Review of the Aggregates Levy: summary of responses to the discussion paper and government next steps
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Chapter 1

Introduction

1.1 At Spring Statement 2019, the Chancellor Philip Hammond launched a government review of the Aggregates Levy (‘the levy’) issuing a discussion document. HM Treasury led the review, working closely with HM Revenue & Customs (HMRC), other relevant government departments and agencies, and the devolved administrations.

1.2 The levy is an environmental tax on primary virgin aggregate (rock, sand and gravel used as bulk fill in construction). The levy has been largely unchanged since its introduction in 2002 and had been subject to longstanding legal challenge, which concluded in February 2019.

1.3 The conclusion of the litigation afforded the opportunity for a comprehensive review of the levy. As set out in the review’s discussion document, this included, but was not limited to:

- the environmental context and impact of the levy
- the effect of the levy on the supply and demand of all kinds of aggregate
- the effect of the levy on the supply and demand of all construction products
- the nature of cross-border trade of aggregate and other construction products, both across external UK borders, and internal borders
- the suitability of the current tax design for devolution
- the suitability, clarity and simplicity of current legislation and HMRC guidance
- the operation of the tax

1.4 The government engaged widely with relevant stakeholders to seek views on the issues above, better understand the impact of the tax and gather evidence and recommendations. Stakeholders had several ways of engaging in the review, including meeting with officials at business roundtables, conferences and site visits around the UK, and via meetings and written representations.

1.5 HM Treasury and HMRC officials met with a range of stakeholders across the UK, including in Northern Ireland, Scotland and Wales, to discuss the effect of the levy in all regions and nations. This involved engaging with trade

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bodies and environmental groups, as well as individual businesses affected by the levy such as quarrying companies and those trading in recycled or secondary materials.

1.6 In Northern Ireland, officials met with stakeholders, including quarrying companies in roundtable discussions as part of several site visits. Officials convened a roundtable discussion with quarrying companies in Edinburgh, as well as the main Scottish aggregates industry trade bodies, and Scottish Government and Revenue Scotland officials. Officials also attended industry trade body events in Cardiff and London, discussing the review with interested parties.

1.7 Industry site visits included: hard rock quarries; sand and gravel sites; a silica sand site; a slate quarry; a china clay site; a ball clay site; a recycling plant; an Incinerator Bottom Ash (IBA) processing site, as well as the Energy from Waste plant which produces the IBA; and a wildlife wetland project, on the site of a former quarry. Officials took part in a roundtable discussion of the levy in Stoke-on-Trent with the main industry trade body for clay producers and ceramic manufacturers, as well as individual companies in attendance. Meetings were also held with trade bodies representing aggregate producers and industries using products of quarrying industries.

1.8 These visits were important in helping shape the government’s understanding of stakeholder views and the effect of the levy, and the government is grateful to all those who hosted meetings, conferences and visits.

1.9 In addition, the government convened an expert working group made up of representatives from industry and other relevant organisations. The Aggregates Levy working group met three times with officials throughout the review process, to offer their expertise and experience to the government and ensuring views from across the sector were represented and presented. The meetings broadly covered the following topics:

1. Objectives of the levy
2. Scope of the levy
3. Operation of the levy, including compliance and devolution issues

1.10 The group also met with the Exchequer Secretary to the Treasury Simon Clarke in October 2019 to put forward their views to him in person.

1.11 The papers from the working group meetings, including minutes, agendas and presentations, can be found on the government’s website2.

1.12 The government received 28 written representations to the review. This included representations from 12 trade bodies representing a range of industries, including aggregate producers, both in the quarrying industry and manufactured aggregate industry, as well as industries which use rock, sand or gravel in their production processes. Representations were also received from: five environmental and wildlife groups; three groups with a

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2 https://www.gov.uk/government/publications/aggregates-levy-review-working-group
focus on geodiversity and geoconservation; two devolved or local
government; and six individual quarry companies.

1.13 The government is grateful to all those who took the time to respond to the review. This document sets out a summary of representations received, including issues raised during the expert working group meetings, representations made to the review team during regional visits and in meetings, and via written submissions. This document also sets out the government’s response to the review’s findings and next steps.
Chapter 2
Objectives and impact of the levy

Setting objectives

2.1 The Aggregates Levy, which came into effect in April 2002, was introduced to ensure that the environmental impacts of aggregates extraction not already addressed by regulation are more fully reflected in prices. The focus of the levy is rock, sand and gravel used for their bulk properties, which make up the vast majority of aggregates supplied in the UK. This includes aggregate that has been dug from the ground, dredged from the sea in UK waters or imported.

2.2 Aggregates can be primary, secondary, or recycled. Primary aggregates are rock, sand and gravel that are extracted from naturally occurring mineral deposits for use as aggregates and used for the first time. Secondary aggregates are a by-product of other quarrying and mining operations, such as china clay waste, slate waste and colliery spoil, or material arising as unavoidable consequence of construction works, as well as manufactured aggregates obtained as a by-product of other industrial processes. Recycled aggregates result from the processing of inorganic materials previously used in construction, also known as construction and demolition waste. The levy on primary virgin aggregate is intended to encourage a shift in demand to alternative materials such as secondary or recycled aggregate.

2.3 While some stakeholders felt that the levy should continue to address and internalise the environmental impact of extraction, others argued that the levy has minimal direct environmental impact. The Mineral Products Association (MPA), representing the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries, commented that the levy “is in effect a tax on sales as a proxy for environmental impacts and does not discriminate between operators with strong or weak environmental performance or drive better environmental performance”.

2.4 The MPA and others argued that the levy’s objectives should be recalibrated to align with current government environmental objectives. Similarly, some stakeholders suggested the objective of reducing the use of virgin aggregate should remain but suggested more consideration should be given to account for the wider environmental impacts of the quarrying or aggregates industry. One environmental group suggested exploring using the natural capital framework to consider the value of those wider impacts.

2.5 A number of stakeholders expressed the view that the levy’s environmental objectives could only be fully achieved through some degree of hypothecation of levy revenues to a fund, which could be used to finance
environmental projects. The ‘Aggregates Levy Fund’ section of this chapter sets this out in more detail.

2.6 One stakeholder, the British Aggregates Association (BAA), representing independent quarry owners, argued that the levy does not and cannot meet its original objectives and called for its abolition, arguing that the “imposition of a series of bewildering and illogical Exemptions and Reliefs, based on a fundamentally flawed understanding of geology has resulted in an unprecedented distortion of the market”.

2.7 The specific points made by stakeholders on the objectives and impact of the levy are discussed in more detail below.

Reflecting environmental impacts of aggregate production

2.8 Members of the quarrying industry expressed the view that the context of the levy had changed significantly since its introduction in 2002. They suggested that better regulation, more stringent planning conditions and industry action has led to improvements in environmental standards in the industry. They pointed to biodiversity net gains when some quarries are restored, for example to create wildlife reserves.

2.9 In the main, the quarrying industry suggested this means that the levy’s objective, of ensuring the environmental impacts of aggregate production not already addressed by regulation are more fully reflected in prices, is less relevant today. As above, they also commented that the levy makes no distinction between operators with strong or weak environmental performance and has no effect on the impact from quarrying.

2.10 Most environmental organisations expressed the view that the quarrying industry has made environmental improvements since the levy’s introduction. These stakeholders suggested that quarries have become havens for flora and fauna, and that quarries can be a valuable source of land for delivering priority habitats and that quarry restoration can deliver biodiversity net gain1. The MPA and BAA, along with Natural England, support Nature After Minerals, a partnership programme led by the RSPB. The programme works to influence Minerals Local Plans2 to ensure that they contain strong biodiversity and mineral site restoration policies. However, some environmental stakeholders, while recognising that the negative environmental impacts of quarrying have been partly mitigated through regulation, planning and corporate social responsibility, argued that these impacts should continue to be reflected in prices via the levy.

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2 Minerals Local Plans set out policies which specify the amount of mineral which needs to be extracted over a period of time, the circumstances under which minerals development will be permitted, where minerals development should take place and how mineral sites should be restored.
Encouraging the use of recycled and secondary materials

2.11 The levy applies to primary aggregates, whereas recycled aggregates are excluded from the scope of the tax to encourage the use rather than disposal of these materials. Similarly, there are exemptions for different categories of secondary aggregate.

2.12 Recycled and secondary aggregate is around 29 percent of the total aggregate market – well ahead of the European average and higher than any European country. This 29 percent is made up of 26 percentage points recycled aggregate and 3 percentage points manufactured or other secondary aggregate.

2.13 Producers of recycled, manufactured and secondary aggregate argued that the levy is important in incentivising the use of these alternatives to virgin aggregate. The MPA felt that the levy has had little to no impact on the overall market for construction aggregates, although they expressed the view that it has led to some replacement of primary aggregates by untaxed alternatives such as by-product from clay extraction, and that it is unclear if this has been a net environmental benefit.

Recycled aggregate

2.14 Aggregate that has previously been used for construction purposes is not taxable aggregate for the purposes of the levy. This includes aggregate from construction and demolition (C&D) waste and road planings. C&D waste is recycled both on site and in recycling depots and can be processed and blended with other aggregate for use in products such as concrete. For example, road planings are often used for paths and increasingly recycled for use in road construction.

2.15 Most stakeholders accept that not taxing recycled aggregate is consistent with the objective of the levy in encouraging use of alternatives and efficient use of resources. However, the BAA expressed the view that recycling plants are often more environmentally damaging than quarries as they are generally in more densely populated areas and, being temporary, are subject to less rigorous environmental regulations and control. One producer of both primary and recycled aggregate commented that significantly more energy was used in producing recycled aggregate and that noise pollution was greater.

2.16 Quarrying industry stakeholders felt it was not clear what part the levy had in driving the use of recycled construction materials, and were more likely to credit increases in recycling rates to improvements in regulation and to the landfill tax, which they argue has made the cost of dumping C&D waste prohibitive.

2.17 The BAA in particular argued that the peak of recycling aggregate has been reached and that the levy has not increased demand for recycled aggregate and would not do so in future. They argued that this was the case because, in their view, only a finite amount of raw materials is ever available and

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suitable for recycling, and all recycling and recycled products are subject to significant control factors such as location and end-product quality.

2.18 A producer of both primary and recycled aggregate commented that to produce recycled aggregate comparable in quality to virgin aggregate is very costly, but that cost cannot be recouped in prices. They suggested this is because cheaper virgin aggregates were always available locally and the majority of customers prefer these to recycled aggregates. They suggested the levy was therefore important in encouraging the use of recycled aggregate.

2.19 One environmental stakeholder argued that the levy is fundamental to upholding the intentions of the European Waste Framework Directive\(^4\), which sets targets for the re-use, recycling and recovery of C&D waste. Another suggested that the freeze in the levy’s rate since 2009 has effectively reduced the cost of the levy to the aggregates industry and may have led to the plateauing in the use of recycled aggregate in recent years.

2.20 However, some stakeholders expressed the view that it is the supply of C&D waste – created through construction and demolition activity – not demand, which constrains the use of recycled aggregate. Some stakeholders also suggested that the supply of C&D varies across the UK, arguing activity was lower in rural areas. Stakeholders from the construction industry suggested that the levy represents a small proportion of the costs associated with construction, and that the levy’s rate would need to be significantly higher to influence the demand for recycled aggregate.

Manufactured aggregate

2.21 Spoil, waste and other by-products of industrial combustion processes, and from the smelting or refining of metal, is exempt from the levy. Ground granulated blast furnace ash (GGBFA) from the steel industry and pulverised fly ash (PFA) from electricity generating plants are used in cement formulations or directly in concrete manufacture for their cementitious properties, but some PFA is also used for its bulk properties. The electricity generating industry is also a source of furnace bottom ash (FBA), while cogeneration at waste plants produces incinerator bottom ash (IBA), as well as hazardous air pollution control residue (APCr), which after treatment can be used in the manufacture of concrete blocks.

2.22 Sectors producing manufactured aggregate expressed support for the levy arguing that it has an important role in enabling materials that would otherwise be landfilled to compete in the aggregate market, and in doing so reducing raw material extraction. They argued that, while supplies of manufactured aggregate from some sources are reducing, supplies of IBA aggregate are growing as the UK continues to move away from landfill and reliance on overseas energy from waste facilities. The Environmental Services Association (ESA), representing the waste management sector, commented

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\(^4\) Directive 2008/98/EC

Note: the UK left the EU on 31 January 2020, and has now entered a transition period until the end of 2020.
that challenges faced for IBA aggregate in competing with primary aggregate include: being classified as a ‘waste’ rather than a ‘recycled’ product; ensuring waste producers and processors can follow the waste hierarchy; and needing long-term investment in reprocessing facilities. They argued that without the levy or some alternative mechanism to encourage use of IBA aggregate, the market for this product would be severely damaged.

Aggregate material arising incidentally

2.23 There are a number of exemptions under the levy for material arising as a consequence of activities that are not for the purpose of extracting aggregate or other minerals. This includes material wholly won in the course of building works, as a result of dredging watercourses and harbours, and along the line of a road or railway, as well as material that consists wholly or mainly of oil industry drill-cuttings, or of anything arising from works carried out below the public highway under powers conferred upon utility companies.

2.24 Aggregate industry stakeholders were broadly content that that the existing exemptions in this group are aligned with the levy’s objective to encourage the use of secondary aggregates. However, some expressed concern that rather than just reusing material that arose incidentally in the course of necessary excavations, construction companies were excavating borrow pits specifically for the purpose of extracting aggregate for use in their projects, and that tax was not being paid on this aggregate. This is discussed in section ‘Aggregate arising on construction sites’ of Chapter 4.

2.25 The UK Water Indirect Tax Group, representing water and wastewater companies, requested that the government exempt all material extracted when laying underground utility pipes. The government consulted on this matter in 2016, concluding that the case for introducing an exemption for spoil arising from works conducted outside the highway was not strong enough at that time\(^5\). In their representation to the review, UK Water Indirect Tax Group requested that this conclusion was reconsidered, arguing that exempting this material would correct an anomaly in the law and put the treatment of such works on a similar footing to the constructions of buildings, railways and roads.

Spoil, waste and by-product from other extractive industries

2.26 Material that consists wholly of spoil from the separation of coal, lignite, slate or specified industrial minerals from the rock from which they are won, is exempt from the levy. In practice, since the exemption only applies to separation after extraction, in the case of coal or lignite this would only be likely to apply in the case of deep, rather than open cast, mining. Spoil from slate occurs at every stage of the production process, not just after

extraction. For the most part this spoil will also be slate, so in practice the exemption for slate discussed in the ‘Exempt materials’ section of this chapter is more relevant to this material.

2.27 In the case of china clay or ball clay, unlike other industrial minerals, it is not just the spoil from separation after extraction that is exempted. The exemption includes waste, spoil or by-product, not including overburden, that arises from extraction. In the case of china clay this includes stent from the blasting of the rock bearing the china clay and tip sand from processing, while ball clay is interbedded with sand.

2.28 Stakeholders associated with the china clay industry suggested that the exemption has been effective in encouraging the use of waste and by-product for aggregate purposes, shifting demand away from virgin aggregate in south-west England. The local market is limited but some aggregate by-product from china clay is now sold into the south-east England market using rail connections.

2.29 These stakeholders argued if the exemption for china clay by-products was removed, sales of this material would be lost and the waste would have to be tipped, as had happened historically; since under council policy no new tipping sites would be approved, the stakeholders said the waste would have to be placed within working pits. They argued that this would increase handling costs and could sterilise reserves, making Cornish china clay less competitive in the global market and damaging the local economy. They further argued that the aggregate that arises when extracting china clay has to be extracted in any case to get to the china clay, and that not using this resource would be inefficient and a waste of energy. A producer of ball clay similarly made the case that sand layers need to be removed to access the clay and that this supplies the local concrete market.

2.30 A north Wales slate producer expressed the view that the exemptions that applied to slate spoil were crucial in enabling them to compete with overseas producers operating in lower cost environments. The manufacture of slate roofing and other architectural products creates a significant volume of by-product which can be used as decorative aggregate, or as low-quality fill. They added that charging the levy on this material would increase the costs accruing to the manufacture of the roofing slate, thereby reducing sales, creating disposal issues and threatening the future of an important local industry.

2.31 No representations were received specifically in relation to spoil from the separation of industrial minerals, other than for china clay, ball clay or slate. Other stakeholders recognised that the levy had encouraged the use of these secondary aggregates and led to a local reduction in primary aggregate extraction. However, not all saw this as a good thing. The BAA suggested that the commercial advantage afforded to producers of such exempt aggregates enable them to deliver to a far wider radius than their taxed competitors. They suggested that this results in a significant increase in emissions due to the consequential increase in delivery vehicle road miles, and an escalation of energy consumption within quarries producing levy-applicable aggregate due to the consequent increase in stockpiling.
The BAA further suggested that aggregate extraction results in the production of lower value by-product, and that the market distortion resulting from the exemptions for secondary materials displaces demand from these taxable by-products. They argued that the resulting accumulation of stockpiles of unsold aggregate sterilises reserves because the rock they sit on cannot be accessed and leads to an increase in energy consumption as a result of re-handling requirements. However, other stakeholders argued that china clay and slate roofing tiles are a special case, because by-product represents such an unavoidably high proportion of the material extracted. In the case of china clay this is said to represent only around 11 percent of the material extracted, with a further 22 percent being sand and 7 percent rock aggregate, while less than 5 percent of slate extracted is suitable for roofing tiles.

Non-aggregate use

The levy is intended to apply to rock, sand and gravel used for its bulk properties. For this reason, certain descriptions of material that are extracted for other purposes are exempt from the levy. Similarly, certain materials that undergo specified exempt processes are not aggregate for the purposes of the levy, while a credit can be claimed on rock, sand and gravel used in prescribed industrial and agricultural processes so that no levy is paid.

The MPA suggested that the scope of the levy should not be widened to a broader minerals tax by the inclusion of such non-aggregate use, while the BAA objected to their industry being singled out for taxation when other minerals producers were not.

Exempt materials

Material that is wholly or mainly coal, lignite or slate is exempt from the levy. Until 2014 this also applied to shale, which is now the subject of an exempt process, see the ‘Exempt processes’ section below. Slate is discussed in the ‘Spoil, waste and by-product from other extractive industries’ section earlier in this chapter. While technically rock, coal and lignite are energy products and therefore subject to other taxation regimes.

Material that is wholly or mainly clay, soil or other vegetable matter is also exempt from the levy, to prevent any stones contained within from being taxable. In addition to being a raw material in ceramics, clay is used to provide an impermeable layer for instance in capping waste sites or lining ponds.

The British Ceramic Confederation (BCC), representing all sectors of the ceramic industry, expressed the view that while their members source clay from their own quarries their primary business is ceramic manufacturing, not aggregate extraction. Use of clay in ceramic or refractory processes would in any case be eligible for industrial processes relief, as explained in section ‘Industrial and agricultural processes reliefs’ later in this chapter.
2.38 The BAA suggested that the environmental impact of extracting clay and slate for use as aggregate was the same as for other building materials. The BCC suggested that ceramic producers are reliant on virgin clay and that there is no substitute material.

2.39 BCC highlighted that clay brick imports have risen substantially in recent years and suggested that taxing clay used in ceramic construction products would further encourage these imports. BCC also noted that bricks and other clay-based materials compete with a wide variety of construction materials including concrete and glass, steel, plastic and timber.

2.40 The BCC stated that ceramic manufacturers had not, in general, made use of the exemption for clay to supply by-product materials for use as fill. The BAA asserted that both slate and clay are extracted within many sites throughout the UK primarily for aggregate purposes, and that the volumes are significant and cause extensive market distortion.

Exempt processes

2.41 Rock, sand and gravel used in an exempt process is not aggregate to the extent that it forms part of the intended product of that process. Exempt processes include the production of lime and cement, the cutting of dimension stone, and the winning of prescribed industrial minerals (see Annex B). Since 2014 it has also included uses of shale other than in prescribed applications, so that, for instance, shale used in brick manufacture is not taxable.

2.42 The BAA questioned the exemption of cement from the tax, citing CO2 emissions. The MPA suggested that extending the tax to extracted materials used for cement and lime manufacture would have no impact on the choice of materials used and would just affect costs, as there are no alternatives. The Mining Association of the UK, representing non-energy industrial mineral underground companies, similarly requested that the exemption for industrial minerals remains unchanged.

Industrial and agricultural processes reliefs

2.43 Rock, sand and gravel qualifies for relief when used in prescribed industrial and agricultural processes. Thirty-eight industrial processes and seven agricultural processes qualify for relief, for example silica sand used in glass manufacture or producing agricultural lime. See Annex C for a full list of prescribed industrial and agricultural processes.

2.44 In some cases, the material used in these processes is produced to a very precise specification, for instance in the different uses of silica sand. However, because of the difficulty of defining precisely what constitutes silica sand, it is simpler to relieve the uses to which it is put than to exempt the material.

2.45 The review considered the justification for industrial and agricultural reliefs in relation to the objectives. The MPA, representing suppliers of the materials
used in these processes, suggested that the scope of the levy should not be widened to include these materials. They referred to the broader market impacts if the reliefs for industrial and agricultural processes were to be removed, arguing this would make the raw materials for the products listed more expensive and affect international competitiveness.

2.46 Because of the range of industrial and agricultural reliefs, and the variety of industries concerned, the review did not specifically seek representations on each individual relief. However, the government did receive representations from British Glass, representing the glass industry, arguing that the industrial process relief for the manufacture of glass and glass products is important in enabling their products to compete in competitive global markets. They argued that the glass industry is already encouraged to recycle through other policies and is sensitive to additional costs which could result in reduced international competitiveness and carbon leakage.

2.47 The BCC similarly highlighted the importance of the existing exemptions and reliefs in ensuring ceramic manufacturers can compete on a level playing field with global competitors. This includes the industrial process relief for any aggregate material used in ceramic and refractory processes.

2.48 The National Farmers’ Union, representing the farming industry, suggested that a further agricultural process relief should be introduced for aggregate material used for cattle paths and watercress beds. Separate to this review, HMRC has received requests that the agricultural process relief for sand used as animal bedding on farms should be extended to stud farms, zoos and safari parks.

**Rate of the levy**

2.49 The rate is currently £2 per tonne. When introduced, the rate was set at £1.60 per tonne, which was increased to £1.95 per tonne in 2008 and £2.00 per tonne in 2009. The rate has remained frozen since 2009. Budget 2020 confirmed a further freeze in the rate of the levy, bringing the cumulative saving to quarries to 78p per tonne of aggregate.

2.50 Several stakeholders commented on the rate of the levy. In part, views on the rate were informed by views on the environmental impact of quarrying. While some felt that the environmental impacts of quarrying were less than £2 a tonne, and that the rate should be decreased, others felt that the impact was greater, and therefore the rate should be increased.

2.51 Views on the levy’s rate were also informed by views on the objective of recycling; some thought that the rate was too low and that the benefits of the levy would be enhanced if government increased the levy. One environmental stakeholder called for the rate of the levy to be increased, arguing for the additional benefits it could catalyse in terms of supporting environmental net gain and reducing carbon emissions, as well as additional mitigation for communities and environments adversely affected by quarrying.
2.52 The BAA argued that the levy represents a disproportionate burden on low value aggregate. Northern Ireland stakeholders, in particular the Mineral Products Association Northern Ireland (MPANI), representing Northern Ireland’s quarrying industry, called for a significant reduction in the levy to a rate which they argued would better reflect the low market price of aggregate in Northern Ireland.

2.53 Northern Ireland stakeholders also called for a scheme similar to the Aggregates Levy Credit Scheme which ran in Northern Ireland from 2004 to 2010, whereby quarries could pay a reduced rate of levy in return for agreeing to environmental improvements.

2.54 One Northern Ireland environmental stakeholder suggested that up-to-date modelling is required to take account of market prices and set the levy at the optimum level. They suggested that it is necessary to identify the threshold above which re-use and recycling will be incentivised, and that setting the rate below this critical threshold must be prevented.

Aggregates Levy Fund

2.55 Although not a focus of this review, around half of written representations made to the review expressed support for the introduction of a fund specifically linked to aggregates extraction.

2.56 An Aggregates Levy Sustainability Fund (ALSF) ran from 2002-2011 in England, and 2002-2017 in Wales. Its core objectives on introduction were to: minimise demand for primary aggregates; promote environmentally friendly aggregates extraction and transportation; and reduce the local effects of aggregates extraction6. The value of the ALSF varied but was set at £29.3m in England in 2002-03 and 2003-04. In England, funds were distributed through: the Countryside Agency; English Heritage; English Nature; WRAP; DTI’s Construction Innovation and Research Management Programme; DTLR’s Planning Research programme; Clean Up programme; and Freight Facilities Grant.

2.57 Stakeholders suggested a range of activities a fund could be focussed on, including: providing funding for projects to benefit local quarrying communities; delivering environmental benefits like achieving biodiversity net gain and geodiversity protection; and educating local communities on quarrying activities. The majority of those supporting the introduction of a fund suggested a fund should have both community and environmental aims.

2.58 Some stakeholders suggested a fund should be used in part for research into: reducing environmental impacts of quarrying; improving spatial planning for restoration of landscape scale restoration; and measuring the public benefit of flood amelioration, recreational access, and landscape amenity values. One stakeholder added a fund could be used for research into carbon emission reduction. The British Marine Aggregate Producers

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6 In 2005, the third objective was revised to “address the environmental impacts of past aggregates extraction” and a fourth objective was added “compensate local communities for the impacts of aggregates extraction”.
Association (BMAPA), representing the marine aggregate dredging industry, commented that the ALSF had provided an opportunity to think strategically across the industry.

2.59 Several representations made to the review, including those made by large industry trade bodies, expressed support for government to increase its funding of the mineral planning system. The British Geological Survey expressed support for the return of the Annual Mineral Raised Inquiry (AMRI). AMRI was an annual comprehensive set of statistics on the production of a wide range of minerals, across Great Britain. AMRI was last published in 2014 but was used by local authorities and the quarrying industry to inform decisions around mineral planning. The working group voiced support for the return of the survey, arguing it was a useful source of data. The reintroduction of AMRI was also specifically suggested by an environmental organisation in their written representation.

2.60 Stakeholder views on the size of a fund varied, with suggestions ranging from 2.5 percent of levy revenues, 10 percent of levy revenues, with one environmental stakeholder arguing that 100 percent of levy revenues should be invested in remediation and environmental improvement.

**Government response**

2.61 The UK government’s environmental objectives for England are set out in its 25 Year Environment Plan. Goal 5 of this plan is ‘using resources from nature more sustainably and efficiently’, while goal 8 seeks to minimise waste.

2.62 The UK government’s Resources and Waste Strategy for England sets out that the government will aim to minimise waste, promote resource efficiency and move towards a circular economy. This will be achieved by prolonging the lives of the materials and goods that we use, and by moving society away from the inefficient ‘linear’ economic model of ‘take, make, use, throw’, while minimising damage to our natural environment.

2.63 In Scotland, the Scottish Government published in 2016 its circular economy strategy, “Making Things Last”. This laid the foundations for action by setting out a vision and priorities for action to move towards a more circular economy. This means minimising the population’s demand on primary resources and maximising the re-use, recycling and recovery of resources, rather than treating them as waste.

2.64 In Wales, the Welsh Government’s Natural Resources Policy includes a key priority to move towards a more circular economy in Wales, where raw materials are kept in productive use for longer in order to significantly reduce the impact on natural resources. Like the UK government’s Resources and Waste strategy, the new Circular Economy Strategy for Wales, ‘Beyond Recycling’, sets out that the Welsh Government will aim to minimise waste, promote resource efficiency and move towards a circular economy.

2.65 In Northern Ireland, the current Waste Management Strategy “Delivering Resource Efficiency” focuses on waste prevention, including re-use, preparing for re-use and recycling. This strategy moved the emphasis of
waste management in Northern Ireland from resource management to resource efficiency, using resources in the most efficient way while minimising the impact of their use on the environment. The strategy promotes a move towards a circular economy by keeping materials in use for as long as possible in order to reduce the pressure on natural resources.

2.66 The UK Government recognises that it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the nations need. They make an essential contribution to the country’s prosperity and quality of life. The Minerals Planning Policy, set out in the National Planning Policy Framework seeks to ensure a steady, adequate and sustainable supply of mineral products;

- ensuring mineral development plans do not have unacceptable adverse impacts on the natural and historic environment or human health;
- taking account of the contribution that substitute or secondary and recycled materials and minerals waste can make;
- safeguarding mineral resources of local and national importance for future use from needless sterilisation;
- ensuring high quality restoration and aftercare, including the creation of new habitats and biodiversity.

2.67 The Scottish Government recognises that minerals make an important contribution to the economy, providing materials for construction, energy supply and other uses, and supporting employment. Scottish Planning Policy recognises that minerals will be required as construction materials to support the ambition for diversification of the energy mix, and that planning should safeguard mineral resources and facilitate their responsible use. Scottish Planning Policy also sets out the that the planning system should promote developments that minimise the unnecessary use of primary materials and promote efficient use of secondary materials.

2.68 Similar national planning policy objectives exist in Wales and these are principally set out in Planning Policy Wales which, in particular, advocates a preference for the use of secondary and recycled aggregates.

2.69 In Northern Ireland, strategic planning policy for minerals is set out in the Strategic Planning Policy Statement (SPPS). In this regard, a regional strategic objective is to facilitate sustainable minerals development through balancing the need for specific minerals development proposals against the need to safeguard the environment. The SPPS references the Sustainable Development Strategy which advocates the greater use of recycled building rubble in construction so as to reduce the depletion of natural resources and to limit transportation of such minerals.

2.70 The government believes that a distinction can and should be drawn between the deliberate extraction of primary aggregates and extraction of secondary aggregates as an unavoidable incidental consequence of other works.
2.71 The government is committed to signalling the environmental benefits of recycled aggregate use. Following the introduction of the Aggregates Levy, and along with other measures and factors, the trend for increasing rates of aggregate recycling continued. And, at around 29 percent, the share of recycled and secondary aggregates in total UK aggregate sales now is higher than any country in Europe.

2.72 Given that primary aggregate is a finite resource, having a price signal by way of the levy is in keeping with, and contributes to, the government’s environmental objectives set out above. Having this price signal and structuring the tax to exclude recycled and secondary aggregates encourages the more efficient extraction and use of all aggregates.

2.73 The government concludes that the Aggregates Levy continues to play a role in achieving the government’s wider environmental and mineral planning objectives.

2.74 The government also uses a range of other policy levers to help meet its climate change and emission reduction objectives.

2.75 The government acknowledges the improvements the quarrying industry has made to its environmental credentials since the levy’s introduction, a success of both government regulation and industry-led initiatives. For example, the government recognises the quarrying industry as well placed to deliver biodiversity net gain, with quarries and their wider estates often providing habitats for wildlife both during and after operation. The government encourages the quarrying industry to continue its efforts to ensure its operations maintain high environmental standards.

2.76 The introduction of a fund, like the Aggregates Levy Sustainability Fund, was not the focus of this review. However, the government has noted the representations made on this issue and will consider these going forward as part of its usual consideration of spending and tax policy. Likewise, the government has noted representations made to the review which covered the rate of the levy. As with all taxes, these will be considered as part of the usual Budget process.

2.77 The government recognises that an adequate supply of minerals and construction products is essential for economic growth, which is why the government is exploring new ways of collecting minerals data to support its mineral planning objectives, including investigation by the ONS Data Science Campus of complementary Big Data sources.

2.78 The government recognises the apparent anomaly that some uses of rock, sand and qualify for relief when this use is for an agricultural purpose but not in analogous non-agricultural purposes relating to, for instance, animal welfare or habitat restoration. The government therefore invites representations from stakeholders in respect of processes that fall within the descriptions in Codes 39 to 45 of Annex C but which are not currently eligible for relief because the purpose they are put to is not agricultural.

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2.79 The industry’s view that some reliefs may be open to abuse is covered further in Chapter 4 ‘Operation of the levy’.
Chapter 3

Cross Border and Devolution

Levy on imports and relief on export

3.1 Aggregate imported into the UK is subject to the levy when it is used in construction, supplied or mixed, in the same way as UK-produced aggregate. Imported products containing aggregate, such as concrete blocks, are not subject to the levy, so the aggregate contained in these processed products is not taxed. Aggregate is fully relieved if it is exported from the UK in the form of aggregate, although the aggregate content of processed products is not relieved if it is exported from the UK.

Impact on Northern Ireland

3.2 MPANI suggested that because of Northern Ireland’s unique circumstances, the levy has had a disproportionate impact on the quarrying industry there. MPANI highlighted that 75 percent of Northern Ireland’s land area lies within 20 miles of the 300-mile-long border with Ireland, and that a disproportionately large proportion of overall UK aggregate supply and levy revenue comes from Northern Ireland. A Northern Ireland environmental stakeholder also highlighted this, arguing that a significant proportion of levy revenue should, therefore, be used for remediation and environmental purposes, as well as for increased levy compliance, in Northern Ireland. Stakeholder views on repurposing levy revenues are further explored in the section ‘Aggregates Levy Fund’ in Chapter 2.

3.3 MPANI highlighted that the lower sale price of aggregate in Northern Ireland compared with the rest of the UK, means that the impact of the levy is disproportionately greater in Northern Ireland, and the tax rate should therefore be lowered. However, a Northern Ireland environmental stakeholder suggested that the levy rate should instead be set at a level to encourage recycling. Stakeholder views on the levy’s rate are further explored in the ‘Rate of the levy’ section of Chapter 2.

3.4 In recognition of the unique circumstances in Northern Ireland, the government previously introduced relief schemes providing operators with tax credits. The Aggregates Levy Credit Scheme (ALCS) gave Northern Ireland operators access to an 80 percent discount on the levy in return for making environmental improvements to their operations. However, following legal action against the government, State Aid approval for the scheme was withdrawn in 2010, and the scheme was ended.
Northern Ireland stakeholders, including MPANI, reported anecdotally higher incidence of non-compliance with the levy in Northern Ireland, and suggested the land border with Ireland creates more opportunity for tax evasion in the form of undeclared imports in Northern Ireland than elsewhere in the UK. MPANI, alongside others, called for the publication of a public register of levy-registered operators, arguing that this would greatly improve transparency and would enable better identification and reporting of potential tax evasion. The issue of tax compliance is explored further in Chapter 4 ‘Operation of the levy’.

Concrete imports were also highlighted as a concern by MPANI (see section ‘Imports of aggregates contained in other products’ in this chapter for further detail), along with non-commercial imports from Ireland that are not subject to the levy.

Devolution

The Smith Commission report in 2014 set out that, once the then existing legal issues in relation to the Aggregates Levy had been resolved, the power to charge tax on the commercial exploitation of aggregate in Scotland would be devolved to the Scottish Parliament.

The Scotland Act 2016 (Section 18) provides for the devolution of the levy to the Scottish Parliament. Under the legislation, once the provision has been commenced, movements of aggregate from the rest of the UK to Scotland would be relieved from the Aggregates Levy, while movements from Scotland into the rest of the UK would become subject to the Aggregates Levy on the same basis as imports.

The Silk Commission in 2013 recommended that the Aggregates Levy should also be devolved to the National Assembly for Wales, subject to the outcome of discussions between the UK government and the EU Commission on State Aid issues. In its response the UK government said it would keep the devolution of the levy to the National Assembly for Wales under review, with the intention of devolving in the future subject to State Aid issues and working through any ‘cross-border’ market distortions. The litigation pertaining to State Aid was concluded in early 2019.

During the review, several stakeholders, and all Scottish industry stakeholders, expressed concerns about the implications of there being different levies on aggregates in Scotland and the rest of the UK in the future, and about potential devolution to the National Assembly for Wales. Stakeholders referred to the existing issues around compliance and competition that businesses in Northern Ireland face because of the border with Ireland. Those stakeholders who expressed a view were consistent in their desire for the structure of the Aggregates Levy and the Scottish levy on aggregates to remain closely aligned, calling for maximum consistency of the design and rate of the taxes following devolution.
Imports of aggregates contained in other products

3.11 Some stakeholders argued that the levy affects the international competitiveness of concrete products, and in the case of Northern Ireland, of ready mixed concrete and asphalt. Whereas aggregate that goes into UK-produced products has the levy applied to it, the aggregate content of imports from outside the UK is not taxed.

3.12 Concrete products include concrete blocks, pipes and tiles, as well as precast concrete building components, which are cast in a mould and transported to construction sites to be lifted into place rather than being poured and cured on site. According to MPA’s representation using the government’s Monthly Bulletin of Building Materials and Components\(^1\), since the introduction of the levy, trade in concrete products has moved from a surplus to a deficit. MPA argue that, while it is not clear to what extent this can be attributed to the levy, UK businesses face taxes that are not applied to imports and this will inevitably damage the UK industry’s competitiveness. Therefore, to remove the potential for market distortion the MPA asked for the levy to be applied to the aggregate content of concrete imports.

3.13 MPANI expressed concern that customers in Northern Ireland were buying not just concrete products but also ready-mix concrete and asphalt from companies in Ireland, and that Northern Ireland operators were unable to compete with these “levy free” imports. Furthermore, MPANI argued that an operator extracting stone in Northern Ireland could avoid the levy by exporting it a few miles over the border for use in the manufacture of concrete or asphalt, and then importing these products back into the UK.

3.14 Some stakeholders were concerned that similar issues could arise between England and Scotland when the levy is devolved to Scotland.

Government response

3.15 The UK government is committed to devolving the levy to the Scottish Parliament and will continue to work closely with the Scottish Government to set a timetable for devolution, now that the litigation on the levy has concluded, and following the publication of these next steps to the levy review. It will be for the Scottish Government to make its own arrangements with regard to the design and collection of any replacement tax.

3.16 The UK government engaged widely with stakeholders to consider how it might minimise the risk of double taxation and any risk of unintended consequences, such as market distortions around the border. As part of this, the UK government held a roundtable discussion with industry stakeholders in Edinburgh during the review which representatives of the Scottish Government and Revenue Scotland attended.

3.17 The UK government has said that it would keep the devolution of the levy to the National Assembly for Wales under review with the intention of devolving in the future, subject to the agreement of both governments and

legislatures. Potential ‘cross-border’ impacts are a particular concern because of the proximity of sources of aggregate on both sides of the border to major centres of population on the other. This would therefore be subject to ‘cross-border’ impacts being worked through in full through engagement with affected parties. The government’s primary concern is ensuring the best outcome for businesses and consumers on both sides of the border.

3.18 The government will engage with industry on imported construction products to establish whether market distortion is occurring, and whether it would be feasible to tax the aggregate content of such products. This is in recognition of some stakeholders, including those in Northern Ireland, raising concerns that imports of processed products result in unfair competition for domestically produced processed products, and that the movement of processed products across the UK could be a potential issue under devolution of the levy.
Chapter 4
Operation of the levy

Concerns over non-compliance

4.1 The MPA, MPA Scotland and MPANI said that Aggregates Levy legislation and guidance is generally well understood within the industry and operates reasonably effectively. But they said they had concerns about the enforcement of Aggregates Levy legislation in relation to some temporary and less regulated aggregates extraction activities. The BAA felt that HMRC had failed to properly enforce non-compliance by rogue operators, saying this had caused huge damage to the industry.

4.2 Both the MPA and BAA said that evasion of the levy, even on a small scale, can have significant, harmful impacts for legitimate operators in the local market. One environmental stakeholder expressed concern that an unintended consequence of the levy could be to encourage criminality and rogue operators and called for more resource to crack down on evasion.

Misdescription of aggregate

4.3 The British Geological Survey said that there were no precise geological definitions of some terms in Aggregates Levy legislation, such as “slate”, “shale” and “clay”. Several stakeholders expressed the view that materials whose liability to the levy is different can be difficult to distinguish from one another. They suggested that definitions needed to be clearer to avoid misdescription of material either mistakenly or deliberately to gain an advantage.

4.4 Concerns were also raised by stakeholders within the quarrying sector that a significant proportion of ‘recycled’ aggregate may actually be wholly or partly virgin aggregate on which levy should be due. A number of bodies have required their contractors to use a certain percentage of recycled aggregate, but some stakeholders suggested that either cost or lack of supply has caused some suppliers to add virgin aggregate to recycled or vice versa. The BAA suggested that misreporting of primary aggregate as recycled occurs in the recycled aggregate sector.

Unregistered quarrying sites

4.5 Several stakeholders suggested that illegal “pop-up” extraction sites not registered for the levy were an issue. This concern was raised by Northern
Irish and Scottish stakeholders in particular. These pop-up sites could occur anywhere, but the MPA noted there is anecdotal evidence that the exemption that allows farm and forestry businesses to extract and use unmixed aggregate on their own land is being abused in this respect. One stakeholder said: “We are constantly competing with farmers creating their own borrow pits and hiring in plant to create a few thousand tons of subbase. They then sell this on locally and deliver by tractor and trailer.”

4.6 Stakeholders felt that where the levy rate made up a greater proportion of the selling price of aggregate, such as in Northern Ireland and rural areas of the rest of the UK, non-compliance was more prevalent.

Aggregate arising on construction sites

4.7 As explained in section ‘Aggregate material arising incidentally’ of Chapter 2, material unavoidably removed from the ground to build roads, railways and foundations is exempt from the levy to encourage its use. In the case of roads and railways, the material must be removed from along the line of the road or the railway to qualify for exemption. In addition to these exemptions, the levy does not have to be paid on aggregate that is returned, unmixed, to the land at the site from which it was originally removed. Case law has established that this can apply to civil engineering projects when aggregate from nearby “borrow pits” – temporary extraction sites created for a specific construction purpose – is used unmixed on the construction site. This is because the borrow pit and the construction site are deemed to be part of a single, large site.

4.8 Many stakeholders raised concerns over compliance in relation to exemptions relating to construction activity. While the principle of exempting material unavoidably removed from the ground during the course of construction works was accepted, there was widespread concern over the enforcement of these exemptions. Many stakeholders within the aggregates industry said that aggregate from borrow pits was avoiding the levy unfairly by being deemed to be part of the construction site, when in fact it was located some distance away from the works. They called for a review of case law to identify areas where guidance or legislation could be changed to reduce levy avoidance and evasion in these areas.

4.9 Construction industry stakeholders said that making a judgement on the location of borrow pits with levy liability in mind is a recurring problem for construction companies, and that they would welcome clearer guidance.

4.10 Both industry and environmental stakeholders had concerns that borrow pits and pop-up sites had lower standards, or no standards, of environmental management, and minimal commitment to site restoration compared with legitimate quarrying sites.
Undeclared imports

4.11 As mentioned in Chapter 3, the levy is due on imported aggregate when it is supplied or used commercially in the UK. However, stakeholders in Northern Ireland highlighted the border with Ireland as a concern, providing an opportunity for undeclared imports of aggregate. In addition, stakeholders suggested that concrete products containing aggregates can be invoiced from an address just across the border in Ireland, rather than from the real manufacturing site in Northern Ireland, thereby evading the levy.

Public register

4.12 Northern Ireland stakeholders, including MPANI, suggested that illegal sites were a particular issue in Northern Ireland, both from a commercial and environmental point of view. They, along with the MPA and MPA Scotland, suggested publishing a list of businesses registered to pay the levy along with their operating sites. They felt this would benefit the quarrying industry by assisting aggregate customers with ensuring they purchased aggregate from legitimate suppliers. Additionally, they suggested that a register could help legitimate aggregate businesses to identify incidences of non-compliance to report to HMRC.

Industry regulation

4.13 The MPA suggested that improvements in regulation and the enforcement of regulation by other regulatory bodies concerned with mineral extraction and environmental protection was also needed to support compliance with the levy. They proposed using a proportion of levy revenues to improve the capacity of these bodies. They also proposed introducing or encouraging a requirement that every UK public and private sector construction client includes within their sustainable procurement policies a requirement that all aggregate supplies being used on their projects must come from an Aggregates Levy registered source.

Cross Tax View

4.14 The MPA also suggested closer collaboration and communications between HMRC teams covering the levy, VAT, the construction sector and other environmental taxes.

Government response

4.15 The government notes that the MPA considers there is a high level of compliance and that collection of the levy is relatively efficient. It also notes MPA’s and BAA’s concerns that even relatively low scale non-compliance can have severe impacts on local markets. There are particular areas of concern with the enforcement of compliance with the levy but, in general, the
majority of stakeholders felt the legislation and guidance were broadly satisfactory.

4.16 HMRC seeks to design and administer taxes that can be collected at minimal cost to taxpayers and the exchequer, in a way that engages the trust of those paying the tax. HMRC aims to promote compliance and prevent non-compliance as early as possible in its relationship with individuals and businesses, while responding appropriately to non-compliance.

4.17 In practice, HMRC’s strategy means designing compliance into the tax system, supporting the honest majority, and tackling the dishonest few who try to bend or break the rules. HMRC:

• promotes compliance by designing it into systems and processes, helping taxpayers get things right from the very start

• prevents non-compliance by using its data to spot mistakes, personalise services and support, block fraudulent claims, and automate calculations

• responds by identifying and targeting the areas where there may be tax risk – and where appropriate using tough measures to tackle those who deliberately try to cheat the system

4.18 HMRC adopts a customer-centric approach, looking across all tax regimes.

4.19 Throughout the review, the government has requested evidence of abuse from stakeholders to ascertain where such activity is occurring and whether this is a widespread issue and continues to welcome such evidence. Instances of suspected tax evasion can be reported to HMRC on-line, by phone or by post1.

4.20 In the absence of further evidence it is unclear whether concerns relating to substantive abuse of the exemptions for slate and clay raised in section ‘Exempt materials’ of Chapter 2 are well-founded, and if so whether the problem of untaxed aggregate arises rather from lack of clarity as to what the legislation intends by slate or clay, or indeed deliberate misdescription of the material being sold. The government would welcome further evidence and will continue to work with industry to keep this issue under review.

4.21 The government recognises that aggregate arising on construction sites has the potential to result in unjustified market distortion. In response to these concerns raised during this review, HMRC will consult on the tax treatment of aggregate removed during construction works. The consultation will focus on two issues. Firstly, on exemptions under the levy for aggregate that arises as a consequence of activities that are not for the purpose of extracting aggregate or other minerals. Secondly, on the exclusion for material returned to the land at which it was won, in order to determine whether these need to be clarified or amended to prevent abuse.

4.22 HMRC will publish a public register of businesses and sites registered for the levy. The government agrees with representations made during the review that this could be a useful tool in tackling non-compliance.

1 https://www.gov.uk/government/organisations/hm-revenue-customs/contact/reporting-tax-evasion
Annex A

List of contributors to the review

- Ballast Phoenix
- Bridgend Aggregates Ltd
- British Aggregates Association
- British Ceramic Confederation
- British Marine Aggregates Producers Association
- British Glass
- British Institute of Geological Conservation
- Brookland Sand and Aggregates Ltd
- Campaign for National Parks
- Campaign for the Protection of Rural England
- CBI Minerals Group
- Cory Riverside Energy
- Creagh Concrete
- Day Group Ltd
- Department of Finance, Northern Ireland
- Derbyshire County Council
- Derbyshire Environmental Trust
- Energy UK
- English Geodiversity Forum
- Environmental Services Association
- GeoConservation UK
- Goonvean Aggregates
- Imerys
- International Small Businesses Alliance
- J&J Franks
- KPMG
- Mineral Products Association
- Mineral Products Association Northern Ireland
- Mineral Products Association Scotland
- Mining Association of the UK
- National Farmers’ Union
- Northern Ireland Environment Link
- Ocean Blocks and Aggregates Ltd
- RJ Mitten & Sons
- Robinson Quarry Masters Ltd
- Royal Society for the Protection of Birds
- Sibelco
- South West Aggregates Working Party
- Tarmac
- UK Water Indirect Tax Group
- Welsh Slate (part of the Breedon Group)
Annex B

Industrial minerals

The following minerals are not subject to Aggregates Levy:

- Anhydrite
- Ball clay
- Barytes
- China clay
- Feldspar
- Fireclay
- Fluorspar
- Fullers earth
- Gems and semi-precious stones
- Gypsum
- Metal ore
- Muscovite
- Perlite
- Potash
- Pumice
- Rock phosphate
- Sodium chloride
- Talc
- Vermiculite
Annex C

Prescribed industrial and agricultural processes

A tax credit against Aggregates Levy can be claimed on rock, sand and gravel used in the following processes.

Industrial processes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Iron, steel and non-ferrous metal manufacture and smelting processing, including foundry processes, investment casting, sinter plants and wire drawing</td>
</tr>
<tr>
<td>002</td>
<td>Alloying</td>
</tr>
<tr>
<td>003</td>
<td>Emission abatement for air, land and water</td>
</tr>
<tr>
<td>004</td>
<td>Drinking water, air, and oil filtration and purification</td>
</tr>
<tr>
<td>005</td>
<td>Sewage treatment</td>
</tr>
<tr>
<td>006</td>
<td>Production of energy</td>
</tr>
<tr>
<td>007</td>
<td>Ceramic processes</td>
</tr>
<tr>
<td>008</td>
<td>Refractory processes</td>
</tr>
<tr>
<td>009</td>
<td>Manufacture of glass and glass products</td>
</tr>
<tr>
<td>010</td>
<td>Manufacture of fibre glass</td>
</tr>
<tr>
<td>011</td>
<td>Manufacture of man-made fibres</td>
</tr>
<tr>
<td>012</td>
<td>Production and processing of food and drink, for example, sugar refining, production of gelatin</td>
</tr>
<tr>
<td>013</td>
<td>Manufacture of plastics, rubber and PVC</td>
</tr>
<tr>
<td>014</td>
<td>Chemical manufacturing, for example, soda ash, sea water magnesia, alumina</td>
</tr>
<tr>
<td>015</td>
<td>Manufacture of precipitated calcium carbonate</td>
</tr>
<tr>
<td>016</td>
<td>Manufacture of pharmaceuticals, bleaches, toiletries and detergents</td>
</tr>
<tr>
<td>017</td>
<td>Aerating processes</td>
</tr>
<tr>
<td>018</td>
<td>Manufacture of fillers for coating, sealants, adhesives, paints, grouts, mastics, putties and other binding or modifying media</td>
</tr>
<tr>
<td>019</td>
<td>Manufacture of pigments, varnishes and inks</td>
</tr>
</tbody>
</table>
020 Production of growing media and line markings for sports pitches and other leisure facilities
021 Incineration
022 Manufacture of desiccant
023 Manufacture of carpet backing, underlay and foam
024 Resin processes
025 Manufacture of lubricant additives
026 Leather tanning
027 Paper manufacture
028 Production of art materials
029 Production of play sand, for example, for children’s sand pits
030 Clay pigeon manufacture
031 Abrasive processes: specialist sand blasting, iron free grinding (pebble mills) and sandpaper manufacture
032 Use as propping agent in oil exploration, for example, fracture sands and drilling fluids
033 Flue gas desulphurisation and flue gas scrubbing
034 Manufacture of mine suppressant
035 Manufacture of fire extinguishers
036 Manufacture of materials used for fireproofing
037 Acid neutralisation
038 Manufacture of friction materials, for example, automotive

Agricultural processes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>039</td>
<td>Manufacture of additives to soil, for example, agricultural lime</td>
</tr>
<tr>
<td>040</td>
<td>Manufacture of animal feeds</td>
</tr>
<tr>
<td>041</td>
<td>Production of animal bedding material</td>
</tr>
<tr>
<td>042</td>
<td>Production of fertiliser</td>
</tr>
<tr>
<td>043</td>
<td>Manufacture of pesticides and herbicides</td>
</tr>
<tr>
<td>044</td>
<td>Production of growing media, including compost, for agricultural and horticultural use</td>
</tr>
<tr>
<td>045</td>
<td>Soil treatment, including mineral enrichment and reduction of acidity</td>
</tr>
</tbody>
</table>