

Minerals Local Plan Review Topic Paper

Forecasting the Need for Mineral Provision in Essex, 2025 – 2040

Report prepared November 2023



Essex County Council

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Topic Paper – Forecasting the Need for Mineral Provision in Essex, 2025 – 2040

Executive Summary

Essex County Council is the Minerals and Waste Planning Authority (MWPA) for the administrative county of Essex. A key role of the MWPA is to ensure that there are enough minerals allocated for extraction to meet the mineral provision methodologies set out in the NPPF¹ as relevant to the area. This process is led through the adoption of a Minerals Local Plan (MLP). The MLP forms part of the Development Plan for all authorities within the administrative county of Essex and provides a framework of policies which govern minerals development in the County. The current MLP was adopted in 2014 and is now being reviewed.

The role of this topic paper is to provide background on the minerals extracted in Essex and assess a quantified future need for each, where possible, within the context of the on-going Minerals Local Plan (MLP) Review. The Review will result in an amended MLP with a revised plan end of 2040.

As well as setting out the approach to the provision of all mineral resources that exist in the Plan area, the MLP includes policies promoting recycling and secondary processing, the safeguarding of resources and facilities, the protection of local amenity from the potential impacts of extraction as well as promoting high-quality site restoration once extraction has ceased. The MLP also allocates sites where mineral extraction is to take place.

In terms of mineral resources, the only aggregate extracted in Essex is sand and gravel. Re-quantifying the provision of sand and gravel to the new MLP end date of 2040 is the main focus of this paper. Within the county, there is also the limited extraction of three industrial minerals, which are silica sand, brick clay and brickearth, and there is also limited chalk extraction. The NPPF sets out provision requirements and methodologies for each of these minerals and these will form the basis for the justification of the proposed provision set out in the relevant sections of this report. Quantified amounts derived from NPPF methodologies are to be considered minimum amounts and the final MLP has to be sufficiently flexible to accommodate fluctuations in the market whilst also not over allocating and making unnecessary allocations. Given the non-qualitative nature of some of the inputs to the methodology, there cannot be a 'correct' plan provision rate in any event, it is instead the case that the plan rate needs to be set appropriately such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of minerals, as justified by evidence.

The population of Essex has increased by 0.76% (average annual growth rate) since the 2011 Census. This makes Essex one of the faster growing areas of the country, with the average annual growth rate in England and Wales being 0.64%. A growing population needs additional housing and supporting development, with the latter providing the services, goods, roads and local job opportunities that communities require. These new homes, and the commercial opportunities and the infrastructure needed to serve them, all require mineral resources in order for them to be able to be delivered. Housing delivery rates in

¹ NPPF Paragraph 213 and Paragraph 214

all local plans in Essex suggest a provision rate of approximately 7,150 per annum compared to the historic rate of 4,753 additional homes per annum averaged across the previous 21 years.

Assessment under the NPPF methodologies for each mineral found that the MWPA is required to make additional provision for sand and gravel, silica sand, brickearth and brick clay. The situation with regard to the chalk reserve is not clear as this is not extracted as an industrial mineral in Essex and therefore has no associated provision methodology. As such, there is no explicit need to make provision for chalk extraction at this time but a policy will need to be put in place through which any potential future application for chalk extraction can be determined.

Two Call for Sites (CfS) were therefore carried out in 2022 to support this process. The purpose of a CfS is for landowners or those instructed on their behalf to submit sites for potential extraction. The potential local impacts of each site are assessed via a transparent site assessment methodology, the results of which can be found in the 'Assessment of Candidate Sand and Gravel Sites, 2022' report. Following further consultation in 2024, sites will be allocated on the basis of their conformity with the site assessment methodology, the quantified need for such sites as set out through this report, and other planning related considerations also set out in this report for context.

Across both Call for Sites, the MWPA received over 50 potential allocations for sand and gravel extraction, of which one also proposed silica sand extraction. No sites proposing the extraction of brick clay, brickearth or chalk were submitted.

Regarding sand and gravel, based on the NPPF methodology, a consideration of other local information and alternative supply options, the MWPA is proposing to implement a plan provision rate of 3.98 million tonnes per annum (mtpa). This is below the current plan provision rate of 4.31mtpa and represents a 20% uplift to the calculated basic ten-year rolling sales figure. This is due to the need for the final plan to be flexible, particularly in light of the forecasted increase in development rates, particularly housing, compared to recent history. When factoring in existing Permitted Reserves (the amount of sand and gravel already permitted for extraction) and the proposal to allocate for an additional seven years of mineral at the end of the Plan period in recognition of the requirement for a minimum sand and gravel landbank of seven years, **the amount of sand and gravel to be found through new allocations is 64.56 million tonnes (mt)**. This figure does not include a quantified reduction to be met by contributions from other sources, primarily because there is no evidence sufficiently robust enough to justify such a reduction. The justification for the approach is also set out in this report.

With the MWPA assessing that there is a potential future need for industrial mineral sites, and given that no candidate sites have been submitted at this time other than for a site with silica sand co-mixed with aggregate sand and gravel, amendments to the future equivalent policy to Policy S7 are proposed. The amendments are to enable industrial mineral sites to come forward off-plan where there is an over-riding justification or benefit, and the application is otherwise in conformity with the Development Plan, unless material considerations indicate otherwise.

It is important to note that making either no or insufficient provision for the quantified mineral need in an emerging Plan despite having suitable options to do so will see that plan being incapable of adoption as it would fail the Tests of Soundness . In the absence of a plan, or where an adopted Plan is being found to under-provide, this could encourage applications for extraction to come forward 'off-plan' due to a demonstrable lack of provision being made in the administrative area. These off-plan applications will be required to be assessed under a tilted balance on the basis that there is insufficient provision for mineral resources being made in the MLP and therefore a demonstrable need for further extraction. It is not the case that making no provision for mineral, or not keeping the Plan up to date, means that mineral will not be extracted in the County.

This report will form the evidence base underpinning the quantified mineral provision set out in the emerging MLP 2040. The plan and its evidence base will then be subjected to Regulation 18 consultation in 2024. Following a consideration of all the responses received, any amendments required to each of the provision methodologies set out in this report will be made and the methodologies re-run. A revised MLP incorporating any revision to the provision figures, and any other changes deemed necessary through the consultation, will then be submitted to a Regulation 19 consultation.

1 Introduction

Background Context

- 1.1 Essex is located to the north-east of London, within the East of England region, and borders the counties of Hertfordshire, Suffolk and Cambridgeshire. The population of the administrative county of Essex^{2,3} in the 2021 Census was 1,503,520 comprising some 626,500 households. The population has increased by 110,020 since the 2011 Census, which translates into a 0.76% average annual growth rate. The average annual growth rate in Essex is above the growth in England and Wales of 0.64%.
- 1.2 The number of households in the county of Essex has increased by 7.7% from 582,000 to 627,000 between 2011 to 2021. By the proposed end of the emerging MLP Plan period in 2040, the Office for National Statistics states that the population in Essex is likely to increase by 13 per cent, or 192,000 people, to 1.65 million. A growing population creates a need to provide more housing and supporting development, with the latter providing the services, goods, roads and local job opportunities that a growing population requires. Local Authorities in Essex are preparing Local Plans to deliver approximately 150,500 additional homes up to 2036 and beyond, equating to approximately 7,150 additional homes per annum. These new homes, and the commercial opportunities and the infrastructure needed to serve them; require mineral resources in order to be able to be built.
- 1.3 Essex County Council is the Minerals and Waste Planning Authority (MWPA) for the administrative county of Essex. A key role of the Essex MWPA is to ensure that there are enough minerals for construction to meet the needs of Essex, a process which is led through the adoption of a Minerals Local Plan (MLP). The MLP forms part of the Development Plan for all authorities within the administrative county of Essex and provides a framework of policies which govern minerals development in the County.
- 1.4 As well as setting out the rate of provision for minerals across the Plan period, the MLP includes policies promoting recycling and secondary processing, the safeguarding of resources and facilities, the protection of local amenity from the potential impacts of extraction as well as promoting high-quality site restoration once extraction has ceased. The MLP also allocates sites where mineral extraction is to take place. The final chapter of the MLP specifies the monitoring framework for the plan. This identifies the extent to which the plan and policies are performing and is reported upon annually within the Essex Authority Monitoring Report (AMR). Collectively, the mineral framework seeks to maximise a sustainable approach to minerals development.
- 1.5 The current MLP was adopted in July 2014 by Essex County Council (ECC) and contains planning policies for minerals development in Essex until 2029. It sets a policy framework within which the best possible use of finite resources can be

² Incorporates the district/ borough/ city administrative areas of Basildon, Braintree, Brentwood, Castle Point, Chelmsford, Colchester, Epping Forest, Harlow, Maldon, Rochford, Tendring and Uttlesford. Excludes unitary authority areas of Southend-on-Sea and Thurrock

³ All references to 'Essex' are to the 'administrative county of Essex' as set out above, unless specifically stated otherwise

made and allocates sites for future mineral extraction and associated development.

- 1.6 Paragraph 33 of the National Planning Policy Framework (NPPF) states (inter-alia) that “Policies in local plans and spatial development strategies should be reviewed to assess whether they need updating at least once every five years and should then be updated as necessary. Reviews should be completed no later than five years from the adoption date of a plan and should take into account changing circumstances affecting the area, or any relevant changes in national policy.” Undertaking a local plan review every five years is a legal requirement for all local plans (Regulation 10A of the Town and Country Planning (Local Planning) (England) (Amendment) Regulations 2017).
- 1.7 By virtue of its adoption in 2014, a Plan Review was initiated in 2019, and in November of that month, ECC published on its website that following a review of the MLP and as a result of early engagement under the Duty to Cooperate⁴, there was indeed scope to review the policies in the MLP, and that a formal plan review would be undertaken.
- 1.8 The role of this topic paper is to provide background on the minerals extracted in Essex and assess their future need within the context of the on-going Minerals Local Plan (MLP) Review. The Review will result in an amended MLP with a revised plan end date of 2040. The minerals extracted in Essex are sand and gravel, silica sand, chalk brick clay and brickearth.
- 1.9 It is important to note that making either no or insufficient provision for the quantified mineral need in an emerging Plan will see that plan being incapable of adoption as it would fail the Tests of Soundness⁵. In the absence of a plan, or where an adopted Plan is being found to under-provide, this could encourage applications for extraction to come forward ‘off-plan’ due to a demonstrable lack of provision being made in the administrative area. These off-plan applications will be required to be assessed under a tilted balance⁶ leaning towards approval on the basis that there is insufficient provision for mineral resources being made in the MLP and therefore there is a demonstrable need for further extraction. An unjustified refusal of an application can see the applicant appeal and have the application be ‘called-in’ by the Planning Inspectorate. At this point, if ECC had been found to have erred in its judgement and not appropriately taken the tilted balance into account, the application could be approved in any event and ECC could be liable to pay the costs of the appeal.
- 1.10 Recognising the length and relative complexity of this report, the MWPA have included summary sections at key sections of the document, as well as a high level conclusion.

⁴ The Duty to Cooperate is a legal requirement on local planning authorities to engage with other relevant authorities and bodies constructively, actively and on an ongoing basis on strategic planning matters.

⁵ [NPPF Paragraph 35 - Tests of Soundness](#)

⁶ Where planning judgement on an application is required to be tilted from being applied neutrally to one where there must be compelling reasons for permission to be withheld.

Progress with the MLP Review including the two Call for Sites Exercises

- 1.11 The MLP review has already been through four public consultation or engagement stages since the decision to publish the need to review the MLP was made in November 2019. The stages that have occurred to date are as follows:
- a consultation (under Regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended)) in March to April 2021
 - an informal engagement on Policy S6 of the Minerals Local Plan in February to March 2022
 - a 'Call for Sites' exercise for new future sand and gravel extraction sites in February to March 2022
 - a 'Call for Sites' exercise for new future sand and gravel extraction sites in September to November 2022.
- 1.12 With respect to mineral provision, the initial conclusions of the MLP Review in 2021 were to not allocate any further mineral sites or amend any mineral plan provision figures. Whilst it was recognised that a further Call for Sites would be required over what was then the Plan period to 2029, it was concluded that the need to initiate a process of new allocations could be based on continued monitoring of the adequacy of current provision as made through the Local Aggregate Assessment (LAA) and/or the issuing of revised guidance from Central Government in relation to provision calculations. It was therefore the intention that the initiation of a Call for Sites would be based on conclusions made through the annual LAA and that this need not be tied to a wider Plan review. Further, it had been the case historically that mineral provision was based on National and Sub-National Guidelines (the 'Guidelines'). The latest set of Guidelines had expired by the point of the Regulation 18 consultation in 2021 and with the Government setting out their intention to replace these Guidelines, the pragmatic approach was considered to be to wait for these revised Guidelines to be put in place rather than modify plan provision back in 2021 and subsequently make allocations on the basis of a methodology that might change with the release of new Guidelines.
- 1.13 This stance was tested through Regulation 18 in 2021 and we received a number of objections from stakeholders regarding the Call for Sites postponement. The objections were accepted by the MWPA and in early 2022, an informal engagement on Policy S6 took place. This policy sets the plan provision amount for sand and gravel from which the requirement for new allocations to serve this amount is derived. Whilst sand and gravel is not the only mineral extracted in Essex, it is the only mineral extracted as an aggregate and at scale, and therefore needs a provision figure to ensure that mineral extraction is carried out sustainably. The informal engagement proposed keeping the Plan end date to 2029 and alongside this engagement, a Call for Sites was initiated. This requested the submission of new potential candidate sites for sand and gravel extraction that could be deliverable by the end of 2029.
- 1.14 Through the informal engagement, stakeholder objection was received with regards to not extending the MLP end date to 15 years after the expected re-adoption of the MLP. In light of emerging best practice, the MWPA accepted that it would be appropriate to extend the end date of the MLP. NPPF Paragraph 22

states that “Strategic policies should look ahead over a minimum 15-year period from adoption, to anticipate and respond to long-term requirements and opportunities”. The MWPA accepts that adding new sites to a Plan is to impact on a strategic policy and therefore there is the requirement to extend the Plan period accordingly. Given that re-adoption is anticipated for 2025, the revised MLP period would be to 2040.

- 1.15 As such, a new Call for Sites took place in November 2022, which requested the submission of sites deliverable up to 2040. Through this Call for Sites, it was noted that sand and gravel is the main mineral extracted in Essex and that it was considered that this would be the resource where new allocations will primarily be required. However, it was also noted that silica sand, chalk, brick clay and brickearth are also extracted within Essex in much smaller quantities. Recognising the revised MLP time horizon to 2040, and unlike the previous call for sites, expressions of interest were invited for the extraction of any of these minerals, but in all cases other than sand and gravel, a reasoned justification for the need for extraction was required.
- 1.16 Between the two Call for Sites exercises, 57 candidate sites were submitted. Of these, 56 were for sand and gravel extraction, with one of those also incorporating silica sand, and the other was for a rail-linked transshipment site⁷. There are also five undelivered sand and gravel sites allocated in the current MLP that have yet to come forward as a planning permission. Operator interest has been confirmed in all of these sites. Five sites have since withdrawn from the site selection process, with one of those being an undelivered allocation in the current MLP.
- 1.17 As part of the MLP Review process, all candidate sites for sand and gravel, and silica sand, including those allocations that remain in the MLP will be assessed against a site assessment methodology to understand their suitability, in principle, as a site for future mineral extraction to serve the growth needs of the County. The site assessment process is being led by independent consultants with technical support from ECC officers across a wide range of criteria. At a future Regulation 18 stage, the application of the site selection methodology on each candidate site, as well as the methodology itself, will be subject to public consultation. Following an assessment of all consultation comments received, sites will be proposed as Preferred Sites, to the extent required to address a quantified need, on the basis of their performance under the site assessment methodology and in accordance with the revised MLP Strategy and other planning considerations. These ‘other planning considerations’ are set out in Paragraph 5.269. The results of this exercise will then be submitted under Regulation 19, which is currently anticipated in late 2024.
- 1.18 As previously mentioned, one of the candidate sites was for a new rail-linked transshipment site. The proposed approach to transshipment site proposals and future allocations is set out in the Regulation 18, 2040 MLP Consultation document. To summarise the position, at this time insufficient information is before the MWPA to justify specifically allocating the candidate site for transshipment purposes. However, in recognition of the potential need for

⁷ Mineral transshipment sites provide for the movement of minerals over long distances by sustainable transport modes and are vital strategic mineral facilities. They take the form of rail depots and marine wharves.

additional mineral transshipment sites across the revised Plan period, the MWPA will formulate a new criteria-led policy approach which will set out the type of locations where transshipment sites may be suitable subject to conformity with the wider Development Plan and any other material considerations. This new policy approach will be subsumed into what is Policy S5 of the current MLP, leading to the creation of a criteria-led policy to consider minerals infrastructure proposals against.

- 1.19 It is this intention to continue with a criteria-led policy for aggregate recycling sites that led to the decision to not separately request candidate sites for aggregate recycling capacity in the latest Call for Sites. As with transshipment site capacity, it is not appropriate to seek to cap recycling capacity as these capacities, in principle, contribute to a sustainable approach to mineral development. As such it is considered appropriate for the market to set the need for additional capacity, rather than plan allocations, with policies ensuring that these facilities are located appropriately and that they themselves contribute to sustainable development.
- 1.20 No candidate sites were submitted for either chalk, brick clay or brickearth. Any additional requirement for this resource over the Plan period, and the means by which it is intended to accommodate any required additional provision, is set out in the sections for chalk (from Paragraph 7.1) and brick clay/ brickearth (from Paragraph 8.1). To summarise the position, amendments are proposed in relation to Policy S7: Provision for Industrial Minerals to allow for sites to come forward off-Plan if a need can be demonstrated and the application is otherwise in conformity with the Development Plan unless material considerations indicate otherwise.

Scope of this Paper

- 1.21 The scope of this paper is to clarify the planning policy basis for mineral provision and subsequently quantify an amount of mineral across the five extracted mineral types in Essex that is forecasted to be required to meet the need for those minerals across the revised Plan period to 2040. This will then inform, in part, which mineral sites will be considered for allocation as Preferred Sites in future iterations of the MLP. This paper has been informed by the latest available data at the time of writing (October 2023) and all previous consultation and topic papers, including the MWPA's responses to issues raised by stakeholders through the consultation in relation to these.
- 1.22 With respect to the type of minerals found within Essex, the only aggregate extracted is sand and gravel. The current MLP through Policy S6 sets out an annual plan provision figure upon which the need for sand and gravel quarry allocations was quantified. Re-quantifying the provision of sand and gravel to the new MLP end date of 2040 will be the main focus of this paper, and this will result in a proposed new plan provision rate to be inserted into a revised MLP Policy S6 ahead of public consultation. Within the county, there is also the limited extraction of silica sand, an industrial mineral, as well as chalk and brick clay / brickearth. The NPPF sets out provision requirements for each of these minerals and these will form the basis for the justification of the proposed provision set out in the relevant sections of this report.

Not within the Scope of this Paper

- 1.23 Whilst the Introduction to this paper has briefly discussed the site assessment process, it is not within the scope of this paper to discuss the interim results of the assessment ahead of public consultation. This is set out in the ‘Assessment of Candidate Sand and Gravel Sites, 2022’ report. This paper will however now briefly discuss the site allocation process insofar as this paper relates to that process in order to assist in the understanding of the mineral site allocation process as a whole.

Site Selection and Assessment Process

- 1.24 The MWPA recognises that mineral extraction can have impacts on amenity both locally where the mineral is extracted, and further away as a result of, for example, mineral related traffic. The ‘Assessment of Candidate Sand and Gravel Sites, 2023’ report assesses the suitability of extraction at candidate sites in principle and explores a number of criteria that any planning application made on that site would need to accord with in order to mitigate any potential impact. The interim site assessment results are being consulted upon at the same time as the Plan, and these act to highlight those candidate sites with potential impacts across a range of criteria, the degree and nature of that impact, and how it might be mitigated against. These results, alongside the quantified need for sand and gravel will initially inform the site selection process. However, there will be other considerations influencing this process, as set out from Paragraph 5.279, such as the need to ensure a geographic spread of sites so far as is possible, and that sites are within in the control of a wide pool of industry stakeholders. The amount of mineral required, and therefore the number of sites that need allocating, is informed by this mineral provision paper. It is this paper which quantifies the need for each individual mineral across the Plan period and site allocations are made based on serving this derived need. The application of the NPPF methodologies to quantify mineral provision as set out in this paper is also subject to the Regulation 18 consultation.

Granting Permission for Mineral Extraction

- 1.25 It is important to note that when a candidate site is allocated in an adopted Plan, this does not convey permission to extract. A planning application will first be required, and this will be required to include much more detailed information than that required at the allocation stage, which only establishes an ‘in principle’ suitability for extraction.
- 1.26 At the application stage, the application is assessed against its conformity with the policies in the Development Plan. The current MLP includes Policy DM1 – Development Management Criteria, which seeks to mitigate against impact during mineral working, and Policy S12 – Mineral Site Restoration and After-use which ensures that planning applications demonstrate that the land is capable of being restored at the earliest opportunity to an acceptable environmental condition to support beneficial after-uses. In both instances, this includes land use matters which would be determined by the MWPA, and environmental matters regulated by the Environment Agency, which are separately licenced. Impacts are looked at on both an individual and cumulative site basis. If

permission is then granted, conditions are placed on planning permissions to ensure that the works permitted remain in conformity with policy. Conditions are required to be written in such a manner that they are measurable, meaning that they are enforceable. The MWPA operates an enforcement service that can respond to any issues raised by local communities. Monitoring of mineral development is regularly undertaken and failure to comply with permissions can result in enforcement action being taken against the operator or landowner, which could potentially include the forced cessation of working and a move towards remedial measures.

2 The Planning Policy Context for Mineral Provision

National Planning Policy Context since MLP Adoption in 2014

The National Planning Policy Framework

- 2.1 The National Planning Policy Framework (NPPF) sets out the government's planning policies for England and how these are expected to be applied. Since the NPPF was published in March 2012, it was revised in July 2018, updated in February 2019, revised in July 2021 and again updated into the current version which is dated September 2023 with further amendments expected in Autumn 2023.
- 2.2 Despite being adopted in 2014, a significant amount of work was carried out on the currently adopted MLP prior to the publishing of the first iteration of the NPPF in 2012. The MLP was however considered to be compliant with the NPPF as extant at the time of adoption in 2014 as evidenced in the concluding remarks of the Inspector's Report issued to Essex County Council (as MWPA) in June 2014. This states that subject to Main Modifications (which were duly made by the MWPA) the document that became the MLP upon its adoption "meets the criteria for soundness in the National Planning Policy Framework."⁸
- 2.3 In terms of policy compliance, the wider MLP Review process must concern itself with whether any element of the existing MLP (2014) that is to be preserved is still in conformity with the extant NPPF (2023) and is also reflective of extant Planning Practice Guidance (PPG). The revisions made to the NPPF since the current MLP was adopted are numerous and it is outside of the scope of this paper to specifically detail these revisions. The majority of revisions did not in any event relate to mineral planning policies, and instead were to policy stances including in relation to housing, design, viability, Neighbourhood Plans and the Green Belt, with the latest set of amendments focussing on onshore wind development in England. The one exception is an amendment made in the 2021 iteration of the NPPF which resulted in a reference to Mineral Consultation Areas for the first time. These were however already referenced in the PPG and amendments to the MLP previously proposed seek to bring the MLP into alignment with the PPG definition (see section below). With regards to mineral provision methodologies, these have therefore not been impacted by any revisions to the NPPF since it was published in March 2012.
- 2.4 The national planning context for mineral provision is currently set out in the NPPF within Chapter 17 – Facilitating the sustainable use of minerals. The NPPF recognises the importance of mineral supply, with the opening Paragraph 209 stating that it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. The NPPF also sets a requirement at Paragraph 210f for planning policies 'to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality. As mentioned previously, the existing plan contains Policy S12

⁸ [Para 167, Report on the Examination of the Essex County Council Replacement Minerals Local Plan – January 2013](#)

– Mineral Site Restoration and After-Use and Policy DM1 - Development Management Criteria which in particular accord with this requirement.

- 2.5 A similar requirement is made through Paragraph 211b which requires a MWPA to ensure that, when determining planning applications, 'there are no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality'. This requirement is facilitated first through the 'Assessment of Candidate Sand and Gravel Sites, 2022' report which seeks to ensure that only those sites where impacts can be sufficiently mitigated, in principle, are selected as Preferred Sites. A Preferred Site is an area where the MWPA have assessed that mineral development is acceptable in principle and applications for extraction will be supported, in principle. References to decisions being made 'in principle' highlight that assessment of a far more detailed nature, including with regard to assessing and mitigating any impact on local amenity, is required to take place before planning permission to extract the site would be granted.
- 2.6 Should the Preferred Site remain in the Plan at the point of its adoption following an independent Plan examination, the Preferred Site becomes an Allocated Site. It is again noted that an allocation in this manner does not grant planning permission to extract. When a planning application is submitted for the working of an allocated site, the principles set out in NPPF Paragraph 211b are tested in much greater detail through MLP Policy DM1, where any application will need to demonstrate that there will be no unacceptable impacts on sensitive receptors. Paragraph 211e subsequently requires the provision of 'restoration and aftercare at the earliest opportunity, to be carried out to high environmental standards, through the application of appropriate conditions'. This requirement is captured through the need for planning applications for extraction to be accompanied by a detailed restoration plan, as currently required through MLP Policy S12.
- 2.7 Following this articulation of the principles of mineral development, the NPPF sets out the provision methodologies for aggregates and industrial minerals. These will be set out in more detail in the relevant sections of this report, but in summary require an assessment of historic sales data, relevant local information and, in the case of aggregates, the consideration of a number of supply options including aggregate sourced from recycled sources and the marine environment. The NPPF also places an emphasis on the safeguarding of minerals and associated infrastructure (NPPF Paragraphs 210c and 210d, 212 and 214b), although such considerations are outside of the scope of this report.

Planning Practice Guidance

- 2.8 The provisions of the NPPF are supplemented by a 'Minerals' section of the PPG. This can be more readily updated than the NPPF as it does not have the same requirement for public consultation given its status as 'guidance' rather than 'policy', with the latter attributed more weight in decision making. The Minerals PPG covers planning for mineral provision in plan making, mineral safeguarding and the planning application process. This includes references to a number of specific mineral bodies and reporting mechanisms which will be discussed further where relevant to this report.

- 2.9 The Minerals section of the PPG also contains a detailed section on restoration and potential amenity impacts including dust, noise and restoration which ensures that the issues are appropriately addressed through the planning application process and site operation. For example, it is stated that whilst the level of detail will vary site-by-site, restoration and aftercare plans would normally include an overall restoration strategy incorporating an after-use, information about soil resources and hydrology and how soils and overburden materials will be handled during excavation, an assessment of the agricultural land classification and a landscape strategy. Applicants must also provide an outline strategy of their commitments towards the five-year aftercare period and the information presented must be sufficient to clearly demonstrate that the overall objectives of the scheme are practically achievable. As set out above, this requirement is currently set out in the MLP through Policy S12, which through the MLP is being updated to accommodate the latest in restoration guidance, including an amendment to set out the requirement for mandatory Biodiversity Net Gain post-development.
- 2.10 With respect to the PPG as a whole, updates have been published numerous times since the MLP was adopted, both alongside and outside revisions to the NPPF. The majority of these amendments were again not primarily mineral provision focussed and therefore do not impact the approach taken in this paper. They were instead concerned with issues such as viability, calculating housing need, plan-making procedure, flood risk, Green Belt issues and low carbon energy. The wider MLP Review does however need to consider PPG updates as they relate to, for example, the plan review process, such as the expected approach to the Duty to Co-operate and Statements of Common Ground⁹, and the impacts of mineral development on the Green Belt.
- 2.11 The Mineral section of the PPG has received no updates since April 2015. The 2015 revisions are concerned with the extraction of hydrocarbons and whether a periodic review of planning conditions should cover ancillary mining development. Although these updates post-date the adoption of the MLP in 2014, neither of these issues are relevant to the county of Essex and therefore any element of the MLP Review.

The National Guidelines for Aggregate Provision

- 2.12 As previously stated, although published in 2014, much of the current MLP was prepared prior to the adoption of the NPPF in March 2012. Before the NPPF was in place, in order to calculate an appropriate amount of the different aggregates required to sustain growth, Central Government derived figures for the amount of different aggregates that would be required to support growth on a national scale. These were subsequently divided into regional apportionment figures to be allocated to each region, having regard to forecasted growth and supply, major national surveys which are published every four years and sales figures obtained from Annual Monitoring Reports. This exercise was completed in the context of having to recognise the geological inequality of sand & gravel, crushed rock and

⁹ The means by which authorities can demonstrate that their plans are based on effective and ongoing cooperation, through the Duty to Co-operate. They highlight areas of agreement with other authorities and that they have sought to produce strategies that as far as possible are based on those agreements.

other aggregates across the country, as well as all existing environmental constraints which exist upon mineral development. This work was termed the Managed Aggregate Supply System (MASS).

- 2.13 As previously mentioned, the only aggregate extracted in Essex is sand and gravel, so any mention of aggregates, aggregate provision etc as applied to aggregates extracted in Essex within this paper relates solely to the provision of sand and gravel.
- 2.14 Historically, Regional Aggregate Working Parties, aided by the now dissolved Regional Assemblies, had the role, in conjunction with Mineral Planning Authorities, of dividing these regional apportionment figures into an annual apportionment for each Mineral Planning Authority. These figures were subsequently published in the periodically updated National and Sub National Guidelines for Aggregates Provision in England ('the Guidelines').
- 2.15 The publication of the NPPF in 2012 brought in a new methodology for calculating aggregate provision which, amongst other considerations, required every MWPA to take 'account of any published National and Sub National Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates'. Each iteration of the NPPF since it was first published has maintained this requirement, which is currently set out in Paragraph 213d of the NPPF 2023. However, the latest version of the Guidelines are dated 2005 – 2020 and have therefore expired.
- 2.16 Despite the expiration of these Guidelines, the MWPA considered that it was still appropriate to maintain their use in the early stages of MLP Review. At this point in time in early 2021, the latest Guidelines were only one year out of date. In response to a question asked of Central Government relating to the continued use of Guidelines, the Government stated in 2018 that it recognised "that planning for minerals is essential to increasing the supply of housing and other development, and that without updated guidelines, there is a real risk of under-provision and possible sterilisation of mineral resources.....The Government intends to explore these issues after the publication of the Framework."¹⁰ However, although the version of the NPPF framework that is being referred to was published in 2019, it is still the case, as of October 2023, that no further updates to the Guidelines have been published.
- 2.17 The MWPA concluded in 2021 that, given the Government's continued support of the use of the Guidelines due to their continued inclusion in the NPPF, and their stated intention to review the approach to guidelines and provision forecasts in the future, it would seem inappropriate to revise the current apportionment set out in the MLP at that juncture. This is because the forecasting methodology set out in the NPPF had already been acknowledged as being under consideration for revision. This rationale was strengthened by the fact that at that time in the Review process, there was no intention to allocate further mineral sites. As such, any derived mineral provision figure would largely only be required for monitoring purposes with regards to quantifying the size of the landbank. Further, the landbank derived in this manner could, at any time, be sense-checked against the landbank figure as derived from the new NPPF methodology.

¹⁰ Refers to [National Planning Policy Framework](#)

- 2.18 The requirement to take account of the Guidelines is maintained in the current iteration of the NPPF published in September 2023. However, the nature of the MLP Review has significantly changed and this has led to the MWPA re-considering its approach to the Guidelines. More detail can be found from Paragraph 5.28 but in summary, the MWPA consider that given that the current Guidelines are dated to 2020, they are now obsolete and do not provide a robust basis for planning future provision in the county.

Local Planning Policy Context for Mineral Provision

- 2.19 Schedule 1, Section 1 (Local Planning Authorities: Distribution of Functions) of the Town and Country Planning Act 1990 defines the winning and working of minerals as a “county matter” and as such, in two-tier authority areas like Essex, planning policy is developed and administered by the County Council.
- 2.20 This further means that District, Borough, City and Neighbourhood plans will not contain policies for the winning and working of minerals other than to perhaps provide hooks or repetition of county-tier policy where this aids in delivery of locally derived policies within the wider Development Plan. This will particularly be the case for mineral safeguarding policy, where non-mineral applications over a certain threshold proposed on land safeguarded as a potential mineral resource are required through policy to be supported by an assessment of the practicality and environmental feasibility of the prior extraction of that mineral ahead of the non-mineral development taking place. Whilst the policy is developed and administered at the County level, it is useful to have it referred to in local plans where relevant.
- 2.21 However, despite not containing bespoke policies directly influencing mineral planning, District, Borough and City local plans still strongly influence where sand and gravel extraction will take place as they manage the rate and location of growth within each local planning area. As sand and gravel is a relatively low value and bulky resource, the economics of mineral development dictates that most sand and gravel is used within 30 miles of its point of extraction. On that basis, it is envisaged that the revised MLP Spatial Vision will retain the currently adopted principle of locating mineral allocations in proximity to the County’s allocated main growth centres. As such, where local plans of this nature allocate land for significant growth and development, it could, when in conformity with the wider Development Plan, be appropriate to co-locate mineral extraction sites in those broad locations to provide the mineral to facilitate this growth. This would act to reduce mineral miles which brings with it clear sustainability benefits. An assessment of the key areas for growth across the County will be made as the MLP develops and this will be used in conjunction with the site assessment methodology to assist in allocating candidate sites, where an appropriate geographic dispersal will be sought. However, by necessity this is guided by where the mineral resource is found, and where sites within these resource areas have been submitted to the MWPA for consideration.
- 2.22 There are other policies within local plans that will act to influence mineral development even though mineral development will not be explicitly referenced. For example, circular economy policies act to reduce waste and encourage recycling, including the reduction, re-use and recycling of construction and demolition waste which can reduce the requirement for new mineral extraction.

Further, whilst the emerging MLP will have policies protecting amenity in a general sense, local plans are likely to contain policies of a protective nature that are locally specific, such as for a particular historical environment, landscape, ecological feature or area of green space. Restoration plans for mineral sites may need to include specific measures to reflect this local significance whilst there may also be the opportunity for restoration plans to contribute to local green and/or amenity objectives as set out in a local plan or other strategy document. To that end, and without prejudice, the MWPA will consider whether the site selection process that will result in a proposed list of Preferred Sites will be able to be influenced by the Essex Local Nature Recovery Strategy (LNRS). The LNRS for Essex will include a statement of biodiversity priorities and also provide habitat mapping for the area covered by the strategy. There is the potential opportunity for mineral sites to deliver on the priorities set out in the LNRS through restoration as well as any extant Green Infrastructure Strategies.

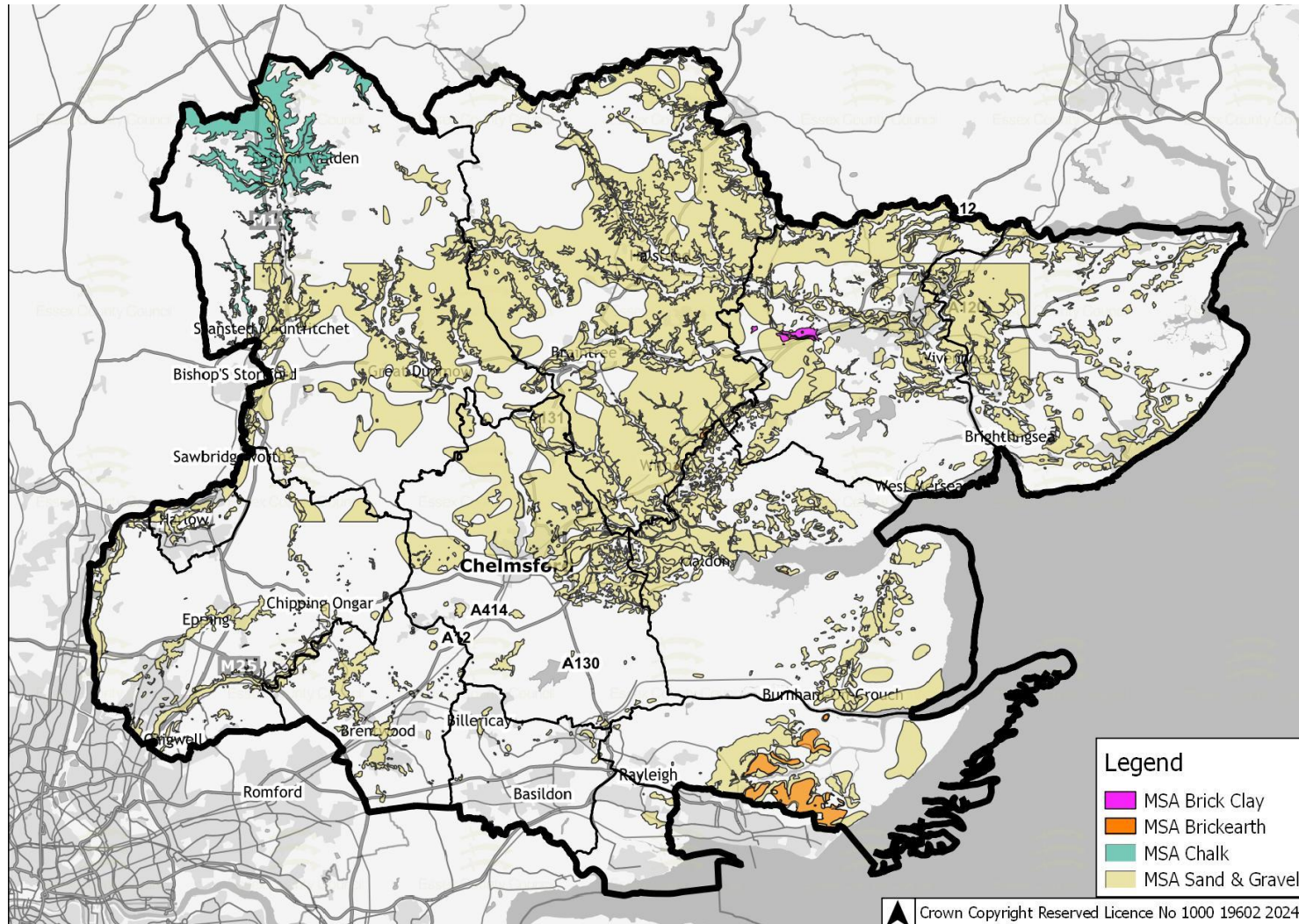
- 2.23 Similarly, proposed amendments (underlined) to MLP Policy S12 state that 'Proposals for minerals development will be permitted provided that it can be demonstrated that the land is capable of being restored at the earliest opportunity to an acceptable environmental condition to support Local Plan objectives and/or other beneficial after-uses'. A further proposed amendment at the previous Regulation 18 stage stated 'Restoration schemes shall reflect strategies across Essex, including Local Plan objectives for growing natural capital and green and blue infrastructure Strategies where relevant.' It is envisaged that the reference to local plan objectives will enable the policy to require a consideration of any locally specific priorities to deliver on mandatory Biodiversity Net Gain requirements by the time the revised MLP is capable of adoption.
- 2.24 Of specific reference to this paper are MLP Policy S6 – Provision for sand and gravel extraction and MLP Policy S7 – Provision for Industrial Minerals. These two policies quantify the need for each of the minerals extracted in the county and set the parameters for the Plan-led approach by defining where mineral extraction would be supported in principle whilst also creating additional tests for applications coming forward outside of the allocations made in the Plan. Both of these policies are under review, with Policy S6 being subjected to its own informal engagement in March 2022 on top of the 'whole-plan' Regulation 18 consultation in April 2021, where comments were also invited on the emerging Policy S7 alongside all other policies in the emerging MLP. The conclusions drawn from the engagements are set out in separate Topic Papers, one for each policy, and elements of these will be brought forward into this report where relevant.

3 The Economic Geology of Essex

Introduction

- 3.1 The geology of Essex dictates where mineral resources will occur and consequently where their extraction can take place. Not every mineral or geological layer in Essex is considered to be a 'mineral resource'. Mineral resources are those which have a use in our economy and are located in areas in sufficient volume such that they are economically viable to extract, either now or potentially in the future. Minerals are essential for the economy, and the different types across the nation provide the infrastructure, buildings, energy and goods that the country needs.
- 3.2 The mineral resources in Essex comprises of sand and gravel, which is classified as an aggregate, as well as silica sand, chalk, brickearth and brick clay, which are all classed as industrial minerals. That they are a commodity means that they have value to landowners and the working of these minerals requires planning permission. Planning policies are therefore required to regulate across the County where extraction may take place, and how much extraction can take place, with the latter being informed by the requirements of provision methodologies in the NPPF and any conditions required to mitigate harm as attached by the planning permission
- 3.3 Where minerals present in Essex are not considered to be a resource there are no bespoke policies regulating their extraction, unless their extraction is to facilitate other purposes such as for landraising, landfilling and for engineering purposes, which are issues addressed by the Essex and Southend-on-Sea Waste Local Plan 2017. These minerals, such as London Clay, may also be extracted within Essex in significant volumes in order to access the valuable mineral resources underneath. Such uneconomic mineral is termed the overburden when it is extracted for the purposes of access to the mineral beneath, and its management is regulated through extraction and restoration policies, which are currently MLP Policies DM1 and S12 respectively in the adopted Essex MLP.
- 3.4 The following map sets out where the mineral resources in Essex are located. The areas set out in the map essentially function as Areas of Search for the associated mineral resource as their extraction is not possible outside of these areas.

Figure 1: Map of Mineral Resources within Essex



- 3.5 It is important to note that it is not the case that all of the resources identified in Figure 1 are available for extraction, even when the physical, chemical and hydrological properties are favourable and the deposit is located close to potential markets. Much of the resources will already be buried under existing development and infrastructure, whilst other deposits will be located in areas that are otherwise unsuitable. Examples of unsuitability include the deposit being located in areas:
- too close to existing dwellings or other sensitive land such that potential noise, dust, water and visual impacts cannot be mitigated,
 - with an insufficient local transport network to safely facilitate mineral-related traffic, or
 - they are located in areas with high biodiversity or historic value, especially designated areas, where the benefits of extraction do not outweigh the value of the existing asset.
- 3.6 The remainder of this section provides a summary of the economically viable mineral resources in Essex. The intended approach to provision for each of these minerals is set out in Section 4. This section acts solely to provide a simple summary and spatial representation of the economically viable minerals in Essex.

The Mineral Resources located within Essex

- 3.7 As set out above, the mineral resources located within Essex are sand and gravel, silica sand, chalk, brickearth and brickclay. A brief introduction to these resources within the context of Essex is set out below.

Sand and Gravel

- 3.8 Sand and Gravel is defined by its individual particle size rather than what it is made of. In accordance with European standards, "gravel" refers to particles between 4mm and below 80mm in diameter, and "sand" (also referred to as "fine aggregate") refers to particles that are finer than 4mm but coarser than 0.063mm¹¹.
- 3.9 The sand and gravel in Essex takes the form of superficial deposits. This term refers to geological deposits typically of Quaternary age, spanning from 2.58 million years ago to the present. These are recent deposits in geological terms and take the form of unconsolidated sediments which may include stream channel and floodplain deposits, beach sands, talus gravels and glacial drift and moraine. Essex has extensive river terrace and glacio-fluvial sand & gravel deposits, with majority of these being part of the Kesgrave Formation. River terrace deposits are found not only along current river valleys but in historic river channels that are now dry. These are often associated with early paths of the River Thames and River Medway. Glacio-fluvial deposits were deposited as retreating glaciers dropped material they had scoured and picked up during their advance. These deposits are also known as Plateau Deposits and are usually well sorted (meaning each part of the deposit is of a similar grain size to other

¹¹ Mineral Resource Information in Support of National, Regional and Local Planning: Essex (comprising Essex, Southend-on-Sea, Thurrock and the London Boroughs of Barking and Dagenham, Havering, Redbridge and Waltham Forest) – British Geological Survey Commissioned Report CR/02/127N. A J Bloodworth et al, British Geological Survey, 2002.

proximal deposits). Heavier cobbles were dropped first followed by progressively finer material until the last material was deposited, which is boulder clay.

- 3.10 The resource of sand & gravel in Greater Essex is:
- Worked at 19 quarries in 2022
 - Significant in the regional and national context i.e., Essex is one of the largest producers in the UK;
 - Most extensive in the centre and north of the county, in the Districts of Uttlesford, Braintree, Colchester, Tendring and Chelmsford..
 - Least extensive in the south east where deposits appear smallest and least workable;
 - Used as a raw material to produce concrete, mortar, asphalt and construction fill which is used in the construction industry and for roads.
- 3.11 The mineral resource of 'sand and gravel' is not homogenous across the County and each deposit has the potential to be highly variable, both from neighbouring deposits and within the deposit itself. The economic potential of a sand and gravel deposit is influenced by the following criteria:
- Sand-to-gravel ratio
 - Proportion of fines and/or oversized material
 - Presence of undesirable rock types in the deposit
 - Thickness of the deposit and overburden ratio
 - Position of water table
 - Presence of unwanted inter-bedded material
 - Location relative to demand
- 3.12 The suitability of aggregates for a particular purpose depends principally on their physical and mechanical properties, although for some applications mineralogical or chemical properties are also important. For general purpose applications, aggregates of high strength and durability with low porosity are required. Different considerations apply according to the end use proposed, with the most stringent specifications being for structural concrete and road pavement construction. Specifications for less demanding uses, such as construction fill for building foundations and embankments will vary considerably providing the opportunity to use a range of weaker aggregates.
- 3.13 Despite these variances, the MWPA treat the different superficial sand and gravel categories and deposits as a single resource for planning purposes, hence the same colour being used for these resources in Figure 1. This is in part due to the fact that the 'as extracted' resource can be processed into numerous end specifications depending on the market need. Further, there can be variance of mineral properties even within single deposits which means there is not absolute clarity in what is being allocated. This isn't to say that every deposit of sand and gravel will be suitable for every end use, but that the superficial sand and gravel deposits of Essex are not sufficiently distinct enough to warrant bespoke approaches to its extraction. This is addressed in more detail in Paragraph 5.8. The assessment of an appropriate level of sand and gravel provision covering the new MLP period of 2025 – 2040 is set out from Paragraph 5.1.

Silica Sand

- 3.14 Silica Sand is a nationally important industrial mineral, deposits of which are nationally scarce. Although sand and sandstone deposits are widely distributed in the UK, only a small proportion of these possess the necessary physical and chemical properties to be considered as potential sources of silica sand. These, in turn, will differ appreciably in purity, particle size and thickness.
- 3.15 The distinction between silica sand and construction sand described in the section above is based principally on application and market specification, rather than a fundamental difference between the two raw materials. Silica (industrial) sands contain a high proportion of silica (normally, but not exclusively, more than 95% SiO₂) and, more importantly, very low levels of deleterious impurities. They are produced from both loosely consolidated sand deposits and by crushing weakly cemented sandstones, and unlike construction sand, are typically more specialist and distinct in terms of their end use.
- 3.16 Sands that have the correct specifications for specific end uses (such as glass manufacture) are very restricted as the deposits that contain them are often heterogeneous. Unlike construction sands, which are used for their physical properties alone, Silica sands are valued for their physical and/ or chemical properties on which their industrial applications are based. For most applications, silica sands have to conform to very closely defined specifications, and consistency in quality is of critical importance. Particular uses routinely require different combinations of properties and attributes. Consequently, different grades of silica sand are usually not interchangeable in use¹².
- 3.17 All sand resources will require some form of processing to upgrade them into marketable form. A critical factor, therefore, in defining a sand or sandstone deposit as a silica sand resource is its inherent particle size and the ease with which impurities can be removed, together with the level of losses incurred in this process. Depending on end use, silica sand processing is of varying degrees of complexity and often requires a high capital investment in plant. Silica sand processing typically requires a high capital investment in plant, with processing aimed at improving both the physical and chemical properties of the sand to meet strict user specifications. Typically several grades of sand are produced from one site either by selective extraction and/ or processing. Blending of lower and higher quality material is undertaken to optimise the use of the reserves¹³. Reflecting the higher processing costs, the minimum landbank¹⁴ for silica sand is ten years compared to seven years for sand and gravel used as an aggregate.
- 3.18 Its relative rarity and specialist uses means silica sand commands a higher price than construction sand and this allows it to serve more distant markets. However, the special characteristics of the markets for silica sand and the costs of

¹² Mineral Resource Information in Support of National, Regional and Local Planning: Essex (comprising Essex, Southend-on-Sea, Thurrock and the London Boroughs of Barking and Dagenham, Havering, Redbridge and Waltham Forest) – British Geological Survey Commissioned Report CR/02/127N. A J Bloodworth et al, British Geological Survey, 2002. Mineral Planning Factsheet – Silica Sand, British Geological Survey, 2020

¹³ Mineral Planning Factsheet – Silica Sand, British Geological Survey, 2020

¹⁴ See Paragraph 4.6 for a definition of a 'landbank'.

processing means that silica sand resources have restricted market opportunities compared to cheaper, more general aggregates.

- 3.19 Silica sand has been produced on a limited basis in Essex since before World War 2. Historically, output has been almost entirely from Martell's Quarry located in Ardleigh, north-east of Colchester, and this is the only site currently extracting this resource. The BGS highlight the current production in Essex as being an important producer nationally¹⁵. At Martell's Quarry, closely sized water filtration sands for horticultural and industrial uses are produced from the Pleistocene Kesgrave Group of Essex, which also provides much of the sand and gravel extracted in Greater Essex.
- 3.20 Due to the complex sedimentary environments in which they were formed, silica sand deposits are very likely to contain sands with different physical and chemical properties with variations both laterally and vertically, sometimes over small distances. Insufficient geological information is available to differentiate the resource areas for silica sands specifically¹⁶ and as such they are not present in Figure 1.

Chalk

- 3.21 Chalk is a relatively soft, fine-grained white limestone consisting mostly of the remains of planktonic algae. The Chalk Group tends to show little signs of bedding, other than for lines of flint nodules which become common in the upper sections. Nodules of the mineral pyrite also occur and are usually oxidized to brown iron oxide on exposed surfaces. The Chalk Group is divided into a White Chalk Subgroup and a Grey Chalk Subgroup, both of which are further subdivided into different formations.
- 3.22 It is the White Chalk Subgroup which crops out in the north-west of the County, particularly in Uttlesford. It is the oldest rock exposed at the surface, sedimentary in origin, and was formed in relatively deep marine conditions during the cretaceous period (between 80 – 100 million years before the present). Chalk is one of the mainstays of 'solid geology' under Essex, where it occurs extensively under the surface. The particular formations found in Essex are the Lewes Nodular Chalk Formation and Seaford Chalk Formation (undifferentiated).
- 3.23 Within Essex, chalk is extracted as an agricultural mineral rather than as an industrial mineral, and as such it is not possible to define a separate landbank for this resource (see Paragraph 7.1) as there is no NPPF provision methodology when chalk is extracted in this manner. Across Essex, chalk is currently extracted at a single site, in the form of white chalk at Chalk Farm, Newport Quarry, and mostly used for agricultural purposes. This site has been operating since the 1980s, with the most recent planning permission extending the lifetime of the site to allow operations to be completed by 2042.
- 3.24 Much of the chalk resource within Essex is concealed by Quaternary clays and silts¹⁷. These concealed areas are currently included as a chalk resource in the

¹⁵ Mineral Planning Factsheet – Silica Sand, British Geological Survey, 2020

¹⁶ Updating of Mineral Safeguarding Areas of Essex, Minerals and Waste Programme Commissioned Report CR/22/008, British Geological Survey, 2022.

¹⁷ Mineral Resource Information in Support of National, Regional and Local Planning: Essex

adopted MLP but the BGS have since discounted them as a resource. These areas have now been removed from BGS Digital Mineral Resource Data as it is unlikely that these low value resources would be extracted if significant amounts of overburden are required to be removed¹⁸. Mineral resource maps will be updated accordingly through the MLP Review.

Brickearth and Brick Clay

- 3.25 Brick clay is the term used to describe 'clay, shale, mudstone and other such materials' used in the manufacture of structural clay products, Brick manufacture is by far the largest tonnage use, with other uses including clay tiles for roofing and cladding and vitrified clay pipes. Brick clays are fine-grained sediments or sedimentary rocks of different geological ages and compositions. These range from relatively soft, plastic clays to hard mudstones. Their chemical properties, which are related to their mineralogical composition, and physical properties, particularly grain size, are critical to determining their suitability for the manufacture of structural clay products. The variety of clay used gives rise to the distinctive regional variations in the appearance of the built environment¹⁹.
- 3.26 House building is the principal consumer of bricks (and therefore brick clay). Therefore, brick production (and thus the demand for brick clay) is closely linked to Government policies related to stimulating housebuilding and associated construction. Alongside large, automated brick making facilities, of which Essex has none, some manufacturers specialise in handmade products for the repair of historic buildings, which is the case in Essex. As such, Essex brick making is not impacted by Government policy in this way.
- 3.27 Essex has had a long tradition of brick making, and centuries ago was one of the most important areas nationally for the craft. It has been suggested that this is because of the wealth in East Anglia in late mediaeval and Tudor times coupled with the lack of local stone for building. The earliest references to brick making in the County date to c1225 at Little Coggeshall Abbey, with there currently being seven surviving buildings in Essex where brick making was occurring prior to 1450.
- 3.28 Brick Clay and Brickearth are the designations given to separate mineral resource types for brick making in Essex. These terms have been used interchangeably in the past, both in Essex and further afield. Specifically, brickearth is a term used to describe a specific material used to make bricks comprised of the clay and silt deposits associated with the First River Terrace of the Thames, which within Essex is located primarily in Rochford District, although there are currently no brickworks in this location. Typically, they are used as a feedstock for the golden yellow 'London Stock' brick.
- 3.29 Brick clay is more of a generic term for any clays that can be used for the production of bricks (and similar products such as tiles and pipes). Brick clay resources in Essex are noted from an area of inter-glacial clays to the west of

(comprising Essex, Southend-on-Sea, Thurrock and the London Boroughs of Barking and Dagenham, Havering, Redbridge and Waltham Forest) – British Geological Survey Commissioned Report CR/02/127N. A J Bloodworth et al, British Geological Survey, 2002.

¹⁸ Updating of Mineral Safeguarding Areas of Essex, Minerals and Waste Programme Commissioned Report CR/22/008, British Geological Survey, 2022.

¹⁹ British Geological Survey, Mineral Planning Factsheet – Brick Clay

Colchester at Marks Tey. These are subsequently blended with other clays sourced from outside of the County during brick making.

- 3.30 Within Essex, brick clay and brickearth are shown on resource maps as two separate resources although their properties are similar. The difference between them is the type of bricks that can be produced. NPPF Paragraph 214d requires MWPAs to account for the need for provision of brick clay from a number of different sources to enable appropriate blends to be made, and the PPG further states that MWPAs need to recognise that 'different uses can require different specifications, and industrial minerals are often not interchangeable in use'²⁰. As such, a separation is required to be made through planning policy based on the requirement to take account of the need for the provision of different types of brick clay from different sources to enable the manufacture of different types of brick from the two discreet geological units within Essex.
- 3.31 Although the outcrop area of what is designated as London Clay is extensive across Essex, this clay is not shown as a resource in Figure 1 as it is generally unsuitable for modern brick making purposes and any other use. This clay is however extracted at a small scale in the north of Essex at Bulmer to make a distinct type of brick that, amongst other uses, is used to repair historic buildings. It also has some engineering uses, such as forming a lining in landfill voids.

²⁰ Paragraph: 086 Reference ID: 27-086-20140306

4 The Need for Mineral Resources in Essex, 2025 – 2040

Introduction

- 4.1 This section briefly discusses the general approach to the provision of mineral that the MWPA is required to follow during plan preparation to ensure that the resulting draft MLP makes an appropriate provision for each of the mineral resources found in the administrative area and is therefore capable of adoption.
- 4.2 Sections 5 to 8 takes each of the four mineral resource groups in Essex in turn, sets out the methodology for their provision as presented in the NPPF, and then uses this methodology to determine the approach to the provision of these mineral resources over the Plan period 2025 - 2040.
- 4.3 Where able, this approach will result in a quantified need for the plan area across the plan period. As previously discussed, the four mineral resource groups present in Essex are sand and gravel, silica sand, chalk, and brickearth and brick clay. This section focuses on high level principles with the following sections being specific to each mineral resource.

General Approach to Mineral Provision in the National Planning Policy Framework, 2023

- 4.4 Paragraph 209 of the NPPF states that ‘It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs.’ Paragraph 210 requires MWPA’s to develop policies which ‘provide for the extraction of mineral resources of local and national importance’ and ‘so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously’.
- 4.5 In terms of maintaining supply, the NPPF sets out different provision methodologies for aggregates and industrial minerals across Paragraphs 213 and 214 respectively. Sand and gravel is the only aggregate extracted in Essex, whilst silica sand, chalk, brickearth and brick clay are classed as industrial minerals. The requirements of NPPF Paragraphs 213 and 214 are set out in relevant sections of this report²¹.

The Role of Landbanks in Monitoring the Supply of Minerals and for Assessing Future Need

- 4.6 Paragraph 213e of the NPPF defines a ‘landbank’ of a mineral as being an indicator of the security of the supply of that mineral. A landbank is the sum in tonnes of all of the reserves of that mineral with a valid planning permission to extract divided by the annual plan provision figure (‘need’) for that mineral as set out in the relevant planning policy in a MLP. This derives a figure which equates to the number of years that the resource permitted for extraction in the County would last if no new planning permissions for extraction were granted and the resource was extracted at the exact annual rate set out in policy. In reality,

²¹ Paragraph 5.5 (sand and gravel). Paragraph 6.5 (silica sand), Paragraph 7.8 (chalk) and Paragraph 8.5 (brick clay and brick earth)

annual sales figures fluctuate, which impacts on the size of the landbank. The landbank is therefore a theoretical amount rather than a physical amount as it changes annually depending on the inputs to its calculation. Where extraction of resources takes place above the annual plan provision, the landbank decreases. Where planning permissions are granted at a rate which exceeds the sales of the resource, the landbank increases. Despite not being a 'real' quantity, it is the most important measure of mineral provision as all NPPF mineral provisions methodologies stem from the need to maintain landbanks above a minimum value.

- 4.7 As such, landbanks are an ongoing monitoring tool for plan review purposes. They ascertain whether appropriate provision has been made in the Plan being reviewed ie is the amount of mineral being sold broadly equating to the Plan provision rate, and are allocations in the adopted plan coming through the planning system at a sufficient rate to replace the reserves already extracted. Landbanks also aid in the determination of how much mineral potentially needs to be allocated for future extraction as part of a Plan review. The means through which landbanks are calculated for all mineral resource in Essex is set out in NPPF Paragraph 213 and Paragraph 214, with those clauses relevant to this paper set out in the appropriate section.

The Tests of Soundness

- 4.8 It is important to note that for the new MLP to be adopted, it must be found, by an independent planning inspector at a public hearing, to meet the legal tests of preparation as well as the 'Tests of Soundness' as set out within NPPF Paragraph 35. In terms of the provision of mineral, it is considered that the emerging MLP would fail the four Tests of Soundness set out in NPPF Paragraph 35 (reproduced in italics below) if the MWPA did not proactively seek to make sufficient and suitable additional allocations to address the need for the amount of mineral quantified in this paper. An MLP taking an approach of under-provision versus the quantified need would not be:
- '*consistent with national policy*' as provision methodologies would not be being followed,
 - '*positively prepared*' as it wouldn't be seeking to address the derived need,
 - '*effective*' as it wouldn't allow for a plan-led approach to mineral supply, or
 - '*justified*' as it is clear that the county of Essex has sufficient resources to accommodate its own needs for those resources whilst also contributing to the wider Managed Aggregate Supply System (MASS). MASS ensures that minerals flow around the country and that essential minerals are available where they are needed across the entire nation, irrespective of whether they are indigenous or not in any one region²².
- 4.9 It is important to further note that even with an adopted Plan, if the MWPA is found to be making insufficient provision for mineral resources due to changes in

²² Essex is a regionally important net exporter of sand and gravel but is fully reliant on imports of hard rock. In recent years this material has been imported from the Midlands, Scotland and western Europe

need, this will simply mean that applications are more likely to come forward 'off-plan' rather than not be approved at all. In terms of the application of planning policy, where it can be demonstrated that the MWPA is not making sufficient provision, a tilted balance towards approving these applications will need to be applied. An unjustified refusal of an application under these circumstances can result in the applicant appealing the decision and having the application be 'called-in' by the Planning Inspectorate. Through the appeal, if the MWPA had been found to have erred in its judgement under the tilted balance, the application could be approved in any event and ECC as a whole could be liable to pay the costs of the appeal. As such, the MWPA is required to instil its MLP with a degree of flexibility to allow for the MLP to accommodate a variance in sales and thereby retain a plan-led system without having to launch an emergency review.

5 Sand and Gravel Provision in Essex, 2025 - 2040

Introduction

- 5.1 The East of England is one of the most important regions nationally for the extraction of sand and gravel, with Essex being the largest source of this resource within the region. With such relatively high sales volumes, Essex is potentially subject to greater variance in its sales throughout an economic cycle. For more information on the nature of this resource, please see Paragraph 3.8 onwards.
- 5.2 The rate of provision of sand and gravel in Essex is currently led initially by Policy S6 within the adopted MLP. This policy, inter-alia, sets out the amount of sand and gravel that has been calculated as being required to provide a 'steady and adequate' supply of this aggregate on an annual basis across the current Plan period. Policy S6 also ensures the maintenance of a landbank of at least seven years for sand and gravel and preserves a plan-led approach by acting to resist applications outside of sites allocated in the MLP unless certain criteria are met. This section of the Report will provide the justification behind the proposed amendments to the future sand and gravel provision rate through application of the NPPF methodology. Please note that the impacts of extracting sand and gravel and the restoration of sites are managed through other policies and is outside of the scope of this report.
- 5.3 The current Plan provision rate for sand and gravel is 4.31 million tonnes per annum (mtpa) and this was set through plan preparation which took place prior to the publishing of the first iteration of the NPPF in March 2013. Whilst plan provision was therefore not based on the aggregate provision methodology set out in the NPPF, an independent planning inspector at the time of the Examination in Public in 2013 was satisfied that the approach was not out of conformity with the provisions of the NPPF, with that decision set out in their [report](#) into the MLP Examination in Public from Paragraph 40²³.
- 5.4 In order to derive a new plan provision figure covering the period 2025 – 2040, this report will directly follow the provision methodology set out in the NPPF, as set out below, whilst taking into account comments made through previous engagement and consultation events as appropriate.

Sand and Gravel Provision Methodology as set out in the National Planning Policy Framework, 2023

- 5.5 Paragraph 213 of the NPPF states that 'Minerals planning authorities should plan for a steady and adequate supply of aggregates by...' and then lists a number of expectations. Those expectations that have relevance to this paper and the sand and gravel resource are bulleted below and cross referenced to the relevant section in this report:

²³ The Planning Inspector requested the implementation of a hierarchy of Preferred and Reserve Sites given that the proposed plan apportionment was higher than that which would have been derived through the baseline NPPF methodology, which led to more sites being selected for allocation. The Planning Inspector did not rule against the proposed plan apportionment figure being inserted in policy.

- Preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data²⁴ and other relevant local information²⁵, and an assessment of all supply options (including marine dredged²⁶, secondary²⁷ and recycled sources²⁸);
 - Making provision for the land-won and other elements of their Local Aggregate Assessment in their mineral plans, taking account of the advice of the Aggregate Working Parties and the National Aggregate Co-ordinating Group as appropriate. Such provision should take the form of specific sites, preferred areas and/or areas of search and locational criteria as appropriate. (*Out of scope of this report but please see from Paragraph 9.1*)
 - Taking account of any published National and Sub National Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates. (*Please see from Paragraph 5.28*);
 - Using landbanks of aggregate minerals reserves principally as an indicator of the security of aggregate minerals supply, and to indicate the additional provision that needs to be made for new aggregate extraction and alternative supplies in mineral plans. (*Please see from Paragraph 5.163*)
 - Maintaining landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock, whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised. (*Please see from Paragraph 5.163*)
 - Calculating and maintaining separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market. (*Please see from Paragraph 5.8*)
- 5.6 The remainder of this section follows the above methodology and results in the derivation of, firstly, an annualised plan provision rate, and subsequently the minimum amount of mineral that needs to be allocated as part of adopting a new MLP to address need across the Plan period of 2025 – 2040.

Considering 'Other Relevant Information' as part of the Sand and Gravel Provision Methodology

- 5.7 Before applying the baseline methodology of a rolling ten-year sales average, it is important for the MWPA to assess the context within which this provision is being made. This is required under the NPPF provision methodology which requires the consideration of other local information. Subsequent conclusions may require the baseline provision of a ten-year average of rolling sales to be supplemented or reduced. What constitutes 'other relevant information' for this purpose is set out below:

²⁴ Paragraph 5.85

²⁵ Paragraph 5.75.197

²⁶ Paragraph 5.201

²⁷ Paragraph 5.239

²⁸ Paragraph 5.221

- Continuing sand and gravel provision on the basis of a single landbank for sand and gravel (*Please see from Paragraph 5.8*),
- Accommodating the need to take account of sand and gravel sales in Thurrock through the Essex MLP Review (*Please see from Paragraph 5.23*),
- The Use of the National and Sub-National Guidelines for Aggregate Provision, 2009 – 2020 in setting the provision rate in the emerging MLP (*Please see from Paragraph 5.28*),
- The need to maintain a landbank of seven years or more for sand and gravel at the end of Plan Period (*Please see from Paragraph 5.40*),
- The impact of the COVID-19 pandemic on mineral statistics collation and accommodating ‘Non-representative’ sales data (*Please see from Paragraph 5.48*),
- Assessing whether falling sales is influenced by a lack of supply rather than just wider economic impacts (*Please see from 5.55*)
- Likely changes in demand due to forecasted future rates of development (*Please see from Paragraph 5.58*)
- Forecasted housing completions in Essex to 2040 (*Please see from Paragraph 5.58*).
- Nationally Significant Infrastructure Projects and Other Major Projects in proximity to Essex (*Please see from Paragraph 5.67*)
- The current and future state of the Economy (*Please see from Paragraph 5.73*)

These issues are addressed in turn.

Continuing Sand and Gravel Provision on the Basis of a Single Landbank for Sand and Gravel

- 5.8 As set out in Paragraph 4.6, the ‘landbank’ of a mineral resource is how much is permitted for prior extraction divided by the annual rate of provision as set out in planning policy. Paragraph 213h of the NPPF requires ‘calculating and maintaining separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market.’ The PPG explicitly references building sand and concreting sand²⁹ in this regard (Reference ID: 27-066-20140306).
- 5.9 Before calculating the amount of ‘sand and gravel’ required across the Plan period, it is therefore necessary to determine how that sand and gravel needs to be provided. The currently adopted Plan makes allocations for sand and gravel on the basis of a single landbank, and it is intended to maintain this approach into the new MLP.
- 5.10 Whether separate landbanks for building and concreting sand are an appropriate means upon which to base mineral supply depends at least in part on whether it is feasible to calculate the reserves of sand in Essex that would be classified as building sand separate from those classified as concreting sand. At the Examination in Public in 2013 which led to the adoption of the existing MLP, the MPA held that it was not possible and justified its position through its evidence

²⁹ ‘building sand’ is the term used for sands used in the manufacture of building materials, mainly mortar, whereas concreting sands are a finer aggregate used for the manufacture of concrete.

base published alongside the emerging plan. This document³⁰, as well as an updated version dated 2019³¹ which was published as part of the MLP Regulation 18 consultation in 2021, can be found in the evidence base to the Regulation 18 consultation in 2024.

- 5.11 The Inspector conducting the Examination in Public Hearings for the MLP in 2013 noted that, in a minority of cases, separate building sand landbanks are identified in mineral local plans elsewhere. It was also noted that this is usually in response to a high reserve of bedrock sands as opposed to superficial sand and gravel deposits such as those that occur widely in Essex. The Planning Inspector further stated that there is no evidence that building sands can only be obtained from particular sources, or that any specific sand reserve in Essex can only furnish building or concreting sand end uses. It was also found that there is no evidence that the permitted and allocated sand and gravel reserves in the County cannot continue to produce sufficient quantities of building sand to meet demand, or that such demand is not being fulfilled at present. However, to be sound, it was requested that the current MLP should contain a commitment to continue to review the situation, as part of annual monitoring, should a shortage of building sand arise which could be addressed by way of a separate landbank in a future review of the Plan³².
- 5.12 The building sand addendum of 2019 did not advise of any changes in the practicality and justification for providing a separate landbank for building sand since the MLP was adopted in 2014.
- 5.13 This revised evidence noted in the first instance that the provision of separate landbanks, to differentiate minerals used in different end uses from each other, is clearly desirable, where possible, so as to ensure that the planning system provides reserves of required minerals in accordance with demand. However, it also noted that separate landbanks can only be provided if both (i) the specification for end use of minerals, and (ii) the reserves in the ground of material for different end uses, can be identified separately and unambiguously from each other.
- 5.14 With regard to mineral specification, the 2019 addendum states that the specifications for building sand and that for concreting sand actually overlap each other so that in essence whilst there are two separate uses and therefore markets (concreting sand and building sand), the decision as to what is produced is predominantly a commercial substitution decision which then reflects the level of processing applied to what is essentially largely a common reserve (point (ii) above). As such, any view of concreting sand and building sand as being two 'different' minerals is merely a reflection of distinct markets rather than of explicitly distinct resources.
- 5.15 The addendum also states that the most fundamental point with regard to re-assessing the previous report's conclusions that a separate building sand landbank was not required was whether there have been any changes in the

³⁰ A Review of Building Sand Supply in Essex: Consideration of a Separate Building Sand Landbank Topic Paper

³¹ Report to determine whether marine aggregate supply can offset the demand for land-won aggregates in Essex, 2019

³² [Report on the Examination of the Essex County Council Replacement Minerals Local Plan \(January 2013\)](#)

specification for building sand which redefines its resources in a specific manner, thereby limiting such supply sources. On this point, it states that there have been no changes in processing or production which inhibit the technical ability of a wide range of resources to be processed to meet the building sand specification. The report reaffirms that it is a relatively simple matter to change components within a processing plant to alter the properties of either the end sand product or the proportion of building sand to concreting sand. There has been no change in law or policy that would require such actions to seek planning permission.

- 5.16 To address the required commitment to continue to review the approach to building sand provision, the collated results from the AWP annual mineral survey³³ were used as a basis for considering proportions of building sand compared to other sand and gravel. Further interrogation of this collated data by ECC has concluded that in Essex since 2014, there has been a reduction in the number of sites reporting sales of building/ mortar sand
- 5.17 This monitoring showed that in 2014, nine of the 17 active sites in Essex sold both building/mortar sand and concreting/silica sands/gravel whereas in 2022 using the same criteria, six of the 17 active sites supplied the market with building/ mortar sand from mixed sand and gravel deposits by selective processing³⁴. It has therefore been concluded that although there has been a reduction in sites overall, sites have been capable of processing both building sand and concreting sand from a single resource by varying the method of production since at least when the current MLP was adopted. It is therefore demonstrated that single mineral resources in Essex can produce to the two different specifications, and therefore there is no need to make separate provision for building sand and concreting sand as they do not necessarily appear as distinct resources in Essex. The production of each is held to be primarily a decision made by the operator as a response to market demand.
- 5.18 With regards to capturing building sand data, the sales at Essex sites are captured through the same annual mineral survey carried out at the regional level referenced above. Through the survey, operators are requested to disaggregate the different types of sand and gravel sold at their sites. There is however a degree of variance with regards to the level of detail in the information that operators provide within their returns. Some survey returns can take the form of a single figure for 'sand and gravel' which does not differentiate between the two commodities (of sand and gravel), let alone the different types of sand. As such, placing reliance on any building sand figure derived from this process would only be a rough estimate and accentuate any inaccuracy in the data that already exists.
- 5.19 Import/ export information can also be gathered through the annual regional mineral survey. However, within Essex with regards to import/ export data, it is often the case that too few operators of transshipment sites in Essex fill in export/ import information such that, due to commercial confidentiality, this information cannot be reported upon. Outside of this survey operated by the East of England Aggregates Working Party, the MWPA has no other mechanism to require such import/ export data to be submitted other than voluntarily through public consultation, and in Duty to Cooperate discussions with other MWPA's whose

³³ <https://davidjarvis.biz/east-of-england-awp/>

³⁴ In each case there was a further site extracting building sand only.

own data may substantiate any imbalance in building sand provision. The MWPA has, to date, received no evidence following the adoption of the MLP 2014 that there is an unfulfilled market need for building sand that is currently required to be met by import into the County that could be met through a different approach to site allocations.

- 5.20 The updating report further states that there has been one significant change which has had an impact on the conclusions of the 2013 report. This is that there has been a rapid growth in the use on construction sites of factory mixed mortar, with building sand being the aggregate in such mortar. Factory mixed mortar requires sand with consistent properties to enable a consistent production process and to assure customers that such consistent properties will be maintained over a construction project timescale. This has produced a shift in those resources and reserves of building sand used in mortar to those washed sands from deposits which can provide sand of consistent properties and typically such sand which falls within the common range of the specification for both concreting sand and building sand. That therefore further reduces the ability to differentiate resources or reserves despite the material being sold to two markets. This shift applies across the UK and not just to Essex, although the implications may be more significant elsewhere due to scarcity of suitable resources and more complex commercial positions.
- 5.21 The 2019 addendum further concludes that there is no practical value in re-assessing this issue in another review of the Plan. The report states that it would be 'unsound' if the new Plan sought separate landbanks as there is no ability to quantify reserves separately and unambiguously from each other.
- 5.22 No further information has been presented to the MWPA through two public engagement activities in 2022³⁵ to demonstrate that there is an unfulfilled market need for 'soft' or 'building' sand, nor through engagement under the Duty to Cooperate with other Mineral Planning Authorities. The MWPA therefore considers its current and proposed position to continue to plan on the basis of a single sand and gravel landbank to be appropriate, as it is the processing of mixed deposits that allows sand and gravel extracted in Essex to serve distinct markets, rather than sand and gravel in different parts of Essex only having the capability of serving a distinct market which wouldn't otherwise be served. It is this latter case where the NPPF requires separate provision to be made. With the allocation of a single sand and gravel landbank being in place since at least the last two MLPs, it has previously been considered to be a sound approach and therefore it is considered that it is implicit that, with no information to the contrary and the NPPF having not changed in this regard, that the position remains sound.

Accommodating the Need to take Account of Sand and Gravel Sales in Thurrock through the Essex MLP Review

- 5.23 Annual sand and gravel sales and permitted reserve³⁶ data is collected from operators by all MWPA's as part of the annual Mineral Survey and collated from

³⁵ Consultation (under Regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended)) in March to April 2021 and an informal engagement on Policy S6 of the Minerals Local Plan in February to March 2022

³⁶ 'Permitted reserve' means the amount of mineral that is permitted for extraction across the Plan area but has yet to be extracted

MWPAs by Aggregate Working Parities³⁷ (AWP). The survey returns allow MWPAs to calculate and forecast mineral reserves through assessing the size of landbanks in their administrative area.

- 5.24 To protect commercial confidentiality, survey results cannot be published, even when amalgamated, in mineral planning areas comprising of three or less sites of whatever the survey question relates to. For these reasons, all sites in Essex, Thurrock and Southend-on-Sea are combined into the reporting tier of 'Greater Essex'. This means that the sales of sand and gravel within these three areas cannot be disaggregated and used for planning purposes. MWPAs are also required to delete all survey returns once information has been collated and anonymised ahead of transfer to the AWP. As such, the MWPA does not have access to historic sales of any sort other than the published single amalgamated figures which met the confidentiality threshold
- 5.25 Neither the unitary authorities of Southend-on-Sea or Thurrock, nor the MWPA of Essex, have reviewed and subsequently adopted new mineral provision policies since the last apportionment was derived through the East of England Regional Assembly and agreed through the East of England AWP. The Greater Essex apportionment is currently 4.45mtpa, with a proxy of 0.14mtpa being used to equate to both the apportionment and sales in Thurrock whenever a split between the constituent authorities of Greater Essex is required to be articulated. Sales of sand and gravel in Southend-on-Sea are taken as 0mtpa given the absence of mineral workings in that unitary authority. Reported mineral sales presented in this paper for Essex can therefore only be an 'assumed figure', calculated by taking the Thurrock apportionment of 0.14mtpa away from the Greater Essex sales figure. As such, the sales figures presented in this paper for 'Essex' will be 0.14mt fewer than the sales reported in the Greater Essex LAA and the East of England Annual Monitoring Reports.
- 5.26 With regards to the Plan provision figure in Essex. Taking 0.14mt from the Greater Essex apportionment of 4.45mtpa leaves the Essex apportionment standing at 4.31mtpa, and this is the figure set out in the adopted MLP Policy S6.
- 5.27 The requirement to derive revised figures from datasets through the use of a proxy is not considered to impact significantly on the appropriateness of any derived figures for future planning purposes. This is because the Thurrock apportionment represents only 3.15% of the total Greater Essex apportionment, meaning that sale rates and trends are highly likely to be governed by the sales in Essex.

The Use of the National and Sub-National Guidelines for Aggregate Provision, 2009 – 2020 in Setting the Provision Rate in the Emerging MLP

- 5.28 As set out previously, NPPF Paragraph 213d states that MPAs should take "account of any published National and Sub National Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates".

³⁷ Aggregate Working Parties are formed on a regional basis and provide a formal environment for liaison between mineral industry stakeholders and MWPA officers. The role of Aggregate Working Parties is to monitor the supply and demand for aggregates, rocks and other mineral resources, and where they are to be sourced. NPPF Paragraph 213b states that MWPAs should be members of an AWP. The Essex MWPA is part of the [East of England Aggregates Working Party](#).

- 5.29 With the Review now intending to re-base the Plan to 2025 – 2040, the latest Guidelines are now considered to be increasingly inappropriate as a basis for future mineral provision, given that they will be five years out of date, if not six, by the time the MLP is adopted.
- 5.30 Through previous consultations, objections were raised on this matter. Whilst it was accepted by objectors through representation that mineral planning authorities are in a difficult position with the current Guidelines being out of date, and notwithstanding the comprehensive analysis in previous MWPA evidence³⁸, objectors were not convinced that a good reason had been put forward to move away from the guideline apportionment figure for Greater Essex and towards a ten-year sales average with a percentage increase. Other representations echoed these comments, stating that there was not a need to depart from the current apportionment rate given the increasing trend for housing and infrastructure growth that is to be provided for. The ‘other local relevant information’ that is required to be considered was argued as not having changed since the Regulation 18 consultation in 2021.
- 5.31 It was further considered that the MWPA had not justified a deviation on the position that the MWPA was taking a year ago which was to retain the apportionment figure³⁹ rather than pursue a reduction. Whilst representations accepted that the national guidelines only ran until the end of 2020, and that there have been no further figures produced or guidance offered by government, it was not accepted by the objectors that this is was therefore a reflection that the approach from government is no longer supported.
- 5.32 Whilst the MWPA acknowledges that the NPPF and PPG still refers to the Guidelines, this is in the context of them being an indicator or guideline of ‘need’, with the basis of ‘need’ being that derived through the LAA which itself is subject to the provisions of the NPPF. The PPG states that a calculation of ‘need’ must be ‘supported by robust evidence and be properly justified, having regard to local and national need’⁴⁰
- 5.33 The ‘robustness’ of the latest Guidelines as an indicator of local ‘need’ is considered to decrease as the time since their expiry increases. Further, it is noted that the NPPF refers to ‘Guidelines’ in a general sense rather than a specific set of Guidelines. With the last set of Guidelines having expired, they can in principle no longer be considered to be extant. Should revised Guidelines be published that are within date, then these can again justifiably be taken into account.
- 5.34 Whilst the latest ten-year sales average is now to be taken as the basis of plan provision, it is the factoring in of local evidence, including an assessment of future planned growth rates, which assists in determining the need or otherwise for a proportional uplift in the ten-year sales average. The proportional uplift that the MWPA sought to apply is what creates plan flexibility and consequently contributes to a supply of aggregates that equates to being steady and adequate

³⁸ Response Paper – Informal Engagement on Policy S6: General Principles for Sand and Gravel Provision (Policy S6: Provision for sand and gravel extraction), February – March 2020, and Minerals Local Plan Review Topic Paper Policy S6: Provision for Sand and Gravel Extraction, 2022

³⁹ The full argument to maintain plan provision at the Guidelines provision rate is set out in the Rationale Report 2021. An updated but summarised version is presented in this report.

⁴⁰ (PPG Ref Paragraph: 070 Reference ID: 27-070-20140306).

as required by NPPF Paragraph 213. The MWPA has to balance the needs of the market with the requirement to allocate a level of sites which ensures that, so far as is possible, the sites are required such that they come forward within the Plan-period. This is the basis of a Plan-led system which provides certainty for all stakeholders. It was previously proposed that this uplift be 20% in previous consultation material⁴¹, and this is tested through this paper from Paragraph 5.82 onwards. The conclusion will be consulted upon through the Regulation 18 2040 consultation taking place in 2024.

- 5.35 Whilst a number of representations received to previous MLP Review consultations advocated the continued use of the now-expired Guidelines, it was also noted through the consultation that there was opposition to their use. It was noted that there has been no indication that the figures in the expired Guidelines are to be 'rolled forward' or re-issued, despite there having been ample opportunity to do so, either through subsequent revisions to the NPPF or by other means. It is important to note that whatever Plan provision figure is now devised through the MLP Review will now carry significantly more weight than at earlier stages in the Review due to the fact that it will inform the amount of mineral required to the new Plan end date of 2040 and consequently the number of new mineral sites that will be needed to be allocated to serve this need. Previously, the figure derived from the Guidelines would have been used for monitoring purposes only as allocations were not being proposed, and this monitoring could be sense-checked against an average of ten-year rolling sales as required by the NPPF.
- 5.36 Regarding any update to the Guidelines, the MWPA accepts that the Government still intends for this to happen. An informal indicative timetable has been presented by Government through the National Aggregate Co-ordinating Group⁴² which indicates that any new Guidelines for aggregate provision should be informed by the results of the Aggregate Minerals Survey 2023 which is to conclude in December 2024. Further, the current government contracts for Aggregate Working Parties (AWPs) expire in March 2025, and any changes to the role of the AWP's required as part of implementing the revised Guidelines can be accommodated at that point. It was indicated that the Government will seek to commission the Guidelines project towards the end of 2024. The MWPA subsequently infers that new Guidelines are unlikely to be published until late 2025 or more likely 2026.
- 5.37 The MWPA will factor any new Guideline figures into any future plan provision figures should they become available at an appropriate time during the Plan making process. Until such a time, the MWPA will re-calculate mineral need on the basis of the methodology set out in the NPPF for the revised Plan period. Should new Guidelines be issued after plan production, these will factor into annual monitoring of the MLP which will inform future MLP reviews, including any potential need for immediate review should the adopted plan provision figure be significantly out of step with that set out in the revised Guidelines.

⁴¹ Minerals Local Plan Review Topic Paper Policy S6: Provision for Sand and Gravel Extraction, 2022

⁴² The purpose of the National Aggregate Co-ordinating Group is to monitor the overall provision of aggregates in England, and to provide timely advice to government and individual Aggregate Working Parties.

- 5.38 The MWPA clarifies that the NPPF refers to the 'taking account of any published National and Sub-National Guidelines' rather than the explicit use of a specific set of Guidelines. As such, the MWPA therefore does not agree that giving little weight to the last set of Guidelines, given their expiration, means that the MWPA is moving away from the stated NPPF requirements. They are being taken account of, both now and in the future, as set out above.
- 5.39 As an aside, the assessment of what constitutes a steady and adequate supply of aggregate as set out from Paragraph 5.82 compares the last ten years of sales to the figure set out in the last set of Guidelines in any event by virtue of the current rate of provision in the existing Plan being that derived from the Guidelines, minus the assumed Thurrock contribution of 0.14mtpa. In that respect, the Guidelines are in effect being considered under 'other relevant information'.

The Need to Maintain a Landbank of Seven Years or More for Sand and Gravel at the End of Plan Period

- 5.40 Through the informal engagement on Policy S6 of the Minerals Local Plan in February to March 2022, the MWPA questioned whether the emerging MLP should make provision for an NPPF compliant landbank of at least seven years at the end of the Plan Period⁴³.
- 5.41 In summary, respondents stated that without such provision, the Plan would not be NPPF compliant throughout the Plan period as a seven-year landbank would not, by definition, be able to be achieved through the Plan period. Therefore it is implicit that there needs to be a landbank of seven years of sand and gravel at the end of the Plan period, and it is Government policy to make provision for this as part of the Plan.
- 5.42 The MWPA does not disagree that there is a requirement to maintain a seven-year landbank at all times. The MWPA accepts that NPPF Paragraph 217f sets out the need to maintain 'landbanks of at least 7 years for sand and gravel'. The means of achieving this are not however made explicit. This requirement is viewed by the MWPA as being applicable in perpetuity, and to be monitored annually, rather than being calculated at the end of the Plan period at the point the Plan is adopted. Being able to demonstrate a seven-year landbank at the end of the Plan period based on forecasts at the point of adoption of a Plan would not guarantee accordance with this NPPF requirement in any event, as demonstrated below.
- 5.43 An MLP with an annual plan provision rate of, for example, 2mtpa, may seek to allocate for seven years beyond its horizon. However, if sales equated to 2.5mtpa over a sustained period of time, then the provision made in that Plan, assuming it was all delivered, would eventually not be able to satisfy the seven-year landbank requirement, and certainly not by the end of the Plan period. Due to what transpired to be an underestimation of need, a Plan Review would be required to allocate additional sites in the Plan to make up for the shortfall. The need for such a review is monitored annually as part of the MWPA's functions, and an

⁴³ For a more detailed commentary around this issue, please see 'Response Paper – Informal Engagement on Policy S6: General Principles for Sand and Gravel Provision (Policy S6: Provision for sand and gravel extraction), February – March 2020'

assessment of whether to review the MLP needs to take place within five years of adoption in any event.

- 5.44 If annual monitoring concluded on a need to Review due to a forecasted shortfall in allocations, and an amended Plan with additional sites was adopted ahead of the annual cumulative shortfall resulting in a landbank that couldn't be maintained at seven years across the Plan period based on the allocations in the previous iteration of the Plan, then compliance with the NPPF landbank requirement would continue to be achieved provided that applications capable of being approved are submitted on those new allocations.
- 5.45 As such, allocating sufficient supply equating to a landbank of seven years at the end of the Plan period at the point of adoption based on a forecast undertaken prior to submission to the Secretary of State does not automatically convey accordance with the NPPF requirement of maintaining a seven-year supply in perpetuity over the lifetime of the Plan. Therefore it is considered that not doing so cannot mean that the Plan is automatically in conflict with the requirement. The sand and gravel landbank position is monitored annually, and it is this annual figure that needs to always be at least seven years, with forecasts used to calculate any potential shortfall over the Plan period.
- 5.46 That said, making provision for mineral outside of the Plan period clearly imbues the adopted Plan with greater flexibility in terms of being able to respond to sales increasing above the plan's forecasted provision rate and this approach therefore contributes to, rather than determine, maintaining a steady and adequate supply of minerals. The MWPA also notes the time and expense taken to complete Plan reviews, including the period required for examination and adoption, which justifies additional allocation being made at Plan adoption on the basis of according with the need for flexibility. Making provision for an amount of sand and gravel outside of the Plan period is considered to accord with the Tests of Soundness of planning positively and being justified, effective and consistent with national policy as it provides flexibility within the Plan.
- 5.47 In its assessment of what constitutes an appropriate provision of minerals across the Plan period, the MWPA will demonstrate two provision volumes across provision scenarios. The first volume will be the amount of mineral required to satisfy no more than the forecasted physical provision of sand and gravel to the end of the Plan period, such that the landbank would be 0 years at the end of the Plan period. The second would be the forecasted volume of mineral required to have a seven-year landbank maintained at the end of the Plan period. Provided that there are sufficient and appropriate candidate sites remaining following the site assessment process, the total volume of mineral that the MWPA proposes to allocate will fall within these two parameters whilst recognising the twin need for creating flexibility and minimising over-provision.

Accounting for Economic Impacts on the Sand and Gravel Provision Methodology

Introduction

- 5.48 As set out in Paragraph 5.5, forecasts for future demand are to be based on a rolling average of 10 years' sales data' as well as 'other relevant information' to put the sales average data in context. As such, it is important to understand whether there were any economic impacts over the ten years covered by the rolling average that might be influencing the reported sales figure such that they

don't accurately reflect the 'true' market need. These events need to be beyond what could reasonably be considered to be ordinary fluctuations in the local economy. When making this consideration, it is also important to recognise any potential 'knock-on' effects caused by an identified event, such as the time it takes for the economy to recover from severe shock. An example of this was considered in an earlier round of Plan making, where caution was raised in relation to utilising an average sales figure for planning purposes incorporating the years 2011 and 2012. Sales in these years were considered to be reflective of the aftermath (and subsequent austerity) resulting from the global financial crisis of 2008 – 2009, which was a period which fell outside of the graphed ten-year rolling sales average as existed at the time but was still manifested within the period the MWPA was required to source baseline data from.

The Impact of the COVID-19 Pandemic on Mineral Statistics Collation and Accommodating 'Non-representative' Sales Data

- 5.49 Given how the sand and gravel methodology operates, pertinent to the current stage of plan-making is the impact that the COVID-19 pandemic had on the mineral industry, both on the activities of the industry itself and the drop in demand for the materials extracted as the economy as a whole slowed. Figure 3 below sets out the sales period from which the data to be used to calculate a ten-year rolling average is currently required to be taken from. It can be seen that within the ten-year sales period, there is a degree of variance, with the highest sales being 4.23mt and the lowest being 2.82mt, or 67% of the highest level of sales.
- 5.50 Further interrogation of Figure 3 shows that there are two instances across the last ten years where the sales of sand and gravel have fallen below 3mtpa. These instances were recorded in 2019 and 2020. It is considered that these sales figures are not representative of mineral demand under 'normal' circumstances, with both figures having been impacted by the COVID 19 pandemic. The 2020 data point is assessed as being directly impacted by the pandemic, whereas the sales reported in 2019 show an indirect impact. The data that would have informed the 2019 sales point would have been collected in 2020, where it is understood that data collation to inform the 2020 survey was impacted by mineral industry staff being on furlough.
- 5.51 It was noted through the public engagement in March 2022 that the COVID-19 pandemic was a once in a century event and therefore the sales figures for these two years should be excluded from supply planning. It was considered that this would have a marked effect on trends and be more in keeping with the long-term increase in sales/ capacity indicated over the ten-year period, that was noted elsewhere in the consultation documents. The representation was summarised by expressing the opinion that making planning decisions based on data sets which include data from 2019 and 2020 is not justified as it is not based on representative evidence.
- 5.52 As previously stated, the MWPA agrees that the sales reported in 2019 and 2020 are not reflective of the true market need for mineral resources. However, it is noted that the NPPF does not explicitly enable the exclusion of sales data in its aggregate forecasting methodology, rather an average of the last ten years sales forms the basis of calculating a provision before supplementing that baseline provision with 'other relevant information'.

- 5.53 By considering whether sales data over the required period of assessment is a true reflection of need, the MWPA will consider each sales return in context and how it impacts the derived average. This consideration will be based on both excluding non-representative figures from a future needs analysis and substituting them with a more representative figure. Important considerations include whether a basic average of historic sales figures, with no omissions, would meet the pre-pandemic level of demand, and forecasted rates of growth. If required, a proportional uplift, as consulted on through the previous informal engagement, is considered to likely be the most transparent way of accommodating any uplift required to the rate of mineral provision following a consideration of the ten-year sales average and other relevant information.
- 5.54 If the MWPA was to remove or substitute those sales impacted by COVID-19, the MWPA would also potentially be required to seek to do the same to the sales peak in 2014 for also not being representative. In addition, the data return in 2013 is considered to reflect the final year of recovery from the global recession in 2008. At just 0.01mt higher than a COVID impacted year, this sales return should also be considered to be unrepresentative of normal market need under this approach. The impact of excluding and substituting sales figures is returned to from Paragraph 5.96.

Assessing whether Falling Sales is Due to a Lack of Supply rather than Wider Economic Impacts

- 5.55 Outside of the wider economy, a consequence of the methodology being heavily informed by historic sales is that falling sales may not be reflective of falling demand, but reduced opportunity to supply that demand in the first place. Existing operations may have closed, and if this is not acknowledged as a driver of reduced sales, it could be viewed as an actual lack of demand, which creates the impression that lower rates of provision need to be made, which then becomes something of a self-fulfilling prophecy. Meanwhile, adjoining authority areas may see sales increase due to this lack of provision, creating a similar feedback loop which requires increased levels of provision from outside the Plan area, contrary to NPPF Paragraph 210b⁴⁴.
- 5.56 With regards to operations closing potentially being a root cause of falling sales in Essex, and therefore the true market need is being masked, the following data sets out the number of sand and gravel sites in Essex actively extracting since the MLP was adopted:

⁴⁴ '...whilst aiming to source minerals supplies indigenously'.

Table 1: Number of Sand and Gravel Sites in Essex Actively Extracting, 2014 – 2022, Adapted from Greater Essex Local Aggregate Assessments

Greater Essex Local Aggregate Assessment Year of Reporting	Number of Sand and Gravel Sites Actively Extracting in Essex
2014	17
2015	18
2016	16
2017	16
2018	16
2019	18
2020	18
2021	16
2022	17

- 5.57 It can be seen that the number of active sand and gravel sites within Essex has remained between 17 and 18 across the reporting period 2014 – 2022. Fluctuations in historic sales are therefore assumed to not be due to the self-fulfilling prophecy of a reduction in sites leading to a lower level of sales.

Likely Changes in Demand due to Forecasted Future Rates of Development

Introduction

- 5.58 In the absence of mineral provision guidelines, the key quantifiable input when it comes to deriving a future rate of provision on the basis of the NPPF methodology is the historic rate of sales, meaning that the methodology is inherently backwards-looking. Whilst historic sales of sand and gravel give an indication of the scale of development that has occurred, the key role of the MLP is to plan for the amount of mineral needed to serve the scale of development that is forecasted to occur. This is where other relevant information becomes important.

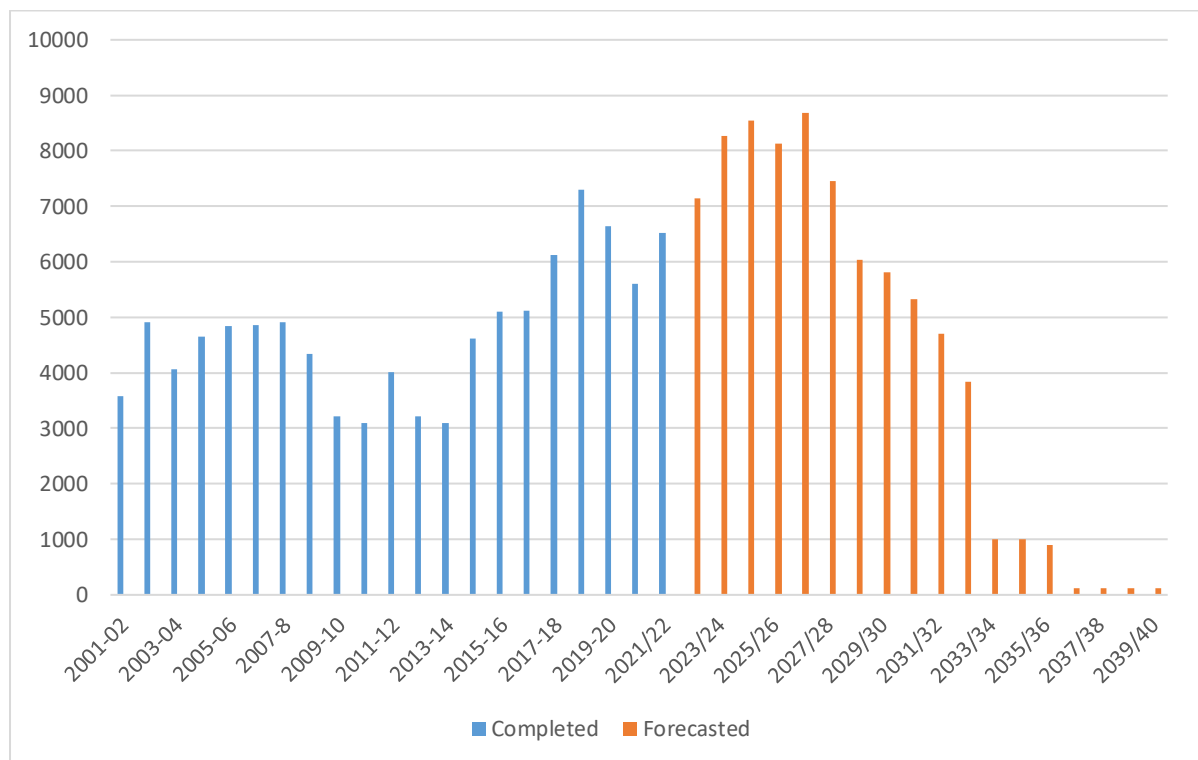
Forecasted Housing Completions in Essex

- 5.59 The PPG states that relevant information to factor into the provision methodology ‘may include, for example, levels of planned construction and housebuilding in their area and throughout the country’. Essex is located to the north-east of London, within the East of England region, and borders the counties of Hertfordshire, Suffolk and Cambridgeshire. This area is amongst the highest population growth areas in the UK. Whilst noting that the PPG recommends an overview of national growth, given that Essex is the primary consumer of the mineral it extracts, a national picture of planned construction and housebuilding is not considered necessary. This is in part because the national averaged growth rate is below that in Essex, so any national context would underrepresent the required provision in the County, but also direct quantification of aggregate need to ‘growth’ is not possible even when development rates are known. This is explained further in Paragraph 5.65.
- 5.60 With respect to population growth rates, the population of the administrative county of Essex in the 2021 Census was 1,503,520 comprising some 626,500 households. The population increased by 110,020 (0.76% average annual growth

rate) compared with the 2011 Census, when there were 1,393,500 people in the County. The average annual growth rate in Essex of 0.76% is above the growth in England and Wales of 0.64%.

- 5.61 The number of households in the county of Essex has increased by 7.7% from 582,000 to 627,000 between 2011 to 2021. By 2040, the Office for National Statistics states that the population in Essex is likely to increase by 13 per cent, or 192,000 people, to 1.65 million. A growing population creates a need to provide more housing and supporting developments, with the latter providing the services, goods, roads and local job opportunities that new communities require. The following graph compares housing completions between the monitoring period of 2001/02 to 2021/22 with the forecasted rate of delivery in adopted local plans in the future.

Figure 2: Comparison of Actual and Forecasted Housing Completions in Essex, 2001/02 – 2039/40



Source: Essex County Council, 2023

Note: Forecasted housing completions are those that are in adopted Local Plans only.

- 5.62 From the above graph, it appears that the future delivery rate of housing developments in Essex is forecasted to increase, above even the highest of historic completion rates, before rapidly tailing off. However this is because the above figure only reflects housing trajectories in adopted Local Plans across the plan period for which they are adopted. Where housing completions appear to be forecasted to drop in 2027/28, this is due to a number of districts only having trajectory information up to that period. As the forecasts move further away from the base date, the number of forecasted completions is informed by fewer and fewer districts, with four having an adopted trajectory to at least 2033/34 compared to all 12 districts for the reporting year 2026/27.
- 5.63 It is also important to note that these figures are likely to be revised upwards as a number of districts in Essex have a Local Plan adopted at such a time that it has not yet been reviewed with the need to reflect the latest housing provision methodology and accommodate the resultant latest local growth projections. The Local Plans of Basildon (March 2022) and Castle Point (July 2022) have been 'withdrawn' with new Local Plan preparation commencing in these administrative areas. Local Plans in Basildon (to 2042), Castle Point (to 2050), Chelmsford (to 2041), Maldon (to 2043), Rochford (to 2040) and Uttlesford (to 2040) are at early stages of plan preparation. Brentwood has recently adopted a new Local Plan but in doing so is committed to submission of a review for examination within 28 months of adoption. In addition, the adjoining authorities of Southend (to 2040)

and Thurrock (to 2040), who have limited to no accessible mineral resources, are both in early stages of plan preparation.

- 5.64 Based on existing preparatory work, these plans will be based on a higher rate of housing delivery than existing plans. The MWPA understands that Local Authorities in Essex are preparing Local Plans to deliver approximately 150,500 additional homes up to 2036 and beyond, equating to approximately 7,150 additional homes per annum based on either 'Objectively Assessed Housing Need (OAHN)' or the 'Standard Method (SM)' for the relevant local authority. The historic rate of delivery as shown in Figure 2 is 4,753 additional homes per annum across the 21 reporting years assessed. Where authorities have commenced Local Plan Reviews, they may identify, through additional evidence, locally based housing need requirements below the OAHN/SM but this will still result in further requirements for additional homes in Essex beyond 2036. These new homes, and the commercial opportunities and the infrastructure needed to serve them, require mineral resources in order to be able to be developed.
- 5.65 However, whilst it is simple to conclude that an increase in the rate of housing provision will highly likely result in an increased need for mineral provision, a quantifiable link is not possible to calculate, primarily because houses are not built to a uniform formula. As such, the MWPA can only use housing figures as a proxy for mineral demand – it is not possible to state that X number of houses equates to the need for Y amount of mineral. Basic housing number information tells you nothing about the size and type of house, and whilst there are cases where houses are built to uniform specifications, the sheer number and type of these makes collating such information across the thousands of houses that are forecasted to be developed is a disproportionate exercise, not least because aggregates such as sand and gravel are also used in great quantities in other major projects and supporting infrastructure, and that proportion would be difficult to quantify.
- 5.66 That said, growth is expected to be driven by private housing, (the largest subsector in the region) with some additional support from public sector construction in the housing and non-housing subsectors, hence the use of housing projections as the primary influencer of mineral need. The MWPA is also mindful that the rate of growth is not uniform across the County, and therefore it is important to consider those areas forecasted to receive the highest growth during the site selection process. The transportation of mineral around the County is a significant factor in the overall sustainability of the approach to satisfying mineral need put forward in the MLP. Where possible, allocations should act to minimise 'mineral miles; which is the distance that mineral travels on the road network. It will be those areas in the County forecasted to receive the highest growth which will have the greatest need for mineral.

Nationally Significant Infrastructure Projects and Other Major Projects

- 5.67 As stated above, aggregates in Essex are not just used for building homes. They are required to build commercial developments and the infrastructure required to serve them, including upgrades to major traffic junctions and additional road lanes on popular routes. An additional significant consumer of aggregates are Nationally Significant Infrastructure Projects (NSIP). These are 'one-off' projects in an area, over a certain threshold depending on the type of development, which are considered by the Government to be of national importance such that

planning decisions are made at the national level albeit still informed by the Development Plan. Projects meeting a certain threshold in the fields of Energy, Transport, Water, Waste Water, and Waste can be NSIPs. These include proposals for power plants, large renewable energy projects, airports and major road projects. They represent an additional draw on resources above the 'business as usual' rates set out in Local Plans.

- 5.68 Perhaps given that Essex is a high growth area, there are a large number of NSIPs or significant highway projects planned for the area. Examples of the former include the Lower Thames Crossing, M25 Junction 8 and the Rivenhall Integrated Waste Management Facility (IWMF) and Energy Centre development. Further, whilst Bradwell B Nuclear Power Station is currently paused, the site remains a strategic allocation in national policy. A consultation was expected in late 2023 on a draft NPS for nuclear energy, which will identify strategic site allocations for all nuclear technologies. It is anticipated that Bradwell B will continue to be identified as a potential site. Further NSIPs and other major projects are set out in the 'Growth Locations and Projected Growth in Essex', February 2023 report, which is part of the evidence base to the Regulation 18, 2040 consultation. These will all require mineral resources of varying amounts, although most will be significant quantities.
- 5.69 The difficulty of quantifying an increase in mineral need through increased rates of development as set out in the Housing section above is exacerbated when considering major infrastructure projects. The reason for this is that there are a greater number of potential markets from where mineral for major infrastructure developments could be sourced from due to the economies of scale manifested in such projects. These include marine sources, where bespoke landing facilities may be able to be established solely to serve the major project. The total mineral take of these projects would also be spread over a number of years, determined by the construction plans of the respective developer, which may be subject to delay and other modification. This makes specific provision from a strategic plan making view impossible
- 5.70 By way of highlighting this issue, a briefing paper on Aggregate Demand for the Lower Thames Crossing produced by Highways England states that the annual take of sharp sand (concreting sand) and gravel expected to be required for this project equates to approximately 6% of an average of the last 10 years of annual sales in Greater Essex and Kent combined . As this is the likely terrestrial mineral market area for the project area, the combined area of Greater Essex and Kent is the basis of their mineral need calculation, so already a specific Essex figure cannot be derived. Further, an important caveat to this calculation is that it does not include aggregate used in pre-cast units transported to the site, which would likely be obtained from sources local to the point of their manufacture, wherever that might be. It is also the case that applications for major projects do not need to include a 'mineral supply audit' or other form of document that sets out what, where and how much mineral the project is likely to consume over an identified period of construction. Another complication with regards to understanding an Essex requirement is that due to growth patterns in Essex, aggregate demand in general is likely to be greater to the north of the River Thames. Mineral demand north of the River Thames can be met by operators with access to several aggregate transshipment facilities (e.g. Port of Tilbury and the proposed Tilbury2 Construction Materials Terminal (CMAT) which could enable the import of

aggregate from other sources outside of Essex and Kent. Nonetheless, the sustainable approach is to try and ensure, subject to the conclusions reached by evidence, that there are suitable proximal sites to serve areas of high mineral need in order to reduce mineral miles.

- 5.71 However, for the reasons set out above, whilst it is known that there are a number of significant infrastructure projects in the pipeline, it is not possible to take this increase in future demand and turn it into a quantifiable mineral need. This is not to suggest that Essex as the MWPA is looking to offset mineral demand to other Mineral Planning Authorities, rather it highlights that it is not possible to specifically quantify the impact that major infrastructure projects will have on local mineral supply as these are matters for the mineral supply market and not matters that a MWPA can control. However, it stands to reason that an increase in local development will likely result in an increase in mineral need. This is considered further from Paragraph 5.96.
- 5.72 As previously mentioned, with regards to ensuring that areas of high need across Essex have access to local supplies, the final geographic dispersal of new site allocations in combination with existing sites will be a consideration of the site selection process.

The Current and Future State of the Economy

- 5.73 The forecasted delivery of housing, housing completions and the delivery of Major Projects factor into anticipated need as required by NPPF methodologies, with funding agreements such as Section 106⁴⁵ typically paid following the completion of housing delivery or at the point of its occupation. The rates of development and payment of funding agreements to deliver supporting infrastructure are themselves subject to prevailing economic conditions. As reported by the Mineral Products Association in October 2023, UK GDP growth has showed resilience, but 14 consecutive interest rate hikes are now slowing the economy more markedly. A loss of momentum across key construction sectors in 2023 appeared to worsen in September as output dropped at its fastest rate in more than three years. Housing completions fell to levels comparable to 2009, which was a time of global recession, due to the squeeze in household incomes which has prompted housebuilders to scale back construction plans. Depending on funding trigger points agreed between planning authorities and private developers, scaling back housing construction plans can impact the delivery of major projects if, for example, funding triggers for these major projects were associated with meeting targets for dwelling completion or dwelling habitation. Demand for sand and gravel itself has been falling since mid-July at the national level, driven by weaker housebuilding activity and delays to key infrastructure projects amid persisting cost and planning challenges across key subsectors, particularly with regards to roads.
- 5.74 According to the recently published Autumn 2023 forecast from the Construction Products Association, construction output will not return to growth until 2025. Despite the current economic climate however, the MLP must be predicated on

⁴⁵ Section 106 of the Town and Country Planning Act 1990 allows a local planning authority to enter into a legally-binding agreement or planning obligation as part of the granting of planning permission. The aim is to balance the pressure created by the new development with improvements to the surrounding area, ensuring that where possible the development would make a positive contribution to the local area and community.

the basis of long-term future 'need' as best understood by all the latest evidence, and for the emerging MLP, the MWLP considers that this must factor in the growth rates set out in district Local Plans. The MLP, which will form part of the Development Plan across the County, and therefore every district within the County, cannot act as a roadblock to the development set out elsewhere in the Development Plan by underproviding. As such, there is a requirement to ensure that plan provision is not unduly reduced by current or historic shocks and takes into account forecasts of growth such that it is positively and justifiably prepared.

Summary of Consideration of 'Other Relevant Information' as Part of Quantifying Sand and Gravel Provision

- 5.75 In order to comply with commercial confidentiality requirements, sand and gravel sales in Essex are amalgamated with those in Thurrock and Southend-on-Sea at the reporting tier of Greater Essex. There is therefore the requirement to derive revised figures from datasets through the use of a proxy. However, this is not considered to impact significantly on the appropriateness of any derived figures for future planning purposes. This is because sales in Greater Essex are dominated by sales in Essex, with the expected provision outside of Essex being approximately 3% of the total in Greater Essex. As such, any inferences regarding trends, impacts etc can be considered to be representative of the administrative area of Essex.
- 5.76 The MWPA will continue basing sand and gravel provision on maintaining a single landbank. Within Essex, it is the processing of mixed deposits that allows sand and gravel extracted in Essex to serve distinct markets, rather than sand and gravel in different parts of Essex only having the capability of serving a distinct market which wouldn't otherwise be served. It is this latter case where the NPPF requires provision of a mineral resource to be made on the basis of multiple landbanks.
- 5.77 Although a number of representations received to previous MLP Review consultations advocated the continued use of the now-expired National and Sub-National Guidelines for Aggregate Provision 2009 - 2020, it was also noted through the consultation that there has been no indication that the figures in the expired Guidelines are to be 'rolled forward' or re-issued, despite there having been ample opportunity for the Government to do so. Whilst the MWPA understand that Government are working on new guidelines for aggregate provision, the MWPA considers that the current set are expired and therefore cannot be used as evidence upon which to justify a position.
- 5.78 The MWPA notes that NPPF Paragraph 217f sets out the need to maintain 'landbanks of at least 7 years for sand and gravel'. This requirement is viewed by the MWPA as being applicable in perpetuity and is to be monitored annually. There is no explicit requirement to allocate sufficient sites as part of the adoption process to accommodate seven additional years of need at the end of the Plan period. However, making provision for mineral outside of the Plan period clearly imbues the newly adopted Plan with greater flexibility as it can better accommodate fluctuating sale rates. The MWPA have made allowances for a seven-year landbank at the end of the Plan period.
- 5.79 In terms of the wider economic context, the nature of the sand and gravel provision methodology requires the incorporation of two data points that the

MWPA considers have been impacted by the COVID-19 pandemic. It also requires the use of a datapoint that is considered to reflect part of a bounce-back from a global recession plus another datapoint that is unrepresentatively high. A proportional uplift, as consulted on through the informal engagement previously, is considered to be the most transparent way of accommodating any uplift required to the rate of mineral provision to accommodate non-representative figures and future growth rather than to attempt to remove or substitute data points.

- 5.80 It is clear that the rate of housing development in Essex is forecasted to increase from the historic housing rate that the mineral market currently serves, and it is also known that there are a number of significant infrastructure projects in the pipeline. However, it is not possible to take this increase in future demand and turn it into a quantifiable mineral need although it stands to reason that an increase in local development will likely result in an increase in mineral need.
- 5.81 The rates of development are however also subject to prevailing economic conditions. As reported by the Mineral Products Association in October 2023, UK GDP growth has showed resilience, but 14 consecutive interest rate hikes are now slowing the economy more markedly. Despite the current economic climate, the MLP must however be predicated on the basis of long-term future 'need' as best understood by all the latest evidence.

Calculating an Appropriate Sand and Gravel Provision Rate in Essex, 2025 – 2040

Introduction

- 5.82 Paragraph 213a of the NPPF requires that MWPAs plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data. This NPPF paragraph requires the consideration of two other factors, with those being 'other relevant local information', and an assessment of all supply options (including marine dredged, secondary and recycled sources). The requirement to consider 'other relevant local information' is set out from Paragraph 5.7 above as this was required to be considered first as it sets out the local context within which provision is to be made. The requirement to assess all supply options is set out from Paragraph 5.197, and will set out the rationale for whether, and to what degree, the MWPA can quantifiably reduce primary provision from that assessed in this section as being required to serve the development needs of the County through substitution from these various sources.
- 5.83 As required by the NPPF methodology, this section begins with an assessment of a rolling average of the last 10-years of sand and gravel sales. This report will then consider whether individual sale values were impacted by wider economic concerns. Following this, a consideration of rolling three-year averages is made. Each data return is then assessed in context to understand if it is representative of market conditions or whether there are external influences masking true market need. Following a consideration of how to accommodate any external influences, the total amount of sand and gravel across the Plan period will be calculated, using the proposed plan provision rate and factoring in other local

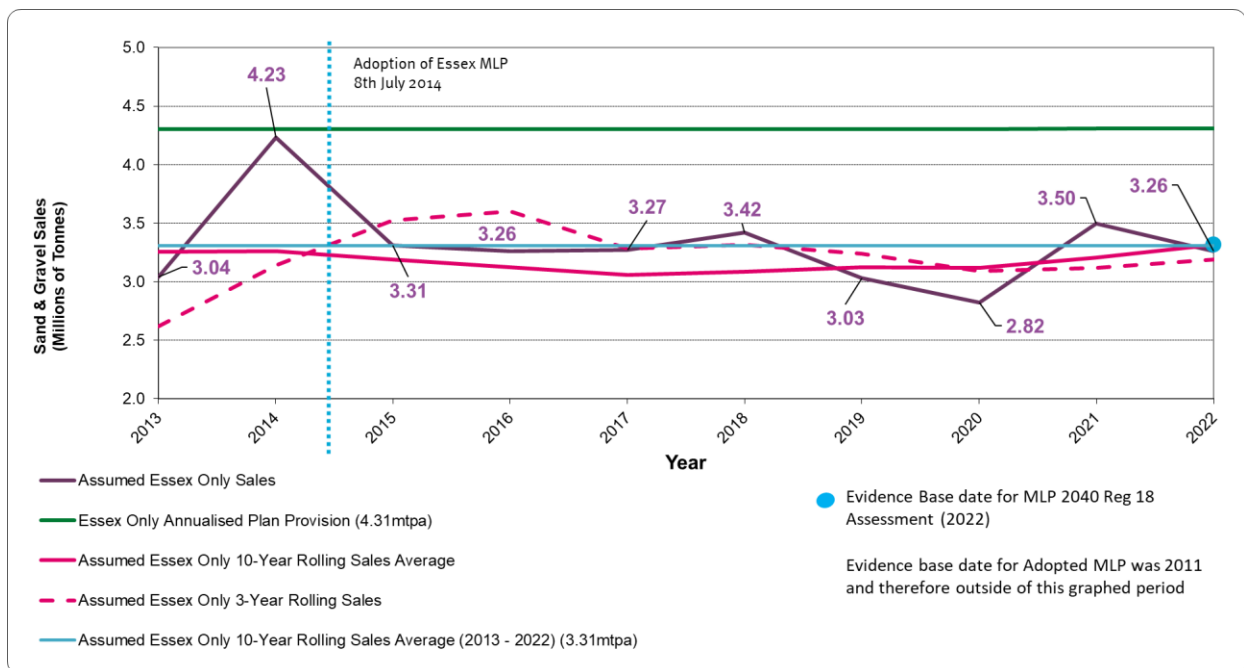
information, any existing reserves of sand and gravel, and potential other supply options.

- 5.84 This section of the report concludes on a plan provision rate and provision amount for sand and gravel to be taken forward into the Regulation 18 2040 consultation scheduled for early 2024. This assessment follows the methodology set out in the Minerals Local Plan Review Topic Paper Policy S6: Provision for Sand and Gravel Extraction, which was initially published in February 2022 to support the informal engagement on MLP Policy S6. Both the derived amounts and the methodology will be subject to specific consultation questions.

Assessing a Rolling Average of Ten-Year Sales Data

- 5.85 Since 2012, the MWPA has published the Greater Essex LAA, with the latest being published in January 2023. As set out in NPPF Paragraph 213a, the role of the Local Aggregate Assessment is to forecast future demand through monitoring a number of mineral need indicators, including historic sales. All iterations of the LAA since the first was produced in 2013 can be found [here](#).
- 5.86 As required by the NPPF, the approach to mineral provision 2025 - 2040 begins by calculating the 10 years' sales average using data originally collated and published through annual iterations of the Greater Essex LAA. As set out in Paragraph 5.25, the sale figures below differ from the LAA by being 0.14mt less than that reported due to the need to disaggregate sales in Thurrock from those in Essex.

Figure 3: Assessment of Rolling 10 Year Sales of Sand and Gravel in Essex, in million tonnes of sand and gravel per calendar year



Source: Essex County Council (2019)

Note 1: The Y axis does not start at zero

- 5.87 Across the ten-year period covered in Figure 3, sales have broadly increased, from 3.04mtpa to 3.26mtpa. However, this masks a significant degree of variance, with sales peaking in 2014 at 4.23mtpa, with a low of 2.82mtpa reported in 2020. Over the same period, the rolling ten-year sales average displays the same trend, with this figure increasing generally over the ten-year period, from 3.25mtpa in 2013 to 3.31mtpa in 2022. There is significantly less variation in the ten-year rolling sales average, with the highest being that reported in 2022 and the lowest being 3.06mtpa reported in 2017.
- 5.88 Looking at the data more closely, following adoption of the MLP in July 2014, it is noted that sand and gravel sales remained relatively stable between 2015 – 2018, which accounts for four of the total ten data returns. Following 2018, there is a relatively sharp decline through 2019 and 2020. As set out from Paragraph 5.49, the MWPA attributes much of this decline to the impacts of COVID-19, with sales in 2020 depressed due to direct impacts from the pandemic whilst data collection carried out in March 2020 to inform the 2019 data return was impacted by furlough. Following 2020, sales increased to 3.5mt in 2021, which is slightly above the relatively stable period between 2015 – 2018, before falling to 3.26mt in 2022 which is identical to the data return in 2016 and 0.01mt below the return in 2017.

Assessing the Appropriateness of Using Historic Sand and Gravel Sales as an Indicator of Future Provision Need

- 5.89 From Figure 3, it is clear that across the ten-year period captured, sales have been consistently below the current plan provision rate of 4.31mtpa. Whilst impacted by COVID-19 as discussed, the lowest sales return in 2020 equated to 65% of the apportionment. When an average is taken of the relatively stable period between adoption of the MLP and prior to the impact of COVID-19 in the figures for 2019⁴⁶, this average is 77% of the apportionment. When also incorporating the two post-COVID data points of 3.5mt and 3.26mt in 2021 - 2022, the average remains at 77% of the apportionment. Whilst this margin between the plan provision rate and suggested actual need could be considered to be relatively large, the Rationale Report 2021 considered the additional headroom to not be contrary to national policy, with Paragraph 11a of the NPPF stating that 'plans should positively seek opportunities to meet the development needs of their area and be sufficiently flexible to adapt to rapid change'. With regard to the MLP, the 'development needs' that the plan is to service relates to the provision of sufficient aggregate to support growth and development, with flexibility afforded by the headroom between averaged sales and the plan provision rate. For example, if the headroom in the MLP is set at an additional 20% of the sales average, the MLP could accommodate a change in need⁴⁷ for aggregate of up to 20% more without needing to revise the Plan.
- 5.90 It is important to note that the current plan provision rate in the adopted MLP was able to be justified through the Examination in Public largely due to the fact that it echoed that set out in the then-extant guidelines for aggregate provision. However, as set out from Paragraph 5.28 of this report, with the Guidelines

⁴⁶ Where survey completions for 2019 data were impacted by mineral industry staff being on furlough in 2020

⁴⁷ Demonstrated through an increase in sales

having expired in 2020, the MWPA considers that they can no longer be used as an indicator or justifier of mineral need for the period 2025 - 2040.

- 5.91 As such, the newly calculated Plan provision figure calculated in this section of the report will be used to determine the amount of sand and gravel that needs to be sourced from additional site allocations. This significantly elevates the importance of considering the plan provision figure than was necessary at the time of the production of the Rationale Report 2021, when no additional sites were considered to be required. Under a scenario of no additional sites, the plan provision figure would have been used to calculate the existing landbank for monitoring purposes and would have had little other practical application provided the calculated landbank didn't drop below seven years. Even then, given the requirements of the NPPF, it would have been appropriate to consider, in the planning balance, the state of the landbank when calculated using the latest ten-year sales average as a comparator. Now that the plan provision figure is to be used to determine and justify an amount of sand and gravel to be allocated as part of plan preparation, and the underlying document upon which the 4.31mtpa figure was derived has expired, it is considered that the MWPA is required to calculate a new plan provision figure based explicitly on the methodology set out in NPPF Paragraph 213.
- 5.92 The current ten-year sales average is 3.31mtpa. As can be seen from Figure 3, this average very closely matches sales in the relatively stable periods between 2015 – 2018 and 2021 – 2022. The MWPA considers that this assists in justifying what a 'true annual market need' looks like. As this average closely matches six of the ten sales figures within the period assessed. The first year of sales below this ten-year rolling average were recorded in 2013. This datapoint reflects a significant increase on sales compared to sales in 2012⁴⁸ and was the continuation of an economic recovery from the Great Recession which began in 2008 and caused an annual reduction in sales until 2012, other than for a small upturn in 2009. The remaining two sales data points markedly below the average were the COVID-19 impacted sales reported in 2019 – 2020, which again have acted to mask the 'true annual need'. What is less clear is the reasoning behind the peak in sales in 2014. This was the year when the current MLP was adopted so this may have encouraged a flurry of activity, or it could be a continuation of economic bounce-back from the recession until sales reduced to a more stable level from 2015. However, with the requirement to delete sales data sourced from the annual minerals survey once returns have been collated for the purposes of reporting to the AWP, the MWPA does not have any sales data that may highlight where or why increased sales could have been reported.
- 5.93 It is recognised that, by definition, an annual sales figure will be both above and below an averaged sales figure over a given plan period. However, proceeding with a plan rate which is a close fit to business-as-usual is not sound plan-making. An adoption of the ten-year sales average with no uplift, even when not considering any potential increase in the rate of future delivery, would potentially fail the Test of Soundness relating to being consistent with national planning policy as it would not accord with NPPF Paragraph 82d. This requires that planning policies be flexible enough to 'accommodate needs not anticipated in the plan...and to enable a rapid response to changes in economic

⁴⁸ Not shown on Figure 3 as this year is now outside of the ten year period

circumstances'. It would not take a significant uplift in the rate of mineral sales for demand to begin to annually outstrip the provision rate.

- 5.94 Given that ECC monitors annual housing completions in the county and works closely with districts on their local plans, it is known that future housing completion rates in districts as set out through extant and emerging Local Plans are intended to outstrip the current rate of completion. This is set out from Paragraph 5.61. The MWPA would therefore also be failing the Test of Soundness relating to the need for policies to be 'evidence-led' if no uplift in mineral provision was made in light of these increased housing trajectories. This would translate into a failure to recognise the link between mineral need and housing delivery rates. With the expiration of the Guidelines in 2020, maintaining the current plan apportionment would also not be 'evidence-led' as sales have been consistently below this value and the piece of evidence from which the apportionment figure of 4.31mtpa was derived is no longer extant.

Assessing a Rolling Average of Three-Year Sales

- 5.95 Having now assessed the ten-year sales average for sand and gravel as being 3.31mtpa and found that to be reflective of sales for six of the ten years assessed, PPG⁴⁹ states that MWPA's 'should also look at average sales over the last 3 years in particular to identify the general trend of demand as part of the consideration of whether it might be appropriate to increase supply. The current three-year sales average is 3.19mt, which is below the ten-year average. However this average includes the data return for 2020 which was impacted by COVID-19. The three-year average has increased over the last three years and it is noted that the three year average calculated one year prior to the impact of COVID⁵⁰ on data collection, which covers a period where sales are not known to be constrained by any external economic impacts, returned a value of 3.32mtpa. This is virtually identical to the current ten-year rolling average of 3.31mtpa. This could be interpreted as lending strength to the idea that 3.31mtpa is representative of normal market conditions.

Plan Provision Rate Scenarios based on Substituting or Removing 'Non-representative' Sand and Gravel Sales as Part of the Provision Methodology

- 5.96 Any removal of a data point from the ten-year dataset would require either:
- basing the average on less than ten data points,
 - the substitution of data older than ten years, or
 - replacing 'non-representative' data with figure(s) self-selected as being representative.
- 5.97 The key for the MWPA is setting mineral provision at such a rate that the Plan can accommodate any additional increases in need without having to undergo an unplanned early review, but not setting that rate so high that sites do not come forward during the Plan period or are worked more slowly, and subsequently restored more slowly, than envisaged. Given the non-qualitative nature of some of the inputs to the methodology, there cannot be a 'correct' plan provision rate in any event, it is instead the case that the plan rate needs to be set appropriately

⁴⁹ Paragraph: 064 Reference ID: 27-064-20140306

⁵⁰ Based on a rolling average of 2016-2018

such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of minerals.

- 5.98 The second option, being the substitution of data older than ten years for non-representative sale figures, is not considered to be a valid alternative as it would involve additional secondary considerations with regards to whether historic figures themselves are representative, including how historic growth figures compare to current growth figures. It would also require an understanding of whether there had been any changes in construction and/ or recycling practices that would have a measurable impact on the need for primary mineral that wouldn't be the case now. Given that it is understood that all sales dating back to 2008 and not already considered in the dataset above were recorded during a global recession, the MWPA would need to go back to at least 2007 to find 'representative' historic figures, magnifying the potential impacts of the secondary considerations set out above.
- 5.99 The MWPA has considered the approach of substituting 'non-representative' values with a 'more representative' figure in order to preserve the concept of taking an average of ten datapoints whilst also being able to remove non-representative figures. However, it is obvious that the more datapoints substituted in this manner, the more the self-selected number would be reflective of the resultant average, particularly given the relatively small dataset.
- 5.100 Key to this exercise is therefore deriving a reasonable 'representative' figure upon which to base the substitutions. Whilst taking the mean average of the dataset as the representative figure may seem like the most obvious approach, this would ignore the fact that the purpose of the exercise is to understand the impact that non-representative sales is having on the mean average in the first place. Taking the mean average of 3.31mtpa would amount to a self-fulfilling prophecy in the sense that replacing those returns least similar to the ten-year average of 3.31mtpa with 3.31mtpa would bring the resulting averages closer to 3.31mtpa.
- 5.101 Instead, it was considered to be more appropriate to consider whether a modal average could be taken from the unmodified dataset. The modal average reports on the figure that appears the most in a dataset and therefore would require at least two years recording the same figure. Sales of 3.26mt were recorded in 2016 and 2022, which are considered to be two years that were unconstrained by economic factors. This figure is also virtually identical to the 3.27mt recorded in 2017 and within 7% of all reported sale years other than for peak sales in 2014 and sales recorded in 2020 which were impacted by COVID-19. The MWPA therefore considers this to be an appropriate substitution as it is a figure reflective of a significant proportion of the dataset, and all the remaining dataset if the previously identified non-representative years are removed.
- 5.102 Table 2 sets out eight scenarios around which to derive an appropriate baseline for the annual plan provision rate. Each scenario reports on the impacts of substituting or removing different combinations of sales data considered to potentially be non-representative of normal market need. These are the datapoints representing the final stage of recovery from the global recession in 2013, the sales peak in 2014 and the period of 2019-2020 where sales and data returns were impacted by COVID-19.

wTable 2: Removing and Substituting 'Non-Representative' Sales Figures from the Ten-Year Rolling Sales Average

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F	Scenario G	Scenario H
Year	Unmodified 10-Year Rolling Sales Average (mt)	3-Year Rolling Average (mt)	Substituting Sales Data Impacted by COVID-19* (mt)	Removing Sales Data Impacted by COVID-19 (mt)	Substituting 'Non-Representative' Peak Sale Value* (mt)	Removing 'Non-Representative' Peak Sale Value (mt)	Substituting All 'Non-Representative Sales' Figures* (mt)	Removing All 'Non-Representative Sales' Figures (mt)
2013	3.04		3.04	3.04	3.04	3.04	3.26	
2014	4.23		4.23	4.23	3.26		3.26	
2015	3.31		3.31	3.31	3.31	3.31	3.31	3.31
2016	3.26		3.26	3.26	3.26	3.26	3.26	3.26
2017	3.27		3.27	3.27	3.27	3.27	3.27	3.27
2018	3.42		3.42	3.42	3.42	3.42	3.42	3.42
2019	3.03		3.26		3.03	3.03	3.26	
2020	2.82	2.82	3.26		2.82	2.82	3.26	
2021	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
2022	3.26	3.26	3.26	3.26	3.26	3.26	3.26	3.26
Average	3.31	3.19	3.38	3.41	3.22	3.21	3.31	3.34
Proportion of Unmodified 10 Year Rolling Sales Average	100%	96%	102%	103%	97%	97%	100%	101%
Difference between Unmodified and Modified Average in mt	0.00	-0.12	0.07	0.10	-0.10	-0.10	-0.01	0.02
Impact on Total Need over the Plan Period based on 10 Year Rolling Sales** in mt	0.00	-1.82	1.00	1.45	-1.46	-1.53	-0.12	0.33
Impact as a Proportion of Total Need Over Plan Period Based on Unmodified 10 Year Rolling Sales Average**	0%	-4%	2%	3%	-3%	-3%	0%	1%

*Substitution using a value of 3.26mt. This figure represents the modal average.

** Total Plan need = 3.31mtpa (Unmodified average) multiplied over a 15-year plan period = 49.65mt. Makes no allowance for existing reserves. See Paragraph

- 5.103 Attempting to modify the dataset gives rise to the requirement to justify any such modification. As previously set out in Paragraph 5.98, removing data points considered to be non-representative of 'normal' market need and replacing them with historic sale figures is not considered to be an appropriate approach as any introduced figures would be from 2007 at the latest. Therefore, none of the scenarios in Table 2 act to replace non-representative values with historic sales.
- 5.104 It is accepted that any kind of modification to the dataset could act to mask normal market fluctuations. However, the MWPA is satisfied that the period 2019 – 2020 is not representative of market conditions due to the impacts of COVID-19. It is acknowledged that there is less certainty with regards to the reason behind the peak sales return in 2014. Nonetheless, the peak also appears non-representative, with most other sales in the dataset being approximately three quarters of this value. When considering non-representative sales values, there is also a requirement to consider the sales figure recorded in 2013 as non-representative. The return of 3.04mtpa that year is almost identical to the first COVID-19 impacted data point of 3.03mtpa, and is interpreted as being the final year of recovery following the global recession.
- 5.105 Scenario A in wTable 2 equates to the baseline ten-year average as required by NPPF Paragraph 213 and is a ten-year average incorporating all data-points. This would result in a plan provision rate of 3.31mtpa. Scenario B is a three-year average that the PPG suggests using as an indicator of more recent trends. The current three-year sales average is 3.19mt, which is below the ten-year average. However this average includes the data return for 2020 which was impacted by COVID-19. This gives rise to the question of whether this three-year average is appropriate to be used or whether itself would need additional modification to remove a figure identified as not-representative across Scenarios C-H.
- 5.106 The three-year average represented by Scenario B would lead to a plan provision rate based on two data points if no substitution of the non-representative sales year was made. This is not considered to be appropriate give that the NPPF states a ten-year average as a basis. Additionally, replacement through a self-selected figure considered to be more representative would have a significant impact on the final average as the self-selected figure would represent a third of the dataset. This is considered to be too big a proportion to allow Scenario B to function as a viable alternative. As such, the use of the latest three-year average is not considered to be appropriate.
- 5.107 It is however noted that the final three-year average calculated one year prior to the impact of COVID on data collection⁵¹ returned a value of 3.32mtpa which is virtually identical to the current ten-year rolling average of 3.31mtpa. For completeness, an average of the last three years of sales would equate to 96% of the ten-year average which in isolation is not considered to be statistically significant. Substituting the COVID-19 period figure with the more representative figure of 3.26mt would derive an average 1% above the ten-year rolling sales figure. Again, this is not considered to be statistically significant to merit selecting Scenario B over the Scenario A approach of incorporating the whole dataset.
- 5.108 Removing datapoints considered to be non-representative has been considered as a potentially valid approach to deriving a more representative market need. In

⁵¹ 2016 - 2018

principle however, averages increase in validity the more data points they are informed by. That said, where the dataset is relatively small, retaining outliers has the potential to distort the average more than retaining them. Scenario D in Table 2 removes 20% of the dataset due to COVID-19 impacts, Scenario F removes 10% of the dataset due to the peak sales figure in 2014 and Scenario H removes 40% of the dataset due to the non-representative COVID-19 sales, peak sales and the final year of recovery in 2013 following the global recession. In principle, removing 40% of a dataset as required under Scenario H would unlikely be sound but that aside, removing all outliers acts to homogenise the dataset and the resulting average shows a 1% uplift from the ten-year rolling sales average presented under Scenario A. When considering Scenarios D (removing COVID-19) and F (removing peak sales), the former provides an average 3% greater than Scenario A with the latter returning an average 3% below Scenario A

- 5.109 Scenario C in Table 2 substitutes 20% of the dataset due to COVID, Scenario E substitutes 10% of the dataset due to the peak sales figure and Scenario G substitutes 40% of the dataset due to the non-representative COVID sales, peak sales and the final year of recovery following the global recession. In principle, substituting 40% of the dataset as required under Scenario G would not be considered to be sound but that aside, removing all outliers and replacing them with the modal average of 3.26mt derives a mean average of 3.31mt which is identical to the unmodified average presented under Scenario A. When considering Scenarios C and E, the former provides an average 2% greater than Scenario A with the latter returning an average 3% below Scenario A.
- 5.110 Across the range of scenarios considered, the deviation of the derived average from an unmodified ten-year rolling sales equates to between -4% to 3%. wTable 2 also considers how this translates into a variation of the need for mineral based on each scenario versus the total mineral that would be required at a rate of the unmodified average (assuming a baseline position of 0mt ie there are no existing permitted reserves of sand and gravel).
- 5.111 The maximum difference in mineral need would be derived under Scenario B – the three-year rolling average scenario. Provision under this scenario would result in a reduction of need of 1.82mt to be allocated through the preparation of the emerging MLP. The MWPA does not however consider that scenario to be credible. The next biggest difference would be a reduction in need of 1.53mt of allocations across the Plan period through Scenario F. Again however, this scenario is not considered appropriate as it results in the removal of the peak sale figure, the cause of which is not known, but retains those figures understood to be impacted by COVID-19 and are therefore also known too not be representative. The scenario with the biggest impact on mineral need which could potentially be considered to be a more legitimate scenario are those related to the removal or substitution of data impacted by COVID-19, which are Scenarios C and D. Depending on whether the data is substituted or removed, the scenarios result in the need for increased allocations across the Plan period amounting to 1mt and 1.45mt respectively.
- 5.112 With these values being higher than 55% - 45% of all candidate sites respectively, there is the potential that a plan rate set at either of the Scenario C or D values could result in the allocation of an additional site that would not be required under the unmodified ten-year rolling sales approach. Whilst in isolation

this is a matter of significance, it is noted that the final quantified plan requirement for allocations would represent a minimum amount of sand and gravel that would be needed to be allocated, not the maximum, with the final suite of allocations having to conform to a number of other planning requirements as set out in this section and specifically Paragraph 5.279. Although in the interests of sustainable planning the MWPA will attempt to make allocations that equate as closely to the quantified need as far as is possible, there are a number of other qualitative considerations required to achieve the Spatial Vision of the MLP which act to reduce the strategic significance of this quantitative need. At the strategic level, which the MWPA is required to consider, the quantitative difference between Scenario C (substituting COVID-19 figures) and D (removing COVID-19 figures) would result in an additional 2% - 3% respectively of the total mineral requiring to be allocated under the unmodified average. Whilst respecting the potential specific economic, environmental and social impact of this difference, it is not considered to be statistically significant given the degree of forecasting and qualitative information that is inherent within the provision methodology in any case.

- 5.113 It is noted that the MWPA hasn't considered the impact of the potentially global recession impacted 2013 datapoint as a separate set of scenarios, as well as additional paired scenarios with the modification of peak sales and COVID-19 scenarios. It is however considered that removals and substitutions at a similar scale have been demonstrated as having little strategic impact statistically. The MWPA have however considered Scenario G and Scenario H which relate to removing and substituting all non-representative data.
- 5.114 Although not applicable to minerals planning, it is noted that Section 2 of the National Planning Policy for Waste 2014 (NPPW) states that 'waste capacity' (analogous to 'mineral need' for waste planning) needs to be 'based on robust analysis of the best available data and information, and an appraisal of options. Spurious precision should be avoided'.
- 5.115 As previously mentioned, given the non-qualitative nature of some of the inputs to the methodology, there cannot be a 'correct' rate of plan provision. The NPPF derived requirement is for the plan rate to be set such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of aggregates. It is not considered that any of the assessed alternative provision scenarios, B – H, result in a provision rate so statistically significant that it justifies a deviation from ten-year rolling sales as the basis of the plan provision rate. Not only are the scenarios statistically very similar, but the scenarios are also based on substitutions and removals with varying degrees of legitimacy.

Factoring 'Other Local Information' into an Appropriate Plan Provision Rate

- 5.116 Having assessed 'other local information' earlier in this Section from Paragraph 5.7, the MWPA has concluded that there are four factors which have the potential to influence the appropriateness of the ten-year rolling average as a predictor of future need to the extent that a forecast based strictly on a ten-year rolling sales basis may not be reflective of the true need for sand and gravel. Two of these are the economic impacts of COVID-19 and the 2008 global recession manifested in historic sales data as set out above. These wider economic impacts resulted in lower annual sales and therefore a lower ten-year average than might otherwise have been calculated. However, as demonstrated through wTable 2, these

deviations are not considered to be so significant that they require a statistical intervention. On that basis, the MWPA considers that a rolling ten-year sales average, without any modification is an appropriate starting point upon which to derive the plan provision rate.

- 5.117 The other pieces of local information of high importance with regards to the requirement for mineral are forecasted growth rates of development and the current and future state of the economy. As shown by Figure 2 and supported by Paragraph 5.62, future growth rates as set out in Local Plans would be an increase on historic delivery rates and this is likely to result in sand and gravel sales increasing from their current levels, creating an additional increase in need. The latest forecasts for the Mineral Products Association and the Construction Products Association note that after 14 separate inflation rises, the economy is again slowing but will experience growth from 2025
- 5.118 With the economy and housing delivery rates forecasted to rise in the future, it is not considered appropriate to set the plan provision rate equivalent to the rate that would be derived from the basic current ten-year average sales. As shown in Figure 3, an un-modified ten-year rolling sales average would result in a plan rate which would be a close fit with what are considered to be akin to 'business-as-usual' years in 2015 – 2018 and 2021-2022. As set out in Paragraph 5.93, the MWPA considers that setting this as the plan provision rate would fail the Test of Soundness relating to being consistent with national planning policy as such an approach would not result in a flexible plan which would be able to respond to any uplift in sales. Such a sales rate would also be to ignore evidence relating to the forecasted increase in development rates, which would fail another Test of Soundness, which is to be evidenced led.
- 5.119 The MWPA accepts that the increased forecasted delivery rates may not come to pass. However, the MWLP is required to accommodate the growth needs of the county as set out in existing and emerging local plans. All Local Plans must reflect future 'need' as best understood by the latest evidence, which for the MWPA is led primarily by the growth rates set out in district Local Plans. The MLP, which will form part of the Development Plan across the County, and therefore every district within the County, cannot act as a roadblock to the development aspirations set out elsewhere in the Development Plan.
- 5.120 It is understood through successive mineral surveys that approximately 80% of aggregates produced in the County are consumed within the County, and any economic recovery is likely to be related to increased activity in house building to which the mineral industry, and therefore the MLP, would need to respond. As such, the MWPA considers it appropriate to increase the ten-year sales average by a buffer value, which will off-set the lower sales figures within the ten-year average whilst also creating the necessary headroom required to be able to respond to an increase in future development rates compared to existing rates. This is considered to be more transparent than attempting to manipulate the raw sales data values themselves.
- 5.121 Whilst the MWPA considers that there needs to be an increase in sand and gravel provision from the ten-year rolling sales average to accommodate future growth, it is also the case that the apportionment must be appropriately set such that it isn't unnecessarily high. Whilst it is recognised that allocating land for mineral extraction based on higher levels of provision will increase flexibility for

the minerals industry, it can also act to reduce certainty with regards to where sites may come forward over the Plan period, including whether they come forward in the plan period at all. If more sites than were needed are allocated, this could subsequently lead to the working of mineral in less sustainable locations than what would have transpired under a lower plan apportionment figure. Sites remaining allocated but not forward for a long period could also lead to planning blight. Over-allocation can also potentially increase timescales associated with the working of mineral and the subsequent restoration of the site, meaning that localised impacts are potentially felt for longer and the local benefits afforded by restoration are delayed. It is also the case that the more allocations made at this point, the less able both the MWPA and the minerals industry as a whole would be able to accommodate potentially more sustainable opportunities in the future. There is therefore a need to derive an appropriate uplift to the ten-year rolling sales average that maintains that balance. This is explored below.

Deriving an Appropriate Uplift to the Ten-Year Rolling Sales Average

- 5.122 With the MWPA concluding that a proportional uplift is required to the ten-year rolling sales average to ensure that the Plan is flexible in accordance with NPPF Paragraph 82d and can respond to the forecasted increase in development rates, there is a requirement to calculate the necessary magnitude of that proportional uplift.
- 5.123 The table and figures below compare Essex-only sales of sand and gravel with the current plan apportionment and a number of potential alternative plan provision figures based on an average of the last ten years sales with varying percentage buffers attached. Figure 4 shows each rolling average annually updated, with Figure 5 projecting the latest ten-year rolling average plus buffer figures for each scenario backwards across historic sales to depict the headroom that the buffer would have afforded against the last ten years of sales. Table 3 below shows this latter value and it would be this latest figure for the chosen proportional uplift that would equate to the annual plan provision figure to be used to calculate the total provision that would be required to be made in the final Plan.
- 5.124 The analysis which follows is based on the latest data. As data is updated annually, the dataset used in this report will not be the most current at future planning stages. As such, figures at this stage are to be considered indicative and are to inform the Regulation 18 consultation in January 2024, with emphasis to be placed on the methodology through which to calculate Plan provision i.e., 10 year rolling sales + X%, rather than the exact figure that is currently derived from that calculation. The MWPA notes that it will need to finalise a provision figure ahead of the Regulation 19 consultation at the latest, and further notes that an independent Planning Inspector may request that the plan provision rate be updated again at the point of adoption. This new provision rate will become a material planning consideration at the point that the new MLP is adopted. At this point, the MWPA will also use this plan provision rate when assessing annually collated sales data to derive evidence of whether the MLP is making an appropriate level of provision in the future. The results of this will be published annually in the LAA and AMR.
- 5.125 Any proposed method set out in this document through which to derive both a revised plan provision figure and an appropriate amount of mineral to be allocated will need to go through Sustainability Appraisal (SA) and other plan

assessments ahead of any public consultation. The conclusions drawn by these plan assessments will have been factored into this paper ahead of the public consultation, with this Topic Paper having been updated to reflect those findings, and Policy S6 re-drafted accordingly.

Figure 4: Comparison between Essex Sand and Gravel Ten-Year Rolling Sales Average, Current Plan Apportionment and Potential Provision Uplifts (shown year-on-year), 2013 – 2022

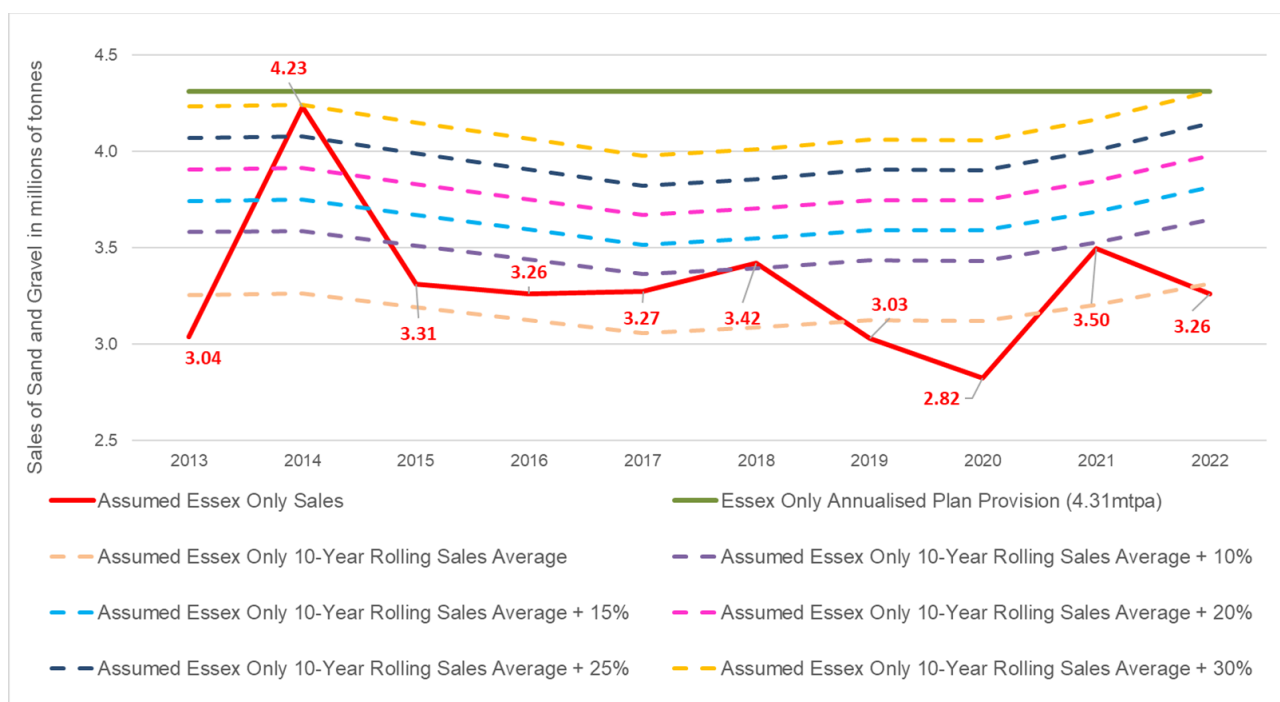


Table 3: Comparison between Essex Sand and Gravel Ten-Year Rolling Average Sales, Current Plan Apportionment and Potential Provision Uplifts based on 2013 – 2022 Average

Provision Scenario	Sand and Gravel in millions of tonnes
Current Essex-only Annualised Plan Provision**	4.31
Assumed Essex-only 10 year rolling sales average*	3.31
Assumed Essex-only 10 year rolling sales average +10%*	3.65
Assumed Essex-only 10 year rolling sales average + 15%*	3.81
Assumed Essex-only 10 year rolling sales average + 20%*	3.98
Assumed Essex-only 10 year rolling sales average + 25%*	4.14

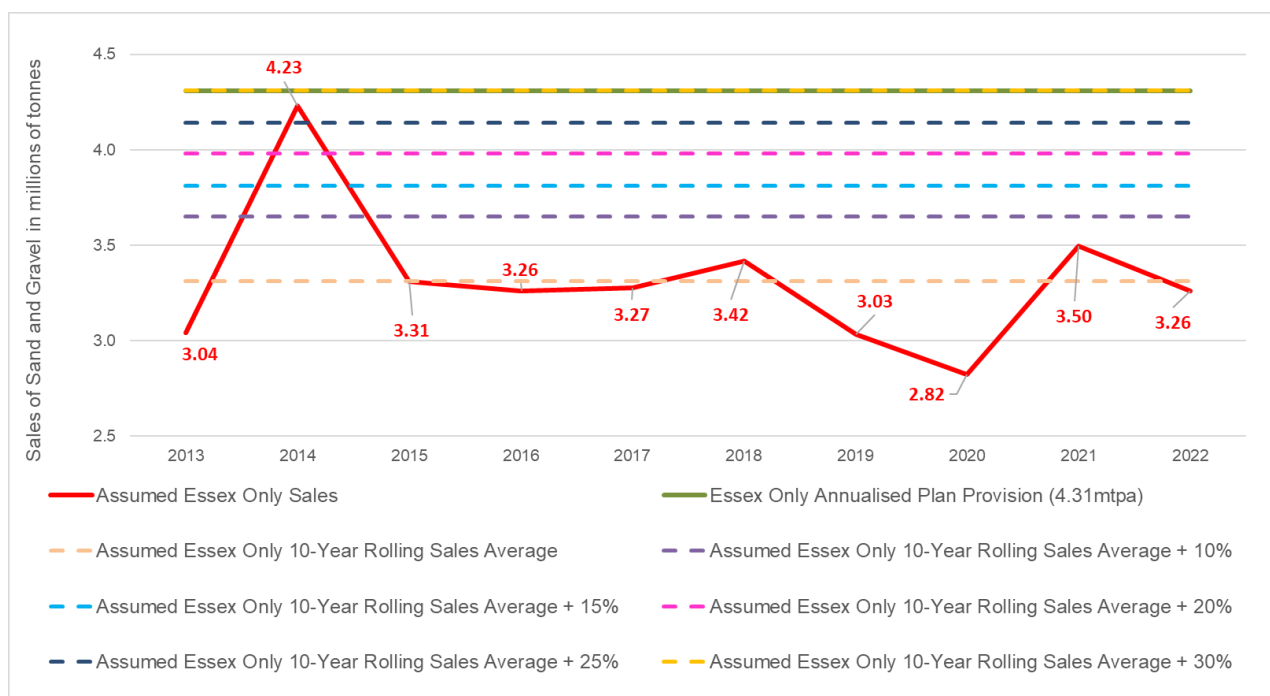
Assumed Essex-only 10 year rolling sales average + 30%*

4.31

Note - * refers to ten year rolling sales value calculated for period 2013 – 2023.

** The Greater Essex apportionment is 4.45mtpa, of which 4.31mtpa is allocated to Essex and 0.14mtpa to Thurrock. To protect commercial, the Thurrock apportionment of 0.14mtpa is subtracted from each Greater Essex sales figure, prior to calculating averages, to arrive at an assumed sales and averaged sales figures for Essex-only.

Figure 5: Comparison between Essex Sand and Gravel Ten-Year Rolling Average Sales, Current Plan Apportionment and Potential Provision Uplifts based on 2013 – 2022 Average



- 5.126 As previously stated, an appropriate plan provision figure is a balance between having sufficient headroom above current sale trajectories such that the MWPA accords with the NPPF Paragraph 82d requirement of producing policies in development plans which are able to offer ‘a rapid response to changes in economic circumstances’, but with this provision not being so high such that the proposed plan provision leads to mores sites, in potentially less sustainable locations, being allocated than is necessary.
- 5.127 Based on an assessment of Figure 5, it is clear that a plan provision based on the current ten-year rolling sales average with no additional provision would not accord with the NPPF Paragraph 82d need for policies to be flexible enough to accommodate needs not currently anticipated.
- 5.128 The ten-year average rate of 3.31mtpa would closely match the period of sales between 2015 – 2018, a period that sits between the adoption of the MLP and prior to the pandemic, and where reported sales are relatively stable. Although this a short period of time covering just under half of the time series, the MWPA

consider this period to have the potential to be broadly reflective of contemporary sales in Essex under 'normal' circumstances. This rate of 3.31mtpa would also only just satisfy the sales figure of 3.26 in 2022 and fail to satisfy the post-COVID-19 sales of 3.5mt recorded in 2021.

- 5.129 Relevant to the consideration of an appropriate uplift, Figure 4 shows a trend of an annual increase in the ten-year rolling sales average, due in part to sales recorded during the years impacted by the global recession and its aftermath increasingly falling outside of the annually revised dataset. It would be remiss of the MWPA to not consider this annual rise in the ten-year average when considering the appropriateness of the current ten-year sales value.
- 5.130 As previously set out, the MWPA considers it appropriate to consider the sales for 2015 – 2018 and 2021 – 2022 as being broadly representative of a normal level of sales. Sales during these periods were not constrained by any non-mineral related economic factors that the MWPA is aware of, nor is there a current lack of permitted operations in the county from which to supply sand and gravel such that sales are being suppressed by a lack of opportunity for market provision.
- 5.131 As set out in Paragraph 5.115 and wTable 2, the MWPA has derived an average of the two periods which are considered to be a stable rate of sales from which the MWPA infer is representative of 'normal' market need (Scenarios G and H), and subsequently compared that to the unmodified ten-year rolling average (Scenario A, 3.31mtpa). The 'representative' average is also 3.31mtpa when substituted figures are used (Scenario G), and 3.34mtpa when 'non-representative' sales are removed and not substituted (Scenario H), a difference of 1%.
- 5.132 With the difference between the two averages being so small it is not considered to be statistically significant. It is therefore considered that there is no requirement to remove any given data point from the ten-year series on the basis that it is so unrepresentative that it distorts the validity of using the ten-year sales average as an indicator of need. Proportional increases will therefore be based on the ten-year sales average as set out in Figure 3.
- 5.133 However, to understand the degree of headroom (plan flexibility) and the minimal differences across the more viable alternative provision scenarios in wTable 2, the values derived from the unmodified ten-year rolling sales figure (Scenario A) plus a range of buffers will be compared primarily to the relatively stable sales period across 2015 – 2018 and 2021 – 2022, as these are considered to represent the 'normal' market conditions to which the MLP will need to respond. These are Scenarios G and H from wTable 2 above. The same exercise has been carried out to offer a comparison between using the full ten-year dataset alongside Scenario C and D which involved substituting and removing the 2019 and 2020 sale returns due to the impacts of COVID-19. The deviation from the proportional uplift applied under the provision scenarios in the first column of Table 4 and Table 5 represents the scale of impact of using the four amended scenarios rather than an unedited dataset.
- 5.134 An additional scenario of the current plan provision rate of 4.31mtpa has been included so the difference between the plan rate and actual rate of provision can also be seen.

Table 4: Assessing Headroom between the Unmodified Sand and Gravel Sales Average and the Sand and Gravel Sales Average with Non-Representative Sale Returns Substituted and Removed, with Varying Proportional Uplifts Applied

Provision Scenario, 2013 - 2022	Plan Rate Sand and Gravel (mt)	When Substituting* Non-Representative Sales Data (Scenario G Sales Average - 3.31mt)		When Removing Non-Representative Sales Data (Scenario H Sales Average - 3.34mt)	
		Headroom between 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022 (mt)	Proportion of 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022	Headroom between 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022 (mt)	Proportion of 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022
Current Annualised Plan Provision	4.31	1.00	130%	0.97	129%
10 year sales average	3.31	0.00	100%	-0.03	99%
10 year sales average +10%	3.65	0.34	110%	0.31	109%
10 year sales average + 15%	3.81	0.50	115%	0.47	114%
10 year sales average + 20%	3.98	0.67	120%	0.64	119%
10 year sales average + 25%	4.14	0.83	125%	0.80	124%
10 year sales average + 30%	4.31	1.00	130%	0.97	129%

Table 5: Assessing Headroom between the Unmodified Sand and Gravel Sales Average and the Sand and Gravel Sales Average with COVID-19 Sale Returns Substituted and Removed, with Varying Proportional Uplifts Applied

Provision Scenario, 2013 - 2022	Plan Rate Sand and Gravel (mt)	When Substituting* Non-Representative Sales Data (Scenario C Sales Average - 3.38mt)		When Removing Non-Representative Sales Data (Scenario D Sales Average - 3.41mt)	
		Headroom between 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022 (mt)	Proportion of 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022	Headroom between 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022 (mt)	Proportion of 10-year Rolling Sales and Average of 'Representative Sales' Only, 2013 - 2022
Current Annualised Plan Provision	4.31	0.93	128%	0.90	126%
10 year sales average	3.31	-0.07	98%	-0.10	97%
10 year sales average +10%	3.65	0.27	108%	0.24	107%
10 year sales average + 15%	3.81	0.43	113%	0.40	112%
10 year sales average + 20%	3.98	0.60	118%	0.57	117%
10 year sales average + 25%	4.14	0.76	122%	0.73	121%
10 year sales average + 30%	4.31	0.93	128%	0.90	126%

Source: Essex County Council

Note: 'Non-representative' sales substituted by modal average of 3.26mt

- 5.135 Table 4 shows the impact on the provision rate of taking an unmodified ten-year average of sand and gravel sales and adding a range of percentage uplifts. The table then compares each of those to an average of sales derived from a dataset modified by the MWPA, through both substitution and removal, of all outlying data returns in order that the average derived from the revised dataset is more representative of what the true market need is anticipated to have been across the Plan period without the impacts of wider economic issues and a potentially non-representative peak in sales.
- 5.136 Table 5 presents a similar comparison but with the revised dataset being based on substituting and removing just those sales figures that are known to have been impacted by COVID-19, either by being non-representative due to the minerals industry being on furlough so survey responses from which sales are collated were lower, or a real impact on sales due to the economic slowdown in 2020.
- 5.137 As demonstrated, the difference between these scenarios is not statistically significant at the strategic plan making level. When just COVID-19 related sales are substituted or removed, the proportional difference is between 2-3%. When all non-representative sales are removed or substituted, the proportional difference is between 0 – 1%. These outcomes again satisfy the MWPA that the plan provision rate can be based on a rolling ten-years average, albeit one which requires an uplift due to the need to satisfy the forecasted increase in growth.
- 5.138 That said, given the previously articulated impossibility of quantifying any direct increase in mineral demand that may come from an uplift in housing provision or the delivery of significant infrastructure projects, the MWPA notes that selecting a proportional uplift based on this particular piece of ‘other local information’ is difficult to justify beyond reasonable doubt, not least because a number of local plans are still in production so little weight can be attributed to their growth forecasts in a quantitative sense. This is further muddled by the fact that significant changes to the planning system are set out in the Levelling Up and Regeneration Act 2023, published in October 2023. Some of the forthcoming changes will relate to the provision methodologies for housing delivery which increases the chances that emerging figures in non-adopted plans may change.
- 5.139 Given the non-quantitative nature of some of the inputs to the methodology, there cannot in any event be a ‘correct’ rate of plan provision. The NPPF derived requirement is for the plan rate to be set such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of minerals. When considered in isolation, there is little strategic significance in applying a proportional uplift of 11% compared to 12% compared to 10% for example. On that basis, the MWPA has selected percentage uplift buffers rising in multiples of five.
- 5.140 What constitutes the selection of an appropriate plan provision rate is striking the balance between setting a plan provision rate sufficiently high such that it can respond to any forecasted growth and market fluctuations, but not setting it so high as to require new site allocations which are probably not necessary to serve demand in the plan period. It is important to consider that the final plan provision figure is not a ‘target’ for sales, nor has it historically created a situation in Essex where sales have increased to match the selected plan provision figure, as can be seen in Figure 3. The apportionment of 4.31mtpa set through the adoption of

the current MLP in 2014, which would equate to a 30% uplift based on the latest data, has not been met at the time of writing (October 2023) since the current MLP was adopted, with the resulting annual cumulative savings that have therefore been made acting to postpone the need for this MLP Review as the sites adopted through the Plan have not been worked at the rate the current MLP was developed to accommodate. The table below acts to demonstrate the cumulative savings that have been realised since the MLP was adopted.

Table 6: Comparing the MLP Sand and Gravel Annual Apportionment with Essex Sand and Gravel Sales (mt)

Year	Essex Only Assumed Sales (mt)	Annualised Plan Provision (mt) (Essex Only Allocation)	Annual "Saved" Sand & Gravel (mt)	Cumulative "Saved" Sand & Gravel (mt)
2014	4.23	4.31	0.08	0.08
2015	3.31	4.31	1.00	1.08
2016	3.26	4.31	1.05	2.13
2017	3.27	4.31	1.04	3.17
2018	3.42	4.31	0.89	4.06
2019	3.03	4.31	1.28	5.34
2020	2.82	4.31	1.49	6.82
2021	3.50	4.31	0.81	7.63
2022	3.26	4.31	1.05	8.68

5.141 Across the nine years since the MLP was adopted, the plan provision rate exceeded the annual sales rate to the extent that 8.68mt of 'expected' sales were not made. It is important to note that this resource is not 'lost'. At the current plan provision rate of 4.31mtpa, the 'saved' sand and gravel amounts to just over an additional two years of provision. In other words, the time when the MLP would no longer be able to make appropriate provision for the County's sand and gravel requirements would be extended by two years based on provision rates calculated prior to adoption. Based on the quantum of allocations made in the current MLP, the Plan would have ceased to be NPPF compliant around 2022 but this was not the case. Although as demonstrated later in Figure 6, that new allocations are likely to be needed in the near future, the Plan remains NPPF compliant at the time of writing in October 2023.

5.142 It is however also important to note that sales should not consistently match the plan provision figure if the provision is to be sufficiently flexible to support development needs and market fluctuations. If the planned rate of provision is exceeded, then the provision made in the plan does not meet the NPPF requirement of being steady and adequate for the period in which it was exceeded. This is why higher provision rates contribute to plan flexibility in the long-term. However, the role of the MWPA is to balance this need for plan and market flexibility with ensuring that the plan rate isn't so high such that more allocations than necessary are made.

- 5.143 Taking all of the above into account, the MWPA currently considers that a future plan provision based on a rolling ten-year sales average plus 20% is an appropriate plan provision figure. This proportion was also that put forward at the previous Regulation 18 consultation in 2021. Adding a buffer of 20% is considered to accommodate the small reductions in the sales average caused by economic recession and the pandemic, as well as provide sufficient time to assess whether the resultant headroom provided by the proposed plan provision rate increase is able to accommodate the forecasted increase in the rate of development as proposed in Local Plans and the NSIP schedule. The figure derived from an average of the last ten years of sales plus an additional 20% is 3.98mt (using 2013 to 2022 figures). This is an increase in the 3.74mtpa calculated for the purposes of quantifying a plan provision rate +20% for the Regulation 18 in 2001, but lower than the current plan provision rate. The increase is due to the upturn in sales in 2021 and 2022 versus the absence of significantly lower historic figures lost through the rolling forward of the dataset.
- 5.144 The derived figure of 3,98mtpa is recognised as also being lower than the highest sales figure of 4.23mt recorded in 2014 but is still 94% of that return. With this derived provision figure accommodating all other annual sales recorded in the last ten years, that single year of exceedance would be easily accommodated by the proposed plan provision rate over that period. The rate of 3.98mtpa is also over the alternative plan provision rates when COVID-19 sales are substituted or removed, and all 'non-representative' sale returns are substitute or removed. In the worst case across all of these scenarios, the 20% additional headroom based on the unmodified ten-year sales average translates into a 17% headroom when COVID-19 sales are removed.
- 5.145 It is acknowledged that the figure which would be derived through an average of the last ten-year sales plus 20% is 8% lower than the current apportionment, which represents a direction of travel which appears at odds with the forecasted upturn in housing delivery and other significant infrastructure projects previously highlighted. However, the MWPA considers the proposed figure of 3.98mtpa to be sufficiently high to accommodate an uplift over historic sales, including those self-selected as being representative of true market need. The MWPA again notes the absence of extant Guidelines that may suggest an alternative provision figure and considers that it has followed the methodology set out in the NPPF for calculating a rate of aggregate provision. The selected plan provision rate is considered to be set sufficiently high that the resultant MLP will be sufficiently flexible to accommodate the forecasted rising need for sand and gravel, and the proposal to add an additional seven-year provision onto the end of the Plan period increases the likelihood of being able to maintain landbank requirements towards the latter stages of the Plan period. The MWPA also considers that there would be sufficient time to identify if demand is outstripping the provision rate and commence another MLP Review long before there would be any issues with supply on the ground.

Summary of Means used to Derive the Proposed Plan Provision Rate for Sand and Gravel of 3.98mtpa

- 5.146 The NPPF and PPG include a number of considerations through which to derive a plan provision rate which equates to a rate of mineral provision resulting in a

steady and adequate supply of sand and gravel. The first requirement is to base provision on a rolling ten-year sales average, which for Essex equates to 3.31mtpa. The NPPF then requires the MWPA to consider 'other local information' in order to determine whether that rate of provision is appropriate.

- 5.147 In order to address this requirement, the MWPA first considered whether each annual sales return informing the average could be considered to be 'business-as-usual' or whether there might be circumstances causing the data point to deviate from a representative market requirement. The MWPA subsequently identified that the 2013 return was potentially impacted by the 2008 global recession, and the 2019 – 2020 returns were impacted by data collation and a suppression of sales as a result of the COVID-19 pandemic. The MWPA further questioned whether a sales peak in 2014 was truly representative and whether it was appropriate in terms of calculating a more representative average to remove all the 'lower-than-normal' sales outliers and retain the potentially 'higher-than-normal' outlying figure. Following an assessment of various scenarios set out in wTable 2 of this report, it was found that statistically there was little difference between the suite of scenarios such that a statistical intervention, which creates a different set of issues around representativeness in any event, could be justified.
- 5.148 This position is strengthened by the fact that there is no 'correct' rate of plan provision based on the NPPF methodology due to the qualitative inputs that are involved. There are also no 'tests' that can be applied to the provision rate beyond looking at previous sales, so attempts to derive the perfect plan provision rate for future provision are considered spurious. The tests for whether the plan provision rate is sound and capable of adoption is whether the proposed supply rate is 'steady and adequate' and will result in a flexible Plan capable of responding to the fluctuating needs of the mineral market. The flexibility that the MWPA are proposing to build into the Plan provides the MWPA with an appropriate timeframe to assess the accuracy of the plan provision rate over a number of years post adoption, and consequently when the MWPA may again be required to amend the provision element of the MLP.
- 5.149 The other important piece of local information that the MWPA considered as part of setting a plan provision rate is the fact that, based on adopted and emerging district local plans, housing development rates in the County are expected to increase from their current rate. Most of the sand and gravel extracted in Essex is consumed by the house building sector in Essex, so this is likely to be the main driver for sales, and it can therefore be confidently inferred that a forecasted rise in housing delivery rates will create an increased need for sand and gravel provision over that which currently exists. There is however no way for a MWPA to quantify the corresponding additional mineral requirement required to accommodate a rise in the housing development rate, even if the housing rate rise itself is known. An increase in housing growth will also create an increase in the need for supporting infrastructure including roads and commercial developments, and there are also a number of NSIPs in the pipeline for Essex. These too will require mineral.
- 5.150 Having considered an unmodified ten-year sales average as being a suitable base for the Plan provision rate, but recognising that the rate itself will need to increase to accommodate forecasted growth, the MWPA is proposing to attach a proportional uplift of 20% to the base plan provision rate, creating a revised plan

provision rate of 3.98mt. This uplift is considered to provide the MLP with sufficient flexibility to act to any rise in mineral sales outstripping this value, with this flexibility further increased by the proposal to allocate sufficient sites such that there is seven years of sand and gravel provision remaining at the end of the Plan period to increase the likelihood that the MLP can satisfy NPPF landbank requirements at the end of the Plan period without amendment.

- 5.151 The NPPF also notes that the plan rate is to be informed by the National and Sub-National Guidelines on Aggregate Provision. However, the use of these in forecasting is not considered to be appropriate as the latest set of Guidelines have expired, there has been no communication from Government stating that they are to still be considered extant, and the forecasting data that underpins the guidelines from which the provision figures are derived are particularly historic. The MWPA is aware that Government intends to revise these Guidelines and the MWPA will consider how best to accommodate these once they are published.
- 5.152 With respect to PPG, this recommends assessing a rolling three-year average as a means to qualify any trend in the ten-year average, and whether a higher or lower rate of plan provision should be sought based on more recent data. On this point, the MWPA notes that the three-year sales average is less than the current ten-year sales average, with the three-year average including the lowest data point in the data series. This was reported in 2020 during the height of the COVID-19 pandemic, meaning a third of the dataset is understood to not reflect market need. On this basis, the 3-year sales average option is not considered to provide a useful alternative or indicator, and the MWPA therefore proposes to adopt the ten-year rolling sales amount of 3.98mtpa as its plan provision rate.

Calculating Mineral Need across the Plan Period Assuming a Sales Rate of 3.98mt

Calculating the Total Need for Sand and Gravel over the Plan Period

- 5.153 With the MWPA proposing to progress the MLP on the basis of an annual sand and gravel provision rate of 3.98mt, there is a requirement to calculate how much additional sand and gravel will be needed to be allocated to service this need across the Plan period in a steady and adequate manner. The following table sets out the forecasted requirement for sand and gravel across the County, based on a plan provision rate of 3.98mtpa over the full plan period of 15 years. An additional seven years of provision has been included in light of the NPPF Paragraph 213f requirement to maintain a landbank of sand and gravel of seven years at all times. Whilst making this addition now will not guarantee conformity with this requirement, as this will be dependent on actual sales reported over the next 15 years, making the addition at this point imbues the MLP with additional flexibility to respond to changing market situations without the need for an unscheduled Review.

Table 7: Mineral Need across the Plan Period on the Basis of a Provision Rate of 3.98mt (Ten-Year Rolling Sales Average + 20%)

Annual Plan Provision Rate (Annual need for sand and gravel)	Need for Sand and Gravel across Plan Period	Accommodating the NPPF Requirement for a 7 Year Landbank
3.98mt to be provided each year	Plan Period 2025 – 2040 Equates to 15 years 3.98mt * 15yrs = 59.7mt	Total Plan Need + 7 Years 7 Years = 3.98mt * 7yrs = 27.86mt Plan Need = 59.7mt Total Need = 59.7mt + 27.86mt = 87.56mt

- 5.154 Table 7 demonstrates that with an annual plan provision of 3.98mtpa, in isolation there would be a requirement to make sufficient allocations to accommodate 59.7mt of sand and gravel over the plan period. With the proposal to make provision for a further seven years at the end of the Plan period in order to provide the plan with flexibility, this increases the amount required to be allocated to a minimum of 87.56mt over the plan period.
- 5.155 This total does however ignore the fact that the County already has existing reserves such that the County is not starting at zero with regards to its need to make provision for sand and gravel. The amount of provision actually required is the total amount needed to the end of the Plan period (87.56mt) minus the amount already in reserve. How to accommodate the contribution of existing reserves is set out below.

Scenarios for Incorporating the Existing Permitted Reserves as Part of Quantifying the Need for Sand and Gravel across the Plan Period

- 5.156 As part of the previous informal engagement held in April 2022, the MWPA devised four scenarios through which to quantify existing reserves with planning permission. These scenarios have been re-used and again will form four options for how to take account of this 'Permitted Reserve'. This amount, as derived from the scenario selected, will be subtracted from the total requirement for sand and gravel over the plan period. The result will be a quantification of the minimum provision (or 'need') required to satisfy a plan provision rate of 3.98mtpa whilst leaving seven years of supply remaining at the end of the Plan period. Following any amendment of this figure through other potential supply options, as explored from Paragraph 5.197, the site selection process will then be required to make

sufficient allocations to satisfy this need as a minimum, provided that there are sufficient suitable sites to do so.

- 5.157 The four scenarios presented below relate to how to factor in the existing permitted reserves and allocations in the currently adopted MLP as part of deriving a mineral need that the new MLP will be required to service. Each scenario has an inherent level of risk associated with it, with risk increasing as the numerical number associated with the scenario increases. This is because each successive scenario assumes an increasing level of contributions being made to the permitted reserve over time.
- 5.158 The current permitted reserve, as calculated from the latest Greater Essex Local Aggregate Assessment using the proxy of 0.14mtpa for Thurrock is 33.62mt. At the proposed plan provision rate of 3.98mtpa, this equates to a supply, or landbank, that would last 8.45 years without any additions. It is therefore clear that more sand and gravel needs to be allocated for future allocation to address need to the end of the revised plan period of 2040. The following bullet points set out how each scenario would add to the baseline figure of 33.62mt.
- Scenario 1 takes into account only that mineral that already has planning permission to extract. This is known as the 'permitted reserve'. There is little to no risk associated with using this scenario as by virtue of being permitted, all of the reserve captured under this scenario is available for extraction. The only risk is that the MWPA cannot force a private company to actually extract it.
 - Scenario 2 includes the permitted reserve as well as the 'pending reserve'. The pending reserve is the sum of the total provision of sand and gravel that would be allocated if all planning applications currently in the planning system in Essex were permitted. There is some degree of risk in adopting this scenario as it assumes that all live applications are capable of being permitted. However, without prejudice to any future decision, there remains a reasonable degree of certainty that these applications are capable of approval.
 - Scenario 3 includes all of the resource captured under Scenario 2 with the addition of the contribution that would be made if all Preferred Sites allocated in the current MLP that have not yet come forward as a planning application do so. There is more risk in this scenario than Scenario 2 as although developer confirmation has been secured in relation to a continued interest to work all these sites, the MWPA is not able to demand that they actually come forward as a planning application. For the purposes of capturing the contribution that would be made by these sites as part of scenario modelling, it has been assumed that all applications will come forward after five years from the date of writing (October 2023). This is approximately double the amount of time that the Mineral Products Association reported in 2022 that a sand and gravel application needs to move from initial pre-application discussions through to the issue of the permission⁵².
 - Scenario 4 includes all resources captured under Scenario 3 with the addition of the contribution that would be made if the Reserve Site allocated in the current MLP comes forward as a planning application.

⁵² AMPS 10th Annual Mineral Planning Survey Report, Mineral Products Association, 2022

There is the most risk in this scenario by virtue of the fact that it is assuming that another site comes forward on top of those already assumed to come forward through Scenario 3. For the purposes of capturing this site's contribution to the permitted reserve as part of scenario modelling, it has been assumed that the contribution from this allocation will be available from 2029 which echoes the (non-binding) start date set out in the current MLP.

- 5.159 It is important to note that whilst the scenarios set out above mirror those upon which comment was sought in April 2022, the context of the MLP Review itself has changed. The review process is now intended to result in a 'new' plan rather than an extended Plan. The consequence of this is that undelivered allocations are no longer proposed to be automatically rolled forward as the Plan that they are allocated in will cease to have any weight when the revised Plan is adopted. The adoption process will replace the existing MLP whereas previously, the review was intending to retain the current Plan and extend its end date.
- 5.160 The remaining sites in the currently adopted MLP are not precluded from being an allocation in the new MLP but they are required to be resubmitted and will go through the same site selection process as all new candidate sites. This significantly increases the risks associated with Scenario 3 and Scenario 4 as the sites brought into scope through these scenarios have the potential to effectively be deallocated from 2025, rather than be extant to 2040 as would have been the case if they were to be rolled over. In essence, the currently allocated sites that have yet to come forward cannot be relied upon to come forward any more than any other candidate site.
- 5.161 Given the above, it is considered that Scenario 1 and Scenario 2 are now the only sound scenarios for taking existing reserves into account due to the risks presented by Scenario 3 and Scenario 4. These latter scenarios are however retained as they have formed part of option generation and will remain open to consultation at the Regulation 18 stage.
- 5.162 The information required to model Scenarios 1 – 4 can be found below.

Table 8: Information Required to Model the Need for Sand and Gravel Extraction 2025 – 2040, Taking into Account Permitted Reserves, 31st December 2022

Scenario	Site Name	Current Planning Status	Current Application Status	Associated Mineral Contribution	Total Additions to Existing Permitted Reserve of 33.62mt
Scenario 1 - Permitted Reserve	No additions made - scenario only takes into account the existing permitted reserve				0mt
Scenario 2 - Permitted Reserve PLUS Pending Reserve	Lufkins Farm, Frating	Unallocated Site in adopted Essex MLP 2014	PENDING: Currently in determination/Report being prepared	1.07mt	1.92mt from 2022
	Colemans Farm Quarry, Braintree (Western Extension)	Unallocated Site in adopted Essex MLP 2014	PENDING: Currently in determination/Report being prepared	0.27mt	
	Land at Martells Quarry, Slough Lane, Ardleigh, Essex, CO7 7RU	Allocated Site	PENDING: Resolution made/Awaiting Legal Agreement	0.59mt	

	Site Reference from MLP 2014 and Site Name	Current Planning Status	Estimated Start Date (as presented in the adopted MLP/ and for the purpose of this scenario modelling)	Associated Mineral Contribution (mt)	Total Additions
Scenario 3 - Permitted/Pending Reserve PLUS MLP Allocated Preferred Sites	A22 - Little Bullocks Farm, Little Canfield	Preferred Site Allocation in adopted Essex MLP 2014	MLP Non-binding start date - 2012	0.65mt	1.92mt from 2022 8.02mt from 2028 Total Additions = 9.94mt
			Assumed start date for modelling - 2028		
	A23 - Little Bullocks Farm, Little Canfield	Preferred Site Allocation in adopted Essex MLP 2014	MLP Non-binding start date - 2012	0.06mt	
			Assumed start date for modelling - 2028		
	A31 - Birch Quarry, Birch	Preferred Site Allocation in adopted Essex MLP 2014	MLP Non-binding start date - 2021	4mt	
			Assumed start date for modelling - 2028		
A40 - Shellows Cross, Roxwell/Willingale	Preferred Site Allocation in	None - remaining allocation following previous application	3.31mt		

		adopted Essex MLP 2014	Assumed start date for modelling - 2028		
Scenario 4 - Permitted/Pending Reserve, Allocated Preferred Sites PLUS Allocated Reserve Sites	A6 - Bradwell Quarry, Rivenhall	Reserve Site Allocation in adopted Essex MLP 2014	MLP Non-binding start date - 2029	2.5mt	1.92mt from 2022
			Assumed start date for modelling - 2029		8.02mt from 2028
					2.5mt from 2029
					Total Additions = 12.44mt

Notes: Potential contribution from the pending reserve (as per Scenario 2) have been added from 2022 as they were already in the planning system at this point. Under Scenario 2, contributions are factored in for modelling purposes at the point of an application being submitted. Contributions from Scenario 3 which are made from currently undelivered MLP Preferred Allocations have been added from 2028, a period equating to double the time the Mineral Products Association have stated is the average for a sand and gravel application to gain permission from pre-application discussion from the time of writing (Oct 2023). A further potential contribution made from currently undelivered MLP Preferred Allocations (Scenario 4) has been added in 2029, the proposed non-binding start date set out in the currently adopted MLP.

Deriving the Need for Sand and Gravel up to 2040 based on Permitted Reserve Scenarios

- 5.163 The following tables show how the permitted reserve for sand and gravel decreases from the base provision date of 2022 through to 2047 (end of the Plan period plus seven years) under each of the four permitted reserve scenarios, assuming that no other additions are made. Where the permitted reserve reaches 0, this means that the County would have no sand and gravel allocated for extraction. A negative figure in Table 9 equates to an unfulfilled need.
- 5.164 Please note that whilst the revised MLP is proposed for adoption in 2025, the base date for projections has to begin from the latest known data available at the time of writing, as forecasts need to be made for those years in the future and which precede the adoption of the revised MLP. In the table below, prior to the proposed adoption date in 2025, the currently adopted plan provision rate of 4.31mtpa has been applied to equate to sales. From 2025 onwards, the proposed plan rate of 3.98mtpa has been applied to equate to sales. The MWPA considered using the newly proposed figure across the whole series but given that for monitoring purposes, the figure of 4.31mtpa will remain extant until 2025, it was considered more appropriate to use it to that date. It also reflects a 'worst case' scenario in that it is moderately higher than the newly proposed rate, meaning the forecasted use of resources would be greater than under the newly proposed rate. However, given that the old rate is only being applied to three of the 26 years covered by the data series, the impact is not considered to be statistically significant.
- 5.165 Table 10 takes the sand and gravel permitted reserve data reported in Table 9 and translates it into sand and gravel landbank data. As stated previously, the 'landbank' is a numerical representation of the length of time that the sand and gravel resource will last, assuming recorded sales equal the plan provision rate, and no further additions are made other than those pertaining to the four different scenarios. When this figure hits 0, this means that the County would have no sand and gravel allocated for extraction. A negative figure in the Table 10 table equates to the deficit in sand and gravel to accommodate need expressed in years.
- 5.166 Table 10 is supported by Figure 6 which provides a visual interpretation of the information in the table.

Table 9: Comparison of Essex Sand and Gravel Permitted Reserves Remaining 2022 – 2047 under Identified Provision Scenarios, Assuming Sales of 3.98mtpa, 31st December 2022

		Increasing Risk of Permitted Reserve Being Overestimated Due to Increasing Levels of Assumption			
		Most Certainty	➔		Least Certainty
Year (As of 31 Dec)	Year	Scenario One	Scenario Two	Scenario Three	Scenario Four
		Permitted Reserve (Million Tonnes)	Permitted and Pending Reserve (Million Tonnes)	Permitted/Pending Reserve PLUS Allocated Sites Reserve (Million Tonnes)	Permitted/Pending Reserve PLUS Allocated & Reserve Sites Reserve (Million Tonnes)
Existing Plan Period	2022	33.62	35.55	35.55	35.55
	2023	29.31	31.24	31.24	31.24
	2024	25.00	26.93	26.93	26.93
	2025	21.03	22.95	22.95	22.95
	2026	17.05	18.97	18.97	18.97
	2027	13.07	14.99	14.99	14.99
	2028	9.09	11.01	19.04	19.04
	2029	5.11	7.04	15.06	17.56
New Plan Period (to 2040)	2030	1.14	3.06	11.08	13.58
	2031	-2.84	-0.92	7.10	9.60
	2032	-6.82	-4.90	3.13	5.63
	2033	-10.80	-8.87	-0.85	1.65
	2034	-14.77	-12.85	-4.83	-2.33
	2035	-18.75	-16.83	-8.81	-6.31
	2036	-22.73	-20.81	-12.79	-10.29

	2037	-26.71	-24.79	-16.76	-14.26
	2038	-30.69	-28.76	-20.74	-18.24
	2039	-34.66	-32.74	-24.72	-22.22
	2040	-38.64	-36.72	-28.70	-26.20
7 years landbank after end of 2040 plan period	2041	-42.62	-40.70	-32.67	-30.17
	2042	-46.60	-44.67	-36.65	-34.15
	2043	-50.57	-48.65	-40.63	-38.13
	2044	-54.55	-52.63	-44.61	-42.11
	2045	-58.53	-56.61	-48.59	-46.09
	2046	-62.51	-60.58	-52.56	-50.06
	2047	-66.49	-64.56	-56.54	-54.04

Source: Essex County Council, 2023

Note: Pending Reserve added in 2022 (Green). Revised Plan adoption in 2025 and Provision Rate Change from 4.31mtpa to 3.98mtpa (Dark Blue). Assumed commencement of Preferred Sites A22 & A23 Crumps Farm, A31 Birth, A40 Shellows Cross added in 2028 (Pink). Assumed commencement of Reserve Site A6 Bradwell in 2029 (Light Blue). Deficit of permitted reserves shown in Red.

Table 10: Comparison of Essex Sand and Gravel Landbank Remaining 2022 – 2047 under Identified Provision Scenarios, Assuming Sales of 3.98mtpa, 31st December 2022

		Increasing Risk of Permitted Reserve Being Overestimated Due to Increasing Levels of Assumption			
		Most Certainty			Least Certainty
Year (As of 31 Dec)		Scenario One	Scenario Two	Scenario Three	Scenario Four
		Permitted Reserve (Million Tonnes)	Permitted and Pending Reserve (Million Tonnes)	Permitted/Pending Reserve PLUS Allocated Sites Reserve (Million Tonnes)	Permitted/Pending Reserve PLUS Allocated & Reserve Sites Reserve (Million Tonnes)
Existing Plan Period	2022	7.80	8.25	8.25	8.25
	2023	6.80	7.25	7.25	7.25
	2024	5.80	6.25	6.25	6.25
	2025	5.29	5.77	5.77	5.77
	2026	4.29	4.77	4.77	4.77
	2027	3.29	3.77	3.77	3.77
	2028	2.29	2.77	4.79	4.79
	2029	1.29	1.77	3.79	4.41
New Plan Period (to 2040)	2030	0.29	0.77	2.79	3.41
	2031	-0.71	-0.23	1.79	2.41
	2032	-1.71	-1.23	0.79	1.41
	2033	-2.71	-2.23	-0.21	0.41
	2034	-3.71	-3.23	-1.21	-0.59
	2035	-4.71	-4.23	-2.21	-1.59
	2036	-5.71	-5.23	-3.21	-2.59

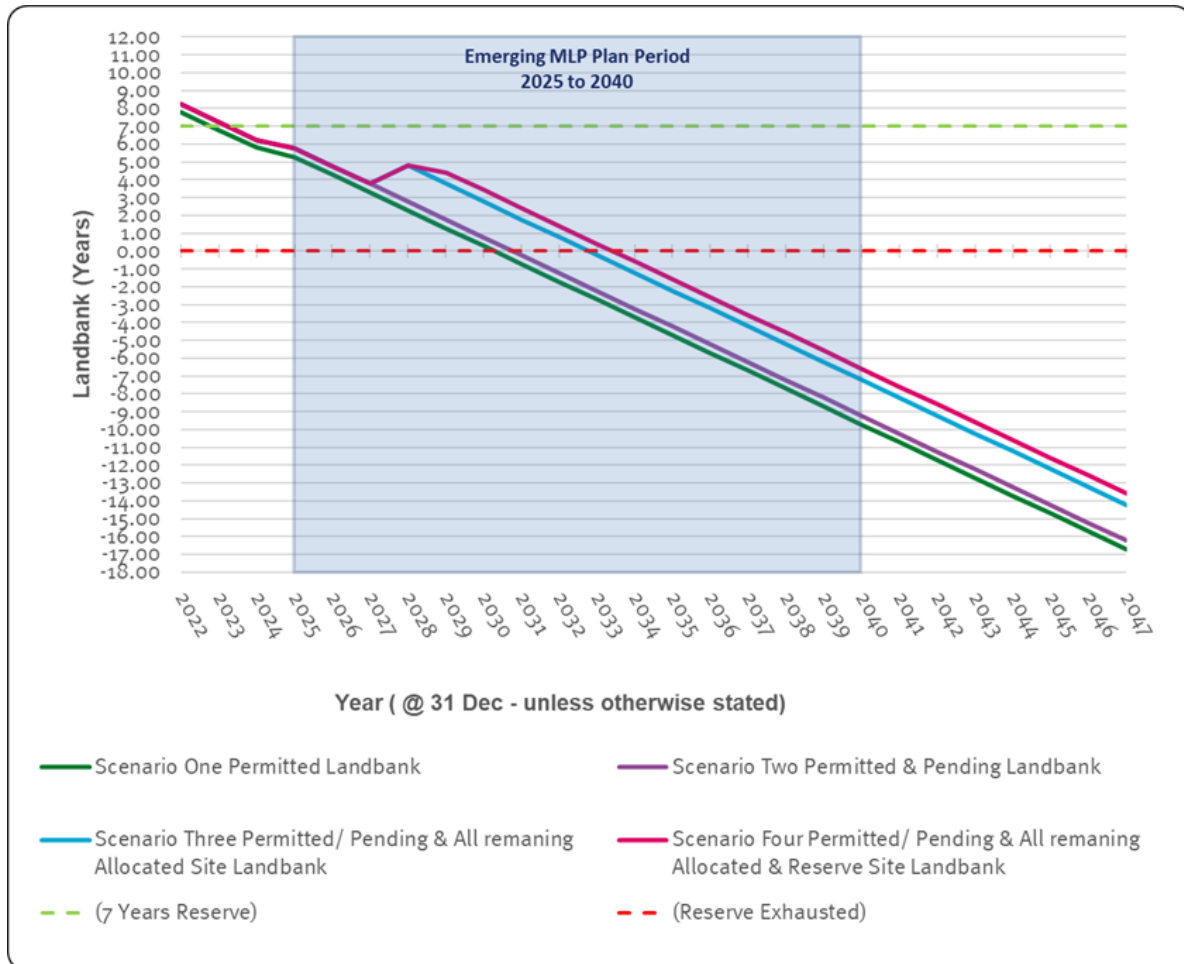
	2037	-6.71	-6.23	-4.21	-3.59
	2038	-7.71	-7.23	-5.21	-4.59
	2039	-8.71	-8.23	-6.21	-5.59
	2040	-9.71	-9.23	-7.21	-6.59
7 years landbank after end of 2040 plan period	2041	-10.71	-10.23	-8.21	-7.59
	2042	-11.71	-11.23	-9.21	-8.59
	2043	-12.71	-12.23	-10.21	-9.59
	2044	-13.71	-13.23	-11.21	-10.59
	2045	-14.71	-14.23	-12.21	-11.59
	2046	-15.71	-15.23	-13.21	-12.59
	2047	-16.71	-16.23	-14.21	-13.59

Source: Essex County Council, 2023

Note: S1, S2, S3, S4 in informative below refers to that Scenario impacted. Colour-coding relates to Year where additions are made only. All other figures in the above are colour-coded depending on NPPF landbank compliance.

Pending Reserve added in 2022 (Green – S2, S3, S4). Revised Plan adoption in 2025 and Provision Rate Change from 4.31mtpa to 3.98mtpa (Dark Blue – S1, S2, S3, S4). Assumed commencement of Preferred Sites A22 & A23 Crumps Farm, A31 Birth, A40 Shellows Cross added in 2028 (Pink – S3, S4). Assumed commencement of Reserve Site A6 Bradwell in 2029 (Light Blue – S5). NPPF compliant landbank in Dark Green, NPPF non-compliant landbank in Orange, Absence of landbank in Red.

Figure 6: Comparison of Essex Sand and Gravel Landbank Remaining 2022 – 2047 under Identified Provision Scenarios, Assuming Sales of 3.98mtpa, 31st December 2022



5.167 As shown in Table 10 and Figure 6, the sand and gravel landbank will cease to become NPPF compliant in 2023 or 2024 depending on whether Scenario 1 or Scenario 2 is taken to represent the size of the permitted reserve. However, this is based on an assumption that the rate of sales would be 4.31mt from the base date(the current plan rate). Emerging data that will be published in the next Greater Essex Local Aggregate Assessment, which will relate to sales in the year 2022, is understood to not show sales being as high as that. Upon further analysis post collation and publishing, this will act to slightly elongate the length of the landbank. This is also likely to be the case in successive years as the current plan provision rate has not been met since 2003, meaning that the above analysis presents what will likely transpire to be an underestimate of the size of the landbank. The position under Scenario 3 and Scenario 4 is the same as that presented under Scenario 2 as these three scenarios only deviate from each other in 2028.

5.168 However, any landbank extension that results from sand and gravel sales being lower than the current rate of provision will be relatively minor even if underselling the plan provision rate remains the case through to the planned adoption of the

emerging MLP in 2025. As such, it is clear that new allocations are required over the Plan period to 2040. Based on sales equalling the current plan rate of 4.31mtpa up to 2024, and sales equating to the rolling ten years of sales plus 20% from 2025 onwards, Essex will have completely exhausted its sand and gravel reserves in 2031 under Scenario 1 and 2, by 2033 under Scenario 3 and by 2034 under Scenario 4.

Quantifying the Need for Sand and Gravel over the Plan Period, based on the Permitted Reserve Scenarios, for the Purposes of Site Allocation

- 5.169 As raised through the previous Regulation 18 consultation, it is important to note that the landbank is not a cap or ceiling to identifying additional resource but an indicator of when further sites are likely to be required. Capping the landbank at just over the seven years minimum in perpetuity does not provide sufficient flexibility to maintaining supply, and is unlikely to be considered to satisfy the NPPF test of being 'steady and adequate'. These factors strengthen the requirement for a suite of allocations to be made as part of the emerging MLP, where the quantified need is the minimum amount of sand and gravel required to be supplied by allocations and potentially other sources as discussed from Paragraph 5.198.
- 5.170 Paragraph 5.40 of this report notes that the MWPA consider it appropriate in terms of Plan flexibility to quantify mineral need over the Plan period as that equating to the amount required to satisfy market need plus an additional seven years at the end of the Plan period in light of the NPPF requiring the sand and gravel landbank to be a minimum of seven years in perpetuity. The summary provided from Paragraph 5.146 of this report sets out how the MWPA has derived a proposed annual market need for sand and gravel through the NPPF methodology. The proposed figure is 3.98mtpa, which equates to an average of the last ten years of sales plus an additional 20% in light of the future increases in development rates forecasted within the County. This annual rate of provision equates to a Plan need of 87.56mt over the period 2025 – 2040, which includes seven years of supply at the end of the Plan period and assumes that the current Permitted Reserve is 0.
- 5.171 From Paragraph 5.156, this report sets out a number of scenarios through which to forecast the level of Permitted Reserves at the point of adoption of the emerging MLP. It is the figures presented in Table 9 that can be used to determine the actual quantified need for sand and gravel over the Plan period that the MWPA proposes should be the basis of the allocation process.
- 5.172 With a proposed plan provision rate of 3.98mtpa, and with the proposed intention to ensure seven years of sand and gravel at the end of the Plan period in 2040 to provide additional headroom and flexibility, this would require that there is sufficient allocations to allow for at least (3.98mtpa x 7) 27.86mt of sand and gravel remaining at the end of the Plan period ie the Permitted Reserve in 2040 would need to be no less than 27.86mt.
- 5.173 With this understood, the scenario data can now be used to calculate the amount of sand and gravel that would need to be added to the Permitted Reserve under each of the four scenarios to satisfy the proposed provision rate of 3.98mtpa and a Permitted Reserve of at least 27.86mt in 2040. Projecting forwards, this would

equate to the Permitted Reserve being 0mt in 2047, based on each of the permitted reserve scenarios.

5.174 The following table provides the calculation set out above:

Table 11: Minimum Need for Sand and Gravel across the Plan Period on the Basis of a Sales Rate of 3.98mtpa and Seven Years' Supply of Sand and Gravel Remaining at the End of the Plan Period

Year (As of 31 Dec)	Scenario One – Permitted Reserve	Scenario Two – Permitted Reserve PLUS Pending Reserve	Scenario Three - Permitted/Pending Reserve PLUS Allocated Sites	Scenario Four - Permitted/Pending Reserve PLUS Allocated & Reserve Sites
	Permitted Reserve Remaining Under Scenario 1	Permitted Reserve Remaining Under Scenario 2	Permitted Reserve Remaining Under Scenario 3	Permitted Reserve Remaining Under Scenario 4
2040	-38.64mt	-36.72mt	-28.70mt	-26.20mt
Additional Sand and Gravel Required to Lift Permitted Reserves to 27.86mt in 2040	66.49mt	64.56mt	56.54mt	54.04mt

Finalising the Total Need for Sand and Gravel by Selecting the Most Appropriate Scenario for Calculating the Permitted Reserves

- 5.175 As previously mentioned, the total identified Plan need of 87.56mt can be reduced by subtracting the amount of sand and gravel that is already allocated, which is known as the Permitted Reserve. In order to achieve this, there is a need to adopt one of the above permitted reserve scenarios in order to be able to quantify the proposed amount of additional provision required.
- 5.176 As set out previously, with the context of the MLP Review having moved away from a Plan extension, Scenarios 3 and 4 are no longer considered to be viable alternatives. The degree of assumption is too great to justify these as being a sound basis for plan making, not least because it is no longer intended to roll existing allocations into the revised MLP. The sites assumed to come forward through Scenario 3 and Scenario 4 therefore have no greater justification for their assumed contribution than any other candidate site as all sites, previously allocated or otherwise, will be subject to the same site methodology, without prejudice, before they can be allocated in the emerging Plan. On that basis, the MWPA considers that it must reject these scenarios.

5.177 Focussing on the remaining scenarios, it is clear that the difference between Scenario 1 and Scenario 2 is statistically small at the plan making level. At 1.92mt, the difference equates to approximately 3% of the total provision to be made. Nonetheless, the MWPA considers that it is most appropriate to select Scenario 2 as the means to derive an existing permitted reserve from which to base mineral need over the Plan period. Whilst it is recognised that the current difference between the two scenarios is marginal, it is considered that it would be remiss, as a matter of principle, to ignore the potential contributions to the need for sand and gravel made by applications in the planning system. As plan-making proceeds, the current Scenario 2 sites may be granted permission and be added to the permitted reserve (Scenario 1), and other sites may enter the planning system and therefore become Scenario 2 sites. The MWPA proposes that there should be the opportunity to consider subtracting the mineral contribution from these potential future applications from any final need figure until the point of submission, unless there are material concerns regarding the likelihood of that application progressing to Scenario 1. Of the remaining two scenarios under consideration, Scenario 2 is the only scenario which would allow such a consideration to be made and therefore this is considered to be the most appropriate. Any inclusion of a site for the purposes of Permitted Reserve Scenario 2, or otherwise, will be without prejudice to any final decision on the application itself.

5.178 Under Scenario 2, the minimum need for sand and gravel over the Plan period 2025 – 2040, taking into account:

- a provision rate equating to an average of the last ten-years of sales plus 20%,
- the current level of the Permitted Reserve,
- the assumed contribution to the Permitted Reserve made by applications for mineral extraction currently in the Essex planning system, and
- the intention to provide seven years of mineral at the end of the Plan period,

is 64.56mt.

5.179 It is reiterated that the value of 64.56mt is the minimum amount of sand and gravel that needs to be supplied through the emerging MLP on the basis of Scenario 2. It is accepted that the MWPA would have derived a different plan provision rate based on selecting different provision scenarios or if this exercise had been completed in the past or the future with a different dataset. This is however a consequence of the NPPF methodology and again serves to highlight that there isn't a 'correct' level of mineral supply, with the test being to supply the NPPF requirement of a steady and adequate mineral supply.

5.180 The MWPA is confident that at this stage, the proposed quantification of need of 64.56mt, or just over 16 years of additional supply at the proposed provision rate of 3.98mtpa, passes the test of being able to maintain a steady and adequate supply. Under Regulation 10A of the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended), MWPA's must review their MLPs within five years of the date of its adoption. For the provision made in the MLP to not be 'steady and adequate' before the end of this review period, at least

in terms of the total amount of mineral allocated, assuming no contribution from other sources there would need to be a significant uplift in sales, as shown below:

Table 12: Impact of Forecasted Plan Need and Permitted Reserves on Landbank between MLP Adoption and First Review⁵³⁵⁴⁵⁵

Year	Permitted Reserve + Allocations in mt	Landbank in Years
2025*	110.51	27.77
2026	106.53	26.77
2027	102.55	25.77
2028	98.57	24.77
2029	94.59	23.77
2030**	90.61	22.77

Source: Essex County Council, 2023

- 5.181 The MWPA accepts that the above table assumes that all allocations will essentially come forward at once, which is a false scenario, but it is considered to be the only way that the MWPA can demonstrate how the minimum sum of the amount of sand and gravel identified as being the need over the Plan period would translate into reserves and the landbank. This is considered appropriate as when it comes to maintaining the landbank rather than providing for it, the MWPA is limited to making opportunities for extraction available via allocations and then determining subsequent applications. It is for industry to submit compliant applications and physically excavate the material.
- 5.182 From Table 12, the sum of the permitted reserve and the total minimum plan need would result in a landbank of 27.77 years at the point of the emerging MLP's adoption, assuming sales equate to the existing plan rate of 4.31mtpa between the base date of 2022 and 2024 inclusive. From adoption and projecting forward at the new plan rate of 3.98mtpa up to 2030, which would be the point of the first Review, this would reduce the landbank to 22.77 years. This is significantly over the seven-year sand and gravel landbank minimum and so sales would have to dramatically outstrip the proposed provision rate to force additional allocations at this point although again, this figure is caveated in that it will not be case, let alone possible, for all sites to come forward and operate in parallel.
- 5.183 Assuming that all allocated sites come forward at the point of adoption, no off-sets are made for contributions from other sources, and sales equated to the current plan provision rate prior to 2025, the Permitted Reserve would be 110.51mt at the point of adoption. For the landbank to fall to below seven years within the first review period, annual sales between 2025 – 2030 would need to

⁵³ 2025 Permitted Reserve + Allocations calculated by adding the total plan provision of 64.56mt to the forecasted permitted reserves of 22.95mt in 2025 as set out in Table 9

⁵⁴ 2030 Permitted Reserve calculated by subtracting annual provision of 3.98mtpa as a sales proxy

⁵⁵ Landbank calculated by dividing Permitted Reserve + Allocations by plan provision rate of 3.98mtpa

be over 15mtpa, or nearly four times the proposed plan provision rate. This is considered to be an extremely unlikely scenario, and therefore provision is considered to be adequate in the first of three five-year periods in the MLP's life, providing industry bring forward compliant applications. This level of headroom also gives the MWPA plenty of time to consider the need for a Review in light of annual sales from adoption rising consistently above 3.98mtpa such that the supply of allocations is being used up quicker than currently forecasted. Should sales equate to double the plan provision rate between 2025 – 2030, whilst this rate would be unsustainable across the length of the emerging MLP, there would still be a 17.77-year landbank remaining. Without prejudice to any future assessment, this would be just about sufficient to remain compliant with the NPPF requirement to maintain a seven-year landbank at the end of the second Review period if sales stayed at that rate, again giving adequate time to make additional amendment if required.

- 5.184 It is reiterated that it is accepted that the above takes as its base a false scenario, but the MWPA considers it sufficient to demonstrate that the proposed provision, plus the existing permitted reserve, amounts to a steady and adequate supply of sand and gravel across the plan period. The MWPA further accepts that there may be issues which result in allocations not being able to deliver as envisaged, but then it is also the case that just as annual sales may exceed the plan provision rate, they may not reach this plan provision rate. The sum of allocations proposing to be made is considered to provide the MLP with the flexibility to respond to increases in future need without emergency review, and therefore is considered to meet the 'steady and adequate' test set out in NPPF Paragraph 213. It is also important to note that where the plan provision rate exceeds 'need' (the amount of sales), the 'extra' amount is not lost. As set out in Table 6 and Paragraph 5.141, this extra amount is saved, which essentially increases the length of time that the allocations in the MLP can service the mineral need of the County.

Summary of the Process Leading to the Derivation of a Quantified Sand and Gravel Amount to Equate to Need over the Plan Period

- 5.185 Paragraph 213a of the NPPF requires that MWPA's plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data. This paragraph further requires the consideration of two other factors, with those being other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources). The potential contribution of other supply options has been assessed separately in the next section.
- 5.186 The current ten-year sales average is 3.31mtpa. As can be seen in Figure 3, this average very closely matches sales in the relatively stable periods of sales between 2015 – 2018 and 2021 – 2022. Regarding those sales furthest away from the average, sales in 2013 are assessed as representing the final year of recovery from the global recession, which is then followed by a peak in 2014 which is not representative of the remaining nice years assessed. Sales between 2019 – 2020 are impacted by issues with the collation in 2020 of data pertaining to 2019, and a significant drop in economic activity in 2020, both due to impacts

of the COVID-19 pandemic. The MWPA considers that the stable periods assist in justifying what a 'true market need' looks like, as the account for six of the ten sales figures, assessed, are similar to the overall average and each other, and these years are not known to be either constrained or elevated by external events.

- 5.187 However, proceeding with a plan rate which is a close fit to business-as-usual is not considered to be sound plan-making. An adoption of the ten-year sales average with no uplift is considered to fail the Test of Soundness relating to being consistent with national planning policy as it would not accord with NPPF Paragraph 82d which requires that planning policies be flexible enough to 'accommodate needs not anticipated in the plan...and to enable a rapid response to changes in economic circumstances'. A lack of uplift in sand and gravel provision beyond the rate of current sales means that there would be no headroom to respond to increasing market sales.
- 5.188 The NPPF allows the consideration of other local, relevant information as part of defining an appropriate plan provision rate. The MWPA has concluded that there are four factors which have the potential to influence the appropriateness of the ten-year rolling average as a predictor of future need to the extent that a forecast based strictly on a ten-year rolling sales basis may not be reflective of the need for sand and gravel. Two of these are the economic impacts of COVID-19 and the 2008 global recession manifested in historic sales data. These wider economic impacts resulted in lower annual sales and therefore a lower ten-year average than might otherwise have been calculated.
- 5.189 The MWPA assessed a number of scenarios where annual sales figures that could misrepresent the 'true' market need due to external economic circumstances were either removed or substituted with more 'representative' figures. It was concluded that none of the assessed alternative provision scenarios resulted in a provision rate so statistically different that it justified a deviation from the ten-year rolling sales average as the basis of the plan provision rate, with all scenarios being within 4% above or below that average. Not only are the scenarios statistically very similar, they are also based on substitutions and removals with varying degrees of legitimacy, such that this exercise was considered to be a spurious search for a 'correct rate' of provision that does not exist given the non-qualitative inputs to the methodology and assumptions made elsewhere. For example, the yields calculated for the candidate sites that are to address the need for sand and gravel only being able to be estimates at this stage ahead of a full borehole investigation being carried out which, without prejudice, may only follow after the operator has the security of an allocation. The NPPF derived requirements extend to ensuring that the plan rate to be set such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of minerals, and that the resultant Plan is flexible. In that sense, there isn't an explicit quantitative test that can be performed on the appropriateness of any specific number
- 5.190 The other pieces of local information of high importance with regards to the requirement for mineral are forecasted growth rates of development and the current and forecasted future state of the economy. As shown by Figure 2 and subsequently caveated by Paragraph 5.62, future growth rates as set out in Local Plans would be an increase on historic delivery rates and this is likely to result in

sand and gravel sales increasing from their current levels, creating an additional increase in need. The latest forecasts for the Mineral Products Association and the Construction Products Association note that after 14 separate inflation rises, the economy is again slowing but will experience growth from 2025. The MLP is required to be able to respond to this growth.

- 5.191 With local plans setting a future growth rate above the current growth rate, a proportional uplift is required to the ten-year rolling sales average to ensure that the Plan is sufficiently flexible to be able respond to the forecasted increase in development rates. The MWPA currently considers that a future annual provision based on a rolling ten-year sales average plus 20% is an appropriate plan provision rate. This proportional uplift was also that put forward at the previous Regulation 18 consultation in 2021. Adding a buffer of 20% is considered to accommodate the reduction in the sales averages over the last ten years caused by indirect and direct economic impacts as well as forecasted growth. The figure derived from an average of the last ten years of sales plus an additional 20% is 3.98mt.
- 5.192 The derived figure of 3,98mtpa is recognised as being lower than the highest sales figure of 4.23mt recorded in 2014, but is still 94% of that return. With this derived provision figure accommodating all other annual sales recorded in the last ten years, that single year of exceedance would be easily accommodated by the proposed plan provision rate over that same ten-year period.
- 5.193 Table 7 demonstrates that with an annual plan provision of 3.98mtpa, in isolation there would be a requirement to address a Plan need of 59.7mt of sand and gravel over the plan period. With the proposal to allow provision for a further seven years, equal to the NPPF minimum landbank for sand and gravel, at the end of the Plan period in order to provide the plan with more flexibility, this increases the need to be accommodated to a minimum of 87.56mt over the Plan period. However, this total ignores the fact that the County already has existing 'Permitted Reserves' such that the County is not starting at zero with regards to its need to make provision for sand and gravel.
- 5.194 The MWPA then considered a number of scenarios for calculating the Permitted Reserve over the Plan period. The most appropriate scenario was considered to be Scenario 2 which requires the Permitted Reserve to be calculated by the sum of the unextracted sand and gravel with permission to be extracted (the actual 'Permitted Reserve') plus the yield set out within applications currently in the Essex planning system. When calculating the Permitted Reserve in this manner, it is forecasted to stand at -36.72mt at the end of the Plan period in 2040.
- 5.195 The minimum amount of sand and gravel therefore needed to provide a steady and adequate supply of sand and gravel over the Plan period 2025 – 2040, is therefore 64.56mt, taking into account:
- a provision rate equating to an average of the last ten-years of sales plus 20% (3.98mtpa),
 - Sand and gravel at the above supply rate for a 15-year plan period ($15 \times 3.98\text{mt} = 59.7\text{mt}$),
 - the intention to provide seven years of mineral at the end of the Plan period in light of the NPPF requirement to maintain a landbank of seven years at all times ($7 \times 3.98\text{mt} = 27.86\text{mt}$),

- the current level of the Permitted Reserve at adoption (from Table 9 = 21.03mt),
- the assumed contribution to the Permitted Reserve made by applications for mineral extraction currently in the Essex planning system (Scenario 2, Table 8 = 1.92mt),
- Minimum total required = Total Need over Plan Period – Forecasted existing Permitted Reserve in 2025 = (59.7mt + 27.86mt) – (21.03mt+1.92mt) = 64.56mt⁵⁶

5.196 It is important to note that when it comes to maintaining the landbank rather than providing for it, the MWPA is limited to making opportunities for extraction available via allocations and then determining subsequent applications. It is for industry to submit compliant applications and physically excavate the material. The MWPA is confident that the need identified in this paper is sufficient to amount to a flexible Plan and that, provided the industry brings its allocations forward, sales would have to increase to a rate that could not be considered sensible for provision to not be considered to be adequate for at least the first five years of the emerging MLP's life ahead of its first mandatory review.

An Assessment of Supply Options to Reduce the Need for Primary Extraction

5.197 The final stage of establishing an appropriate plan provision rate is to consider whether there are any reliable alternative sources for sand and gravel available in order to reduce the amount that has to be extracted from the ground. Para 213a of the NPPF requires an assessment of alternative aggregate supply options, including marine dredged, secondary and recycled sources, as part of determining a steady and adequate rate of mineral provision that would equate to a steady and adequate supply. The PPG⁵⁷ adds imports into and exports out of the mineral planning authority area to this list, whilst the MWPA has also assessed any possible additional contribution from windfall sites. Potential contributions from each of these sources are assessed below.

5.198 It is important to note that the outcome of assessing alternative sources of aggregate does not change the overall need figure for mineral resources. The sand and gravel market is already supplied by contributions from the five additional supply options below, and therefore their contribution to market need is already reflected in existing sales rates. The purpose here is to consider whether there is justification for reducing the amount of terrestrially extracted mineral that needs to be allocated in the MLP in light of the market being able to be supplied to a greater extent by other sources. The need for the Plan period therefore remains 64.56mt irrespective of the conclusions in this section but this may not need to be made up entirely of new terrestrial allocations.

5.199 It is however not appropriate to reduce the assessed need of sand and gravel provided through site allocations, or the proportion of that need derived through site allocations, on the basis that there simply are other sources available. Such reduction in the amount derived through land-won allocations needs to be quantified and justified. It is also not appropriate to attempt to artificially suppress

⁵⁶ Calculation presented here equals to 64.61mt due to rounding of data for presentation purposes. Value based on raw data informing Table 9 is 64.56mt

⁵⁷ Paragraph: 063 Reference ID: 27-063-20140306

market demand by failing to make sufficient allocations when there is potential mineral that could be worked. In the latter event, the MWPA would, in any event, be encouraging applications to come forward on non-allocated sites. The County would lose the benefit of a plan-led system and potentially be unable to secure planned benefits following mineral site restoration.

5.200 The remainder of this section assesses the following alternative sources and to what degree they can justifiably be used to quantitatively reduce land-won provision:

- Marine Sources (Paragraph 5.201)
- Recycled Sources (Paragraph 5.221)
- Secondary Sources (Paragraph 5.239)
- Windfall Sources (Paragraph 5.243)
- Imports and Exports (Paragraph 5.264)

The Ability to Quantifiably Reduce Primary Extraction by Increasing Aggregate from Marine Sources

5.201 The currently adopted MLP did not seek to make a quantified reduction to the mineral need to be delivered through terrestrial allocations on the assumption that this reduction could be substituted with marine sand and gravel.

5.202 In the report⁵⁸ of the Examination in Public on what became the Essex Minerals Local Plan 2014 (MLP), the Planning Inspector holding the Examination Hearings stated that Essex County Council (ECC) should initiate further consideration of whether an increase in the proportion of marine-won aggregate use in Essex could be reliably quantified. This may then reduce the need to allocate sites for aggregate extraction in the terrestrial environment. This led to the creation of a monitoring indicator which states that if marine imports are within 90% of wharf capacity in Greater Essex, then a review is to be undertaken to determine whether capacity is constraining the landing of marine dredged aggregate.

5.203 This assessment was carried out to support this MLP Review and involved engagement with the minerals industry as well as adjoining port and district authorities where landings occur to understand the relationship between aggregate landings and processing capacity. The findings were incorporated into a review of the ability to quantify a marine aggregate contribution to the total need for aggregate as a means to potentially offset the need for land-won aggregates. This has been published as part of the evidence base supporting the MLP Review⁵⁹. The report found that there is no single source of publicly available data providing both the annual amount of marine won material landed at wharf facilities and the total available capacity at wharves to understand the capacity at which wharves were working at, and whether existing capacity was constraining supply of marine sand and therefore its potential contribution to the overall mix of sand and gravel.

5.204 As such, all operators that own wharves that are considered to be within range to support the Essex aggregate market were subsequently contacted as part of

⁵⁸ [Report on the Examination of the Essex County Council Replacement Minerals Local Plan – January 2013](#)

⁵⁹ Report to Determine Whether Marine-Won Aggregate Supply Can Offset the Demand for Land-Won Aggregates in Essex 2020'

compiling the marine aggregate supply report to establish the total capacity of their wharves and to question whether this may be constraining throughput. Sufficient responses were not however forthcoming to enable a reasonable conclusion to be reached, and it is noted that there is no statutory requirement for operators to respond to this request. Consequently, in the absence of sufficiently robust data, it has not been possible to operate the monitoring indicator which sought to understand whether the cumulative annual throughput at aggregate wharves is 90% or above the total capacity of relevant infrastructure. Anecdotal evidence collected through this workstream suggests that there remains surplus capacity at wharves with the ability to support Essex, and capacity issues are focussed around production capability limited by existing dredger fleet numbers rather than wharf capacity.

- 5.205 Further, in its recent report 'Aggregates demand and supply in Great Britain: Scenarios for 2035', the Mineral Products Association notes that whilst marine sources are expected to substitute to some degree for terrestrial based sand and gravel, this will be driven by terrestrial sand and gravel planning permissions dwindling and substitutions having to be found. This driver is not applicable to Essex which has significant sand and gravel reserves. The report further notes that wharf and dredger capacity are two notable barriers at the national level with regards to significantly boosting supply from the marine environment. It is outside of the ability of the MWPA to develop additional wharf and dredger capacity beyond implementing a facilitatory policy framework within which such facilities could be developed, expanded and safeguarded. Policy S7 of the emerging MLP has been amended to reference wharf facilities but it is noted that there are currently no marine aggregate landing wharves in Essex itself at this time. Should an aggregate wharf facility be developed in Essex it would not be possible to state that a quantifiable proportion of marine aggregate landed in Essex would serve Essex markets in any event as all landed material would be sold on the open market.
- 5.206 Another issue with regards to maximising a marine contribution is that information released by the British Marine Aggregate Producers Association⁶⁰ notes that land-won and marine-won aggregate are not always directly substitutable or may require additional treatment. For instance, "marine gravels are typically smooth and rounded due to the distance they have been transported in the geological past and to the constant pounding of the sea. Research has demonstrated that shell fragments in aggregates do not affect concrete strength. Nevertheless, European Standards are in place to limit shell content, which is generally low. The chloride (salt) content from seawater is controlled by rapid draining after dredging and can be further reduced by washing during processing. The chloride content of both the wash water and the product is carefully monitored to ensure that strict European Standards are met. A system of product certification is in place to confirm quality for customers". These techniques however come with a cost, and there are other costs of running the dredger, loading the material onto the dredger and subsequently the shore, and then disseminating it to its final sale destination, perhaps through rail which will likely need additional off-loading onto the road network and then at the final point of sale. Whilst terrestrial excavation will have its own associated costs not mirrored in marine excavation, discussions

⁶⁰ [Aggregates from the Sea: drawing strength from the deep, British Marine Aggregate Producers Association](#)

with a representative of the Crown Estate noted that the ability for marine sand and gravel to substitute for terrestrial sand and gravel is driven by economics. Where terrestrial resources can be worked near urban areas, as is the case across Essex, these resources will be likely be competitively priced compared to marine aggregate.

- 5.207 Further, whilst ECC as MWPA could look to reduce land-won provision as a means to encourage the diversion of marine aggregate into Essex, any deficiency in land-won allocations versus the established need can be met through sites coming forward off-plan, particularly if the shortfall was to cause the sand and gravel landbank to fall below seven years. Such a reduction in allocations could therefore create a scenario which encourages the permitting of additional terrestrial sites which are not allocated through the Plan-making process rather than an intended uplift to the supply of marine aggregates filling the gap. Quantitatively reducing provision based on an assumed increase in provision from other sources outside of the MWPA's control in this manner would likely result in a weakening of the Plan-led system.
- 5.208 On this basis, it is currently considered that there are no means through which to justify a reduction in the allocation of land-won aggregate through a reliance on an increase in marine-won aggregate landings. It is further considered that additional work surrounding the port capacity indicator will not yield any additional results, due to the fact that there is no statutory requirement for operators to participate. It is therefore proposed that the relevant Mineral Monitoring Indicator be removed from the Monitoring Framework, and Policy S6 continues to omit any specific marine aggregate contribution from its quantification of need.
- 5.209 The above stance echoes that originally set out in the Rationale Report 2021 and has since been subject to two consultations; the Regulation 18 consultation (April 2021) and the informal engagement on sand and gravel provision (March 2022).
- 5.210 Through the latter, it was noted as part of the representations that Local Aggregate Assessments must consider the opportunities and constraints of all mineral supplies into their planning regions – including marine sources, noting that even land-locked counties may have to consider the role that marine-sourced supplies (delivered by rail or river) have – particularly where land-based resources are becoming increasingly constrained.
- 5.211 It is clarified that the MWPA are not 'ignoring' the potential of an increase in marine provision reducing the need for land-won allocations in the County. Marine landings in Greater Essex are monitored annually through data obtained from the Crown Estate and this can be compared to annual land-won mineral sales.
- 5.212 The MWPA intends that the revised MLP and successive Local Aggregate Assessments will continue to include information relating to marine aggregates and notes that their contribution to overall supply in the plan area may increase over the plan period. However, the MWPA is not able to directly facilitate an increase in marine aggregate provision into Essex as this is a commercial decision to be made by the operators of such providing facilities. This means that it is not possible to quantify a marine contribution, let alone an increase, and therefore an equal amount cannot be subtracted from terrestrial allocations.

- 5.213 An example of the flow of marine sand and gravel can be found in Figure 9 of the [Greater Essex Local Aggregate Assessment, 2022](#). This shows that nearly 8.21mt of sand and gravel was landed within the Thames Estuary area during 2021, which is significantly more than the total removed from the marine environment in that area (2.12mt). This means that 6.1mt was extracted from other licenced areas (such as the East Coast and East English Channel) and subsequently landed within the Thames Estuary Area, presumably largely to assist with development within Greater London and surrounding areas.
- 5.214 Additionally, the Collation of the results of the 2019 Aggregate Minerals survey, published in 2021, states that 1.19mt of marine-won sand and gravel was landed in Greater Essex but this does not equate to the sale destination, which is a market decision. Sales data upon which the MWPA relies records the location of the sale ie where the marine sand and gravel was landed, and movement of this resource through transshipment sites in the administrative area. The destination of the sold material is not recorded, unless it is sourced for a specific 'significant' project as detailed in [Crown Estate: Marine Aggregates – Capability and Portfolio \(2021\)](#). These include a London Array Wind Farm, Clacton Pier (Essex), Thames Tideway tunnel (London), Queen Elizabeth II Bridge (Dartford), Crossrail (London) and numerous other major London projects. Therefore, the figures do not relate to the amount of marine-won aggregate used within any one location, rather it is the amount landed. In this case marine won aggregate landed in the Thames Estuary and/or at Ipswich would usually be used within proximity to these ports, namely within Essex, Thurrock, Southend-on-Sea, Kent, Suffolk, and London, but potentially also further afield.
- 5.215 A further representation on the topic of marine aggregates was received in 2022 in relation to the recent development of the Tilbury2 Construction Materials and Aggregates Terminal (CMAT). The Terminal is the largest facility of its kind in the UK and was said will act as a hub for materials required across London and the southeast with its riverside location enabling the easy import of raw materials and the use of the River Thames as an onward delivery route.
- 5.216 The relevance of the Tilbury CMAT was stated as being that the quantity of imported or marine won aggregates in Essex is likely to significantly increase in future years. The CMAT capacity is likely to be circa 2mtpa. It was said that much of this is likely to be directed to major infrastructure or development projects either locally (such as the potential Lower Thames Crossing) or further afield along the Thames in both Essex and elsewhere. Reference was then made to the MWPA's intention to not seek to reduce land-won allocations on the basis of not assuming an increase in marine landings to compensate for any reduction in terrestrial reserves.
- 5.217 This was considered inappropriate by the representor as it was stated that marine won and imported aggregate through the Tilbury2 CMAT will constitute a significant and certain contributor to sand and gravel provision in the wider Essex area and further afield now that the facility is fully operational. It was then considered that there is a case for factoring in this source of sand and gravel to the wider consideration of the need for sites in the County, given the environmental impact of sand and gravel extraction and given that the majority of terrestrial sites will not have the sustainability advantages of the CMAT at Tilbury. It was stated that ignoring the contribution was to risk allowing mineral extraction

within the countryside when it is not necessarily needed. Whilst the need for resilience and flexibility in supply was not disputed by the representor, it was considered that greater consideration should be given to marine won and imported material in the overall supply picture.

- 5.218 The MWPA notes the ability of this facility to contribute to the overall supply of aggregate available to the market in Essex and to reduce land-won supply pressures on the local environment. It is however reiterated that it is not considered appropriate to seek to reduce land-won provision of aggregate by assuming an increased contribution from marine-based aggregate, as that increase cannot be quantified. The MWPA is not able to directly facilitate an increase in marine aggregate provision as ultimately the sale destination of this mineral is a commercial decision to be made by the operators of such providing facilities. It is considered more appropriate to allow for an increase in marine aggregates to demonstrably off-set terrestrial sales before broadly unevidenced quantified reductions are made to future land-won provision.
- 5.219 Further, whilst it is acknowledged that there is a general presumption that marine-won minerals will substitute for land-won minerals in the future, reference is again made to the Mineral Products Association's ['Aggregates demand and supply in Great Britain: Scenarios for 2035'](#) report which states that whilst marine sources are expected to substitute to some degree for terrestrial based sand and gravel, this will be driven by sand and gravel planning permissions dwindling and substitutions having to be found. This driver is not applicable to Essex which has significant sand and gravel reserves. Under the scenarios set out in the Mineral Products Association's Future Scenarios document, the substitution of marine aggregate is at least in part driven by necessity due to an absence of terrestrial opportunity. Should the MWPA place undue reliance on the Tilbury2 facility, or others, and reduce terrestrial allocations, applications will still be able to be submitted on terrestrial sites in Essex, and potentially non-allocated sites, which the MWPA may have to approve if the assumed contribution from these facilities was not being met. This would cause the loss of the Plan-led system and likely result in worse sustainability outcomes.
- 5.220 As set out previously, the above should not be inferred as meaning that the MWPA are 'ignoring' the potential of an increase in marine provision reducing the need for land-won allocations. Marine landings in Essex are monitored annually and should it be the case that marine aggregate does arrive in the Plan area in increasing quantities in the future, then through the mineral provision methodology set out in the NPPF, this actual increase in the proportion of marine aggregate would be reflected in the projections for future land-won aggregate need as part of a later Plan review. If marine aggregate is used in greater volumes, there would be a consequent reduction in primary aggregate sales, which would then reduce the ten-year sales average that is the base calculation for future mineral need. This is considered to be a more appropriate approach to considering the potential for marine aggregate to supply Essex than reducing land-won provision based on an assumed future marine contribution that cannot be guaranteed or evidenced. Making supply assumptions on the basis of a single facility would also place undue reliance on that facility, and perhaps present the type of commercial advantage that the NPPF seeks to avoid through Paragraph 213g, which is mineral supply being constrained by too few sources.

The Ability to Quantifiably Reduce Primary Extraction by Increasing Aggregate from Recycled Sources

- 5.221 'Recycled' aggregates are derived from the reprocessing of inorganic materials previously used such as rail ballast or material recovered from demolition or construction waste. Such materials need to comply with national specifications and aggregate standards and historically have provided an increasingly important contribution as substitutes for primary aggregates manufactured from sand and gravel.
- 5.222 The currently adopted MLP did not seek to make a quantified reduction to the mineral need to be delivered though site allocations on the assumption that the gap in provision caused by the reduction could be filled by recycled aggregate. It is proposed that this remains the case in the emerging MLP, and therefore the MWPA are not intending to seek to offset the amount of mineral to be provided by site allocations with recycled aggregate.
- 5.223 It is important to understand there remain data limitations associated with recycled aggregate quantities as there is no way of collating robust County-wide data for recycled aggregate production and capacity. Instead, assumptions and proxy's must be used, which means that caution needs to be exercised if seeking to use the data for quantitative purposes, rather than monitoring general trends.
- 5.224 Whilst there is the potential to disseminate surveys to known operators of aggregate recycling facilities in order to attempt to collate more local information, there is no requirement for such operators to complete these surveys so response rates can be low. This was the case when the MWPA last attempted this exercise, and consequently the data may represent a significant underestimate of the amount of recycled aggregate available, and whether this could increase. These surveys would in any event also not be able to be sent to mobile recycling facilities, which make up a statistically important proportion of the total recycling capacity that is understood to be available in the County. A proxy would need to be used for this and the MWPA does not consider that it has the evidence to robustly justify such a proxy to include both the 'missing' mobile sites plus accommodating all the survey non-returns.
- 5.225 In the absence of bespoke surveys, the only recourse has been to the Environment Agency's annually published Waste Data Interrogator (WDI), which covers the annual throughput⁶¹ at aggregate recycling sites and not the available capacity of the facility itself. Similarly, the data within the WDI does not account for mobile recycling facilities, nor the reuse and recycling that occurs on individual construction sites. The tonnage of recycled aggregates reported in the WDI is therefore likely only representative of a proportion of the recycled aggregates in circulation. To account for this, the combined figure from the WDI is assumed to represent 80% of total available capacity, with an additional 20% added to the figure to account for mobile aggregate recycling facilities. These figures are again

⁶¹ The annual throughput is the annual amount of aggregate that was managed at the site. It is not the capacity of the site, which is the total amount that could be processed at one time, nor is it the 'annual capacity' which is the total amount that could be processed across a year. The annual throughput data is essentially the minimum available capacity at the site and could represent any percentage of the actual maximum capacity.

therefore only estimates and need to be treated with caution if quantified judgements are to be based upon them.

- 5.226 Guidance⁶² has recently been published to assist with planning for recycled aggregate production. It considers that for a product to be made from waste, recycled aggregate must meet the 'end of waste' criteria set out in the WRAP/ Environment Agency Quality Protocol⁶³. The guidance contains standardised methodologies for planners to measure production of recycled aggregate more accurately. However, this guidance still relies on WDI data, and the WDI still excludes the proportion of waste material which is processed by mobile plant at construction sites and therefore estimates of mobile plant contributions are required.
- 5.227 Additionally, some facilities that are covered by the WDI will be operating under temporary permissions, typically linked to a proximate quarry and/ or landfill site. Temporary permissions are required to avoid industrial practices such as concrete crushing being established in the countryside once the primary reason for their location has ceased to be. This then means that long-term reliance cannot be placed on all existing facilities to maintain the production of recycled aggregate, nor their contributing capacity, which cannot be ascertained from the WDI data in any event. The issuing and expiration of temporary permissions for aggregate recycling facilities means that the baseline of existing capacity is forever changing, has the ability to rise and fall annually, and makes a fixed quantified contribution from such capacity impossible to quantify. The only 'guaranteed' capacity would be that from permanent facilities, which would underestimate the total capacity available.
- 5.228 In order to attempt to collate more robust data, from 2020 the annual mineral survey carried out for the AWP, for which there is a requirement for operators to complete, included the provision to provide data on the potential maximum throughput of aggregate recycling at their sites. However, the requirement to fill out this survey applies only to those operators of sites with aggregate recycling facilities which are co-located with extraction or transshipment sites, with the former likely to be temporary facilities as described above. The survey returns would not include any potential recovery throughput at stand-alone sites, which are more likely to be permanent, as its only operators of extraction sites that are required to fill in the survey. As such, these survey returns are essentially of limited value when trying to derive a sufficiently justifiable quantitative amount of capacity or throughput, backed by evidence, that could be used to quantifiably reduce the need for site allocations to fulfil the total plan need. All the data that the MWPA is able to collate is published annually, where commercially confidentiality allows, in the Greater Essex Local Aggregate Assessment available on the ECC website.
- 5.229 The above is not to say that the importance of recycled aggregate, both in terms of its contribution to supply and its sustainability benefits, is not recognised by the MWPA. Part F of the Spatial Vision of the emerging MLP states that 'minerals

⁶² Guidance on Assessing Levels of Recycled Aggregates (2022) was devised on behalf of the regional Aggregate Working Parties and Waste Technical Advisory Board/Planning Advisory Groups. This guidance note links to a regional/national project to standardise aggregate recycling collation data.

⁶³ [Quality Protocol: Aggregates from inert waste](#), WRAP & The Environment Agency (October 2013)

previously extracted from the ground will be put to better use. The recycling and reuse of construction, demolition and excavation waste will be maximised by safeguarding existing soil and aggregate recycling facilities and locating new facilities in proximity to key centres for growth'. Strategic Objective 4a of the emerging MLP is to 'reduce reliance on primary mineral resources in Essex, firstly through promoting the mineral supply hierarchy to reduce the need for primary extraction of minerals and, secondly, by minimising waste by requiring that as much demolition, construction and excavation waste is re-used and/ or recycled as practicable'.

- 5.230 With respect to policies within the emerging MLP, Policy S4 – Reducing the Use of Mineral Resources currently states that all development proposals shall demonstrate 'The maximum possible recovery of minerals from construction, demolition and excavation wastes produced at development or redevelopment sites. This will be promoted by on-site re-use/ recycling, or if not environmentally acceptable to do so, through re-use/ recycling at other nearby aggregate recycling facilities in proximity to the site.' In order to provide such recycling opportunities, the emerging MLP also includes Policy S5 - Creating a Network of Aggregate Recycling Facilities which seeks to safeguard and expand, subject to market need, a network of aggregate recycling facilities.
- 5.231 Whilst an MWPA can create a policy framework which encourages the minimisation of aggregate waste and the development of additional recycling capacity, the MWPA cannot suppress the use of newly extracted sand and gravel by not making sufficient provision for that demand, banning the use of minerals in construction or requiring the use of certain technologies. Such interventions would be required to be mandated by Central Government. However, by aiming to make recycled alternatives as readily available to the market as possible, this should reduce the need, and therefore the sales, of primary aggregate.
- 5.232 On a similar theme, it was raised through previous consultation that the MWPA cannot 'ensure' the greater use of recycled material as this is a matter for the market, mineral specifications, and the economy. A representation clarified that the MWPA can make the policy climate positive for recycling operations to be developed, but not 'ensure' the actual production of recycled aggregate, which is driven by economics. The MWPA accepts this stance.
- 5.233 The purpose of Policy S5 in the emerging MLP is to grow a County-wide network of facilities that would result in additional recycling capacity, assuming that the provision of new permanent and temporary capacity outstrips the loss of temporary capacity. It is however the market that brings these facilities forward, on the basis of the need for additional recycling capacity, and not the MWPA. The subsequent assumption, based on there being an identified market need for extra recycling capacity, is that additional recycled aggregate will be produced when these facilities become available. If there is additional recycled aggregate within the market, then it is assumed that this would reduce the need for primary aggregate, economics and technical specifications allowing, which in turn reduces the annual, and consequently 10-year sales average, of sand and gravel sales from which future mineral provision rates are based on.
- 5.234 In this manner, the contribution made by recycling and re-use is taken into consideration in a way assessed as being more appropriate than assuming the future delivery of additional recycling capacity for which there is no evidence.

Whilst the MLP will continue to promote the use of recycled alternatives as part of this Review, including the delivery of new capacity as guided by emerging policies, this will not be enough to remove the need for additional sites. The demand for aggregate significantly outstrips that which can be provided through only recycled and re-used aggregates. These are only generated through re-development and regeneration sites and not greenfield locations where much development takes place.

- 5.235 Given that the contribution made to the mineral need of the County is implicitly, if not numerically, taken into account through current mineral sales, to reduce the amount of forecasted need to be made through allocations on the basis of a recycling aggregate contribution is to assume an increase in recycling rates and/or production of recycled aggregate. The latest market position, as set out in [‘Aggregates demand and supply in Great Britain: Scenarios to 2035’](#) is that the limited current availability of secondary and recycled resources suggests that the potential for these to significantly increase will be limited. Primary aggregates are projected to still supply between 68% and 72% of total demand by 2035, which is essentially the same proportion that they do now.
- 5.236 Importantly, recycled aggregates have a limited use given their low specification, and the market has more or less met the technological limit of the volume of construction and demolition waste that can be recycled such that there is no evidence that there is the potential for this resource stream to significantly increase. As set out in the same Mineral Products Association scenario report highlighted above⁶⁴, all construction waste which can already be recycled as aggregates is already being used, with limited opportunity for a significantly higher share of Construction, Demolition and Excavation Waste (CDEW) in aggregate markets. Research by the Department for Communities and Local Government into CDEW markets suggested that this was already the case in 2005, when it found little evidence of hard construction and demolition waste which could be recycled into aggregate being landfilled as waste.
- 5.237 Another Mineral Products Association report⁶⁵ noted that once hazardous waste and navigational dredging spoil is excluded, 76% of construction and demolition waste is currently being recovered and recycled for alternative uses. When only considering ‘hard’ construction and demolition waste such as concrete and bricks, this rises to 90%. It is further noted that UK recycling performance places it in the top tier in Europe with around 30% of all aggregate demand now supplied from non-primary sources which are mainly recycled materials. These figures suggest there is already a high level of efficiency in realising value from these wastes, meaning additional gains would be comparatively small. It is therefore clear that a significant increase in recycled aggregate provision as part of the overall supply mix cannot be assumed and is in fact unrealistic. As set out in the aforementioned scenario reports, the availability and use of recycled aggregate is expected to increase but this is in line with the rate of construction, not as an increased proportion.
- 5.238 In summary, the MWPA can only reduce the potential need to rely on primary mineral resources as part of the overall mix of supply options. The MWPA cannot create or enforce an artificial market need for recycled aggregate. Making a

⁶⁴ [‘Aggregates demand and supply in Great Britain: Scenarios for 2035, 2022’](#)

⁶⁵ [From waste to resource – a UK Mineral Products industry success story, 2019](#)

quantitative reduction based on poor numerical evidence, placing increasing reliance on factors outside of the MWPA's control and ignoring evidence that recycling technology is likely to be at its limit, is not considered to equate to positive planning. It is instead more appropriate to encourage the development of recycling capacity through the existing criteria-led policy framework that allows for such developments in appropriate places as required by the market, but place no quantitative reliance or expectation on it coming forward. Should recycling capacity increase and/ or more recycled aggregate be sold as a proportion of total sand need, then this will translate into a reduction in primary sand and gravel sales, which will factor into the next calculation of need carried out in a future plan review as this will be reflected in the ten-year sales average of primary mineral that exists at that time.

The Ability to Quantifiably Reduce Primary Extraction by Increasing Aggregate from Secondary Sources

- 5.239 'Secondary' aggregates are created as a by-product of a construction or industrial process. Substantial amounts are processed on construction and redevelopment sites, either at stand-alone permanent facilities or temporary facilities co-located with existing quarries, landfill, and recycling sites for the life of the primary operation. Examples include power station ash resulting from combustion (fly ash) which can be turned into bricks and cement, and slag from iron smelting which can be manufactured into mineral wool and subsequently be used as a heating pipe insulator.
- 5.240 Whilst secondary aggregates can provide an important contribution to the supply mix of sand and gravel, supporting evidence⁶⁶ for the Essex and Southend-on-Sea Waste Local Plan 2017 (WLP) stated that it is not known whether secondary aggregates are produced in any significant quantity in the joint Essex and Southend-on-Sea Plan area. It was however considered that the lack of heavy industry in Greater Essex precludes the generation of significant amounts of secondary aggregate. Whilst there exists the potential for the MWPA to carry out a bespoke study into the potential for secondary aggregate generation, pursuing such a study is not considered to be proportionate to the likely outcome.
- 5.241 A report published by the Mineral Products Association in 2022⁶⁷ suggested that only 3% of the total aggregates supply in Great Britain in 2020 was made up of secondary aggregates. With no obvious significant industry base that would lead to the availability of material to be processed into secondary aggregates, it is considered that the contribution of secondary aggregate arising from industrial processes as a proportion of total aggregate supply in Essex would be less than 3% and highly likely to be even more minor. It would also be problematic to scope a suitability representative and proportionate cohort to invite to take part in the study. This, coupled with the potential that responses to a survey would likely be low and therefore unrepresentative as there is no requirement for it to be completed, the value of information accrued through attempts to monitor aggregate production from this supply source would be unlikely to justify the resources required for its collation.

⁶⁶ [WLP Topic Paper 1 - Waste Capacity Gap Update December 2015, BPP](#)

⁶⁷ [The Contribution of Recycled and Secondary Materials to Total Aggregates Supply in Great Britain - 2020 Estimates](#)

- 5.242 It is currently the case that the adopted MLP makes no explicit allowances for secondary aggregate as part of its provision calculations. Table 10 and Table 11 of the Rationale Report 2021 presented a range of options for potentially accommodating a contribution to be made by secondary aggregates and concluded that the most appropriate and proportional approach was to make no provision. In the absence of any information being submitted to it suggesting that this approach is no longer appropriate, the MWPA intend to make no quantified adjustment for secondary aggregates as part of the required plan provision.

The Ability to Quantifiably Reduce Primary Extraction by Increasing Aggregate from Windfall Sources

- 5.243 A 'windfall site' in a general sense is one not specifically allocated for development in a development plan but which becomes available for development during the lifetime of a plan. In the context of a minerals plan, a windfall site is one where extraction is permitted to take place at a location not designated for mineral extraction. Any mineral permitted for extraction at such locations is a 'windfall' added to the permitted reserve. This subsequently acts to elongate the landbank and reduce the need for future allocations.
- 5.244 As set out in supporting text to the emerging Policy S6, and assuming the MLP is making sufficient provision for mineral, to ensure future sand and gravel extraction is clearly focused on the Spatial Strategy and the identified Preferred Sites in this Plan, other proposals for sand and gravel extraction at locations situated outside of the areas identified for future working will normally be resisted by the MWPA unless there is an 'over-riding justification' and/or 'over-riding benefit'. As set out numerous times in this report, for a MLP to be capable of adoption, it must demonstrate flexibility and part of that is allowing for the consideration of the appropriateness of sites coming forward off-plan. Policy S6 allows this albeit within a strict framework. Examples of where off-plan extraction may be permitted to take place, subject to appropriate evidence being provided includes, but is not limited to, borrow pits⁶⁸, agricultural reservoirs⁶⁹ and prior extraction to avoid sterilisation⁷⁰. Each time, mineral is extracted for a primary reason that is not simply extracting mineral to sell on the open market, as set out in the footnotes.
- 5.245 The adopted MLP 2014 makes no allowance for windfall sites making up a quantified proportion of the identified need for sand and gravel as a means to reduce the need for site allocations. Paragraph 39 of the Inspector's Report relating to the Examination in Public⁷¹ of the currently adopted MLP states that *'Whilst it is suggested that windfall planning applications can mitigate the*

⁶⁸ A borrow pit is the term given to an extraction site where extraction takes place for the exclusive purpose of providing mineral for a specific major project. Excavated mineral is limited to serving that specific project. Extraction is carried out to reduce transport distances and preserve more distant supply options.

⁶⁹ Agricultural reservoirs may be required to maximise crop growing as part of adapting to climate change, or to diversify the type of crop that can be grown. Mineral is extracted and sold off-site to facilitate the engineering of a landform that can be filled to form a reservoir.

⁷⁰ Where mineral is extracted before the land is permanently developed such as for housing or commercial development. Without prior extraction, the mineral is essentially 'lost' as it can no longer be accessed. Mineral is extracted as a conservation measure as it is a finite resource.

⁷¹ [Report on the Examination of the Essex County Council Replacement Minerals Local Plan \(January 2013\)](#)

requirement for allocated sand and gravel sites, historically there has been only a modest contribution from this source, arising from mineral extraction related to relatively small reservoir construction sites. There is no clear evidence that windfalls will play a substantial part in the supply of aggregates during the Plan period. Therefore, no allowance for windfalls is appropriate.'

- 5.246 An interrogation of 'windfall' applications made since 1943 was undertaken by the authority in 2020 and published as part of the Regulation 18 MLP Review 2021 evidence base⁷². It was recognised that given the intention to re-base the Plan to 2040, there would be merit in re-examining the amount of mineral excavated through windfall sites in recent history to understand whether it remains appropriate to not include a quantified amount of mineral that can be justifiably assumed to come forward through windfall sites as a means to reduce the need for land-won allocations. The data used to inform the Windfall report highlighted above will be approaching five years old at the point of the next public consultation and therefore there is merit in updating this
- 5.247 Below are the results of that update. Rather than seek to update the main report, which had the primary aim of assessing whether the applied for use to justify mineral extraction on non-allocated sites had been delivered and maintained, this update has focused solely on the amount of sand and gravel excavated through windfall sites over the last ten years.

Table 13: Amount of Sand and Gravel Added to the Permitted Reserve as a Result of Windfall Site Permissions, by Year, 2013 – 2022

Year	Windfall Reserve Granted (mt)
2013	0
2014	0.35
2015*	0
2016	0.70
2017	0
2018	0
2019	0.65
2020	0
2021	0
2022	0
Total	1.70

Source: Essex County Council, 2023

* An application was permitting in 2015 which added 1000t to the Permitted Reserve but this doesn't register at two decimal places. It is however included in the table below.

⁷² Analysis of 'Windfall' Mineral Extraction Sites July 2020

Table 14: Amount of Sand and Gravel Added to the Permitted Reserve as a Result of Windfall Site Permissions, by Application Type, 2013 – 2022

	Total Planning Decisions Increasing the Permitted Reserve	Yield of Sand and Gravel Generated from Granted Applications (mt)	Percentage Yield of Sand and Gravel Generated from Granted Applications (mt)
All Applications in Period (01 Jan 2013 to 31 Dec 2022)	15	29.08	100%
Windfall - Agricultural Reservoir	4	1.36	4.66%
Windfall - Borrow Pit	0	0	0%
Windfall - Fishery	0	0	0%
Site Allocation	9	27.38	94.16%
Unallocated Site - Extension	2	0.34	1.18%
Unallocated Site	0	0	0%

Source: Essex County Council, 2023

- 5.248 Between the period 1st January 2013 and 31st December 2022, a total of 15 applications were determined which acted to increase the permitted reserve and therefore the landbank. Of these, nine were on site allocations in the currently adopted MLP, four were for agricultural reservoirs and a further two were permissions granted for an extension to an existing site where land pertaining to that extension was not allocated in the currently adopted MLP. The working of one of these latter two applications was justified on the basis that mineral would be sterilised by a forthcoming development. The other was justified on the basis that it was a very moderate extension to existing working to allow the extraction of all sand and gravel in that locality. Without the extension, what would have remained would be uneconomic to work in the future and would therefore be sterilised.
- 5.249 Over the ten-year period assessed, a total of 1.7mt of sand and gravel was secured by way of windfall sites. This equates to 43% of a single year of need based on the proposed annual plan provision of 3.98mt. Projecting this rate of windfall reserve coming forward for another five years, such that the period assessed is one full Plan length, the total from windfall sites would be 2.55mt. This equates to 64% of a single year of need, or 4% of the total assessed need for additional allocations over the Plan period.
- 5.250 As previously mentioned in this report, there are a number of pending applications currently in the system awaiting a decision. Of the total 1.92mt of sand and aggregate that would be added by these pending applications, 1.34mt would be from windfall sources, namely as a result of the construction of an agricultural reservoir and another minor site extension to avoid sterilisation. This would bring the amount of windfall sand and gravel to 3.06mt, or 4.74% of the total assessed need.

- 5.251 Given the continued low mineral yield from this source, the low number of applications permitted, and the fact that provision from this source is outside of the control of the MWPA, it is considered appropriate to maintain the current approach of making no quantified allowance for the total amount of required allocated provision to be serviced by windfall contributions. Should permission be granted for extraction at a windfall site, at that point the saleable sand and gravel that would be excavated would be added to the 'Permitted Reserve' and at that point be counted within future calculations assessing supply and demand. This is considered to be a more justified way of accounting for the contribution made by windfall sites, as they are then an actual contribution rather than an assumed one.
- 5.252 It was suggested through the Regulation 18 consultation in 2021 that applications involving non-allocated (windfall) sites could be approved if they meet all the conditions in Policy S6 but with no regard needing to be made for the level of the landbank at the time of application. It was considered that this is logical when the analysis of past windfall sites demonstrates that they tend to be small, rare and contribute little. It was however further pointed out that it would appear from the Plan that there is nothing to prevent a departure from this trend - ie the acceptance of a larger non-allocated site which met the conditions of Policy S6. As a result, it was considered crucial that an appropriate low level upper threshold limit on the size (both in terms of area and tonnage) for windfall sites is specified as otherwise the Strategic Objectives and Spatial Strategy provided by the MLP could be undermined.
- 5.253 The MWPA accept that a large windfall site could impact on mineral provision and weaken the Spatial Strategy. However, Policy S6 requires that windfall sites must demonstrate (inter-alia) 'an overriding justification and/ or overriding benefit for the proposed extraction', and therefore this justification would need to outweigh any impact on the Spatial Strategy when everything is considered as part of the planning balance before a decision on the application is made. Conversely, the use of borrow pits may also act to preserve the Spatial Strategy as they will be associated with significant development projects, including those considered to be nationally significant, and these projects can create a 'greater than normal' requirement for locally derived mineral. In that respect, borrow pits preserve the plan-led strategy by ensuring that local mineral supply isn't drained at a quicker rate than envisaged by the need to service significant one-off projects.
- 5.254 The MWPA would also note that whilst no specific quantified cap is intended, the emerging Policy S6 includes Clause b which requires that 'the scale of the extraction is no more than the minimum essential for the purpose of the proposal'⁷³. This is considered to be a more appropriate approach to a 'cap' than selecting an arbitrary maximum threshold that windfall sites must not exceed. Such a threshold may prohibit windfall sites from providing the 'overriding justification and/ or overriding benefit' that creates the need for working these non-allocated sites in the first place.
- 5.255 For example, as part of permitting extraction at a borrow pit, the MWPA could, by way of conditions or legal agreement attached to the planning permission, restrict the mineral derived from the borrow pit to be used only in a particular

⁷³ except in the case of prior extraction to avoid sterilisation

development or developments i.e., it cannot be sold on the open market. This ensures that the amount of mineral derived from the borrow pit is limited to that required for specific projects and is therefore the minimum required for the overriding benefit allowing for the extraction. If extraction is for an agricultural reservoir, then the maximum amount of mineral that can leave the site will be that extracted to create the void for the reservoir water.

- 5.256 The MWPA further notes that representations were received seeking the removal of Clause b such that where extraction operations begin, they are not limited to only the mineral required to facilitate the primary purpose of their planning permission. The MWPA does not however intend to remove Clause b as this would clearly lead to a weakening of the Spatial Strategy and undermine the Plan-led system.

Site A48 – Grange Farm (Coggeshall Flood Scheme)

- 5.257 Whilst the MWPA is satisfied with the strategic approach taken with regards to windfall sites in light of the available evidence to date, It is recognised that there is a potential future site that could, under specific circumstances, contribute a yield of windfall sand and gravel of significance. This is a proposed flood alleviation scheme near Coggeshall, which would involve the extraction of 13mt of aggregates over a 20-year period.
- 5.258 As part of this Review, land pertaining to a similar area was submitted though the Call for Sites exercise in March 2022 as a candidate site for future sand and gravel extraction. The site has been designated Site A48 – Grange Farm and it has been subjected to an assessment, the results of which can be found in the ‘Assessment of Candidate Sand and Gravel Sites, 2022’ report that forms part of the evidence base for this consultation. If the allocation is selected as a Preferred Site and remains so throughout the examination, then following adoption of the emerging MLP, the site will be allocated in the MLP, and its mineral contribution would form part of the plan-led strategy for mineral provision.
- 5.259 It is important to note that evidence supporting the submission of Site A48 states that a ‘planning application for the flood alleviation scheme will come forward during 2022’. This has not yet occurred at the time of writing in October 2023 but if it does so prior to the adoption of the emerging MLP, it would be considered to be a proposal on a non-Preferred Site, irrespective of the outcome under the site assessment⁷⁴. Under this route, the application would likely be classified as a windfall site, where permission is sought for mineral extraction on a non-Preferred Site with the overriding justification possibly being the need to create the landform for the flood alleviation scheme. Without prejudice, there is currently no strong justification for the MWPA to refuse determination⁷⁵ on grounds of prematurity⁷⁶ of the potential application under these circumstances. This is the case whether the primary purpose of the application is mineral extraction or the

⁷⁴ Unless the site is proposed for allocation in the emerging MLP, where weight can be given to the allocation following submission of the emerging MLP to the Secretary of State if little objection was received to that allocation and/ or the application is not considered premature under NPPF Paragraph 50.

⁷⁵ The determination of an application is to come to a decision as to whether to approve or refuse. It does not infer either outcome.

⁷⁶ Please see NPPF Paragraph 49 for a definition of prematurity as it applies to the planning application process

facilitation of a flood alleviation scheme, where the mineral extraction is taking place to form a space for flood waters as part of the delivery of a wider flood scheme. For clarification purposes, it is noted that any landowner, or agent acting on their behalf, is within their rights to submit an application for mineral extraction on non-allocated land and provide an over-riding justification for why extraction should take place as required by existing MLP Policy S6. In this regard, the proposal would not be assessed differently to any other windfall proposal.

- 5.260 Without prejudice, should permission be granted for this site as a windfall site, the mineral would enter the wider market, and the contribution made by that site would reduce the need for additional allocations in the future, either in this Plan Review or a future review depending on when permission was granted. This increase in the landbank is slightly tempered by the fact that the MWPA understands that if extraction at Site A48 or to facilitate a flood scheme were to be permitted, by either of the routes described above, the operators would mothball the current workings at Site A7. The current permission to extract at Site A7 will expire during the 20-year period required to extract to facilitate the flood scheme. As such, the quantity of Permitted Reserve that was left in Site A7 at the point that work is started on the flood scheme would cease to be part of the sand and gravel landbank when planning permission to extract at Site A7 expires on 21 August 2034, unless the operators submit a further planning permission to extend life of Site A7. Such an application will be determined in accordance with the Development Plan as exists at the point of submission.
- 5.261 Whilst the amount of mineral entering the system would be significant in terms of its proportion of the total need identified for the Plan period, it is not considered logical to cap the amount of mineral that could leave this site in total as its extraction is needed to create the space for the flood alleviation scheme. By capping the mineral by way of a quantified policy, a sufficiently sized void may not be able to be created which would compromise the delivery of the flood alleviation scheme itself. The amount of mineral to leave the site can be capped by a condition attached to the planning permission, however. This would be in conformity with Policy S6 clause b) which requires the scale of the extraction at windfall sites to be no more than the minimum essential for the purpose of the proposal, which in this case is the creation of the flood alleviation space.
- 5.262 As set out above, at the time of writing in October 2023, an application has yet to be submitted and therefore there is no application before the MWPA to determine. Should an application be submitted and permission be granted, the quantity of mineral to be extracted would be added to the permitted reserve for the County and not taken as a separate or additional figure. However, because there is currently no certainty of an application and the performance of Site A48 under the methodology is currently being determined, it is not considered possible to make any allowances for this site at this time.
- 5.263 Given the current lack of certainty regarding Site A48 – Grange Farm and historic windfall data demonstrating that windfall contributions are small, the MWPA continue to consider it justified to continue planning on the basis of assuming no additional quantified contribution from windfall sites.

The Ability to Quantifiably Reduce Primary Extraction by Increasing Aggregate from Terrestrial Imports

- 5.264 The final alternative potential alternative source of sand and gravel which would allow for a reduction in site allocations in Essex would be to increase the importation of this resource from sites outside of Essex. The latest [Greater Essex Local Aggregate Assessment \(2022\)](#) reports⁷⁷ that of the total sand and gravel extracted within Greater Essex, 81% is used within the same area. The remaining 19% is exported beyond the boundaries of Greater Essex, of which the majority (12%) is exported to the East of England. Therefore, only 7% of the total sand and gravel extracted within Greater Essex is exported outside of the East of England, such as to Greater London or the Southeast, for example.
- 5.265 In turn, Essex is entirely reliant on hard rock importation, used as construction material and rail ballast, as it has no such deposits itself. It is also reliant on limestone specifically used in cement making. A pattern of long-distance mineral supply has emerged over time, with Essex exporting its sand and gravel whilst importing hard rock from the Midlands and further afield. This pattern of administrative areas exporting mineral resources indigenous to themselves whilst importing minerals that cannot be found internally occurs all over the country and is vital for the functioning of our economy.
- 5.266 Despite this importance, it can be difficult to quantify imports and exports. Tracking road haulage of minerals is not possible as there is no data to collate with regards to mineral supply chains. However, an insight into the bulk movement of mineral at transshipment sites is usually possible through data collected within annual mineral surveys, although only when there are sufficient responses provided which allow publication but preserves commercial confidentiality. Where there are less than three separate operators responding to survey requests, this collated data cannot be published, even if those operators provide returns for multiple sites. Any individual data points are destroyed annually once collated for monitoring purposes. As such, where commercial confidentiality cannot be protected, figures cannot be provided, and this information is destroyed with no record of it retained. Where it is possible to publish data, the MWPA does so annually through the Greater Essex Local Aggregate Assessment.
- 5.267 Due to the fact that individual MWPAs have a responsibility to supply other administrative mineral planning areas with sufficient mineral to meet their needs, plan provision rates have cross-administrative boundary implications. As such they are a strategic planning issue and, as a consequence, are subject to the Duty to Co-operate (DtC). Bought in by Section 110 of the Localism Act 2011, DtC is a legal test that requires local planning authorities (including MWPAs) to engage constructively, actively and on an ongoing basis on strategic planning matters to maximise the effectiveness of policies and to ensure that 'wider-than-local' needs are met.
- 5.268 Should Essex seek to reduce its site allocations on the basis that imports can increase to replace any shortfall, by implication that means that there would need to be an increase in mineral extraction in other mineral planning areas to provide

⁷⁷ as derived from table 9d (page 62), BGS/MHCLG (2021) Collation of the results of the 2019 Aggregate Minerals survey

the additional resource that Essex is no longer providing. Whilst there are times where this may be an appropriate position for a MWPA to take, these will largely be limited to when there is insufficient mineral available for extraction in a given area, or the material is so constrained that its extraction is not possible. This is not the case in Essex, where over 50 candidate sites have been submitted to the MWPA for consideration as future sand and gravel extraction sites. To not make sufficient provision in this context would likely attract significant objection under the DtC which, being a legal provision, would likely have serious implications with regards to the ability to adopt the emerging MLP. Paragraph 210b of the NPPF states that planning policies should 'source minerals supplies indigenously' so to not make sufficient provision for mineral need given the resource base in Essex would be an untenable position.

Summary of the Opportunity to Consider Other Supply Options as a Means to Reduce the Need for Site Allocations

General Information

- 5.269 Part of establishing an appropriate plan provision rate is to consider whether there are any reliable alternative sources for sand and gravel available in order to reduce the amount that has to be extracted from the ground.
- 5.270 The outcome of assessing alternative sources of aggregate does not change the overall need figure for sand and gravel resources. The sand and gravel market is already supplied by contributions from other sources, and therefore their contribution to market need is already reflected in existing sales rates. The purpose here is to consider whether there is justification for reducing the amount of terrestrially extracted mineral that needs to be allocated in the MLP in light of the market being able to be supplied to a greater extent by other sources.
- 5.271 Having considered five different alternative supply sources, the MWPA considers that there is no opportunity to quantifiably and justifiably reduce site allocations on the basis that this shortfall can sustainably and reliably be made up from an increase in the proportional supply mix from one or more other sources. The alternative supply sources considered, and the reason why a quantified increase cannot be relied upon, is set out below.

Marine Sources

- 5.272 Whilst there is data available which sets out where marine sourced minerals are landed, this does not necessarily equate to where they are used. The MWPA has no authority to dictate where marine-won mineral is sold, and in any event there are no wharf landing facilities within the County. It is also the case that land-won and marine-won aggregate are not always directly substitutable, and processing, dredging, unloading and transporting marine sands comes with a cost. The Crown Estate noted that the ability for marine sand and gravel to substitute for terrestrial sand and gravel is driven by economics. Where terrestrial resources can be worked near urban areas, as is the case across Essex, this will be likely be competitively priced than when compared to marine aggregate. A failure to provide sufficient land-based allocations will therefore likely result in applications coming forward off-plan, with the justification being the MLP is not making sufficient provision.

Recycled Sources

- 5.273 There are data limitations associated with recycled aggregates as there is no way of collating robust County-wide data for recycled aggregate production and capacity. Instead, assumptions and proxy's must be used, which means that caution needs to be exercised if seeking to use this data for quantitative purposes, rather than monitoring general trends. Whilst an MWPA can create a policy framework which encourages the minimisation of aggregate waste and the development of additional recycling capacity, it is the minerals industry who bring forward aggregate recycling capacity, which it is assumed it will do when there is a market need. In this regard, the MWPA have a suitably facilitatory policy in its emerging Policy S5.
- 5.274 Given that the contribution made to the mineral need of the County is implicitly, if not numerically, taken into account through mineral sales, to reduce the amount of forecasted need to be made through allocations on the basis of an increased recycling aggregate contribution is to assume an increase in recycling rates and/or production of recycled aggregates. A number of reports published by the Mineral Products Association note that the market has more or less met the technological limit of the volume of construction and demolition waste that can be recycled such that there is no evidence that there is the potential for this resource stream to significantly increase. Research by the Department for Communities and Local Government into CDEW markets suggested that this was already the case in 2005, when it found little evidence of hard construction and demolition waste which could be recycled into aggregate being landfilled as waste. When considering 'hard' construction and demolition waste such as concrete and bricks, 90% is recovered and recycled for alternative uses. It is further noted that UK recycling performance places it in the top tier in Europe with around 30% of all aggregate demand now supplied from non-primary sources which are mainly recycled materials

Secondary Sources

- 5.275 Supporting evidence for the Essex and Southend-on-Sea Waste Local Plan 2017 (WLP) stated that it is not known whether secondary aggregates are produced in any significant quantity in the Essex area. It is however considered that the lack of heavy industry in Essex precludes the generation of significant amounts of secondary aggregate and therefore no contribution is assumed.

Windfall Sources

- 5.276 Given the historically low mineral yield from this source, and the low number of windfall applications permitted, it is considered appropriate to maintain the current approach of making no quantified allowance for the total amount of required allocated provision to be serviced by windfall contributions. Should permission be granted for extraction at a windfall site in future, at that point the saleable sand and gravel that would be excavated would be added to the 'Permitted Reserve' and at that point be counted within future calculations assessing supply and demand. All material won in this manner would reduce the need for site allocations in future plan reviews by effectively increasing the total potential permitted reserve and subsequently the total potential landbank in the plan area

Imports and Exports

- 5.277 The pattern of administrative areas exporting mineral resources indigenous to themselves whilst importing minerals that cannot be found internally occurs all over the country and is vital for the functioning of our economy. Due to the fact that individual MWPAs have a responsibility to supply other administrative mineral planning areas with sufficient mineral to meet their needs, plan provision rates have cross-administrative boundary implications. As such they are a strategic planning issue and, as a consequence, are subject to the Duty to Co-operate (DtC), which is a legal test.
- 5.278 Should Essex seek to reduce its site allocations on the basis that imports can increase to replace any shortfall, by implication that means that there would need to be an increase in mineral extraction in other mineral planning areas to provide the additional resource that Essex is no longer providing. With over 50 candidate sites submitted to the MWPA, to not make sufficient provision for sand and gravel through allocations would likely attract significant objection under the DtC and this would likely have serious implications with regards to the ability to adopt the emerging MLP. To not make sufficient provision for mineral need given the resource base in Essex would be an untenable position and would likely fail all four of the Tests of Soundness.

Factors Influencing the Allocation and/ or Location of Sites

- 5.279 The need for future site allocations for sand and gravel is driven in the first instance by the requirement to fulfil a quantified need for this mineral within a designated area to be covered by an MLP. As previously mentioned, the Essex MLP covers the administrative area of Essex, which excludes Southend-on-Sea and Thurrock, and therefore sets out a quantified minimum need for sand and gravel in that area.
- 5.280 Once the quantified need for sand and gravel is known, there are a number of additional planning considerations, some mandatory and some preferential, that feed into where the allocations should be made. The final suite of allocations made should reflect, as closely as possible, the Spatial Strategy and Vision of the MLP and result in the most sustainable distribution of sites across the County.
- 5.281 Whilst not strictly within the scope of this paper as the following considerations do not impact on the quantification of mineral, it is considered helpful to set out, without prejudice, the factors the MWPA must consider in order to select an appropriate suite of Preferred Sites across the Plan area. These will be consulted upon through the Regulation 18 consultation in 2024.

Site Assessment Paper – Assessment of Candidate Sand and Gravel Sites, 2022

- 5.282 The allocation of sites will primarily be led by the assessment results derived from the site assessment methodology presented in the 'Assessment of Candidate Sand and Gravel Sites, 2022' report, which is part of the Regulation 18 Consultation in 2024. Criteria-led site assessment methodologies have been applied that reflect the planning priorities in Essex. Assessment methodologies were devised for each of 16 assessment criteria, informed by both desktop assessment and site visits. Each site was graded against each criterion, by applying quantitative and qualitative measures, for its suitability against a Red-

Amber-Green (RAG) scale. The main report of the site assessment includes the RAG grade and key assessment findings for each candidate site. Detailed assessments are included in the appendices.

- 5.283 It is noted that information that may be received through future consultation could result in changes being made to the assessments. The final results, following any amendments required, will provide a qualitative understanding of the inherent sustainability of each potential allocation. The site-specific detailed assessments in this report will be the primary method through which sites will be selected as Preferred Sites but there is also a need to take strategic planning issues into consideration in order to serve the growth needs of Essex as a whole.

Geographic Dispersal

- 5.284 The main principles constraining mineral site allocations are that minerals can only be extracted where they are found, and sites can only be allocated if they are put forward by a willing landowner. From a whole-County perspective, these are highly limiting factors.
- 5.285 The transportation of mineral around the County is a significant factor in the overall sustainability of the approach to satisfying mineral need put forward in the MLP. Where possible, allocations should act to minimise 'mineral miles' which is the distance that mineral travels on the road network. The rate of forecasted growth, and therefore the amount of extracted mineral that will be required is not uniform across the County. It is therefore important to consider where the areas forecasted to receive the highest growth are located during the site selection process. It will be those areas in the County forecasted to receive the highest growth which will have the greatest need for mineral. The Spatial Strategy takes dispersal as its primary focus, with its goal being 'To provide for the best possible geographic dispersal of sand and gravel sites across the County, accepting that due to geographic factors the majority of sites will be located in the central and northeastern parts of the County, to support key areas of growth and development and to minimise mineral miles'.
- 5.286 Once the results of the site assessment are known, those sites that perform the strongest will need to be considered in relation to their spatial distribution to ensure that all key areas in the County can rely on proximate mineral resources to facilitate their planned growth, where the appropriate geology and opportunities for extraction exist.

Large Landbanks bound up in Limited Sites

- 5.287 Paragraph 213g of the NPPF requires MWPA's to ensure that large landbanks bound up in very few sites do not stifle competition. The MWPA will need to consider operator and landowner interest as part of selecting its final suite of preferred allocations.

Delivery Timescales

- 5.288 The need to factor in the delivery rate of sites is linked to a number of further considerations set out below. Purely specific to when a site can become operational, there is a need to ensure that there are sites that can deliver mineral at the beginning, middle and end of the Plan period to ensure a continuous steady and adequate supply of aggregates. Sites may have long lead in times for a number of reasons and this needs to be considered as part of the mix.

5.289 Allocating a large number of sites that could commence working in the early part of the Plan period may not create significant issues as the working of these sites would likely be delayed so as to not saturate the market and possibly reduce the value of the mineral. The MWPA would also normally require that a primary site is completed and in restoration prior to the working of any extension in order to reduce cumulative impact as well as ensure restoration is carried out promptly. More problematic would be if the suite of allocations were tilted towards sites that could only come forward at the end of the Plan period. This may create supply issues during earlier years in the Plan. The final list of allocations will need to ensure, so far as is possible, that sites are available to work, with an appropriate spatial distribution, throughout the 15-year plan period.

The importance of Productive Capacity and Striking a Balance between Extensions and New Sites in Ensuring a Steady and Adequate Supply of Minerals

5.290 Productive capacity is the term given to the amount of mineral that can leave a mineral site, typically in a year, taking into account the rate of production and any restrictions that might be placed on a site through planning conditions, such as limiting the hours of working or the number of daily transport movements. Very broadly speaking, allocating more mineral sites independent of each other means a potentially greater total productive capacity as it means more sites are capable of being worked at any one time compared to a small number of site locations with a multitude of extensions. Mineral within extension sites typically cannot be worked until work has ceased at the parent site. Whilst in principle a string of extensions are better geared towards supplying mineral over a longer plan period, there is potentially less opportunity for the required productive capacity to be reached across the Plan period as only one site can be worked at any one time. Conversely, a string of extensions can give a site operator confidence in significantly investing in measures which improve the productive capacity of a site given the guarantee of a number of allocations. However, this is then not aligned with the NPPF requirement to not concentrate allocations to a small number of operators and reduces geographic dispersal.

5.291 It is important to note that productive capacity can only be guide as it is not necessarily fixed. The productive capacity of a site may change due to further planning applications being made following the working of an initial permission which demonstrates that a local area is able to support a greater output so conditions on operations may be able to be relaxed. However, increases in productive capacity may result in reserves being used up at a greater rate than the Plan originally makes provision for, though this is likely to be as a result of an increase in market demand for the mineral, and therefore sales, as a result of increases in the rate of growth and development. Mineral sales are assessed annually, and where sales exceed the plan provision rate, the MWPA will be aware of this and will be able to consider the need for additional allocations through a further Plan review.

5.292 It was noted through previous consultations that with site extensions there is a certainty of additional supply from existing sites whereas greenfield allocations typically take lengthy periods of time to come forwards (if at all) owing to the complexities inherent in quarry development, and/ or the availability of capital at any one time for prospective developers. Whilst this is accepted, the MWPA however notes that those sites allocated in the MLP that have not yet currently

come forward as a planning application are a mix of extensions and new sites. It is further noted that extension sites have their own inherent delivery risks. The deliverability of extensions may, for example, be hindered by operations at the parent site not progressing as originally intended.

5.293 Given the considerations above, the MWPA considers that there is no real evidence, from a strategic mineral supply perspective, to demonstrate that extensions are inherently better or worse than standalone sites. In this regard, the MWPA notes Paragraph: 010 Reference ID: 27-010-20140306 of the PPG which provides a list of circumstances where it would be preferable to focus on extensions to existing sites rather than plan for new sites. These are:

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

5.294 Whilst noted, these would all need to be considered on a case-by-case basis. The MWPA therefore does not intend to treat extensions any differently to standalone sites purely on the basis that they are an extension. Issues such as maintaining geographic dispersal, productive capacity and avoiding large landbanks held by single operators are also important to maintaining strategic mineral supply.

Windfall Sites

5.295 In the context of a minerals plan, a windfall site is one where extraction is permitted to take place in a non-allocated area. As set out from Paragraph 5.156, the approach to sand and gravel provision in relation to the treatment of Permitted Reserves that has been proposed by the MWPA makes allowances for the sand and gravel contribution of all applications currently in the Essex planning system, which includes windfall sites. At the time of writing (October 2023), the total amount of potential sand and gravel within the planning system is relatively small at 1.92mt. Paragraph 5.257 however sets out a current issue which may add a more significant amount to the assumed Permitted Reserve when calculated under the proposed approach. However, without any certainty that a planning application will be submitted, at this time it is not considered to make any reduction in identified need as a result of this potentially significant application. Without prejudice, this approach may be amended should circumstances change.

Restoration Benefits

5.296 Essex County Council are the Responsible Authority for delivering the Essex Local Nature Recovery Strategy (LNRS) The purpose of the LNRS is to establish priorities and map proposals for specific actions to drive nature's recovery. Specifically, the LNRS will map areas of importance for biodiversity and where nature recovery has been undertaken, describe biodiversity and opportunities for nature recovery in the strategy area, agree priorities, identify potential measures

for achieving them and map areas that could become of particular importance in the future.

- 5.297 With mineral extraction offering unparalleled opportunities to essentially 'start again' on the landscape as part of restoration following extraction, there may be opportunities for the restoration of mineral sites to positively contribute to the goals of the LNRS. Any opportunity will depend on the stage that the LNRS has reached at the relevant stage of MLP formation, and whether any sites are co-located with any identified opportunity areas. Where sites show potential opportunities in this area, this does not mean that a site will be allocated, it simply becomes another consideration alongside all the others set out in this section.

Summary of the Position in Relation to the Need for Sand and Gravel Provision in Essex

- 5.298 The East of England is one of the most important regions nationally for the extraction of sand and gravel, with Essex being the largest source of this resource within the region.
- 5.299 In order to comply with commercial confidentiality requirements, sand and gravel sales in Essex are amalgamated with those in Thurrock and Southend-on-Sea at the reporting tier of Greater Essex. However, this is not considered to impact significantly as sales in Greater Essex are dominated by sales in Essex, with the expected provision within Greater Essex but outside of Essex being approximately 3% of the total.
- 5.300 The MWPA will continue basing sand and gravel provision on maintaining a single landbank. Separate building sand landbanks are identified in MLPs elsewhere primarily in response to a high reserve of bedrock sands, as opposed to superficial sand and gravel deposits such as those that occur widely in Essex. It is the processing of mixed deposits that allows sand and gravel extracted in Essex to serve distinct markets, rather than sand and gravel in different parts of Essex only having the capability of serving a distinct market.
- 5.301 Whilst the MWPA understand that Government are working on new guidelines for aggregate provision, the MWPA considers that the current set are obsolete and therefore cannot be used as evidence upon which to justify a future position.
- 5.302 There is no explicit requirement to allocate sufficient sites as part of the adoption process to accommodate seven additional years of need at the end of the Plan period. However, making provision for mineral outside of the Plan period imbues the newly adopted Plan with greater flexibility in terms of being able to respond to sales increasing above the plan's forecasted provision rate. The MWPA has therefore made allowances for a seven-year landbank at the end of the Plan period.
- 5.303 The rate of housing development in Essex is forecasted to increase from the historic housing rate that the mineral market currently serves, and it is also known that there are a number of significant infrastructure projects in the pipeline. To ensure that areas of high need across Essex have access to local supplies, the final geographic dispersal of new mineral site allocations in combination with existing sites will be a consideration of the site selection process. However, it is not possible to take this increase in future demand and turn it into a quantifiable mineral need.

- 5.304 Despite the current economic climate, the MLP must however be predicated on the basis of long-term future 'need' as best understood by all the latest evidence. The current ten-year sales average is 3.31mtpa. This average very closely matches sales in the relatively stable periods between 2015 – 2018 and 2021 – 2022. The MWPA considers that the stable periods assists in justifying what a 'true market need' looks like. as this average closely matches six of the ten sales figures within the period assessed, and these years are not known to be either constrained or elevated by external events.
- 5.305 However, proceeding with a plan rate which is a close fit to business-as-usual is not sound plan-making. An adoption of the ten-year sales average with no uplift would likely fail the Test of Soundness as it would not accord with NPPF Paragraph 82d which requires that planning policies be flexible enough to 'accommodate needs not anticipated in the plan...and to enable a rapid response to changes in economic circumstances'. A lack of uplift in sand and gravel provision beyond the rate of current sales means that there would be no headroom to respond to any increase in market sales.
- 5.306 Given the non-qualitative nature of some of the resulting inputs to the methodology, there cannot be a 'correct' rate of plan provision. The NPPF derived requirements are for the plan rate to be set such that it allows for a steady (not too low) and adequate (not significantly more than needed) supply of minerals, and the resultant Plan is flexible.
- 5.307 The MWPA has concluded that there are four factors which have the potential to influence the appropriateness of the ten-year rolling average as a predictor of future need to the extent that a forecast based strictly on a ten-year rolling sales basis may not be reflective of the need for sand and gravel. Two of these are the economic impacts of COVID-19 and the 2008 global recession manifested in historic sales data. These wider economic impacts resulted in lower annual sales and therefore a lower ten-year average than might otherwise have been calculated.
- 5.308 The other pieces of local information of high are forecasted growth rates of development and the current and future state of the economy. Future growth rates as set out in Local Plans would be an increase on historic delivery rates and this is likely to result in sand and gravel sales increasing from their current levels, creating an additional increase in need. The latest forecasts for the Mineral Products Association and the Construction Products Association note that after 14 separate inflation rises, the economy is again slowing but will experience growth from 2025. The MLP is required to be able to respond to this growth.
- 5.309 The MWPA currently considers that a future plan provision based on a rolling ten-year sales average plus 20% is an appropriate plan provision figure. This proportion was also that put forward at the previous Regulation 18 consultation in 2021. Adding a buffer of 20% is considered to accommodate the reduction in the sales average over the last ten years caused by indirect and direct economic impacts as well as the need to increase provision due to increasing rates of development set out in local plans. The figure derived from an average of the last ten years of sales plus an additional 20% is 3.98mt. The MWPA considers that it has followed all the methodology requirements set out in the NPPF.

- 5.310 The MWPA then considered a number of scenarios for calculating the Permitted Reserve over the Plan period. This figure can be taken off the required total need figure over the Plan period as this is the amount that the MWPA already has approved. The most appropriate scenario was considered to be Scenario 2 which allows the Permitted Reserve to be calculated by the sum of the unextracted sand and gravel with permission to be extracted (the actual 'Permitted Reserve') plus the yield set out within applications currently in the Essex planning system.
- 5.311 The final stage of establishing an appropriate plan provision rate is to consider whether there are any reliable alternative sources for sand and gravel available in order to reduce the amount that has to be extracted from the ground. Having considered five different alternative supply sources, the MWPA considers that there is no opportunity to quantifiably and justifiably reduce site allocations on the basis that this shortfall can sustainably and reliably be made up from an increase in the proportional supply mix from one or more other sources. The alternative supply sources considered were marine, recycled, secondary (re-processed), import and windfall site provision (sand and gravel is extracted from sites coming forward off-plan).
- 5.312 Therefore, *the minimum* amount of sand and gravel that needs to be allocated to provide a steady and adequate supply of sand and gravel over the Plan period 2025 – 2040, is 64.56mt, taking into account:
- a provision rate equating to an average of the last ten-years of sales plus 20% (3.98mtpa),
 - Sand and gravel at the above supply rate for a 15-year plan period ($15 \times 3.98\text{mt} = 59.7\text{mt}$),
 - the intention to provide seven years of mineral at the end of the Plan period in light of the NPPF requirement to maintain a landbank of seven years at all times ($7 \times 3.98\text{mt} = 27.86\text{mt}$),
 - the current level of the Permitted Reserve at adoption (from Table 9 = 21.03mt),
 - the assumed contribution to the Permitted Reserve made by applications for mineral extraction currently in the Essex planning system (Scenario 2, Table 8 = 1.92mt),
 - Minimum total required = Total Need over Plan Period – Forecasted existing Permitted Reserve in 2025 = ($59.7\text{mt} + 27.86\text{mt}$) – ($21.03\text{mt} + 1.92\text{mt}$) = 64.56mt

6 Silica Sand Provision in Essex, 2025 – 2040

Introduction

- 6.1 Silica Sand is a nationally important industrial mineral, deposits of which are nationally scarce. Silica sand has been produced on a limited basis in Essex since before World War 2. Historically, output has been almost entirely from Martell's Quarry at Ardleigh, north-east of Colchester, and this is the only site currently extracting this resource. For more information on the nature of this resource, please see Paragraph 3.14 onwards.
- 6.2 Provision for silica sand in Essex is led initially by Policy S7 in the adopted MLP. This policy, inter-alia, makes provision for a site extension at Martells Quarry, Ardleigh to maintain an appropriate minerals landbank for silica sand of at least ten years⁷⁸ during the plan-period as defined in Policy P2. Policy P2 is the allocation policy for silica sand, and this sets out, inter-alia that the Mineral Planning Authority will grant planning permission for silica sand workings within the Preferred Site allocations subject to accordance with the Development Plan for Essex and any other material considerations. Please note that the impacts of extracting silica sand and the restoration of the site are managed through other policies.
- 6.3 Whilst not the focus of this paper, for completeness it is noted that the currently adopted Policy S7 references provision of silica sand being made at a specific, named site (Martells Quarry) such that it could act to limit production to that site only. This is not considered to be appropriate as not only should a policy not act to create a commercial advantage to any private interest, the policy may also become undeliverable, and the mineral resource need unmet, should it place singular reliance on a commercial activity that does not transpire. It is in any event considered inappropriate to reference a private business in a general planning policy that is not a specific site allocation policy.
- 6.4 As such, amendments are proposed to Policy S7 to remove specific references to Martells Quarry in the silica sand section of the policy and instead refer to provision being made via the allocation policy, MLP Policy P2 (or its future equivalent). This revision allows for future allocations for silica sand, from any potential source, to be made under Policy P2 should they be required. This better demonstrates accordance with the PPG⁷⁹ in that it allows the MWPA to 'recognise that there are marked differences in geology, physical and chemical properties, markets and supply and demand between different industrial minerals'. The PPG further states that MWPA's need to recognise that 'different uses can require different specifications, and industrial minerals are often not interchangeable in use', and are 'essential raw materials for a wide range of downstream manufacturing industries'. The need to make provision for different markets/ end uses can be a legitimate reason to permit new silica sand sites, even in non-allocated locations, and therefore it is not appropriate to deny the principle through policy. That said, it is noted that there is no geological evidence of significant silica sand deposits in Essex.

⁷⁸ As required through a footnote associated with [NPPF Paragraph 214c](#)

⁷⁹ Paragraph: 086 Reference ID: 27-086-20140306

Silica Sand Provision Methodology as set out in the National Planning Policy Framework

6.5 Paragraph 214 of the NPPF states that ‘Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by...’ and then lists a number of requirements. The requirement that has relevance to this paper and the silica sand resource is bulleted below:

- maintaining a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment

This is supported by a footnote which states, inter-alia, that these reserves should be at least 10 years for individual silica sand sites, or for 15 years for silica sand sites where significant new capital is required. Unlike with sand and gravel used for construction, there are no national guidelines for the provision of silica sand, extant or otherwise.

6.6 Silica sand is an industrial mineral rather than an aggregate, and on that basis sites extracting solely this mineral are not be required to take part in the annual regional aggregate survey from which the MWPA can source sales information. However, this mineral resource is often found in construction sand deposits which are subject to the survey, so sales can be recorded. That said, as silica sand is extracted at only one site in Essex, it is not possible to use sales data for planning purposes due to the need to protect commercial confidentiality.

6.7 As set out in the currently adopted MLP⁸⁰, after making allowance for the already permitted reserves at Martells Quarry as existed at the base date of calculations informing the current MLP⁸¹, an additional minimum of 390,000 tonnes of silica sand needed to be allocated. As such, the currently adopted MLP allocated Site B1 as an extension to Martells Quarry as was then extant. The extension was estimated to contain a yield of 0.46mt of silica sand. Permissions had been granted at the site previously that provided for a proportionate split within the sand and gravel deposit of 54% silica sand and 46% aggregate (construction sand and gravel). The annual throughput of this site for silica sand was assumed to be 45,000 tonnes per annum, a calculation based on the proportion of the deposit that was silica sand and the then permitted plant capacity.

6.8 At the time of writing in October 2023, Site B1 is subject to a planning application⁸² which, whilst not approved, has a resolution made pending a Legal Agreement. Within the Planning Statement associated with the application, it is stated at Paragraph 1.6 that ‘Further geological investigation undertaken in 2019 suggests that the saleable reserve of minerals within the western extension amounts to something in the order of 1,310,000t on a similar 55%, 45% split’⁸³.

⁸⁰ Paragraph 3.12, Essex Minerals Local Plan, 2014.

⁸¹ 31st December 2011

⁸² ESS/29/20/TEN - Proposed western extension to Martells Quarry for the extraction, processing, sale and distribution of silica sand and gravel, and subsequent restoration using inert materials along with the creation of a new access

⁸³ ESS/29/20/TEN – Planning Application and Supporting Statement, pde consulting limited, February 2020 (Percentages relate to 55% silica sand, 45% aggregate (construction sand))

Based on this proportional split, the extension would permit 0.72mt of silica sand against a then identified requirement of a minimum of 0.39mt which would be required to the end of the current Plan period, which is 2029.

- 6.9 The current application, if approved, would include Condition 18, which requires that the total quantity of mineral leaving the site shall not exceed a level of 125,000tpa from the date of commencement of the development. Therefore, assuming that 55% of the total resource is indeed silica sand, the annual throughput of silica sand at this site would be a maximum of 68,750tpa. Assuming sales of the total resource in the future equates to the maximum permitted annually, the silica sand element of the resource would add 10.47 years to the existing landbank of this mineral resource.
- 6.10 Whilst the MWPA can calculate a theoretical remaining landbank of silica sand at this site, it is a consequence of the need to protect commercial confidentiality that the MWPA cannot be certain as to the exact landbank remaining. As previously mentioned, actual recorded sales cannot be used to calculate the rate of depletion of the existing reserve. Not only can they not be used as evidence or published, they are also required to be deleted each year as part of consolidating data ahead of the submission of mineral survey data to the AWP, meaning that there is no existing data to infer even an approximate rate over a period of time. With no evidence being able to be presented to the contrary, it is pragmatic to assume that the annual sales equate to the maximum permitted throughput at the site as this would represent the 'worst case' scenario from the perspective of ensuring that there is sufficient permitted silica sand to satisfy the requirements of the NPPF.
- 6.11 On that basis, if the current MLP identified the need for an additional 0.39mt of silica sand up to the end of the current plan period of 2029, and the sale rate was assumed as being 45,000t, then this would equate to 8.67 years of additional supply being required. The current MLP predicated its sand and gravel need across the plan period at the point of plan preparation on the landbank for that mineral reaching zero at the end of the plan period. This allowed for the mineral resources to be 'topped up' to ensure a seven-year landbank across the back end of the plan period via additional allocations through a plan review, allowing for mineral provision to reflect need at the point of review rather than rely on forecasts remaining accurate over the 15 years of the current Plan.
- 6.12 Given that the base date for calculations in the adopted MLP was the end of the calendar year 2011, the total resource requiring allocation on the basis of the above would need to equate to 18 years to satisfy the actual requirement for the resource from the beginning of 2012 up to the end of 2029⁸⁴. If an additional 8.67 years was required, this would mean that the existing landbank was estimated to be 9.33 years from the base date of 1st January 2012. Based on the sales rate assumed in the MLP, the permitted reserve would have run out in the middle of 2021 (9.33 years on from 2012) without planning permission to extend. Whilst this has not been the case, it is the result of having to assume that annual sales are always at the maximum permitted, which likely overestimates the rate of drain on mineral resources. Based on more recent conversations with site operators as

⁸⁴ 'Actual requirement' being the need for the mineral, rather than the NPPF requirement to 'maintain a stock of permitted reserves' of 'at least ten years of silica sand (or 15 years where significant new capital is required) ie accommodating the need plus an additional ten years of supply.

part of the current application, the existing resource is becoming depleted, hence the need to apply for an extension in the first place.

- 6.13 Assuming there was no resource remaining, the addition of another 10.47 years⁸⁵ to the existing silica sand reserve as exists at this site would clearly not ensure that there would be sufficient mineral reserve to allow for its extraction across the new Plan period to 2040. At the point of writing (October 2023), there would need to be allocations equating to a silica sand landbank of approximately 17 years, at this point of plan preparation, assuming there is no resource left now and there will be none at the end of the Plan period, or 27 years in order to be able to satisfy the requirement to maintain a landbank of ten years at the end of the Plan period without an additional plan review between adoption and the end of the Plan period. On this basis, and assuming that current reserves are approximately 0, there would need to be either 6.53 years or 16.53 years of silica sand reserve added on top of the amount that would be permitted by the current application at Martells to satisfy NPPF requirements, with or without review respectively.
- 6.14 It is noted that through the two Call for Sites exercises held in support of this Plan review, only a single potential allocation was put forward for silica sand which could assist in addressing this potential shortfall. It is outside of the remit of this paper to speculate on the potential of any site submission being selected as a Preferred Site for allocation, with the suite of potential allocations not yet having been consulted upon through a Regulation 18 consultation. This is scheduled to take place in 2024. As such, the modifications to Policy S7 as proposed above are considered to be the only mechanism through which the MWPA can respond positively to the future requirement for silica sand extraction at this time. To reiterate, these amendments seek to make clear that applications for silica sand extraction on non-allocated land will be assessed on both their conformity with the Development Plan and a required 'over-riding justification or benefit', which is defined in the MLP as including a demonstrable unmet need. It is clarified that an unmet need does not convey a permission to extract. Any application for mineral extraction must still demonstrate conformity with the Development Plan unless material considerations indicate otherwise, although weight is required to be given in favour of the application when considering the planning balance of benefit versus harm if there is an unmet need in the County.

Summary of the Position in Relation to the Need for Silica Sand Provision in Essex

- 6.15 NPPF Paragraph 214 requires a MWPA to maintain reserves of silica sand of at least 10 years for individual silica sand sites, or for 15 years for silica sand sites where significant new capital is required to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment
- 6.16 Although the MWPA has too few silica sand sites to be able to publish sales and reserve data due to the need to protect commercial confidentiality, which makes forecasting for future need problematic, the MWPA is satisfied that at this stage of the plan-making process, there is likely to be an unmet need for this resource to the end of the Plan period. This is irrespective of whether permission for an

⁸⁵ As calculated in Paragraph 6.9

extension to the existing silica sand providing site that is currently within the planning system is granted. Amendments to the future equivalent policy to Policy S7 are proposed to enable silica sand sites to come forward off-plan where there is an over-riding justification or over-riding benefit, which includes an unmet need of the existing resource and the need to supply distinct markets. In both cases, applications would be assessed based on their conformity with the wider Development Plan as part of the planning balance.

7 Chalk Provision in Essex, 2025 – 2040

Introduction

- 7.1 Chalk is one of the mainstays of 'solid geology' under Essex and is the oldest rock exposed at the surface of the County. It occurs extensively under the surface of Essex and only outcrops in the north-west of the county, particularly in Uttlesford. For more information on the nature of this resource, please see Paragraph 3.21.
- 7.2 Chalk is currently extracted at a single site in Essex (in the form of white chalk at Chalk Farm, Newport Quarry) and is mostly used for agricultural purposes. This site has been operating since the 1980s, with the most recent planning permission extending the timescale of the development for operations to be completed by 2042, which extends outside of the Plan period.
- 7.3 Much of the chalk resource within Essex is concealed, and since the adoption of the MLP, the BGS have since discounted them as an economic resource. This is because it is unlikely that these low value resources would be extracted if significant amounts of overburden were required to be removed⁸⁶. On that basis, these areas have been removed from the BGS Digital Mineral Resource Data. Mineral resource maps will be updated accordingly through the MLP Review.
- 7.4 Provision for chalk in Essex is led initially by Policy S7 in the adopted MLP. This policy states, inter-alia, that the 'small-scale extraction of chalk will only be supported for agricultural and pharmaceutical uses at Newport Quarry as identified within the Policies Map. Extraction of chalk for other uses, such as aggregate, fill material or for engineering will not be supported.
- 7.5 Whilst not the focus of this paper, for completeness it is noted that the currently adopted Policy S7 supports provision of chalk being made at a specific, named site only, such that it limits production to that site only, and would not allow for any other chalk allocations. This is not considered to be appropriate as a policy should not act to create a commercial advantage to any private interest, it is in any event considered inappropriate to reference a private business in a general planning policy that is not a specific site allocation policy.
- 7.6 As such, amendments are proposed to Policy S7 to remove specific references to Newport Quarry in the chalk section of the policy and instead refer to provision being made via the allocation policy, MLP Policy P2 (or its equivalent). This revision allows for future allocations, from any potential source, to be made under Policy P2 should they be required. This better demonstrates accordance with the PPG⁸⁷ in that it allows the MWPA to 'recognise that there are marked differences in geology, physical and chemical properties, markets and supply and demand between different industrial minerals'. The PPG further states that MWPA's need to recognise that 'different uses can require different specifications, and industrial minerals are often not interchangeable in use', and are 'essential raw materials for a wide range of downstream manufacturing industries'. The need to make provision for different markets/ end uses can be a legitimate reason to permit new

⁸⁶ Updating of Mineral Safeguarding Areas of Essex, Minerals and Waste Programme Commissioned Report CR/22/008, British Geological Survey, 2022.

⁸⁷ Paragraph: 086 Reference ID: 27-086-20140306

brick clay and brickearth sites, even in non-allocated locations, and therefore it is not appropriate to deny the principle through policy.

- 7.7 It is also considered that limiting the extraction of chalk at Newport Quarry to that used for agricultural and pharmaceutical uses only is not an approach consistent with national policy. Further amendments have been proposed for Policy S7 which removes these restrictions and adds the need for the MPA to maintain a landbank of at least 15 years where chalk is extracted to form cement primary, or at least 25 years for cement primary to support a new kiln.

Chalk Provision Methodology as set out in the National Planning Policy Framework

- 7.8 Paragraph 214 of the NPPF states that ‘Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by...’ and then lists a number of requirements. The requirements that have relevance to this paper and the chalk mineral resource are bulleted below:
- maintaining a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment
- 7.9 This is supported by a footnote which states, inter-alia, that these reserves should be at least 15 years for cement primary (chalk and limestone) or at least 25 years for cement primary to support a new kiln.
- 7.10 In Essex, chalk is currently only extracted to be used in the production of agricultural lime rather than to supply a processing plant. Therefore there is no requirement to maintain a landbank for this mineral resource as the NPPF only requires this for when the chalk is being used as a cement primary. If there is no minimum landbank requiring maintenance by the MWPA, there is no quantified need for this mineral that the MWPA is required to address through making specific allocations as there is no basis for determining if the existing landbank is sufficient to meet the NPPF provision requirements over the Plan period.
- 7.11 It is recognised that the MWPA could directly approach the operators of this site and request information relating to the size of the permitted reserve and its forecasted length. However, this would be commercially confidential information and the operators are not required to provide it to the MWPA. In any event, the Call for Sites mechanism is the route through which operators can request the designation of chalk allocations. It is noted that through the two Call for Sites exercises held in support of this Plan review, no potential allocations were put forward for chalk extraction. It is outside of the remit of this paper to speculate on the potential of any site submission being made either through this Plan Review or following adoption of this Plan, where in the latter case it would be treated as an application on a non-allocated site.
- 7.12 The modifications to Policy S7 as proposed through Paragraph 7.5 to Paragraph 7.7 are considered to be the only mechanism through which the MWPA can respond positively, within the boundaries of its administrative responsibilities, to any future requirement for chalk extraction at this time. To reiterate, these amendments seek to make clear that applications for chalk extraction on non-allocated land will be assessed on both their conformity with the Development Plan and a required ‘over-riding justification or benefit’. It is clarified that an unmet

need does not convey a permission to extract. Any application for mineral extraction must still demonstrate conformity with the Development Plan unless material considerations indicate otherwise, although weight is required to be given in favour of the application when considering the planning balance of benefit versus harm if there is a demonstrable unmet market requirement in the County.

Summary of the Position in Relation to the Need for Chalk Provision in Essex

- 7.13 As chalk is not an aggregate, chalk sites are not required to take part in the annual aggregates survey from which the MWPA can derive sales information to aid in planning for the future need for this mineral. Further, with chalk operations being confined to a single site within Essex, any derived figures would not be able to be used for planning purposes due to the need to protect commercial confidentiality.
- 7.14 With the NPPF not setting a minimum landbank for chalk extracted for the purposes of agriculture, there is also no basis for the MWPA to be able to explicitly quantify the need for this mineral over the Plan period. The MWPA have however proposed modifications to the chalk provision policy, Policy S7, which will allow the MWPA to respond positively to any future requirement for chalk extraction that is demonstrated through planning application.

8 Brick Clay and Brickearth Provision in Essex, 2025 – 2040

Introduction

- 8.1 Whilst Essex has had a long tradition of brick making dating back centuries, there are no examples of large, automated brick making facilities in the County. The brick industry in Essex primarily specialises in handmade products of a more boutique nature, such as bricks for the repair of historic buildings. For more information on the nature of this resource, please see Paragraph 3.23.
- 8.2 Provision for brick clay and brickearth in Essex is led initially by Policy S7 in the adopted MLP. This policy, inter-alia, makes provision for the maintenance of a landbank of at least 25⁸⁸ years of brick-making clay at the existing brickworks at Marks Tey and Bulmer through the extraction of remaining permitted reserves. At the point of plan-making associated with the adopted MLP, there existed sufficient reserves of brick clay and brickearth to avoid the need for any additional allocations to meet the need of this mineral to the end of the Plan period in 2029.
- 8.3 Whilst not the focus of this paper, for completeness it is noted that the currently adopted Policy S7 references provision of brick clay and brick earth being made at specific, named sites such that it could limit production to those sites only, and not allow for any other brick clay or brickearth allocations. This is not considered to be appropriate as not only should a policy not act to create a commercial advantage to any private interest, the policy may also become undeliverable, and the mineral resource need unmet, should it place explicit reliance on a commercial activity that was to cease. It is in any event considered inappropriate to reference a private business in a general planning policy that is not a specific site allocation policy.
- 8.4 As such, amendments are proposed to Policy S7 to remove specific references to Marks Tey and Bulmers in the brick clay and brickearth section of the policy and instead refer to provision being made via the allocation policy, MLP Policy P2 (or its equivalent). This revision allows for future allocations, from any potential source, to be made under Policy P2 should they be required. This better demonstrates accordance with the PPG⁸⁹ in that it allows the MWPA to 'recognise that there are marked differences in geology, physical and chemical properties, markets and supply and demand between different industrial minerals'. The PPG further states that MWPA's need to recognise that 'different uses can require different specifications, and industrial minerals are often not interchangeable in use', and are 'essential raw materials for a wide range of downstream manufacturing industries'. The need to make provision for different markets/ end uses can be a legitimate reason to permit new brick clay and brickearth sites, even in non-allocated locations, and therefore it is not appropriate to deny the principle through policy.

Brick Clay and Brickearth Provision Methodology as set out in the National

⁸⁸ As required through a footnote associated with [NPPF Paragraph 214c](#)

⁸⁹ Paragraph: 086 Reference ID: 27-086-20140306

Planning Policy Framework

- 8.5 Paragraph 214 of the NPPF states that ‘Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by...’ and then lists a number of requirements. The requirements that have relevance to this paper and the brick clay and brickearth mineral resources are bulleted below:
- maintaining a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment
 - taking account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made.
- 8.6 In relation to the second bullet point, within Essex, brick clay and brickearth are shown on resource maps as two separate resources although their properties are similar. The difference between them is the type of bricks that can be produced. The separation of the landbank into two for this resource is made based on the requirement to take account of the need for the provision of different types of brick clay from different sources to enable the manufacture of different types of brick from the two discreet geological units within Essex.
- 8.7 The first bullet point is supported by a footnote which states, inter-alia, that these reserves should be at least 25 years for brick clay (and by definition brickearth as this is a specific type of brick clay). Unlike with the sand and gravel used for construction, there are no national guidelines for the provision of brick clay and/or brickearth, extant or otherwise.
- 8.8 With brick clay and brickearth being an industrial mineral rather than an aggregate, sites where this material is extracted are not required to take part in the annual regional aggregate survey from which the MWPA can source sales information to assist in the planning for the need for future mineral allocation. However, even if sales were obtained by another means, within Essex the brick clay landbank comprises of a single site as does the brickearth landbank. As such, it wouldn’t be possible to use sales data in order to calculate the landbank for planning purposes due to the need to protect commercial confidentiality.
- 8.9 As such, with no other evidence being able to be used, it is pragmatic to assume that the annual sales equate to the maximum permitted throughput at the site as this would represent the ‘worst case’ scenario from the perspective of ensuring that there is sufficient permitted brickearth and brick clay to satisfy the requirements of the NPPF.
- 8.10 The following sections sets out the MWPA’s understanding of the extent of permitted reserves as of the time of writing in October 2023.

Bulmer Brickworks

- 8.11 The latest planning application covering the Bulmer Brickworks site is Application Reference ESS/12/12/BTE. The proposal states that the previous permission authorising work at the site was due to expire in mid-February 2012 by which time the area to which the permission to extract existed would have been exhausted. It is further stated that ‘Due the nature of the product produced from the extracted clay and the traditional methods of manufacture the rate of extraction is relatively low per annum; at 1,250 tonnes’. In light of this extraction

rate, the applicant considers the site area proposed through the latest application would be sufficient for 25 years of extraction from commencement of operations and as such over the entire period of consent being sought, 31,250 tonnes of brick clay would be extracted. The approved works sought to continue operations previously permitted in 2002 and as such there was no formal implementation date. That said, the site monitoring report published in 2013 stated that an action was to 'continue to work in compliance with permission ref ESS/12/12/BTE' If 2013 is taken as the implementation date, and extraction progressed at the presumed rate of 1,250tpa, the permitted reserve at this site would be exhausted in 2038. As such, an additional allocation would be required through the new plan period to 2040 in order to comply with the NPPF requirement to maintain at least a 25-year landbank of this resource, if extractive works were intended to continue at this location.

Marks Tey Brickworks

- 8.12 An Interim Development Order permission was granted for the extraction of brick clay on 16 June 1948. An application to register the IDO permission was granted by the MWPA on 6 June 1992 and a revised schedule of conditions approved on 29 June 1993. The schedule of conditions was revised again in September 2008.
- 8.13 The IDO permission granted in 1948 was preserved by successive Planning Acts as a valid planning permission. As a result, following the registration of the IDO, further applications submitted to review the schedule of conditions are not required to be accompanied by a justification statement for the clay extraction. From information in the public domain sourced from successive planning applications, the site has permission to extract until 2042, and extracts 1,000 – 2,000 y³ of clay on a biennial basis. It is estimated that the site has 6-8 more digs (12-18 years) left. Therefore, a new allocation for this resource would be required through the new plan period to 2040 in order to comply with the NPPF requirement to maintain at least a 25-year landbank of this resource if extractive works were intended to continue.

Addressing the Assessed Shortfall in Brick Clay and Brickearth

- 8.14 In the absence of sales information gathered by way of survey, it is recognised that the MWPA could directly approach the operators of this site and request information relating to the size of the permitted reserve and its forecasted length. However, this would be commercially confidential information and the operators are not required to provide it to the MWPA. In any event, the Call for Sites mechanism is the route through which operators can request the designation of brick clay and brickearth allocations. It is noted that through the two Call for Sites exercises held in support of this Plan review, no potential allocations were put forward for such extraction. It is outside of the remit of this paper to speculate on the potential of any site submission being made either through this Plan Review or following adoption of this Plan, where in the latter case it would be treated as an application on a non-allocated site
- 8.15 The modifications to Policy S7 as proposed through Paragraph 8.3 and Paragraph 8.4 are considered to be the only mechanism through which the MWPA can respond positively to the future requirement for brick clay and brick

earth extraction at this time. To reiterate, these amendments seek to make clear that applications for brick clay and brickearth extraction on non-allocated land will be assessed on both their conformity with the Development Plan and a required 'over-riding justification or benefit', which is defined in the MLP as including a demonstrable unmet need. It is clarified that an unmet need does not convey a permission to extract. Any application for mineral extraction must still demonstrate conformity with the Development Plan unless material considerations indicate otherwise, although weight is required to be given in favour of the application when considering the planning balance of benefit versus harm if there is a demonstrable unmet need in the County.

Summary of the Position in Relation to the Need for Brick Clay and Brickearth Provision in Essex

- 8.16 As brick clay and brickearth is not an aggregate, extraction sites of this nature are not required to take part in the annual aggregates survey from which the MWPA can derive sales information to aid in planning for the future need for this mineral. With provision based on two landbanks comprised of one brick clay and one brickearth site, even if figures were obtained, the MWPA cannot use this data to forecast future need due to the requirement to protect commercial confidentiality. This makes forecasting for the future need for this problematic although the MWPA is satisfied that at this stage of the plan-making process, based on public information, there is likely to be an unmet need for this resource to the end of the Plan period. Amendments to the future equivalent policy to Policy S7 are proposed to enable brick clay and brick earth sites to come forward off-plan where there is an over-riding justification or benefit, which includes an unmet need for the existing resource and the need to supply distinct markets. In both cases, applications would be assessed based on their conformity with the wider Development Plan as part of the planning balance.

9 Remaining Steps in the Process of Allocating New Mineral Sites to Accommodate Mineral Provision in Essex, 2025 - 2040

Introduction

- 9.1 This section of the report sets out the remaining steps in the process of deriving the scale of mineral provision in Essex across the plan period 2025 – 2040. This process is intended to conclude with the allocation of new mineral sites to accommodate this need through a newly adopted MLP.

Duty to Cooperate

- 9.2 Following the assessments made in this report, the next step in the Plan making process will be to subject the conclusions to DtC engagement. The DtC is a legal requirement placed upon local planning authorities to ensure that they engage with other relevant authorities and prescribed bodies constructively, actively and on an ongoing basis for strategic planning matters. Throughout the plan making process, the ECC MWPA has engaged on multiple occasions with all LPAs in Essex, all LPAs adjoining Essex, all other MWPA's in the East of England AWP, all adjoining MWPA's, all MWPA's from whom we receive or export a strategic amount of mineral from or to, and, all other 'prescribed bodies' as set out in Regulation 4 of [The Town and Country Planning \(Local Planning\) \(England\) Regulations 2012](#).
- 9.3 It is noted that the DtC is not a 'duty to agree'. The role of the DtC is to ensure that ongoing discussions are held on strategic matters with the appropriate bodies such that all stakeholders can consider the implications of a planning authority's intended strategic direction upon their own interests. The DtC forms the basis of Statements of Common Ground, where issues or outcomes between one or more parties are agreed upon. Issues that remain 'unsolved' are likely to be those that are discussed at an independent Examination in Public. Please see the evidence base supporting the Regulation 18 2024 consultation where the outcomes of DtC engagement to date in relation to the MLP can be reviewed. This report, and other strategic evidence base documents such as the site assessment methodology, as well as the MLP itself, have been subjected to DtC and amended as appropriate.
- 9.4 This report will form part of the evidence base for the Regulation 18 consultation on the MLP 2040, which is expected to take place in early 2024.

The Approach to Site Selection

- 9.5 This consultation will also include a 'Assessment of Candidate Sand and Gravel Sites, 2022' report. This report will set out the methodology for the site assessment work and then apply it to all candidate sites. At this stage, the site assessment report will not present a list of 'Preferred Sites' as the assessment and methodology has yet to be subjected to public consultation.
- 9.6 All comments received through public consultation will be assessed by the MWPA, including those on the approach to calculating mineral need and the findings of the site assessment work. Any amendments considered necessary will

be made to the Plan and/ or its evidence, and then it is envisaged that Plan making can proceed to a Regulation 19 engagement. This engagement will include a schedule of Preferred Sites based on the quantified need for sand and gravel, using the processes and criteria set out in this paper and the 'Assessment of Candidate Sand and Gravel Sites, 2022' report, as re-calculated where necessary based on any additional data and consultee comments. The provision methodologies themselves may also be amended after taking consultation responses into account. The MLP may also need to include additional sites should they be submitted as part of a future consultation. A decision on how to accommodate this will be taken as appropriate.

- 9.7 Preferred Sites to accommodate any quantified need will be considered first on the basis of the site assessment methodology before taking into account other planning considerations as set out in this report from Paragraph 5.279. These include geographical dispersal, delivery timescales and restoration opportunities.

10 Conclusion

- 10.1 The following conclusions have been drawn in relation to quantifying an appropriate level of provision of the five distinct minerals found in Essex across the time period of the emerging Local Plan, which is 2025 – 2040. Please note that these high-level conclusions are supported by more detailed summaries throughout the document which act to summarise key elements. It is noted that the sand and gravel conclusion below is heavily summarised on that basis.

General

- Essex is located to the north-east of London, within the East of England region, and borders the counties of Hertfordshire, Suffolk and Cambridgeshire. The population of Essex increased by 0.76% (average annual growth rate) compared with the 2011 Census. This makes Essex one of the faster growing areas of the country, with the average annual growth rate in England and Wales being 0.64%.
- By the end of the proposed Plan period in 2040, the Office for National Statistics states that the population in Essex is likely to increase by 13 per cent, or 192,000 people, to 1.65 million. A growing population creates a need to provide more housing and commercial developments, with the latter providing the services, goods and local job opportunities that housing developments and communities require. Local Authorities in Essex are preparing Local Plans to deliver approximately 150,500 additional homes up to 2036 and beyond, equating to approximately 7,150 additional homes per annum. These new homes, and the commercial opportunities and the infrastructure needed to serve them, all require mineral resources in order to be able to be delivered.
- The only aggregate extracted in Essex, and therefore subject to the methodology set out in NPPF Paragraph 213 is sand and gravel.
- The four industrial minerals in Essex, subject to provision methodologies set out in NPPF Paragraph 214 are silica sand, chalk, brick clay and brickearth

Sand and Gravel Provision, 2025 - 2040

- Based on an assessment of 10 year rolling sales and factoring in other local information and the potential for alternative sources of aggregate to avoid the need for terrestrial allocations, an annual provision rate of sand and gravel of 3.98 million tonnes per annum (mtpa) will be proposed through the Regulation 18, 2040 consultation. This equates to the last 10 year rolling sales of this mineral, plus a proportional uplift of 20%. The proportional uplift of 20% has been proposed due to other local information revealing that there are future increases in planned delivery rates set out in district and borough local plans. There is also the requirement for a plan to be able to demonstrate flexibility. These are NPPF related requirements, set out in NPPF Paragraph 213c and Paragraph 82d respectively.

- By way of comparison, the figure of 3.98mtpa is above the figure of 3.74mtpa proposed through the previous engagement and below the current plan provision rate of 4.31mtpa.
- The need for new allocations of sand and gravel is proposed to be based on 'Scenario 2', which takes into account all mineral currently permitted and assumes that the contribution from sites with planning applications for extraction already submitted to the MWPA will be delivered. Provision is also proposed to be made on the basis of seven year's supply of sand and gravel remaining at the end of the Plan period, in recognition of the minimum size of the sand and gravel landbank set out in NPPF Paragraph 213f and for additional flexibility.
- In a change from the previous approach articulated through this consultation, sites in the current MLP that have not yet come forward as a planning application will not be automatically allocated in the replacement MLP. Existing allocations that do not have permission to extract or are currently not subject to a planning application must demonstrate accord with the new site selection methodology. Potential operators are also required to re-confirm their intention to work the site in the new plan period. Only then will sites be reconsidered for allocation. The quantified need for new mineral therefore does not include any reduction based on sites already adopted in the MLP which have yet to reach the planning application stage.
- It continues to remain the case that it is not considered appropriate to quantifiably reduce the amount of mineral needed to be allocated on the basis of an assumed uplift in other supply options. The assessments on contributions from recycled and secondary aggregate, as well as marine aggregate concluded that there is no evidence-led figure that could be justified to the extent that it could be used to remove a quantified amount of sand and gravel from the quantified need. Significant uplifts from either source are in any event considered to be unlikely at this time, and it is further noted that any terrestrial shortfall would likely be made up of terrestrial sites coming forward off-plan. This is unlikely to result in a more sustainable outcome for mineral provision.
- There is not a history of significant windfall provision of sand and gravel in Essex, with provision over the last 10 years being 1.7mt. Projecting this rate across a full plan period of 15 years, this would equate to 4% of the proposed total need for sand and gravel allocations. When considering pending applications, this would equate to 4.74% of the total need for site allocations. Given the continued low mineral yield from this source, the low number of applications permitted, and the fact that provision from this source is outside of the control of the MWPA, it is considered appropriate to maintain the current approach of making no quantified allowance for the total amount of required allocated provision to be serviced by windfall contributions. Should permission be granted for extraction at a windfall site, at that point the saleable sand and gravel that would be excavated would be added to the 'Permitted Reserve' and at that point be counted within future calculations assessing supply and demand. This is considered to be a more justified way of accounting for the contribution made by windfall sites, as they are then an actual contribution rather than an assumed one.

- Failing to supply the quantified need for sand and gravel on the basis of assuming that sand and gravel could be imported in greater volumes from other mineral planning areas would likely fail the Duty to Co-operate as well as all four of the Tests of Soundness. This is therefore not seen as a reasonable alternative.
- The minimum amount of sand and gravel that is proposed to be allocated to provide a steady and adequate supply of sand and gravel over the Plan period 2025 – 2040, has been calculated as being 64.56mt, taking into account:
 - a provision rate equating to an average of the last ten-years of sales plus 20% (3.98mtpa),
 - Sand and gravel at the above supply rate for a 15-year plan period ($15 \times 3.98\text{mt} = 59.7\text{mt}$),
 - the intention to provide seven years of mineral at the end of the Plan period in light of the NPPF requirement to maintain a landbank of seven years at all times ($7 \times 3.98\text{mt} = 27.86\text{mt}$),
 - the current level of the Permitted Reserve at adoption (from Table 9= 21.03mt),
 - the assumed contribution to the Permitted Reserve made by applications for mineral extraction currently in the Essex planning system (Scenario 2, Table 9= 1.92mt),
 - Minimum total required = Total Need over Plan Period – Forecasted existing Permitted Reserve in 2025 = $(59.7\text{mt} + 27.86\text{mt}) - (21.03\text{mt} + 1.92\text{mt}) = 64.56\text{mt}$

Silica Sand, Chalk, Brick Clay and Brickearth, 2025 - 2040

- In each of the cases for the four industrial minerals extracted in Essex, the supply is maintained by extraction at a single site. The need to preserve commercial confidentiality prohibits any ability to use sales information to assess the quantified need for each of those minerals. Without sales information, it is not possible to establish a landbank for the purposes of demonstrating accordance with the provision methodologies set out in NPPF Paragraph 214.
- Based on estimates utilising information in the public domain, it is considered that there will need to be additional allocations for silica sand, brick clay and brickearth at some point in the plan period to 2040. The situation with regard to the chalk reserve is less clear as this is not extracted as an industrial mineral and therefore has no associated landbank.
- Due to the absence of any candidate sites for allocation for any of the four industrial minerals, the Regulation 18 consultation on the MLP 2040 will not contain any allocations for industrial minerals.
- With the MWPA assessing that there is a potential future need for industrial mineral sites, amendments to the future equivalent policy to Policy S7 are proposed to enable industrial mineral sites to come forward off-plan where there is an over-riding justification or benefit, which would include an unmet need for the existing resource and the need to supply distinct markets. In both cases, applications would be

assessed based on their conformity with the wider Development Plan as part of the planning balance.

Next Steps

- This report will form the evidence base underpinning the quantified mineral provision set out in the emerging MLP 2040. The plan and its evidence base will then be subjected to Regulation 18 consultation in 2024. Following a consideration of all the responses received, any amendments required to each of the provision methodologies set out in this report will be made and the methodologies re-run. A revised MLP incorporating any revision to the provision figures, and any other changes deemed necessary through the consultation, will then be submitted to a Regulation 19 consultation.

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