

Audit of Minerals Operations in Angus

PLANNING AND SUSTAINABLE GROWTH
OCTOBER 2024

Introduction

Mineral extraction and quarrying activities are an important part of the economy in Scotland. They can help to provide high-quality, local sources for building materials for the development and construction industry.

Additionally, the extraction of minerals is a key part of the economy as it enables manufacturing, construction, agriculture, and other industries to have access to the raw materials they require for construction or development.

Due to the underlying geology and superficial deposits of the region, Angus is comprised of Hard Rock and Sand and Gravel quarries, with no other mineral working operations like coal mining or slate workings. Hard Rock quarries operate by extracting the bedrock like limestone or sandstone. This process is undertaken at different levels and involves the blasting of material to produce the aggregates. Whereas, Sand and Gravel quarries operate at a much shallower level, extracting superficial geology deposits without blasting¹.

Background

In 2001, Angus Council commissioned the Carl Bro Group to undertake the first comprehensive assessment of mineral resources within the Council area, including a review of the performance of the existing quarries and the preparation of the Angus Minerals and Landfill Audit Report (2001). The study concluded that:

- sand and gravel is the most extensive deposit in Angus, totalling nearly 1,500 million tonnes, particularly in the Forfar-Arbroath corridor;
- there was a need to release additional land for aggregates (sand & gravel) to maintain a 10 year supply; and
- there was a 10-year landbank for hard rock.

The last audit of minerals operations in Angus was carried out in 2010 prior to the previous Local Development Plan (ALDP 2016). This audit concluded that:

- there was a decrease in extraction rates of both hard rock and sand and gravel resources as a result of the 2008 financial recession.
- Angus had a landbank of just above the 10-year minimum indicated by planning policy at the time, Scottish Planning Policy 2010². Sand and

¹ Scottish Government (2003) [PAN64: Reclamation of Surface Mineral Workings](#)

² Scottish Government (2010) [Scottish Planning Policy](#)

gravel reserves were close to a 10-year minimum (between 14.7-10.8 years), and hard rock reserves were above the 10-year minimum requirement (between 10.5-12.2 years (excluding 2 quarries)).

- There is a marked difference between the extraction rates and capacities of hard rock quarries and sand and gravel quarries.

Policy PV19 of the Angus Local Development Plan 2016 gave policy support to the safeguarding the extraction of minerals to support a 10-year landbank at all times, meaning that new applications for mineral workings would be supported if there was an identified shortfall in either hard rock or sand and gravel resources, and if they demonstrated that the appropriate mitigation for environmental and residential amenity impact would be provided. PV19 reads as follows:

“Angus Council will protect existing mineral resources within Angus which are of economic and/or conservation value from other forms of development. Proposals for new or extended mineral workings must demonstrate that the development is required to maintain, at least a 10-year land bank for aggregates or the development is required for the local, regional and/or national market that cannot be satisfied by recycled or secondary aggregates at existing workings.”

Under the Town and Country Planning (Scotland) Act 1997 (as amended)³, NPF4 and Local Development Plans (LDP's) form the content of Development Plans for any area in Scotland, with the new style of LDPs allowing for relevant alterations to NPF4 policies to reflect local circumstances.

Policy 33 of National Planning Framework 4 (NPF4)⁴ relates to minerals and the sustainable management of those resources. It requires LDPs to support a landbank of construction aggregates of at least 10-years at all times in the relevant market areas in order to meet industry demands. Policy 33(d) details a range of criteria which mineral extraction proposals must comply to in order to be supported, such as including adequate buffer zones, no adverse impact on biodiversity, demonstrating restoration proposals and more.

An updated audit is therefore being carried out to aid the preparation of the next Local Development Plan (LDP) for Angus by providing an evidence baseline to determine the current landbank situation for both hard rock and sand and gravel quarries across Angus. The LDP will set out relevant policy amendments and development proposals for the use of land across Angus in relation to local circumstances which will be reviewed every 10 years. The

³ Town and Country Planning (Scotland) Act 1997 (as amended)

⁴ Scottish Government (2023) National Planning Framework 4.

current timetable for the preparation of the next LDP is available in the [Development Plan Scheme and Participation Statement 2023](#).

As part of the preparation work for the next Angus LDP, the Council must prepare an Evidence Report in relation to the policies of NPF4. This audit will serve as part of the evidence base for the Evidence Report and Proposed Plan, analysing the status, outputs, and overall landbank supply of mineral workings across Angus. A comparative analysis to the 2010 audit will also be undertaken throughout to provide an updated position of mineral workings across Angus.

Quarries In Angus

Currently there are twelve quarries run by six different operators (Table one) with extant planning permission across Angus, eleven of which are operational and one which is not in use but has around 2million tonnes of permitted reserves for extraction. Seven of these are hard rock quarries and the remaining five are sand and gravel quarries.

Table 1 - List of Quarries in Angus

Quarry Name	Mineral Type	Postcode	Operator
Ardownie	Hard Rock	DD5 4HW	D. Geddes
Achterforfar & Pitreuchie Extension	Sand and Gravel	DD8 2RL	Laird Aggregates
Boysack	Hard Rock	DD11 4PX	Laird Aggregates
Cotside	Sand and Gravel	DD7 7RR	William Clark
Cunmont	Hard Rock	DD5 3PX	Breedon Trading Ltd
Ethiebeaton	Hard Rock	DD5 3RB	Breedon Trading Ltd
Hatton Mill	Sand and Gravel	DD11 4UL	D. Geddes
Hilton of Guthrie	Hard Rock	DD8 2UA	Robertson Quarries
Pitairlie	Hard Rock	DD5 3PZ	Denfind Stone Ltd.
Powmyre	Sand and Gravel	DD8 1QD	Breedon Trading Ltd.
Struan	Sand and Gravel	DD9 7TY	D. Geddes
Waulkmill	Hard Rock	DD11 4SA	D. Geddes

These quarries are spread out across Angus (Figure one and Table two), showing that local distribution of quarry products can be achieved from a variety of local suppliers. There are 5 quarries located towards the shared southern boundary of Angus and Dundee City Council, allowing trading opportunities between the areas. As minerals are used for construction and infrastructure projects, it is useful to ensure that each Housing Market Area (HMA) has local access to quarry operations to ensure that HGVs and materials are not being transported too far – minimising the impact on roads, emissions, and general travel patterns.

Figure 1 - Map of Quarries in Angus by Housing Market Area (Source: Angus Council GIS Files)

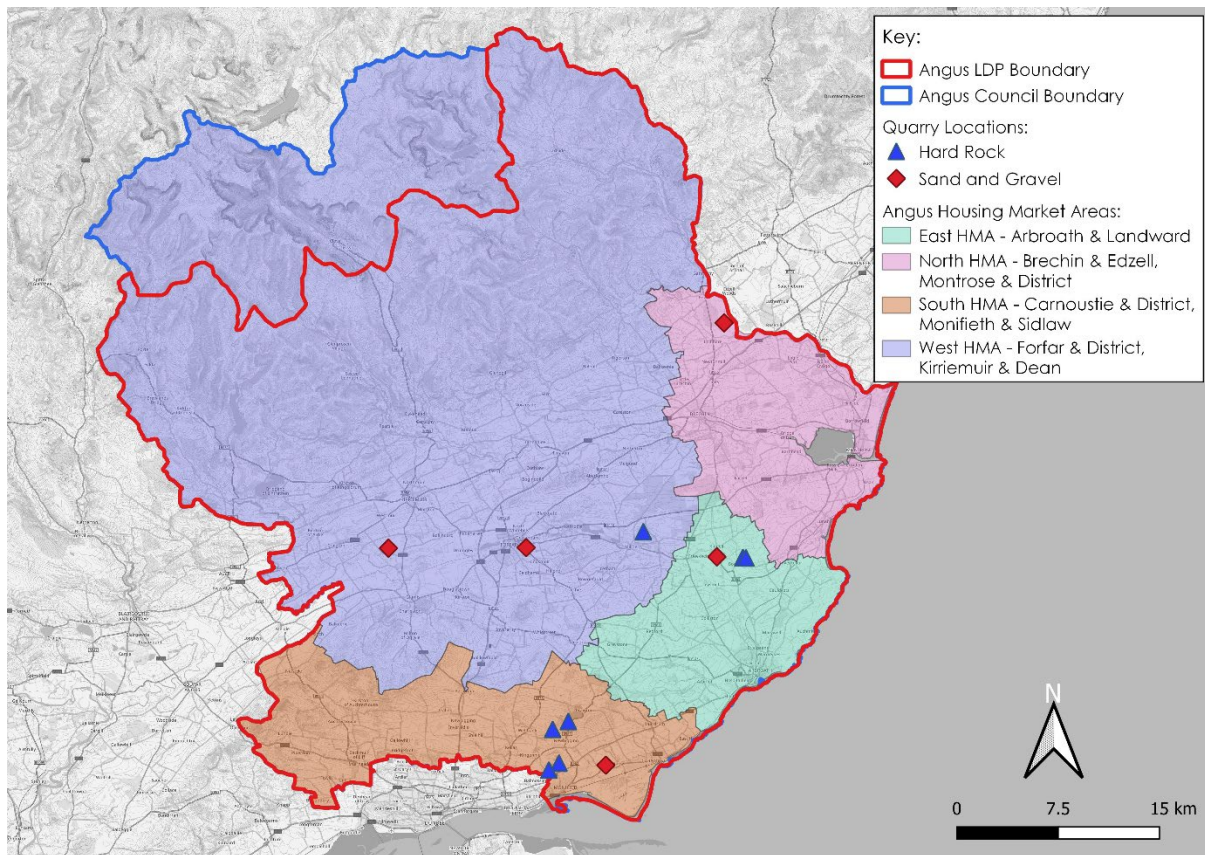


Table 2 - Quarry Locations by Housing Market Area

Housing Market Area	Hard Rock Quarries	Sand and Gravel Quarries	Total Quarries
North HMA	0	1	1
South HMA	4	1	5
East HMA	2	1	3
West HMA	1	2	3
Totals	7	5	12

Methodology for Audit

This updated audit utilises the methodology and approach of the 2010 Minerals Operation Audit, with some minor adjustments were required, as this was considered still to be a robust approach to determining the extent of minerals and aggregates in Angus. The Development Plan team contacted all quarry operators across Angus in March 2024 with an attached form (Appendix one), requesting the following information:

- Current Annual Tonnage Output (tonnes).
- Annual Quarry Tonnage Output(s) since 2016.
- Current Permitted Reserves/Estimate of Potential Reserves (tonnes).
- Operation Cessation Date/Year (based on current planning permission).
- Potential Capacity of Non-permitted Reserves.
- Anticipation of a Time Extension Planning Application for Existing Permitted Reserves.
- Future Aspirations / Plans for Future Site Development.
- Current Market Conditions, Product Destination, and Transport Patterns (e.g. Local / Regional / National).
- Future Market Conditions.
- Compliance with Outputs Specified in Planning Conditions.
- Impact of COVID-19 Pandemic and Cost of Living on Extraction Abilities.
- Land Use Planning Issues.
- Any Other Comments.

In response to this form, six of the local operators were contacted for the twelve quarries, of which four responded directly, covering nine of the quarries ([Appendix three](#)). An additional operator provided an alternative response for two other quarries, detailing remaining reserves and annual outputs.

In the case of the operators who did not respond, information has been obtained from publicly available planning application documents, therefore this information cannot be taken as completely accurate and is instead based on the permitted outputs, reserves, and length of time in operation. This was done to ensure that extant permitted reserves were not overlooked.

Landbank Calculation

NPF4 Annex F, Glossary of Definitions, states: “*Landbank (construction aggregates) - A landbank is calculated by a Planning Authority and is a means of gauging whether there is sufficient consented construction aggregates (sand/gravel and hard rock) within their relevant market area, to avoid possible disruption and/or delays to supply. The calculation is primarily based on annual extraction figures, sales trends and the known reserves within existing consented sites*”.

In order to establish how many years of operation each quarry, mineral resource, and overall quarry workings in Angus have left, a simple calculation was carried out using the data provided by operators or through the publicly available information in planning application documents. However, due to the original form not including a question regarding the remaining reserves, operators were subsequently contacted to provide such information, but in the cases where there was no response, the remaining reserves were calculated using the following method:

Permitted reserves minus (Number of years in operation * Average annual output) = Remaining Reserves

As this is only an estimate, these figures of the remaining reserves in Angus may not be exact but is the best method of calculating the landbank figure without the correct data. These figures are reflective of the start of 2024.

The average annual output figure was calculated for each quarry by taking an average of their annual outputs over 5 years (2019-2023) to gain the most accurate representation of the extraction volumes.

The remaining permitted reserves were then divided by the average annual output, giving a number (in years) as to how long these mineral workings can be sustained at the current extraction rate.

Overall Landbank Supply

From the responses received and the information obtained from the planning application documents, the average annual output of the twelve (eleven operational) quarries in Angus is around 1.1 million tonnes p/a. Compared to the remaining permitted reserves (as of the beginning of 2024) of around 19.1 million tonnes, this provides a landbank of 17.2 years. From this data and the audit responses, most quarries are behind in meeting their specified/consented outputs. If these quarries were extracting the maximum allowance, the landbank would be brought down to around 8.9 years.

Similar to the 2010 audit, there are considerably higher consented reserves of hard rock resources over sand and gravel. Alongside this, there is a considerable difference between the average annual outputs of these quarries in comparison to the consented extraction rate, possibly indicating a lower demand than expected when applying for planning permission. This will be explored further in the upcoming sections for each mineral resource.

Table 3 - Landbank Supply Figures for All Quarries in Angus (Source: Quarry Operator Responses - Appendix 1, & Planning Applications)

Landbank Supply: All Quarries		
Total Remaining Reserves	Average Annual Extraction Rate (5-year average, 2019-2023)	Consented Extraction Rate
18,573,278	1,106,952	2,153,000
Lifespan:	16.8 years	8.6 years

Hard Rock Quarries

There are currently seven hard rock quarries in Angus which are operational or have extant planning permission: Ardownie, Boysack, Cunmont, Ethiebeaton, Hilton of Guthrie, Pitairlie, and Waulkmill.

Analysis

Since the previous audit of mineral workings, one hard rock quarry (Henderston Quarry by Newtyle) has ceased operations, due to exhausted resources. This quarry had a fairly low consented reserve of 15,000 tonnes of recovered material from a discard mound and was mainly used for local farmers and households due to demand.

In October 2010, a major application (10/01189/MINM) was approved subject to conditions to permit the extension and merging of Ardownie and Ethiebeaton quarries for continued mineral workings. This allowed for a combined 15,900,000 tonne reserve to be permitted between the two quarries, alongside joint operations onsite between Breedon and Geddes and a shared restoration plan. This extension has allowed for extraction of the material over a period of 30 years.

In 2020, the Council approved an application for an extension to the hard rock extraction area at Pitairlie Quarry by Monikie (20/00587/FULM). This extension allowed for extraction of a further 370,000 tonnes of material from an area of 34.7ha over a period of no more than 50 years. However, this quarry does not produce typical hard rock aggregate, they instead produce natural stone products such as cut stone slabs and walling, creating variety within the hard rock outputs in Angus.

Currently, an application at Hilton of Guthrie Quarry is pending consideration for an extension of 3.05ha, releasing 600,000 tonnes of hard rock to be extracted over a period of around 20 years. Otherwise, the planning permission on this quarry will expire in 2028.

Cunmont Quarry is a hard rock quarry in the ownership of Breedon and located by Newbigging, however, this site is currently dormant as there is no direct demand for extraction here at present, due to Breedon's activity at Ethiebeaton. This quarry has permitted reserves of around 2,000,000 tonnes of hard rock, meaning that it can be accounted for as a substantial contributor to Angus' landbank. A planning agent for quarry operators across Angus noted that recommencement of operations would be viable if demand was to increase.

There are two hard rock quarries which are nearing the end of their reserves/planning permissions. These are:

- Boysack, by Friockheim – granted permission in 2009 for extraction over a period of 24 years, expiring in 2033.
- Waulkmill, by Friockheim – granted permission in 2008 for extraction over a period of 24 years, expiring in 2032.

The responses from quarry operators indicate that the market for hard rock quarry products is mainly local or regional, not spanning much further than the Dundee/Tayside area. However, the operators at Pitairlie Quarry have noted that there are occasional loads which travel to the South of England. This indicates that the demand for local aggregates is high enough to sustain the workings of these quarries within short distances from operations, reducing the impact of long-distance HGV transportation on road infrastructure, operational costs, and environmental impacts.

The audit responses indicated that the COVID-19 pandemic and cost of living crisis have had an impact on the hard rock quarries. Many of the hard rock quarries have not stated any direct adverse consequences to their operations as a result of these events, other than two comments from hard rock quarry operators surrounding the rising costs for production and transport but little additional detail was given. Conversely, one of the larger hard rock operations informed the Council that the pandemic increased their activity as they were supplying to critical infrastructure works.

Landbank Supply

Table four displays figures from the responses received and planning application documents, showing that the average annual output of the seven (six currently operational) hard rock quarries in Angus is around 580,000 tonnes p/a. Compared to the remaining permitted reserves of around 13.2 million tonnes, this provides a landbank of 22.7 years. From this data and the audit responses, most hard rock quarries are not meeting their specified/consented outputs. If these quarries were extracting the maximum allowance, the landbank would be brought down to only 13.6 years.

Table 4 - Landbank Supply Figures for Hard Rock Quarries in Angus
(Source: Quarry Operator Responses - Appendix 1, & Planning Applications)

Hard Rock Quarries		
Total Permitted Reserves (tonnes)	Average Annual Extraction Rate	Consented Extraction Rate
13,188,278	581,481	973,000
Lifespan:	22.7 years	13.6 years

Sand and Gravel Quarries

There are currently five sand and gravel quarries in Angus which are operational: Auchterforfar, Cotside, Hatton Mill, Powmyre, and Struan.

Analysis

Since the previous audit was undertaken, there has been closure of one sand and gravel quarry in Angus which was Stannochy Quarry, by Brechin. The Council were informed by the operator that resources here were exhausted and operations have now ceased.

The previous audit identified that the landbank was very close to the minimum of 10 years; however, as a result of Struan Quarry, by Edzell, receiving planning permission in 2012, further 2.8 million tonnes of sand and gravel reserves were released to be extracted at a rate of no more than 80,000 tonnes per annum over 35 years.

In 2019, there were two applications for extension of extraction areas for sand and gravel quarries in Angus, one at Auchterforfar, by Forfar, known as the Pitreuchie extension, and the other at Hatton Mill, by Kinnell, Arbroath. These were both approved subject to conditions. The extension at Auchterforfar was approximately 10.5 ha, releasing an additional 1,100,000 tonnes of sand and gravel, over a period of 4-5 years, into the landbank.

The extension at Hatton Mill Quarry was for 6 ha and an additional 469,000 tonnes of sand and gravel was therefore added to the landbank as a result. In 2022, the operators of Hatton Mill also applied for a variation of conditions to this extension to permit the extraction of minerals over a period of 6 years from the date of commencement of development (2019), and restoration of the site within a period of 7 years, rather than the previously agreed 3-4 years.

Powmyre Quarry, by Forfar, was granted permission in 2022 for a time extension of 12 years longer than originally consented for extracting minerals at this site, meaning the current planning permission will expire in 2035.

The following sand and gravel quarries are nearing the end of their reserves/planning permissions:

- Auchterforfar, by Forfar – granted permission in 2019 for extraction over a period of 5 years, expiring in 2024. Currently, an application for the Pitreuchie extension at Auchterforfar Quarry is pending consideration for an extension of 7 years to the timescale for the extraction of materials, but no extension to the area of land/volume of minerals being extracted (Planning App Reference: 24/00411/FULM). Otherwise, the planning permission on this quarry will expire in 2024, with

outstanding permitted reserves remaining and will subsequently impact the sand and gravel landbank.

- Hatton Mill, by Arbroath – granted permission in 2019, but variation to conditions in 2022 changed the timescale of mineral workings, now expiring in 2030.
- Cotside, by Carnoustie – granted permission in 2008 for extraction over a period of 24 years, expiring in 2032.

The responses from quarry operators indicated that the markets for sand and gravel products are mainly local. However, two operators indicated that their outputs go toward internal supply for concrete and asphalt plants (Hatton Mill and Powmyre Quarries). This indicates a similar pattern to hard rock markets in that the demand for local aggregates is high enough to sustain the workings of these quarries within short distances from operations, reducing the impact of long-distance HGV transportation on road infrastructure, operational costs, and environmental impacts.

Similar to the hard rock quarries, the sand and gravel operators provided audit responses which indicated that the COVID-19 pandemic and cost of living crisis has impacted on sand and gravel quarries across Angus. Two of the sand and gravel quarries responses have stated that the periods of lockdown during the pandemic and the increased cost of living have both caused difficulty in obtaining equipment and replacement parts for machinery added to the delays in extraction. One quarry noted that alongside these delays, prices for these critical parts and spares were increasing as well as wages for their workforce, meaning that outgoings were higher and the demand for aggregates were lower.

Landbank Supply

Table five displays figures from the responses received and planning application documents, showing that the average annual output of the five sand and gravel quarries in Angus is around 525,500 tonnes p/a. Compared to the remaining permitted reserves of around 5.4 million tonnes, this provides a landbank of 10.2 years. However, from this data and the audit responses, it can be concluded that most sand and gravel quarries are not meeting their specified/consented outputs as forecast at the time of receiving planning consent. If these quarries were extracting the maximum allowance, the landbank would be brought down to just over 4.5 years. As stated above, some of these quarries are nearing the end of their permissions, and it is possible that, even if extracting at the consented rate, the permission will expire before all of the permitted reserves are extracted. Therefore, if extensions of timescales are not applied for, these quarries would drop from the landbank supply at the time of expiration.

As a result, the reserves in Angus are nearing the minimum 10-year landbank supply defined by NPF4. Consequently, there may need to be consideration given on how to address this in the LDP and if it is appropriate to provide policy support to allow for sand and gravel exploration areas and additional support for the approval of new and/or extensions to sand and gravel operations, subject to appropriate mitigation measures being put in place to safeguard adverse impacts on residential, environmental and other relevant considerations.

Table 5 - Landbank Supply Figures for Sand and Gravel Quarries in Angus (Source: Quarry Operator Responses - Appendix 1, & Planning Applications)

Sand and Gravel Quarries		
Total Remaining Reserves	Average Annual Extraction Rate (5-year average, 2019-2023)	Consented Extraction Rate
5,385,000	525,471	1,180,000
Lifespan:	10.2 years	4.6 years

Conclusion

NPF4 states that LDPs should support a minimum 10-year landbank supply of minerals for construction at all times. Similar to the 2010 audit, this 2024 audit has discovered that there is a clear difference between the reserves of hard rock and sand and gravel resources.

The reserves of 2 million tonnes of hard rock at Cunmont Quarry serve as important reserve of mineral resources if currently operational quarries fall short on current reserves.

Additionally, the pending extension at Hilton of Guthrie can be considered as a viable reserve of 600,000 tonnes if the application is approved.

As the landbank for hard rock quarries is well over the 10-year minimum and no quarries are operating to their consented output capacity, there is likely to be no requirement for the LDP to require areas of search or exploring options for extensions of hard rock quarries in Angus.

There is one application pending consideration for the extension of hard rock resources to release an additional 20 years of extraction material, which, if approved, will increase the capacity of the hard rock landbank.

Given the existing landbank of sand and gravel is close to the minimum 10-year requirements (or below, if consented extraction rates were to occur) established in NPF4, with no outstanding sand and gravel extensions or new applications. The Evidence Report and Proposed Plan will therefore need to review future requirements of sand and gravel extraction, ensuring that any new areas of exploration across Angus would have no adverse impacts on residential, environmental, or any other relevant conditions of the land and surrounding areas. As an additional resource to aid areas of exploration for sand and gravel quarries, broad areas of search were identified in the Angus Minerals and Landfill Audit Report (2001):

- Central Strathmore (Ruthven – Forfar – Arbroath)
- Kirriemuir – Glen Isla – Glen Clova
- Brechin – Montrose – Edzell

The next LDP will need to consider if these broad areas of search are also still relevant.

Policy Approach

The current hard rock sites will contribute to the maintenance of a 10-year minimum landbank reserve, however, further extensions or new sites will need to be established to maintain a 10-year supply of sand and gravel resources.

Policy 33(d) of NPF4 supports the appropriate development of mineral extraction operations. However, as there is such a significant difference between the permitted reserves of sand and gravel to hard rock, there must be differentiation between these resources and the purposes for which they are being used in the consideration of any new applications.

There is possible scope to allow for areas of search for sand and gravel which correspond with the findings of the 2001 Minerals and Landfill Audit Report as aforementioned. It is likely that within these areas of search, as long as there is sufficient screening and mitigation measures put in place, aligning with environmental, archaeological, residential, and any other relevant circumstances.

In line with the 2010 Audit, if there is an identified shortfall of mineral resources below the 10-year landbank, the policy approach should consider the following aspects:

- Impact on Local and Regional Markets
- Use of extending existing mineral sites in Angus
- Reopening of dormant quarries in Angus
- Overarching environmental, archaeological, and residential impacts

Appendices

Appendix 1 – Quarry Operators Form – Angus LDP Evidence Report Minerals Audit

Quarry Name:				
Mineral Type:	Sand and Gravel:		Hard Rock:	Other (Please Specify):
Operator Name:				
Operator Contact Details:				
Quarry Address:				
1. Current Annual Output (tonnes): <ul style="list-style-type: none">•				
2. Annual Quarry Output(s) since 2016 (tonnes): 2016 - 2017 - 2018 - 2019 - 2020 - 2021 - 2022 - 2023 -				
3. Current Permitted Reserves/Estimate of Potential Reserves (tonnes): <ul style="list-style-type: none">•				
4. Operation Cessation Date/Year (based on current planning permission): <ul style="list-style-type: none">•				
5. a) The extraction of non-permitted reserves at your quarry would be subject to further assessments, including economic, environmental and transportation as well as future legal agreements. Notwithstanding this, are you able to indicate the potential capacity of non-permitted reserves at your quarry? <ul style="list-style-type: none">•				

b) Do you anticipate a time extension planning application being submitted in future years to extend the existing quarry permission lifespan, particularly if outputs from recent years (as set in Q2) have been lower than expected?

-

6. What are the future aspirations or plans for future site development of your quarry?

-

7. What are your current markets, product destination, and transport patterns (e.g. Local / Regional / National) like?

-

8. What are the current and future market conditions like for your quarry operations?

-

9. Have you met production outputs/outputs specified in planning conditions?

-

10. How has covid pandemic/cost of living impacted the ability to extract?

-

11. Are there any land use planning issues that you have encountered or expect to encounter as a result of NPF4 or the next Angus LDP?

-

12. Any other comments:

-

Date Completed:

Appendix 2 - Hard Rock Quarries

Ardownie Quarry

Location: Monifieth

Operator: D. Geddes

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 192,630 tonnes p/a

Consented Reserves: 9 million tonnes (15 million permitted between Ethiebeaton and Ardownie) with 4 million remaining.

Total Landbank (based on 5-year average and consented reserves): 25.5 years

Operation Cessation Date (based on current planning permission): 2041

Markets: Local

Future Aspirations: Possible extension to quarry area.

COVID-19 and Cost of Living Impact: Supplying to critical infrastructure jobs during pandemic increased work. Cost of Living slightly impacting aggregate collection trade.

Planning Issues: None.

Planning App History: 10/01189/MINM – Application approved subject to conditions for the extension and merging of Ethiebeaton and Ardownie quarries for joint operations between Geddes and Breedon. Releasing an additional 9million tonnes of hard rock for Ardownie over a period of 30 years. Consented extraction rates for Ardownie and Ethiebeaton quarries are joint, meaning that either quarry cannot exceed 500,000 p/a. From the audit responses, Ethiebeaton is extracting significantly higher amounts than Ardownie.

Boysack Quarry

RESPONSE TO THIS FORM WAS NOT PROVIDED BY QUARRY OPERATOR FOR BOYSACK, THEREFORE ALL INFORMATION BELOW IS AN ESTIMATE BASED ON PLANNING APPLICATION DOCUMENTS.

Location: Friockheim

Operator: Laird Aggregates

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 44,000 tonnes p/a

Consented Reserves: 2,000,000 tonnes

Total Landbank (based on 5 year average and consented reserves): 45.5 years

Operation Cessation Date (based on current planning permission): 2033

Markets: N/A

Future Aspirations: N/A

COVID-19 and Cost of Living Impact: N/A

Planning Issues: N/A

Planning App History: 02/01290/MIN – Application approved subject to conditions in 2009, allowing the extraction of 2million tonnes of hard rock over a period of 24 years at a rate of no more than 85,000 tonnes p/a.

OTHER COMMENTS: Response by email was provided on 3rd June 2024 detailing annual outputs and remaining reserves. This quarry was acquired by Laird from Tayside Contracts with just over 2million tonnes in reserves and is estimated to now sit at around 2 million tonnes of remaining reserves.

Cunmont Quarry

Location: Newbigging

The Council have been informed that this quarry is currently mothballed with no outputs, therefore is sitting as a reserve at the moment.

Operator: Breedon

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 0

Consented Reserves: 2,000,000

Total Landbank: 10 years*

Operation Cessation Date (based on current planning permission): 2042

Markets: N/A

Future Aspirations: Unknown

COVID-19 and Cost of Living Impact: N/A

Planning Issues: N/A

Planning App History: 17/00902/EIAM – Review of conditions relating to quarry operations at Cunmont was requested in 2017 and approved in 2020. These revised conditions were based on an updated Environmental Impact Assessment and were in relation to a number of aspects of operation like timescales, operating hours, noise levels and more.

*based on [Supporting Statement](#) for Planning App 17/00902/EIAM which states: “The estimated reserves are approximately 2 million tonnes with an average output of 200,000 tonnes per annum anticipated upon recommencement of extraction operations”.

Ethiebeaton Quarry

Location: Monifieth

Operator: Breedon

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 210,880 tonnes p/a

Consented Reserves: 6,900,000 (15 million between Ethiebeaton and Ardownie)

Total Landbank (based on 5 year average and consented reserves): 32 years

Operation Cessation Date (based on current planning permission): 2044

Markets: Local

Future Aspirations: In accordance with the approved plans.

COVID-19 and Cost of Living Impact: Resourcing remains a challenge.

Planning Issues: *“Landbanks are supported but should be used as a minimum threshold rather than a maximum. It is important to note that minerals are essential to the success of the Local Development Plan and developments should be supported where it can be demonstrated that extraction can take place without significant impact on the environment. Policies should be designed to take into account the need for minerals and the working practices/methods required to extract these materials. It is for each development to demonstrate need.”*

Planning App History: 10/01189/MINM – Application approved subject to conditions for the extension and merging of Ethiebeaton and Ardownie quarries for joint operations between Geddes and Breedon. Releasing an additional 6.9million tonnes of hard rock for Ardownie over a period of 30 years. Consented extraction rates for Ardownie and Ethiebeaton quarries are joint, meaning that either quarry cannot exceed 500,000 p/a. From the audit responses, Ethiebeaton is extracting significantly higher amounts than Ardownie.

OTHER COMMENTS: *Remaining reserves were not provided, therefore were calculated based on figures provided, as shown in [Appendix four](#).*

Hilton of Guthrie Quarry

Location: Friockheim

Operator: Robertson Quarries

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 19,160 tonnes p/a

Consented Reserves: 120,000 – 150,000 remaining*

Landbank (based on 5 year average and consented reserves): 7.8 years

Operation Cessation Date (based on current planning permission): 2028**

Markets: Local/Regional

Future Aspirations: Currently awaiting decision on quarry extension.

COVID-19 and Cost of Living Impact: Higher production/transport costs

Planning Issues: To be included in the LDP as a potential reserve for Angus to be brought in when and if required.

Planning App History: 23/00860/FULL - Application pending consideration currently for the extension of Hilton of Guthrie by 3.05ha, allowing the extraction of an additional 600,000 tonnes of hard rock. The supporting documents stated that extraction will likely be at a rate of no more than 30,000 tonnes p/a over a period of 20 years. Therefore, if this is approved, it will extend the permitted reserves of hard rock by 600,000 tonnes.

*INFORMATION FROM PLANNING APPLICATION 23/00860/FULL STATES THAT THERE ARE 120,000 TONNES REMAINING, BUT FORM RETURN STATED 150,000 TONNES

**SUBJECT TO CHANGE DEPENDENT ON PLANNING APPLICATION DECISION.

OTHER COMMENTS: Information received/clarified regarding the remaining reserves are 120,000.

Pitairlie Quarry

Location: Monikie

Operator: Denfind Stone Ltd

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 3,834 tonnes p/a

Consented Reserves: 375,000 tonnes

Landbank (based on 5 year average and consented reserves): 97.8 years

Operation Cessation Date (based on current planning permission): 2070

Markets: National

Future Aspirations: To continue as per planning application.

COVID-19 and Cost of Living Impact: None.

Planning Issues: None.

Planning App History: 20/00587/FULM – Application approved subject to conditions in 2020 for the extension of Pitairlie by 34.7ha, allowing for the extraction of an additional 375,000 tonnes of hard rock (sandstone) over a period of no more than 50 years at an extraction rate of no more than 8,000 tonnes p/a.

OTHER COMMENTS: Remaining reserves were not provided, therefore were calculated based on figures provided, as shown in [Appendix four](#).

Waulkmill Quarry

Location: Friockheim/Inverkeilor

Operator: D. Geddes

Material: Hard Rock

Average Outputs (5-year, 2019-2023): 110,976 tonnes p/a

Consented Reserves: 2,000,000

Landbank (based on 5 year average and consented reserves): 18 years

Operation Cessation Date (based on current planning permission): 2032

Markets: Local

Future Aspirations: Extension of planning consent to include deeper workings.

COVID-19 and Cost of Living Impact: Minimal impact.

Planning Issues: None.

Planning App History: 03/01068/MIN – Application approved subject to conditions in 2008 for the extension of Waulkmill by 13ha, releasing an additional 3.5million tonnes of hard rock to be extracted over a period of 24 years at a rate of no more than 150,000 tonnes p/a.

OTHER COMMENTS: Remaining reserves were not provided, therefore were calculated based on figures provided, as shown in [Appendix four](#).

Appendix 2 – Sand and Gravel Quarries

Auchterforfar Quarry and Pitreuchie Extension

NO INFORMATION WAS PROVIDED BY QUARRY OPERATOR FOR AUCHTERFORFAR, THEREFORE ALL INFORMATION BELOW IS AN ESTIMATE BASED ON PLANNING APPLICATION DOCUMENTS.

Location: Forfar

Operator: Laird Aggregates

Material: Sand and Gravel

Average Outputs (5-year, 2019-2023): 250,000 p/a (based on planning permission)

Consented Reserves: 1,100,000 tonnes

Total Landbank (based on 5 year average and consented reserves): 4.4 years

Operation Cessation Date (based on current planning permission): 2024

Markets: N/A

Future Aspirations: N/A

COVID-19 and Cost of Living Impact: N/A

Planning Issues: N/A

Planning App History: 19/00091/FULM – Application for extension approved subject to conditions in 2019, allowing for 4 phases of operation to extract the additional 1.1million tonnes of sand and gravel over 5 years at no more than 250,000 tonnes p/a.

OTHER COMMENTS: Response by email was provided on 3rd June 2024 detailing annual outputs and remaining reserves.

Cotside Quarry

NO INFORMATION WAS PROVIDED BY QUARRY OPERATOR FOR COTSIDE, THEREFORE ALL INFORMATION BELOW IS AN ESTIMATE BASED ON PLANNING APPLICATION DOCUMENTS.

Location: Barry/Carnoustie

Operator: William Clark

Material: Sand and Gravel

Average Outputs (5-year, 2019-2023): 50,000 tonnes p/a (based on planning application supporting information)

Consented Reserves: 1,500,000 tonnes

Total Landbank (based on 5 year average and consented reserves): 15 years

Operation Cessation Date (based on current planning permission): 2036

Markets: N/A

Future Aspirations: N/A

COVID-19 and Cost of Living Impact: N/A

Planning Issues: N/A

Planning App History: 02/00243/FUL – Application approved subject to conditions in 2002 for the extraction 1.5million tonnes of sand and gravel at no more than 100,000 tonnes p/a. No timescales were stated in conditions, however these conditions allow for 15 years of extraction at the consented limit. However, as no information was provided by the quarry operator in 2024, information from supporting documents was pulled, stating that predicted outputs would be around 50,000 tonnes p/a, but the 100,000 tonnes p/a limit was put in place due to possibility of exceeding the 50,000 figure some years. Therefore the lifespan of this quarry could be 15-30 years from approval of permission.

OTHER COMMENTS: Remaining reserves were not provided, therefore were calculated based on figures provided, as shown in [Appendix four](#).

Hatton Mill Quarry

Location: Friockheim

Operator: D. Geddes

Material: Sand and Gravel

Average Outputs (5-year, 2019-2023): 74,942 tonnes p/a

Consented Reserves: 1,200,000 tonnes

Total Landbank (based on 5 year average and consented reserves): 16 years

Operation Cessation Date (based on current planning permission): 2030

Markets: Local

Future Aspirations: Hand back to landowner

COVID-19 and Cost of Living Impact: Pandemic caused delays in getting critical spares to run plant and equipment.

Planning Issues: None.

Planning App History: 19/00083/FULM – Application approved subject to conditions in 2019 for the extension of Hatton Mill by 8ha, allowing for the extraction of 469,000 tonnes of sand and gravel over a period of 3 years and 7 months at an extraction rate of no more than 130,000 tonnes p/a.

22/00249/FULM – Application approved subject to conditions under Section 42 for a variation in conditions to above planning permission for the timescale of extraction at Hatton Mill. The timescale was extended to be 6 years from the commencement of development (and 1 year for restoration) rather than the previous 3 years and 7 months.

Powmyre Quarry

Location: Glamis/Kirriemuir

Operator: Breedon

Material: Sand and Gravel

Average Outputs (5-year, 2019-2023): 165,640 tonnes p/a

Consented Reserves: 813,000 tonnes

Total Landbank (based on 5 year average and consented reserves): 4.9 years

Operation Cessation Date (based on current planning permission): 2035

Markets: Local and Internal Supply.

Future Aspirations: In accordance with the approved plans

COVID-19 and Cost of Living Impact: None.

Planning Issues: Same comment as Cunmont.

Planning App History: 03/00691/MIN – Application approved subject to conditions in 2007 for the formation of a sand and gravel quarry, allowing for the release of 813,000 tonnes of material to be extracted over a period of no more than 15 years at a rate of no more than 300,000 tonnes p/a.

21/00769/FULM – Application approved subject to conditions under Section 42 for a variation in conditions to above planning permission for the timescale of extraction at Powmyre. The timescale was extended for a further 12 years of extraction than originally set out.

Struan Quarry

Location: Edzell

Operator: D. Geddes

Material: Sand and Gravel

Average Outputs (5-year, 2019-2023): 69,889 tonnes p/a

Consented Reserves: 2,800,000 consented & 2,300,000 remaining

Total Landbank (based on 5 year average and consented reserves): 32.9 years

Operation Cessation Date (based on current planning permission): 2047

Markets: Local (furthest haul likely Dundee)

Future Aspirations: Extension of planning consent to include surrounding area where sand and gravel is present.

COVID-19 and Cost of Living Impact: Critical parts were more difficult to obtain. Higher prices of spares. Higher wages to help the workforce manage the cost of living. So overheads higher and demand for aggregates lower.

Planning Issues: None.

Planning App History: 11/01169/FULM - Application approved subject to conditions in 2012 for the formation of a 65.3ha sand and gravel quarry, allowing for the release of 2.8million tonnes of material to be extracted over a period of 35 years at no more than 80,000 tonnes p/a.

Appendix 3 - Quarry Operator Responses

OPERATOR	QUARRY/QUARRIES	DATE OF RESPONSE
D. GEDDES	Ardownie	2 nd April 2024
	[REDACTED]	
	Hatton Mill	
	Struan	
BREEDON TRADING LIMITED	Waulkmill	22 nd April 2024
	Cunmont	
	Ethiebeaton	
ROBERTSON QUARRIES	Powmyre	8 th April 2024
DENFIND STONE LTD.	Hilton of Guthrie	17 th April 2024
LAIRD AGGREGATES	Pitairlie	No Response to original form, response via email on 3 rd June 2024
	Auchterforfar	
WILLIAM CLARK	Boysack	No Response
	Cotside	

Appendix 4 – Remaining Landbank Calculations/Figures

	Permitted Reserves	Consented Annual Output	Average Annual Output	Years in Operation *	Extraction to Date*	Remaining Reserves	Remaining Lifespan	Planning Permission Expiration	Remaining lifespan**
Ardownie	9000000	200000	156875	-	-	4000000	25.5	2041	20.0
Boysack	2000000	85000	44000	-	-	2000000	45.5	2030	23.5
Cunmont	2000000	200000	0	0	0	2000000	10	2042	10
Ethiebeaton	6900000	300000	214616.5	12	2575398	4324602	20.2	2044	14.4
Hilton of Guthrie	150000	30000	20975	-	-	83900	4	2028	2.8
Pitairlie	375000	8000	3834	4	15336	359664	93.8	2070	45.0
Waulkmill	2000000	150000	111998	13	1455976	544024	4.9	2032	3.6
Auchterforfar	-	320000	50000	-	-	150000	3	2024	0.5
Cotside	1500000	100000	50000	18	900000	600000	12	2036	6
Hatton Mill	1200000	130000	74942	5.3	400000	800000	10.7	2030	6.2
Pitreuchie	1100000	250000	115000	-	-	722000	6.3	2024	2.9
Powmyre	3297600	300000	165640	15	2484600	813000	4.9	2035	2.7
Struan	2300000	80000	69889	-	-	2300000	32.9	2047	21.8
Totals		2,153,000	1,077,770			18,697,190	17.3		8.4

*only calculated where remaining reserves not provided by operator

**if consented annual output reached