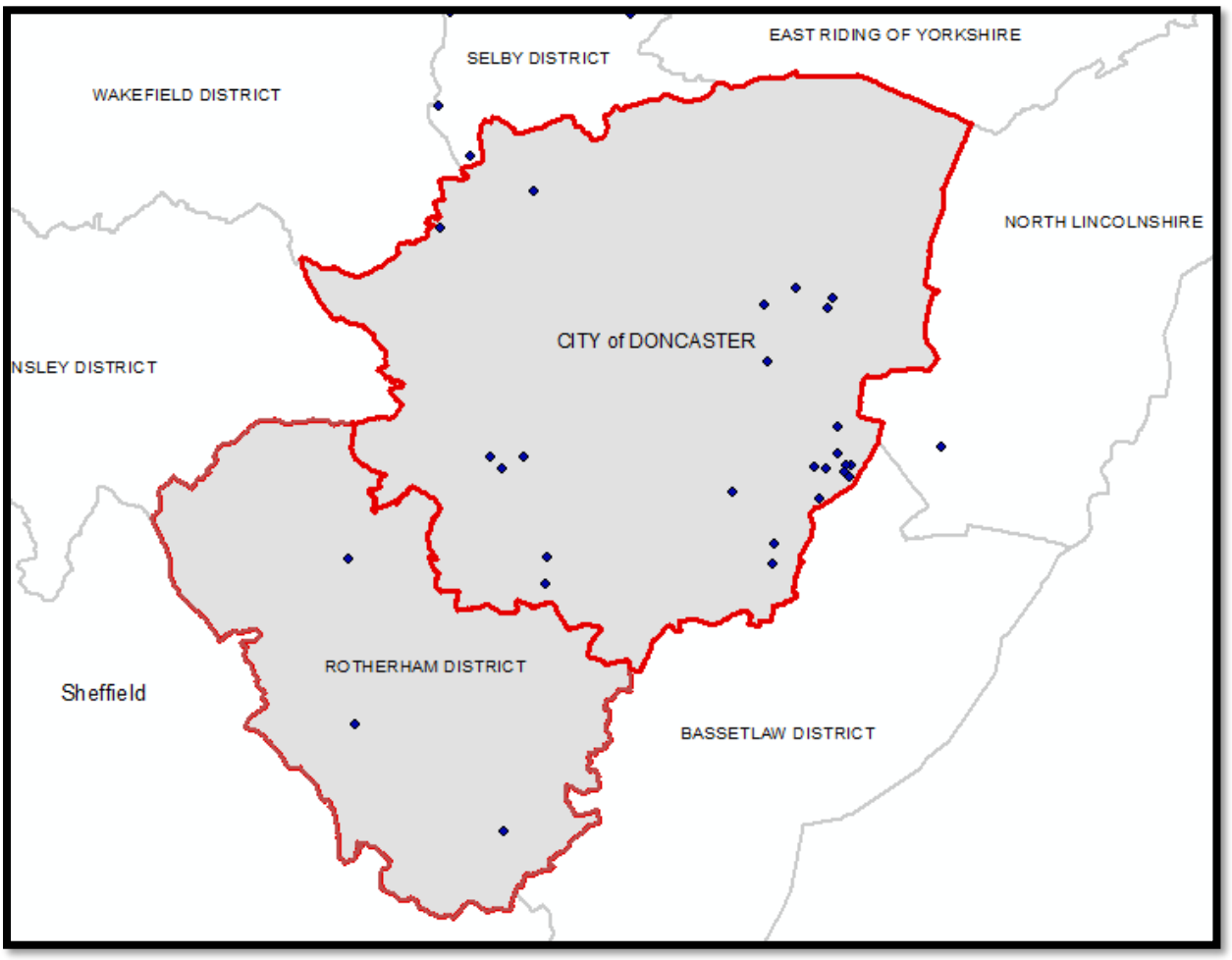
City of Doncaster Council

Rotherham Metropolitan Borough Council

Doncaster and Rotherham Local Aggregates Assessment 2023

(Incorporating 2022 Aggregates Monitoring Data)

Aggregate Working Party – AWP Ratified November 2023



Executive Summary

The requirement to produce an annual Local Aggregate Assessment (LAA) was introduced through the National Planning Policy Framework (NPPF) in March 2012. The Government then issued further guidance on the Managed Aggregate Supply System (MASS) in October 2012. National Policy requires all Mineral Planning Authorities to provide for a land bank of at least 7 years for sand and gravel and 10 years for crushed rock. This LAA aims to meet the requirements set out in both of these documents.

Sand and Gravel
The sand and gravel reserve for Doncaster in 2022 is 7.1Mt. The landbank based on ten year average sales is 16.4 years. The three year average sale landbank is 12.38 years and the fixed rate local plan annual provision landbank is 16.9 years. This is well above the seven year landbank requirement as set out in national policy, but decreasing annually.

Crushed Rock
The crushed rock (limestone) reserve (shared with Rotherham) for 2022 is 41Mt. The landbank based on ten year average sales is 18.5 years. The three year average landbank is 15.4 years and the fixed rate local plan annual provision landbank is 20.5 years. This is well above the ten year landbank requirement as set out in national policy, but decreasing annually.

Security of Supply
Security of supply for sharp sand and gravel always remains a concern locally, regionally and nationally with only a fraction of the reserve being sharp sand and gravel. In terms of security of supply for crushed rock local provision comes from mainly one site.

	Performance in 2021 (Mt)	**Performance in 2022 (Mt)**	**In comparison to previous year (Mt)**
Land won sand and gravel sales (tonnes) (mostly soft sand)	0.62Mt	0.69Mt	▲
Permitted reserves of sand & gravel (tonnes) (mostly soft sand)	7.0Mt	7.1Mt	▲
Sand and gravel landbank[1] (years) (based on ten year average sales)	18.5 years	16.4 years	▼
Sand and gravel landbank (years) (based on 3 year average sales)	12.2 years	12.4 years	▲
Sand and gravel landbank (years) (using local provision of 0.42Mt)	**16.7 years**	16.9 years	▲
Land won crushed rock sales (tonnes)	3.2Mt	2.7Mt	▼
Permitted reserves of crushed rock (tonnes)	44Mt	41Mt	▼
Crushed rock landbank[1] (years) (based on ten year average sales)	21.6 years	18.5 years	▼
Crushed rock landbank (years) (based on 3 year average sales)	16.5 years	15.4 years	▼
Crushed rock landbank (years) (using fixed rate of 2Mt)	**22 years**	**20.5 years**	▼

2022 Planning Application Summary and Status.

[1] calculated using the previous ten year average sales figures

A summary table of pending mineral planning applications for 2022 can be found in appendix one. No new applications approved in this year.
No new aggregate mineral applications for Rotherham.

Doncaster Local Plan and Rotherham Core Strategy

Doncaster Council adopted the Local Plan in September 2021. Doncaster provides for the crushed rock, sand and gravel minerals in the South Yorkshire sub-region and Rotherham has one crushed rock site with extant permission, but this site is currently inactive. Development proposals in Doncaster including the allocation of two sites and three 'areas of search' can be found in the Doncaster Local Plan. The Doncaster Local Plan allocated two sand and gravel sites, providing 1.9Mt[2] of sand and gravel. One of the allocated Local Plan mineral sites was granted permission in December 2020. No sites are allocated in the 2014 Rotherham Core Strategy.
The 2022 landbanks show there is currently sufficient provision of crushed rock, sand and gravel. The sand and gravel landbank has increased very slightly, but the Limestone landbank has decreased. It should also be noted that Doncaster and Rotherham is (and will remain) reliant on imports of sand and gravel from other areas to meet development needs.

Doncaster Local Plan Provision
Sand and gravel local provision = 0.42Mt per annum
Crushed rock local provision = is 2Mt per annum

Addendum

Monitoring returns from non-BAA / MPA operators has become increasingly difficult with smaller operators regularly failing to provide returns. 4 of the 14 active sites in Doncaster have failed to respond to the request for monitoring information. This year's monitoring return and Local Aggregate Assessment includes estimates sourced from planning application information, prior monitoring and telephone conversations with operators. As a result of the increase in operators failing to provide monitoring information (and to meet with NPPF requirements) new aggregate mineral planning permissions in Doncaster will include an annual monitoring condition.

Introduction

1. The Government through the 2023 National Planning Policy Framework (NPPF) states 'It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy, and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation' (paragraph 209) and accordingly that "Minerals Planning Authorities (MPAs) should plan for a steady and adequate supply of aggregates..." (paragraphs 213 and 214).

2. The NPPF also states that local planning policy should "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" (para. 210 second bullet).

3. The NPPF identifies that MPAs should prepare Mineral Local Plans (MLPs) that make provision and include policies for the extraction of mineral resource of local and national importance, define safeguarding areas, and set out environmental criteria against which planning applications will be assessed. A contribution to this plan making will be the preparation of an annual Local Aggregate Assessment (LAA). The LAA will facilitate the monitoring of supply and demand which will input into the provision needed in MLPs. This provision should take the form of specific sites, preferred areas and/or areas of search and locational criteria. The advice of the National Aggregate Co-ordinating Group to each Aggregate Working Party should be considered in preparing mineral plans. Their advice is capable of being a material consideration in making decisions on individual planning applications. There is also a requirement that every Planning Authority produce an LAA, which requires ratification by the relevant Aggregate Working Party.

    - LAAs serve several functions, acting as:

    - Monitoring Reports,
    - Supporting evidence for preparation or review of Minerals Local Plans,
    - Supporting evidence for calculation of landbanks,
    - Supporting evidence for planning applications.

4. National guidance states LAAs can be produced independently, jointly or in agreement with other Local Authorities. Doncaster and Rotherham have been identified historically by the Yorkshire and Humber Regional Aggregate Working Party (YHRAWP) as the 'South Yorkshire' sub region, due to minerals being found within the authority boundaries. The two Authorities have also consistently worked together on mineral matters. Doncaster and Rotherham are also regular attendees and contributors to the YHRAWP including the development of annual monitoring reports.

5. The 'Duty to Co-operate' found in the Localism Act, has been reiterated in the National Planning Policy Framework and minerals planning authorities are required to cooperate with neighbouring authorities to co-ordinate for a planned approach to ensure adequate minerals provision. Doncaster's Local Plan 'Statement of Common Ground' covers a wide range of Local Plan matters including minerals and is required to provide

information on the national context of duty to cooperate, strategic matters and priorities, potential impacts, organisations involved, signatories and strategic geography.

6. Regarding minerals, Doncaster's Statement of Common Ground seeks to address the sustainable use of minerals, recognise the need for monitoring information to determine aggregate need, concerns in relation to resource depletion (specifically sharp sand and gravel / concreting aggregate), sharing advice, monitoring information and cooperating on the development of local plan policies and evidence base.

7. Doncaster and Rotherham's mineral resources include limestone for aggregate, building stone and industrial limestone. Sand and gravel is only sourced in Doncaster. For a more complete overview on mineral resources in Doncaster, please refer to the 2016 Local Aggregates Assessment.

The 2019 Aggregates Mineral Survey for England and Wales (published August 2021)

8. The 2019 Aggregate Minerals Survey for England and Wales (AMS) was carried out in 2020 during the pandemic and was reliant on mineral operators providing returns on line during a very tight timeframe in very unusual circumstances. Doncaster Council is of the opinion that the South Yorkshire monitoring data is not accurately represented for the year 2019. The data from the 2019 AMS is however provided below for both crushed rock, sand and gravel. AMS Table 9h (sales of primary aggregate by MPA) identifies South Yorkshire (Doncaster Council) land won sand and gravel at 0.04Mt and 1.8Mt for crushed rock. Table 10 (Imports of primary aggregates by sub-region) in 2019 identifies imports of sand and gravel at 0.4Mt and crushed rock at 1.1Mt. AMS Table 11 (Consumption of primary aggregates by sub-region) in 2019 identifies 0.45Mt of sand and gravel and 2.9Mt of crushed rock consumption for South Yorkshire.

2022 Monitoring Information Doncaster and Rotherham Mineral Planning Authorities

9. This section of the report provides an overview of existing extraction operations, aggregate sales, reserves and landbanks for monitoring year 2022.

10. In 2022, the extraction of sand and gravel was taking place at 8 active sites identified in table 1 below.

Table 1. Sand and Gravel Quarries (Doncaster only)

Quarry Name	Owner / Operator	Status (2022)
Austerfield Quarry	Hanson Quarry Products Europe Ltd	Active
Armthorpe Quarry	(Yorkshire Aggregates) - 15/03012/MINA	Active
Dunsville (Lings) Quarry	Breedon Aggregates)	Active
Blaxton Quarry	Vigo Group	Inactive (no plans for extraction) (material transfer site)
Partridge Hill (High Common Lane, Austerfield)	Misson Sand and Gravel	Active
58's Road.	North Lincs' Aggregates	Worked out and awaiting restoration. (source of information - site visit)

Quarry Name	Owner / Operator	Status (2022)
Land On The North Side Of Bank End Road. Finningley	North Lincs' Aggregates	Active (no return)
Old Bawtry Road Finningley	Misson Sand and Gravel	Active
Dale Pit Lakes	John Holt and Sons	Active (no return)
Wroot Road Quarry	Yorkshire Horticultural Ltd	Active (Part time) producing sand for agriculture (no return)

11. In 2022, the extraction of crushed rock (limestone) was taking place at 6 active sites identified in table 2 below. Note, Cadeby Quarry is active for dimension stone.

Table 2. Limestone Quarries Doncaster and Rotherham 2022

Quarry Name	Owner / Operator	Status (2022)
Glen Quarry[3] (Stainton)	Marshalls Natural Stone	Active
Holme Hall Quarry (Stainton)	Breedon Aggregates	Active
Barnsdale Bar (Part in Doncaster)	Darrington Quarries	Active until 2028 (North Yorkshire)
Sutton Field Quarry	Darrington Quarries	Awaiting restoration
Harrycroft Quarry (Rotherham)	Tarmac	Inactive (permission granted until 31 December 2031)
Cadeby Quarry	Leaseholder / Operator Grants Precast Ltd	Inactive (aggregate) Active (non-aggregate)
Hazel Lane Quarry	Cat Plant Ltd	Active (no return)
Warmsworth Quarry	Sibelco	Active (industrial mineral and aggregate)

Sand and Gravel

12. Table 3 below shows the previous eleven year's sand and gravel production figures for 2012 to 2022 inclusive. The 2019 data has not been used to calculate the (ten year average) landbank for 2022 due to limited monitoring data received during the Covid pandemic.

Table 3. Sand and Gravel Aggregate sales 2012 to 2022 (Mt)

Year	2012	2013	2014[4]	2015	2016	2017	2018	2019[5]	2020	2021	2022
Doncaster	0.14	0.15	0.14	0.4	0.5	0.6	0.6	0.31	0.5	0.6	0.7

13. Table 4 overleaf shows landbank levels over the last eleven years. It excludes 2019 data and includes the year 2012. The landbank[6] is shown based on ten year average sales, three year average sales (to identify short term fluctuations in supply) and the fixed annual provision identified in the adopted Doncaster Local Plan. In all scenarios the landbank for 2022 is well above seven years as required by national policy. See executive summary (page 2 of this document).

[3] Glen Quarry is operational for the production of aggregates, but is exhausted from a reserve perspective. The raw materials for Marshalls' aggregate production comes from Holme Hall Quarry.
[4] Figure sourced from the '2014 Aggregates Mineral Survey for England and Wales'
[5] Figure sourced from the '2019 Aggregates Mineral Survey for England and Wales'
[6] Ten year average sales = 0.43Mt, three year average sales = 0.57Mt, and Local Plan fixed rate = 0.42Mt

Table 4. Reserves and Landbank of Aggregate Sand and Gravel

	Sand and Gravel			
Year	**Reserve (Mt)**	**Landbank (yrs) (based on 10 year average sales)**	**Landbank (yrs) (based on 3 year average sales)**	**Landbank (yrs) based on Local Plan fixed annual provision (0.42Mt)**
2012	5.7	12.8		
2013	4.1	11.5		
2014	2.3	7.6		
2015	4.2	14.5		
2016	8.8	29.3		
2017	5.6	18.1	11.2	13.33
2018	5.6	17	9.8	13.33
2019				
2020	8.1	24.6	14.3	19.3
2021	7	18.47	12.21	16.67
2022	7.1	16.36	12.38	16.9

New Permissions for Sand and Gravel Extraction 2022

14. No new permissions for sand and gravel extraction were approved in 2022. The slight increase in the landbank is due to the reported figures in the monitoring returns.

Table 5. New Permissions (Sand and Gravel) 2022

Application	Site Name	Operator	Detail	Decision
No new permissions				

Wharves and Rail Ports

15. There are no wharves or rail ports associated with sand and gravel production in Doncaster

Crushed Rock (Limestone Aggregate)

16. Magnesian Limestone (Dolomite) is the only aggregate rock type sourced and worked in the Doncaster and Rotherham area. Table 6 below shows the crushed rock aggregate sales between 2012 and 2022.

Table 6. Crushed Rock Aggregate Sales 2012 to 2022 (Mt)

	2012	2013	2014[7]	2015	2016	2017	2018	2019[8]	2020	2021	2022
Doncaster and Rotherham	1.1	1.2	2.1	2.4	2.6	2.0	2.4	2.4	2.4	3.2	2.7

17. Table 7 below shows landbank levels over the last eleven years. The 2019 data has not been used to calculate the landbank for 2022 due to limited monitoring data received during the pandemic. The landbank[9] is shown based on ten-year average sales, three-

[7] Figure comes directly from the '2014 Aggregates Mineral Survey for England and Wales'
[8] Figure comes directly from the '2019 Aggregates Mineral Survey for England and Wales'
[9] Ten year average sales (crushed rock) = 2.0Mt, three year average sales = 2.7Mt, and Local Plan fixed rate = 2.0Mt

year average sales (to identify short term fluctuations in supply) and the fixed annual provision identified in the adopted Doncaster Local Plan. In all scenarios, the landbank for 2022 is well above ten years as required by national policy, but it should be noted the reserve is decreasing over time.

Table 7. Reserves and Landbank of Crushed Rock for Aggregate Use

	Limestone (Crushed Rock)			
Year	**Reserve (Mt)**	**Landbank (yrs) (based on 10 year average sales)**	**Landbank (yrs) (based on 3 year average sales)**	**Landbank (yrs) based on Local Plan fixed annual provision (2Mt)**
2012	60	28.9		
2013	59.5	31.3		
2014	57.6	32.5		
2015	56.6	32.5		
2016	52.1	30.1		
2017	51.7	30.2	22.5	25.85
2018	53.3	31.4	23.2	26.65
2019				
2020	48.9	26.9	21.6	24.5
2021	44.00	21.57	16.5	22
2022	41.00	18.55	15.38	20.5

New Permissions for Quarrying Crushed Rock Aggregate 2022

Application	Site Name	Operator	Detail	Decision
No new permissions				

Wharves and Rail Ports

18. No change, please refer to 2016 Local Aggregates Assessment paragraphs 29 to 32 for detail.

Security of Supply

19. The reserve and landbank is one of the indicators for security of supply. Sand and gravel is sourced only from Doncaster and the sharp sand and gravel resources remains a concern, locally, regionally and nationally. Although the current sand and gravel reserve is 7.1Mt with a landbank of just over 16 years[10] only a fraction of this is sharp sand and gravel. To address this Local Plan policy 61 therefore requires all new applications to evidence more than 20% sharp sand and gravel in their proposals. Sand and gravel sales are shared between the 8 active sites identified in Table 1.

20. Regarding Limestone aggregate, Harrycroft quarry in Rotherham remains inactive with no plans to re activate extraction. Barnsdale Bar quarry is active in North Yorkshire and although no reserves are accounted for in the Doncaster and Rotherham LAA, the proximity of the site to the Doncaster border provides

[10] Based on ten year average sales

opportunity for sales of material locally. Hazel Lane quarry is a small independent provider and hardly ever responds to the request for information so it is difficult to comment on this site. Warmsworth quarry provides mainly industrial mineral but also a small amount of aggregate annually. Cadeby quarry has extant permission for aggregate extraction, but currently only provides dimension stone, Glen quarry (Stainton) has no remaining reserves and uses Holme Hall quarry mineral to manufacture products. Holme Hall Quarry has been the major limestone aggregate provider for some years, providing over 90% of crushed rock aggregate sales. Holme Hall Quarry permitted reserves will be exhausted around the time of the end date of the current permission in June 2025. The quarry operator has two pending permissions in 2022 (21/00433/MIN and 21/00398/MINA[11]. see appendix one).

21. The two sperate concerns regarding security of supply noted above are included and considered as part of the decision making process for new minerals extraction applications.

Secondary and Recycled Aggregate

22. Recycled Aggregate, which includes inert materials such as concrete, stone, brick and other similar materials, are reprocessed materials previously used for construction purposes and which are often taken from the Construction, Demolition and Excavation (CD&E) waste stream. Secondary aggregates are usually by-products of industrial processes and can include materials such as clay, ash and slag.

23. The use of secondary and recycled materials not only reduces the requirement for new production of primary aggregate, but also reduces the need for disposal to landfill of CD&E waste materials. National Policy recognises the role of secondary and recycled materials as an alternative to primary aggregate.

24. Data on secondary and recycled aggregate production and use is variable and incomplete. The reason being some sites operate under license and can be monitored but much recycling and re-use occurs on individual construction sites and is temporary in nature and does not produce data. The Environment Agencies Waste Data Interrogator is used to identify the amount of CD&E waste produced and handled within each Waste Authority.

25. The Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted in early 2012) identifies and safeguards a range of waste facilities across three boroughs to maximise recycling, divert waste from landfill and create a range of 'green' jobs. It deals with all varieties of waste including construction, demolition and excavation waste (CDEW).

26. Given the information contained in the 2012 plan is increasingly out of date the South Yorkshire Authorities commissioned an up-to-date Waste Needs Assessment (WNA) covering all four South Yorkshire Authorities.

27. The South Yorkshire Waste Needs Assessment (2021-2041) identifies the Waste Planning Authorities of South Yorkshire jointly produce just under 3Mt of various waste

[11] Approved 02.10.2023

types per annum, of this 1.3Mt is Construction, Demolition and Excavation waste (CD&E).

28. CD&E waste refers to waste materials that arise from the construction or demolition of buildings and/or civil engineering infrastructure, including hard construction and demolition waste, and excavation waste (and soils). Hard construction and demolition waste may include concrete, bricks, tiles, bituminous mixtures, railway ballast, and mixtures of the various components. Excavation waste may include clean and contaminated soil, stone, and rocks arising from land levelling, filling, and/or general foundations. The majority of this type of waste is made from inert materials such as concrete, rubble, and soils. A small proportion of CD&E waste is non-inert materials such as wood, metals, and plastic that can be managed via non-hazardous waste treatment facilities. CD&E waste may also include hazardous waste materials such as lead, asbestos, liquid paints, oils, etc. CD&E waste contains a high proportion of recyclable materials.

29. The Waste Needs Assessment identifies a local estimate based on data derived from Environment Agency (EA) databases and Defra 2021 UK statistics. Waste operator returns are available through the EA Waste Data Interrogator (WDI) and Incinerator Returns databases. It is widely acknowledged that a significant proportion of total CD&E waste arisings are reused on site or at exempt sites; this unseen capacity is not captured through the EA databases.

30. Estimated waste arisings derived from EA databases and Defra 2021 were compared in the WNA for the purpose of sensitivity testing. The national CD&E waste arising estimate (Defra 2021) acknowledges that a significant percentage of construction and demolition waste arisings are managed or reused on-site, or at exempt sites, and that this management capacity is unseen; this is also acknowledged in the National PPG. This may go some way to explaining the variance between estimated as managed and total CD&E arisings reported through surveys and the EA databases; with that reported through the EA databases forming the portion managed at permitted waste management facilities and the remainder being the portion managed or reused on-site, or at exempt sites.

31. In the absence of any more accurate local data, the figures derived from the EA databases are taken to form the best available data regarding CD&E waste requiring management at permitted facilities for which South Yorkshire, as WPAs, are responsible for. The Defra 2021 estimates are taken to form the estimated total CD&E waste arisings. The difference between the estimated total CD&E waste arisings and the actual as managed arisings is assumed to make up the unseen arisings managed either on site or at exempt sites; this accounts for, on average, about half of the estimated total CD&E arisings which is quite high however may also reflect that the national estimates are not made for the purpose of drilling down to WPA level. The method applied reflects that the national CD&E arising estimates are not designed to be drilled-down to a local level and helps to avoid localised inaccuracies.

32. The national ***Defra estimates*** were extrapolated forward using a growth profile based annual dwelling completions (considered to reflect construction output), and has been taken as the estimated total CD&E waste arisings; producing a figure of ***2.308 Mt*** for 2020. The figure derived from the ***EA database*** is taken to form the ***as managed***

portion in the WNA, at ***1.319 Mt for 2020***.This methodology accords with national policy and guidance and is reflective of approaches applied to recent WNAs in surrounding regional and WPA areas. This methodology provides for a consistent approach whilst considering local circumstances. CD&E waste generated within South Yorkshire and management methods are summarised in the table below.

Table 8. South Yorkshire CD&E waste arisings and management, 2020 (million tonnes)

South Yorkshire - Total		2.308
South Yorkshire - As managed		1.319
Barnsley		0.259 (20%)
Doncaster		0.321 (24%)
Rotherham		0.122 (9%)
Sheffield		0.617 (47%)
Preparation for reuse and recycling	Materials recycling	0.226 (17%)
	Composting	0.001 (<1%)
	Inert recycling	0.234 (18%)
Other treatment and recovery	Treatment and energy recovery	0.023 (2%)
	Soil treatment	0.078 (6%)
	Inert recovery (includes deposit of inert waste associated with the restoration of permitted mineral extraction sites)	0.656 (50%)
Disposal	Disposal to inert landfill	<0.001 (<1%)
	Disposal to non-hazardous landfill (including SNRHW)	0.100 (8%)

33. CD&E waste management is subject to commercial contracts that determine current and future management methods and rates. This information is not available to the council and the ability of the council to directly influence such matters is limited; however a similar range of legislative and market drivers (including the Aggregates Levy) are acting on operators to divert waste from landfill.

34. Targets for CD&E waste are limited to that set out in the Waste Framework Directive (WFD) requiring recovery of at least 70% of C&D wastes by 2020 (excluding naturally occurring material defined in category EWC 170504 – non-hazardous soils and stones), including backfilling operations using waste to substitute other materials. Current as managed arisings indicate that EWC 170504 wastes account for around two-thirds of CD&E waste as managed. Of other CD&E wastes the majority is processed for reuse and recycling or otherwise recovered achieving a total recovery of around 95%; exceeding the WFD target.

35. For the purpose of the South Yorkshire WNA targets for CD&E waste were identified: for EWC 170504 – maintaining current rates of 95% recovery and a maximum 5% disposal to landfill from 2021 onwards; and for other wastes (excluding EWC 170504 wastes) – increasing to 95% recovery by 2030 with a maximum 5% disposal to landfill, this target builds on the existing WFD target and management rates. The proposed targets are based on overall recovery and disposal rates as this approach is considered to allow for flexibility regarding market demands and commercial contracts.

36. The South Yorkshire WNA made assumptions in preparing the CD&E waste forecasts:

- Growth in CD&E waste is tied to construction and/or demolition projects and so does not continually grow year-on-year.
- Dwelling stock forecasts indicate general construction activity likely to take place and may therefore reflect waste generation.
- Impact of, and recovery from, Covid-19 will see a decrease in construction output (including associated waste arisings), gradually recovering over a period of 5+ years.
- Current recycling and recovery rates will not decrease.
- Application of targets was achieved by applying an even graduation from three-year average rates (2018 to 2020) up to the full target rate (applied at the target year e.g. 2030).
- There is a significant quantity of CD&E waste that is reused on-site or at exempt sites and this will continue to be the case.
- Waste recorded at intermediate facilities (i.e. waste transfer stations) is subsequently managed, and accounted for, at other waste management facilities (e.g. MRF, treatment, landfill, etc.).
- Waste recorded through intermediate facilities identified as transfer/treatment (either in the WDI or permitted by the WPA for transfer and materials recycling), has been captured under materials recycling at a rate of 25% (unless stated otherwise and informed by site-specific information) of the recorded tonnage in order to reflect that the facility involves some form of preparation for reuse and/or recycling.

Table 9. As managed CD&E waste forecast by management method up to 2041 (million tonnes per annum)

South Yorkshire – As managed	**2021**	**2026**	**2031**	**2036**	**2041**
	1.267	1.529	1.588	1.588	1.588
Barnsley	0.249	0.360	0.374	0.374	0.374
Doncaster	0.308	0.292	0.303	0.303	0.303
Rotherham	0.117	0.180	0.186	0.186	0.186
Sheffield	0.592	0.698	0.725	0.725	0.725
Waste hierarchy level and broad management method					
Preparation for reuse and recycling					
Materials recycling	0.247	0.299	0.311	0.311	0.311
Inert recycling	0.199	0.243	0.254	0.254	0.254
Composting	<0.001	<0.001	<0.001	<0.001	<0.001
Treatment and other forms of recovery					
Treatment and energy recovery	0.018	0.022	0.023	0.023	0.023
Soil treatment	0.062	0.075	0.079	0.079	0.079
Inert recovery*	0.640	0.794	0.842	0.842	0.842
Disposal					
Non-hazardous landfill (including SNRHW)	0.100	0.095	0.078	0.078	0.078

* Inert recovery includes deposit of inert waste associated with the restoration of permitted mineral extraction sites.

37. The BDR Waste plan is still the adopted plan for Doncaster and Rotherham. The Key outcomes are:

- The bulk of CDEW will continue to be used close to the point of origin
- Developers and contractors will voluntarily provide a waste management plan setting out how the waste generated from the site will be managed during the construction and lifetime of the project (see WCS7)
- The boroughs have sufficient capacity to deal with any inert CDEW during the life of the plan, and;
- Colliery spoil and minerals waste will be dealt with through individual core strategies

Secondary and Recycled Aggregate Infrastructure

38. All waste management sites (with extant permission) for South Yorkshire are identified in appendix two of the South Yorkshire Waste Needs Assessment.

Ancillary Minerals Infrastructure

39. The quarry industry is supported by a variety of infrastructure. A number of screening, production, processing and handling facilities are located in Doncaster and Rotherham. See tables 11 and 12 below:

Table 10. Asphalt Plants

Name	Owner / Operator	Location	Status	Notes
Express Asphalt	Aggregate Industries	Doncaster	Active	Asphalt sand sourced from Dunsville Quarry
Steelphalt	Harsco	Rotherham	Active	

Table 11. Ancillary Minerals Infrastructure

Company	Location	Type Of Infrastructure
Hanson UK	Auckley Rossington	Concrete Production Handling & Processing Concrete Production
Marshalls plc	Stainton	Concrete Products, Batching & Processing
Tarmac	Kirk Sandall Wath-upon-Dearne Aston	Concrete Batching Cement works (Ready Mix)
Aggregates-R-us (former Tarmac site)	Finningley	Handling & Processing
Aggregate Industries	Kirk Sandall	Handling & Processing
Network Rail	Ten Pound Walk	Rail aggregate recycling handling and transport
Doncaster Council	Carcroft	CDW / aggregate recycling handling and transport
Hope Construction	Canklow	Cement works (Ready Mix)
Cemex	Parkgate	Cement works (Ready Mix)

40. The Doncaster sites in tables 10 and 11 above, are safeguarded in the adopted Doncaster Local Plan. The Rotherham sites in tables 11 and 12 above are safeguarded in the adopted Rotherham Sites and Policies document. Please note, there is no information available relating to site capacity.

Road Network

41. The major road network used for the transport of minerals in and around Doncaster and Rotherham consists of:
    - A1M and A1 (major north – south route) and the M18 leading to the M180 and the M62 (the east – west route)
    - M1 – (west and south of Rotherham)
    - A614 – Bawtry to Thorne (located in the vicinity of Doncaster's sand and gravel extraction area links to the A638, and M180 via the A18)
    - A638 – Wakefield to Bawtry through Doncaster centre (north –south)
    - A19 – Doncaster to Selby
    - A630 – Sheffield, Rotherham, Doncaster, to the M18

- A57 – Sheffield to Worksop (through Rotherham)
- A631 – Sheffield to Bawtry
- A629 – Chapletown
- A633 – Barnsley; and
- A6195 – Dearne Valley Parkway.

42. The Doncaster Local Plan states all proposals including minerals will be required to provide a technical assessment of the transport impacts using the most up-to date guidance, policy and best practice. Transport plans will continue to be required and the plans will deal with detailed routing, off-site parking, hours of movement, considerate driving and complaints procedure and will be incorporated into pre-application discussions and/or planning agreements. These requirements are also found in the National Planning Practice Guidance.

43. Rotherham's Core Strategy 2013-2028 (adopted September 2014) and Sites and Policies document (adopted June 2018) require proposals to make adequate arrangements for sustainable transport infrastructure and consider good practice guidance including that relating to transport assessments. They also promote improvements to the freight network and the transfer of freight from road to canal.

Traffic Issues (Minerals Development)

44. Nationally road transport equates for 90% of aggregate mineral movement, with rail representing 9% and waterways only 1%. Quarrying activities result in heavy goods vehicle (HGV) traffic. Exceptions include quarries located near to navigable waterways or rail depots, Cadeby quarry[12] is the only quarry in Doncaster next to a navigable waterway. Nearly all of the South Yorkshire sub region's minerals are transported by road. HGV traffic can have adverse environmental impacts such as noise, air pollution, vibration, dust and road safety hazards for pedestrians, cyclists and other vehicles. Lorries also produce carbon emissions, which contribute toward global warming. To minimise the impacts associated with HGV traffic the use of rail and water for the transportation of minerals is encouraged in the adopted Doncaster Local Plan. It should be noted from the outset that currently the potential for increasing the sustainable transportation of minerals is locally very limited. The Doncaster Local Plan states mineral development proposals will be supported where all impacts are addressed and appropriately mitigated in accordance with policies in the Local Plan, national policy and planning practice guidance. There are no operational quarries in Rotherham.

Marine Aggregates[13]

45. Marine aggregates are not currently a consideration for Doncaster and Rotherham. On a positive note, both authorities are well connected in terms of navigable waterways. Please refer to the 2016 Local Aggregates Assessment for more detail on Marine Aggregates Study.

Assessment of Future Supply

Housing

46. The Doncaster Local Plan identifies Doncaster will deliver 15,640 new homes over the plan period 2018 – 2035 at an annual rate of 920 net units per annum (Policy 2).

[12] Currently used for extracting high quality dimension stone, although has permission to extract aggregate.
[13] A brief summary of the conclusions of the 2014 Marine Aggregates study can be found in paragraph 14 of the 2015 LAA. For reserves and resources see paragraph 50 of the 2016 LAA

47. Rotherham's adopted Core Strategy Policy CS6 'Meeting the Housing Requirement' identifies a total requirement of 14,371 homes between 2013 and 2028. Sites to meet this requirement are now allocated in the adopted Sites and Policies document. Following a review, a partial update of the Core Strategy is underway which will include housing policies. The update is in its early stages and no new housing target has been set. Pending a new target in a revised Core Strategy, the Council is using the figure of 554 new homes per annum derived from the government standard method for calculating local housing requirements.

48. The combined Doncaster and Rotherham housing requirement is currently identified as 1474 homes per year for both plans.

Infrastructure Proposals

49. It is difficult to quantify what impact infrastructure proposals will have on mineral reserves. Full details of the infrastructure development proposals for Doncaster can be found in the Doncaster Infrastructure Strategy (updated in 2019). Details of Rotherham's infrastructure requirements are set out in Appendix A of the adopted Rotherham Core Strategy 2014 and the Infrastructure Delivery Study 2020 update. The Doncaster Local Plan[14] contains some 68 housing allocations (47 with permission, 21 without permission) and 3 potential development sites. There are also five employment allocations ranging from 8.5 ha to 69 ha and one 'potential' employment site. Doncaster Local Plan, policy 12 confirms support for infrastructure proposals at 5 locations around the borough. All Local Plan allocations and proposals will have an impact on mineral requirements to a greater or lesser degree and more minerals will be needed to meet additional Local Plan allocations and proposals. To meet Local Plan requirements, Doncaster and Rotherham will continue to be dependent on imports as well as locally produced aggregate to deliver development and infrastructure proposals. Paragraph 14.45 of the Doncaster Local Plan also identifies a 27% uplift on previous levels of mineral extraction will be necessary to meet allocation requirements for South Yorkshire.

Are Adequate Resources Available to Meet Development Proposals

50. The landbanks for crushed rock (shared with Rotherham), sand and gravel are well above that required by national policy. See paragraphs 14 and 18.

51. The Doncaster Local Plan was adopted by Full Council in September 2021. It identifies a fixed Local Plan annual provision of 0.42Mt per annum for sand and gravel and 2Mt per annum for limestone (crushed rock). To deliver Local Plan proposals South Yorkshire will be dependent on these resources and other aggregate resources including sand and gravel imports from Nottinghamshire, Lincolnshire and the East Riding. (See paragraph 50 below)

52. A separate Local Plan evidence base document 'Forecasting the Demand for Aggregate 2019'[15] evidenced and estimated future supply requirements. It also identified that Doncaster produces and exports (to varying degrees) aggregate to other authorities within the South and West Yorkshire sub-regions. A short update to this document can be found in appendix 3. The original 2019 evidence base paper identifies South Yorkshire will require approximately 3.7Mt of combined sand, gravel and crushed rock aggregate annually to meet their combined Local Plan proposals. The update reiterates this need and identifies approximately 0.9Mt of combined aggregate will be required annually to deliver Local Plan housing allocations for South Yorkshire. Given the

[14] Base date 2018

[15] A copy of the 'Forecasting the Demand for Aggregate' evidence base document can be obtained by emailing localplan@doncaster.gov.uk.

assumption that housing development (on average) makes up around 25% of the combined aggregate consumption, it is presumed a further 2.7Mt will also be required for additional infrastructure projects, giving a combined annual aggregate requirement in the region of 3.6Mt. This figure is very similar to the original 2019 assumption.

53. Doncaster also exports some aggregate to the West Yorkshire market, which (according to estimates) will require approximately 4Mt of combined aggregate per annum to meet Local Plan proposals and infrastructure development. Given mineral operations are a 'free market economy' the material goes to where it is needed at the best price. Overall, however the contribution Doncaster's operators will make to the 4Mt requirement is expected to be minimal. Doncaster operators combined average aggregate production over the last three years is 3.3Mt and historic monitoring shows 10 to 20% is exported out of South Yorkshire, with some of this material going to West Yorkshire.

54. Given the movement of material across authority and region boundaries, it is evident therefore South Yorkshire will continue to produce material in the short to medium term, but also remain dependent on aggregate imports from other areas to meet development proposals set out in Local Plans.

Local Plan Site Allocations (sand, gravel and limestone)

55. The Doncaster Local Plan allocates two sand and gravel sites, which will provide an additional 1.9Mt[16] of sand and gravel. The Local Plan also identifies three sand and gravel 'Areas of Search'[17]. These areas are Doncaster's best options to provide the required quality and quantity of aggregate mineral with the least impact on local amenity and environment. These areas contain mineral resources, but additional borehole information (provided by mineral operators) will be needed to confirm the level of sharp sand and gravel as part of the planning application process. No additional sites or areas of search have been allocated for Limestone (crushed rock). Please note one Local Plan allocation (MIN17) Bank End Quarry (20/01219/MINA) was granted permission on 08/12/20, with operations to cease 08/12/29 and restoration to be finalised in 2031.

56. Rotherham's Core Strategy does not allocate any mineral sites.

Conclusion

57. The NPPF requires that all planning authorities calculate their own landbanks and apportionments (local need) and ensure full use is made of recycled materials where appropriate. It goes on to say the Local Aggregates Assessment is to be based on 10 year average sales and other relevant information. Doncaster and Rotherham will continue with this requirement to undertake an annual review and produce a Local Aggregate Assessment. The LAA also shows comparable landbank based on 'local provision' as identified in the Doncaster Local Plan. It should be noted that other relevant information including the level of reserve and evidence identifying a depleted sharp sand a gravel resource are also important factors when considering Doncaster's ability to continue to provide minerals.

58. National policy requires that a landbank of at least seven years for sand and gravel and ten years for crushed rock should be maintained. The landbank in Doncaster has been calculated on ten year average sales, three year average sales and on a fixed rate of 0.42Mt for sand and gravel and 2Mt for crushed rock. The landbanks identified in tables 4 and 7 show in all scenarios the aggregate landbank for 2022 is well above that required by national policy, but reserves are continuing to decline annually.

[16] 335,000 tonnes – Johnson Field; 1,550,000 tonnes – Land at Grange Farm
[17] Identified using BGS data and mineral assessment reports

59. In terms of Local Plan requirements, (Local Need) Doncaster can provide for 8Mt of sand and gravel during the Doncaster Local Plan period. This is derived from a 5.6Mt existing reserve, 1.9Mt of allocations in the Local Plan. This equates to an average output of 0.42Mt of sand and gravel until the end of the plan period 2035. In terms of crushed rock the Doncaster Local Plan requirement will equate to approximately 2Mt per annum. To deliver annual Local Plan allocations and infrastructure projects in South Yorkshire approximately 3.6 to 3.7Mt of combined aggregate will be required. This makes South Yorkshire dependent on aggregate imports as well as locally sourced material.

60. Rotherham Council's Cabinet approved commencement of a partial update of the Local Plan Core Strategy in July 2019. An updated Local Development Scheme setting out the timetable for the partial update was approved by the Council's Cabinet in December 2019. The scope will include a consideration of housing and employment land requirements. In respect of minerals, it will also include consideration of moving towards a net zero carbon approach, recognising the continuing challenges of climate change, and reducing reliance on fossil fuels.

61. For further information please contact either:

Authority	**Contact Name**	**Telephone No.**
Doncaster Council	Helen McCluskie	01302 734874
Rotherham Council	Andy Duncan	01709 823830

Appendix One – Planning Application Summary

Name	Operator/Applicant	Application Number	Details	Notes
Land Off Mosscroft Lane Hatfield Doncaster DN7 6ND		16/02685/MIN	Proposed extraction of sand and gravel reserves, the infilling of land and the provision of landscaping	Pending.
Hazel Lane Quarry Wakefield Road Hampole Doncaster DN6 7EX	CatPlant	19/00072/REVA	Application for determination of conditions for mineral site.	Pending.
Holme Hall Quarry	Breedon Southern Ltd	21/00433/MIN		Pending.
Dale Pit Quarry	John Holt - Dale Pitt Aggregates	21/00534/MIN	A planning application for the extraction of sand and gravel and the restoration of the land to a landform suitable for nature conservation and ancillary activities together with the consolidation of Planning Permission 18/01656/MIN.	Approved 11.05.2023
Great North Rd, Rossington	Robinson And Rowley Ltd	21/02493/MIN	Formation of new access to Bawtry Road for extraction of grit, sand and gravel - DRAFT	Approved 10.03. 2023 (400,000 tonnes sand with 60% sharp sand /gravel)
North Of Holme Hall Quarry Holme Hall Lane Stainton Doncaster DN12 1QB	Breedon Southern Ltd	21/00398/MINA	Proposed northerly extension of the quarry workings into around 31.6ha of land to include mineral extraction; in-pit primary processing and transfer of mineral to plant site. Proposals also	Approved 2.10.2023. Extraction 19 Mt crushed rock aggregate over 8 years at 2.4Mt annually. Completion including restoration 11.06.2035

Name	Operator/Applicant	Application Number	Details	Notes
			include creation of peripheral screen mounds, advance planting and progressive	
Hurst Plantation Quarry Hurst Lane Auckley Doncaster DN9 3NW	The Green Group Ltd	22/00800/MIN	Review of Old Minerals Permissions 97/05/2598/P/REV and 01/4991/P	Pending.
Quarry High Common Lane Austerfield Doncaster DN10 6HA	Mr Carl Rowley - Misson Sand & Gravel	22/00202/MIN	Application to vary condition 4 of planning application 18/02858/MIN granted 24/05/2019 - to permit a larger volume of materials to be imported and blended, up to a maximum of 30,000 tonnes per annum).	Pending.
Hatfield Moors 1 And 3 Production Site Lindholme Bank Road Hatfield Woodhouse Doncaster DN7 6DT	Natural England & Evergreen Garden Care UK Ltd	22/02772/REV	Review of Old Mineral Permissions TH49, 97/51/0221/P and 98/51/2915/WCC - detailing the restoration of the site following the cessation of all mineral extraction activities.	Pending.

Appendix Two - Consultation Comments

Consultation comment	Response
Hi Helen, No comments from us. Regards, James Durham North Lincolnshire	No response required
This is a good report. There is just one mistake that I can see which needs deleting. There's an 'XX' on Page 2, second paragraph, third line. Kind regards Louise White Leeds City Council.	Amended.
Hi Helen, I have now had a read through the Doncaster and Rotherham LAA. The only comment we have to send back is that we agree with the assessment in paragraphs 50 and 51 about how some of the sand and gravel produced in Doncaster is exported to West Yorkshire. Best wishes, **Nick Reeves BA (Hons) MA MSc MRTPI** Kirklees Council	No response required
Hi Helen, Thanks for circulating the attached draft. I'm sorry to continue to push about this point. I know I responded last year and you kindly added some clarification to the LAA, but I do wonder if the document could benefit from some further clarification/context about the health of the crushed rock landbank in Doncaster and Rotherham. The NPPF sets out that landbanks should be used principally as an indicator of the security of supply. However, the size of the landbank is not the best measure of the ability to maintain a steady and adequate supply of mineral, as it is easily skewed by large reserves bound up in few sites and other constraints may not be factored in. What is really important is the mineral that is likely to be available for production in the assessment / plan period and demonstrable productive capacity. Taking the operational sites for limestone / crushed rock at table 2 – there are noted to be 6 active sites. However, based on the details I have compiled from planning applications and other public documents:	Hi Kris This is a tough one to achieve without breaching your confidentiality. All the sites you have mentioned below are covered in the LAA and I can't comment on other companies reserves. In terms of Barnsdale Bars reserve it isn't considered in our LAA, but given its location the material could feasibly be utilised within South and West Yorkshire. Regarding the LAA data being skewed by large reserves bound up in few sites, yes they are in Doncaster, but when planning applications are considered, this issue is considered too. I could also say in terms of other issues not factored in locally, free market supply of material could be achieved from Whitwell quarry as well as Barnsdale Bar. But how can I go in to that level of detail without it becoming obvious which sites are being discussed? Do you want me to say in the LAA that Holme Hall produces the majority of the crushed rock in Doncaster and outstrips all the others put together? I can if you like… Its true and I'm sure everyone in the business knows this in reality. I don't generally pick out site specifics if I can help it due to confidentiality.

• Glen Quarry is exhausted. Mineral is supplied from Holme Hall and processed by Marshalls here (I appreciate this is noted); • Barnsdale Bar is principally within North Yorkshire, who appear to also count the production within their LAA. Are there any remaining reserves within Doncaster? • Harrycroft is mothballed and has been for some time. I understand there are approx. [redacted] left and the permission expires in 2031. • Cadeby is operational but only for dimension stone. While there is potentially a huge reserve ([redacted]), it is highly constrained and no production can take place in a lot of the further phases without further archaeological or ecological assessment and approval. • Hazel Lane is active with approx. [redacted] remaining (as 1 Jan 2018) and expires in 2034. • Warmsworth is active predominantly for industrial mineral rather than aggregate use. It should almost be considered separately but I understand it is nearing exhaustion anyway? Even taking the most ambitious view (per the table below) where the mothballed sites become operational and produce at their highest quoted capacity, **without Holme Hall** there is a huge gap in supply ([redacted] / annum) in Doncaster and Rotherham against the 2MT target in the Local Plan. If I were to take a more realistic position on Harrycroft, Cadeby, Hazel Lane and Warmsworth I suspect the gap is more likely to be at least [redacted]. This is further evidenced by the fact that Holme Hall has provided in excess of 90% of the supply for at least the last 5 years where I have the data readily available. (Table supplied not printed) Hopefully the planning application for the northern extension at Holme Hall will be approved and supply can be continued throughout the plan period. However, I did wonder whether someone picking up this LAA would comprehend the criticality of Holme Hall to the continued supply of mineral in Doncaster / Rotherham / South Yorkshire. Happy to discuss this further. Thanks, **Kris Furness** Regional Land & Mineral Resources Manager Breedon Trading Ltd	When we discussed figures for your planning application you asked that some be redacted and rightly so. I also can't comment on your planning application, which goes before planning committee next week, but I have had input in to the report. Let me know your thoughts. Kind regards Helen

Hi Helen, I have been giving this some thought, trying to ensure that summarising the situation in a couple of paragraphs does not leave the LAA reading a bit like a tale of two stories. With that in mind, if the only obstruction to being more clear about the situation is preserving the confidentiality of our gross sales number, then I think we would be happy to see those numbers published **if** the LAA was then clear that there is no evidence that productive capacity and the fixed Local Plan provision can be secured without Holme Hall continuing production beyond 2025. I know you mentioned Cadeby on the call yesterday with its large reserve, but even disregarding the major constraints to aggregate production, previously quoted max figures were in the region of 300,000k per annum. I also understand I have grossly overquoted for Warmsworth below and their aggregate production is fractions of the 150k quoted. I've suggested below some inclusions for the exec summary, which would then probably need to be similarly carried through the assessment of crushed rock – para 17 and the conclusions. **Executive Summary** **Crushed Rock** The crushed rock (limestone) reserve (shared with Rotherham) for 2022 is 41Mt. The landbank based on ten year average sales is 18.5 years. The three year average landbank is 15.4 years and the fixed rate local plan annual provision landbank is 20.5 years. This is well above the ten year landbank requirement as set out in national policy, but decreasing annually. The landbank is also just one indicator of the security of supply and in this instance is a calculation of all permitted reserves, divided by the relevant average sales figure. This includes mothballed sites and takes no account of operational issues, limitations, mineral quality. **Supply and Demand (New Para)** Doncaster Local Plan provides policies to maintain supply of mineral and meet development needs to 2035. Based on the 2MT per annum fixed local plan target for crushed rock aggregate, Doncaster and Rotherham must supply 24MT up to the end of the plan period. While the assessment of the crushed rock landbank indicates that there are sufficient reserves to meet the identified need in quantum, there are issues of productive capacity that need to be addressed.	Following on from previous emails and input from Kris Furness, amendments have been made to the executive summary and a new a new section added to cover security of supply (see paragraphs 20 to 22).

Holme Hall Quarry has been the major contributor of supply for several years, providing over 90% of crushed rock aggregate sales and also directly supplying manufacturing units at the site. The extant planning permission at Holme Hall requires mineral extraction to cease in June 2025 and it is likely that existing permitted reserves would be exhausted around this date. There is no evidence that consented reserve at other sites in Doncaster and Rotherham can meet the identified need. Doncaster and Rotherham, therefore, can not demonstrate a steady and adequate supply of mineral for the plan period and this needs to be afforded significant weight when assessing planning applications in accordance with policies 61 and 62 of Doncaster Local Plan. There are two planning applications pending consideration for Holme Hall, a lateral extension increasing mineral reserves to 2035 and an extension of time for the associated site infrastructure. If approved, these planning applications would make a significant contribution to meeting need to 2035. Appreciate that you may wish to change some of the phrasing / language etc, but how does that look in principle? Just as an aside, I review quite a lot of LAA's although less than I probably should, but there are a few that quote the Local Authority estimate of remaining reserve and estimated productive capacity, without publishing specific annual sales from monitoring returns – Durham and Northumberland spring to mind. That approach might assist in the future with preserving other parties confidentiality but also presenting a full appraisal of productive capacity for the plan period? Happy to discuss further. Thanks, **Kris Furness** Regional Land & Mineral Resources Manager Kris.Furness@breedongroup.com	
Hi Helen, Thanks again for considering this and recirculating, the revised version is good. Happy for this to be finalised. Thankyou, Kris Furness Regional Land & Mineral Resources Manager	No further response required

Kris.Furness@breedongroup.com	
Hi Helen, I have had a look at the updated version of the LAA and don't have any new comments to make on it. Best wishes, Nick Reeves BA (Hons) MA MSc MRTPI Planner Planning Policy & Strategy Economy & Infrastructure - Planning & Development Kirklees Council	No response required

Appendix Three: Forecasting Aggregate Demand – 2023 LAA Update

This note explores previous national Aggregate Minerals Surveys for England and Wales from years 2009, 2014 and 2019 alongside information on housing completions sourced from the local authorities in South Yorkshire and West Yorkshire. This information is contained in Tables i and ii at the end of this note. The aim is to use this historic information to determine future aggregate demand across the South and West Yorkshire. Please note, that historic monitoring has shown that 80 to 90% of the aggregate produced in Doncaster is consumed within South Yorkshire and West Yorkshire.

What is the percentage of is aggregate required for house building? (with the remainder contributing toward infrastructure requirements)

A variety of ranges were previously considered in the 2019 Local Plan evidence base document 'Forecasting Demand for Aggregate' Paper. These were aggregate demand at 9% (which approximates to 60 tonnes per house (source BGS), 15% (as proposed by the Construction Products Association), 25% (as noted at the January 2019 Y&HAWP meeting). The note also considered a 50% ratio as a precautionary measure. The document concluded that the range of total aggregate demand used for house building was in the range of 25% dwellings and 75% additional infrastructure (including roads and commercial development). The 25% / 75% ratio has been confirmed by the Minerals Products Association[18] as a representative assumption and will be used to make an approximation of future aggregate demand for the 2023 LAA. This note will therefore consider house-building demand at 25% of the total aggregate consumed, with the remaining 75% contributing to all other infrastructure projects.

Interpretation of Table i (Housing projections for South and West Yorkshire) and Table ii (Gross Housing Completions by Authority for South and West Yorkshire. Estimated mineral requirements and known mineral consumption for 2009, 2014 and 2019 (National Annual Aggregate Mineral Survey))

In **2009** national monitoring identifies South Yorkshire consumed **2.8Mt** of combined aggregate and housing completions totalled **3,591** units. At a rate of 25% of the total consumption just over 0.7Mt of aggregate was used for house building and the remainder (2.1Mt) used for infrastructure projects. This equates to approximately 195 tonnes of aggregate per housing unit.

In **2009**, West Yorkshire consumed **3.1Mt** of combined aggregate and delivered **6,052** homes. At a rate of 25% of the total consumption just over 0.8Mt of aggregate was used for house building and the remainder (2.4Mt) used for infrastructure projects. This equates to approximately 129 tonnes of aggregate per housing unit.

In **2014** national monitoring identifies South Yorkshire consumed **2.9Mt** of combined aggregate and additional research shows **4,022** housing completions. At a rate of 25% of the total consumption just over 0.7Mt of aggregate was used for house building and the remainder (2.1Mt) used for infrastructure projects. This equates to approximately 179 tonnes of aggregate per housing unit.

In **2014**, West Yorkshire consumed **3.1Mt** of combined aggregate and delivered **6,270** homes. At a rate of 25% of the total consumption just over 0.8Mt of aggregate was used for house building and the remainder (2.3Mt) used for infrastructure projects. This equates to approximately 121 tonnes of aggregate per housing unit.

In **2019** national monitoring identifies South Yorkshire consumed **3.3Mt** of combined aggregate and housing completions totalled **5,345** dwellings (gross). At a rate of 25% of the total consumption just

[18] The MPA believe the amount of aggregate used in house building is nearer 200 tonnes per unit.

over 0.8Mt of aggregate was used for house building and the remainder (2.5Mt) used for infrastructure projects. This equates to approximately 155 tonnes of aggregate per housing unit.

In **2019**, West Yorkshire consumed **2.8Mt** of combined aggregate and delivered **9,074** dwellings. At a rate of 25% of the total consumption just over 0.7Mt of aggregate was used for house building and the remainder (2.1Mt) used for infrastructure projects within the region. This equates to approximately 80 tonnes of aggregate per housing unit.

Conclusion:

For South Yorkshire the current combined Local Plan annual housing requirement is 5,052[19] units annually. This is made up of 920 units for Doncaster, 958 units for Rotherham, 2,040 units for Sheffield and 1,134 units for Barnsley. Using the information above to estimate future supply suggests that approximately 0.9Mt of aggregate will be required annually to deliver the Local Plan housing requirements. **Total annual consumption could therefore be in the region of 2.7Mt for infrastructure related projects and 0.9Mt for housing projects totalling a yearly need in the region of 3.6Mt for South Yorkshire as a whole.**

For West Yorkshire the current combined Local Plan housing requirement is 9,228 units a year. This is made up of 1,400 units for Wakefield, 3,397 units for Leeds, 1,704 units for Bradford, 1,730 units for Kirklees and 997 units for Calderdale. Using the information above to estimate future supply suggests that approximately 1Mt of aggregate will be required annually to deliver the Local Plan housing requirements. **Total annual consumption for West Yorkshire could therefore be in the region of 3Mt for infrastructure related projects and 1Mt for housing projects totalling a yearly need in the region of 4Mt for West Yorkshire as a whole.**

In the simplest of terms, the demand for aggregate mirrors the increased trends to grow the economy and society, even if done with sustainability in mind. Building new homes, infrastructure projects, schools, hospitals, and climate adaption projects such as flood defences and solar farms increases pressure on aggregate consumption.

References.

Forecasting Demand for Aggregates – Local Plan Evidence Base Document (June 2019).
The Need for Indigenous Aggregate Production in England – BGS Open Report (OR/08/026).
South Yorkshire Mayoral Combined Authority Statement of Common Ground.
West Yorkshire Local Aggregates Assessment 2022.
Bradford Local Plan Authorities Monitoring Report 2019-2021 (4 Mb) (Table 5.5).
Leeds Annual Monitoring Report 2019-21(PDF 2.13MB) (Table 22).
Kirklees Annual Monitoring Reports Table 11 (2018/19) and Table 15 (2019/20).
Email responses direct from participating authorities.

[19] SYMCA-SoCG (Annex 1, Table 1.)

Table i. Housing projections South and West Yorkshire

Area	Local Plan Total Projected no.	Local Plan Annual requirement	Local Plan Timeframe	Source	Notes
South Yorkshire					
Doncaster	15,640	920	2015 to 2035	Local Plan	
Rotherham	14,371	958		SYMCA-SoCG (Annex 1, Table 1.)	The Rotherham Local Plan is made up of a Core Strategy (adopted in 2014) and a Sites and Policies document (adopted 2018)
Sheffield		2,040		SYMCA-SoCG	Publication Draft Sheffield Plan (January 2023)
Barnsley		1,134		SYMCA-SoCG	
Total		**5,052**			
West Yorkshire					
Wakefield	26,600	1,400	2017 to 2036	West Yorkshire LAA (2022)	
Leeds	54,352	3,397	2017 to 2033	West Yorkshire LAA (2022)	
Bradford	30,672	1,704	2020 to 2038	West Yorkshire LAA (2022)	
Kirklees	31,140	1,730	2013 to 2031	West Yorkshire LAA (2022)	
Calderdale	12,600	997	2018 to 2033	West Yorkshire LAA (2022)	
Total		**9,228**			

Table ii. Gross Housing Completions by Authority for South and West Yorkshire. Estimated mineral requirements and known mineral consumption for 2009, 2014 and 2019 (National Annual Aggregate Mineral Survey)

Authority	2009	2014	2019
South Yorkshire			
Doncaster	309	933	1239*
Rotherham	416	633	490
Barnsley	793	644	1075
Sheffield	2,073	1,812	2,550
Total dwellings	**3,591**	**4,022**	**5,286**
25% of total consumption for housing development	706,250	721,000	831,000
Sand and Gravel consumed in South Yorkshire (tonnes)	719,000	760,000	454,000
Crushed Rock consumed in South Yorkshire (tonnes)	2,106,000	2,124,000	2.870,000
Total Consumption (tonnes)	**2,825,000**	**2,884,000**	**3,324,000**
West Yorkshire			
Wakefield	682	1208	1,974
Leeds	2,519	2,323	3,381
Bradford	1360	1590	1,778
Kirklees	781	731	1,438
Calderdale	710	418	503
Total dwellings	**6,052**	**6,270**	**9,074**
25% of total consumption for housing development	785,500	764,500	702,000
Sand and Gravel consumed in West Yorkshire (tonnes)	810,000	702,000	466,000
Crushed Rock consumed in West Yorkshire (tonnes)	2,332,000	2,356,000	2,342,000
Total Consumption (tonnes)	**3,142,000**	**3,058,000**	**2,808,000**

*Figures in red are the average of financial years 2018-2019 and 2019-2020.