for additional land to extend the life of the quarry not to increase its activity.

Will the workings increase flooding?

No. We are well aware of the concerns about flooding particularly since 2007 and so the proposals have been carefully designed to take account of a wide range of technical issues to ensure that there will be no increased risk of flooding along the Windrush Valley. Chapter 10 of the Environmental Statement provides the full technical assessment work on flooding.

Will the workings provide more flood storage capacity?

Yes. There will be an increase in flood storage capacity as a result of the proposed workings. The restored reedbed areas of the development will provide additional flood water storage in peak flood times.

Will the proposals create noise and dust?

No. We are not proposing any changes to our day to day operations and as these are carried out largely without complaint or concern then we do not believe that the proposals will result in any increase in either noise or dust. The technical work carried out on this as apart of the application confirms this.



Recycled aggregates



Why can't you restore it all back to agriculture?

We can't restore all the worked land back to its originals levels for agriculture for a number of reasons including operational issues of accessing parts of the site but particularly the lack of availability of suitable material to reinstate the ground.

Are you going to tip rubbish and landfill the site?

No. The site is not suitable for a landfill operation for biodegradable bin wastes. However, we already bring in to Gill Mill inert construction, demolition and excavation wastes which we recycle in to construction aggregates. The clays and other non recyclable materials are also used to help reconfigure the quarry voids to new landforms for use after mineral extraction. The proposals will see a continuation of this.

Will you affect Ducklington Mead?

No. The proposed workings do not come any closer to the Mead than those sand and gravel reserves for which we already have permission for and lie to the east and north of the current site. Extensive technical work on the implications of our proposals on groundwater shows that with the recommended mitigation measures the Mead will not be affected.

Will the workings cause Ducklington pond to dry up?

No. We have been monitoring water levels within the valley for very many years and more recently have extended this out to the pond. Although the pond has dried up on occasions the monitoring has shown that this has not been as a result of any of the operations we carry out at Gill Mill. Although we have been carrying out some works on the pond recently this is wholly unrelated to the quarry and is being undertaken in collaboration with the Parish Council to improve the pond.





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Scan the QR code on your smart phone or tablet to take you to the website to access the documents.

The latest version of the planning application documents can be viewed at: www.smithsbletchington.co.uk/index.php? option=com_content&task=view&id=155

Smith & Sons (Bletchington) Limited Enslow Kidlington Oxfordshire OX5 3AY

Tel: 01869 331281 **Fax:** 01869 332112

Email: info@smithsbletchington.co.uk

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