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Decision by Richard Dent, a reporter appointed by the Scottish Ministers

- Planning appeal reference: PPA-390-2047
- Site address: Murrayshall Quarry, Cambusbarron, Stirling
- Appeal by Patersons Quarries Ltd against the failure of Stirling Council to determine a planning application (reference:14/00742/FUL)
- Application for planning permission dated 28 November 2014
- The development proposed: continuation of quarrying, new access road and public car park, including restoration proposals
- Date of hearing: 22 & 23 November 2016
- Date of site visits by reporter: 23 November, 2 & 14 December 2016

Date of appeal decision: 10 February 2017

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## Decision

I dismiss the appeal and refuse planning permission.

## Background

1. Murrayshall Quarry has been in existence for many years. In 1982, planning permission for the “winning and working of minerals” was granted to allow the extension and modification of existing mineral workings at the quarry. It appears that extraction ceased in 1996.
2. In 2002, an application was submitted under section 74 of the 1997 Act in respect of the review of old mineral permissions. The application included a new schedule of conditions and this was agreed by Stirling Council with a further review required in 2017. The council explains that an environmental impact assessment was not undertaken as part of the review although subsequent legal opinions state that this was an omission. On the basis of this advice, the council undertook what is described as “a non-statutory environmental appraisal” in 2011 to obtain baseline information on environmental resources.
3. Despite the lack of a then current environmental impact assessment, the council believes the schedule of conditions approved in 2002 to be valid. Cambusbarron Community Council claims that the process was flawed.
4. After the approval of the new schedule of conditions in 2002 the quarry continued to lie dormant and has remained so with no quarrying activity at the present time. A concrete



batching plant operates in the western part of the quarry with materials delivered to the site to service “ready-mix” concrete vehicles.

5. In recent years, ownership has changed with the previous operator selling the western part of the quarry to Tillicoultry Quarries Limited in 2014 whilst, in 2013, the eastern section of the quarry had been leased to the appellant by the owners, Drygrange Estates Ltd. The appeal proposal relates to the eastern part of the quarry along with a proposed new access to the southeast linking to Polmaise Road.

### **Preliminary matter**

6. The application now the subject of this appeal was accompanied by an environmental statement although that statement did not include a cumulative impact assessment.

7. The council explains that the application was considered to be deficient and further information was required. In particular, a cumulative assessment was necessary to take account of the potential resumption of extraction in adjacent part of the quarry (the western part of the quarry owned by Tillicoultry Quarries Ltd.). In addition to the appellant’s proposed extraction rate of 300,000 tonnes per annum, the council believed a cumulative assessment of impact should be undertaken for volumes of 600,000 and 900,000 tonnes per annum. Until this information had been provided the council was unwilling to determine the application.

8. The appellant has maintained that the maximum output to be assessed in terms of cumulative impact should be 600,000 tonnes per annum. It was on this basis that a cumulative assessment was prepared as an addendum to the environmental statement. The proposed annual output of 300,000 tonnes from the appeal site is said by the appellant to reflect long experience in the supply of aggregates commercially. Historical records also show that, when operational, Murrayshall Quarry produced between 200,000 and 300,000 tonnes per annum and the appellant argues this remains a realistic level of output. On the other hand, claims the appellant, no clear justification has been provided to support the need for an assessment of an output of 900,000 tonnes per annum.

9. Tillicoultry Quarries Ltd believes that there is a total mineral reserve within the company’s ownership of approximately 3.75 million tonnes. Taking into account the provisions of the 2002 schedule of conditions, there is an estimated working reserve of about 2.1 million tonnes. Extraction at a rate of 300,000 tonnes per annum would equate to seven years of working although Tillicoultry Quarries Ltd believes it more likely that the reserve would be worked over a period of twelve years.

10. Cambusbarron Community Council draws attention to the problems of relying on average extraction rates. The award of large contracts to the quarry operators could foreseeably lead to up to 900,000 tonnes in aggregate being extracted in any one year. In turn, this justifies a cumulative assessment of the impact of this level of extraction.

11. I can appreciate that the annual output of a quarry is difficult to determine and that a variety of factors could influence the total volume of minerals extracted in any one year. General economic wellbeing is clearly an important consideration although this is difficult to forecast over the long term with any great accuracy. Commercial judgement is also central

to the future potential for production and in this respect I attach weight to the experience of the appellant. Whilst I accept the community council contention that output may vary from year to year, I believe the appellant's forecast to have a reasonable basis. I note the indication by Tillicoultry Quarries Ltd - also a commercial operator - that extraction in the western part of the quarry might extend to twelve years. I believe this lower anticipated rate of extraction is a further indication that the appellant's figures should be accepted.

12. On the foregoing basis I conclude that the cumulative impact assessment based on 300,000 and 600,000 tonnes per annum provides adequate information to permit the determination of the appeal.

## Reasoning

13. I am required to determine this appeal in accordance with the development plan, unless material considerations indicate otherwise. In this case, the development plan comprises the Stirling Local Development Plan, adopted during September, 2014.

14. Having regard to the provisions of the development plan, the main issues in this appeal are, firstly, whether or not it is necessary to establish a need for the proposals and, if so, has that need be justified? Secondly, it is necessary to consider whether the environmental impacts of the proposal would be acceptable. These impacts include the effect of the development in respect of landscape character, visually, ecologically and in terms of cultural heritage along with a range of operational impacts including air quality, noise, blasting, hydrology, and traffic. Cumulative impacts must be assessed as part of this process.

15. The local development plan seeks to maintain the high quality of the rural and urban environments: a range of policies support this objective. For the most part, these generic policies fall to be applied to all proposed development. Primary Policy 11, Minerals and Other Extractive Industries, is of specific relevance to the appeal proposal.

16. In my consideration of the main issues, I have had regard to the extant planning permission for Murrayshall Quarry which, as explained, is subject to the schedule of conditions applied in 2002 under the Review of Old Mineral Permissions procedure. I share the general opinion that the process should have included an environmental impact assessment but, nevertheless, the council has indicated that the permission is valid and extends until 2042. On this basis, I have regarded the permission as a fact. The lack of an environmental assessment undertaken at the time limits the value of the extant approval in the assessment of the current proposal. However, the appeal proposal must be considered in its own right. Indeed, the appellant has emphasised the belief that this should be the case. Nevertheless, the extant permission, insofar as it provides the potential for mineral extraction in the western part of the quarry, requires to be considered in any assessment of cumulative impact.

## Need

17. Tillicoultry Quarries Ltd points out that several operational quarries within central Scotland are capable of serving the area. These quarries are said to have collective reserves significantly in excess of the requirement to meet a ten-year land-bank for

aggregates. Accordingly, in terms of need, it is argued there is no requirement to allow the immediate extraction of the reserves at Murrayshall Quarry.

18. Cambusbarron Community Council objects to the lack of evidence to demonstrate the development is required to contribute to the minimum ten-year land-bank for construction aggregates in the Stirling County area. In this context, development at present would lead to the loss of a resource required by future generations. This would be both unsustainable and a potential disincentive to recycling construction aggregates. The community council believes the lack of need locally would lead to materials being transported over a longer distance. Again, this would be unsustainable.

19. The appellant explains the quarry would replace Beltmoss Quarry, Kilsyth, on exhaustion. Extraction from Murrayshall Quarry would enable locally won aggregates to be delivered to customers in the Stirling and Falkirk areas. This would be sustainable and economically beneficial.

20. The report to the council's Planning and Regulation Panel points out that, partly because of commercial sensitivity, no maximum ten-year supply level is specified in local development plan Primary Policy 11, Minerals and Other Extractive Industries. The policy is said to reflect Scottish Planning Policy which also refers to permitted reserves "of at least 10 years at all times". The report considers it unlikely that a proposal would be made by a quarry operator unless there was a market for the aggregates to be extracted. Accordingly, the report believes it is difficult to argue that a sufficient supply of the aggregate exists.

21. Additionally, the report indicates that Murrayshall is the only crushed rock quarry in the Stirling Council area although it seems delivery distances extend beyond the notional limit of 50 kilometres. The report agrees that Murrayshall Quarry could enable the appellant to supply existing customers following the exhaustion of Beltmoss Quarry.

22. I believe the report to the Planning and Regulation Panel takes a pragmatic view of the situation and it is clear that, in seeking a minimum ten-year reserve of aggregates, both the local development plan and Scottish Planning Policy do not set an upper limit to permitted reserves. I also accept there will be a requirement to provide an alternative to Beltmoss Quarry, Kilsyth in due course although an anticipated closure date has not been provided.

23. I recognise the community council concern about the potential loss of the reserve for use by future generations but it has been explained the quarry is intended to replace an existing facility once exhausted. This seems to me to represent a reasonable progression in the use of a finite resource which, in this respect, is a sustainable approach.

24. In the opinion of the community council, longer haulage distances do not represent sustainable development. I recognise that road transport of minerals represents a tension between the creation of greenhouse gasses and the economic benefits derived from the construction industry. I note the panel report indicates that haulage distances beyond the notional maximum are to be found with deliveries throughout central Scotland and beyond. In any event, as the only quarry of its type in the Stirling Council area, it is to be expected that some relatively local deliveries would also take place should extraction resume at Murrayshall Quarry. In this instance, I recognise and support the economic benefits likely to accrue from the proposal.

25. Overall, despite noting the concerns of both Tillicoultry Quarries Ltd and the community council, I attach significant weight to the report to the Planning and Regulation Panel which I consider to be persuasive. This leads me to conclude that insofar as need is concerned, no justification is required and this aspect of the development does not constitute a reason for refusing planning permission.

### Environmental impacts

#### *Landscape character impact*

26. The site lies within a transitional landscape type between lowland hills to the west and lowland river valley to the north. More particularly, Murrayshall Quarry is within East Touch Hills Fringe local landscape character area which is represented by landscape of an intimate nature, a high proportion of tree cover, a dolerite sill outcrop, and estates such as that of Polmaise Castle.

27. The dolerite sill outcrop was the original reason for mineral exploitation at this location and continues to be the justification for the proposed ongoing aggregate extraction.

28. The environmental statement indicates that landscape character could be affected by ongoing quarrying, including the extraction of rock from within a currently vegetated area, formation of the access, and restoration of the site. Mitigation measures proposed include restoration plans, retention of woodland along the access route and limitation of the extended quarried area to three hectares.

29. The environmental statement concludes that the impact on the wider landscape character area and local landscape would not be significant.

30. Scottish Natural Heritage indicates that there are no formal landscape designations in the vicinity of the appeal site. However, the agency points out that the assessment is very reliant on visual considerations and does not assess the site within the context of the local landscape character area. In response, the appellant argues that because quarrying has previously taken place within the site, there is no need to undertake an assessment of landscape impact at a site-based level. Scottish Natural Heritage agreed and subsequently confirmed that there is sufficient information to assess potential landscape impact.

31. Messrs Ironside Farrar prepared an audit of the environmental statement on behalf of the council. The audit also expresses some concern about the lack of assessment of local landscape character impacts but, nevertheless, agrees that the majority of landscape impact effects would not be significant.

32. I recognise that where any development is undertaken, landscape character is altered to some extent. In this case, the existing quarry has changed the landscape character over the area where mineral extraction has previously taken place. However, the dolerite sill remains a clear feature in the local landscape character. Although Murrayshall Quarry is a large feature, in my opinion, the disposition of the worked area has resulted in very little impact on the local landscape character area as a whole.

33. The impact of the existing quarry would be extended by either the implementation of the extant permission or by the undertaking of phase two of the current appeal proposal. Phase two would involve an extension of some three hectares within the previously consented area. Although phase two would require the removal of vegetation, I believe the additional impact on landscape character would be insignificant on both a micro and a macro scale within the East Touch Hills Fringe landscape character area. The essential landscape character of the area, including the general intimate nature, would be retained.

34. The proposed access road would also have an impact on landscape character, but I consider that effect would be very limited especially as much existing woodland would be retained.

35. In due course, the proposed mitigation, whilst not restoring the original landscape character, would have the potential for softening the harshness of the quarry sides and allow the provision of replacement vegetation in keeping with the current landscape character.

36. Clearly, should there be further mineral extraction in the western part of the quarry under the existing permission, there would be the potential for further cumulative impact. However, in my opinion, any development undertaken under the current proposal would not make a significant contribution to cumulative impact on landscape character.

37. I therefore conclude that, in terms of landscape character impact, the proposal would not be unacceptable in its own right or cumulatively.

### *Visual impact*

38. The environmental statement includes drawings illustrating the zones of theoretical visibility in terms of the existing quarry, the proposed phases of extraction and subsequent restoration. The analysis is supported by a series of viewpoint photographs and photomontages. Visual impact from major roads and relevant minor roads has been assessed along with visibility from recreational routes, including core paths. Overall, the environmental statement predicts that the visual impacts would be generally of moderate to slight (or less) significance during extraction, and moderate to negligible upon restoration.

39. Scottish Natural Heritage initially indicated that the environmental statement contained insufficient information to allow an informed decision on visual impact. However, the supplementary information provided by the appellant included two additional viewpoints intended to provide more information on the impact of the proposed access road.

40. The Ironside Farrar audit agrees that the majority of visual effects would not be significant but draws attention to the effect on the core path close to the site. The supplementary information points out that the additional viewpoints are also intended to address the core path issue.

41. Cambusbarron Community Council considers the visual impact has, in general, been under-played in the environmental statement. A specific adverse impact would result from the loss of the stand of five Sequoia trees which are proposed for felling. Gillies Hill is visible from some 70% of a radius of 15 kilometres and it is argued that the removal of the trees would involve the loss of an iconic skyline element. In turn, this would impact on what

the community council describes as “one of the historic scarp slopes of Stirling”. The community council argues that “the Sequoia Grove serves as a hilltop landmark and beacon to local residents; a historical relict of the Victorian era; a destination to those who hike to the hill; and a destination for educational outings.” The community council suggests that a triangular area around the Sequoias should remain and that this would provide “an excellent viewpoint”.

42. I share the opinion of the Ironside Farrar audit that the majority of visual effects would not be significant. Mineral extraction would be contained within the walls of the quarry and, even from relatively short distances, there would be negligible visual impact. An exception would be the view from the west where it is already possible to see into the quarry due to past working. However, this view is very limited. On this basis, I agree with the environmental statement that the visual impact in views from the west of the quarry, including views from Murrayshall Farm and core footpaths would be slight to moderate.

43. The removal of vegetation to allow phase two to progress would have some visual impact but any felling would be set in the context of other woodland in both the immediate vicinity and throughout the local landscape character area. In this context also, I believe the visual impact would be very limited. In any event, felling is not an unusual occurrence in areas where commercial forestry is to be found. Indeed, trees have been recently removed at several locations in the general vicinity of the site. Phase two would also involve the lowering of the current surface level through mineral extraction. Again, the disposition of the quarry is such that only the upper part would be visible beyond the boundary of the site (other than to a limited extent to the west as discussed above). I believe in the important wider views referred to by the community council, including from Stirling Castle, Drumyat Hill (in the Ochils) and the Wallace Monument, distance would render visual impact to insignificant levels. This is illustrated in viewpoints 20,21 and 22.

44. I note the particular concern expressed by the community council and individual objectors to the prospect of felling of the five Sequoia trees within phase two of the proposed development. It is clear that these trees are cherished locally and I recognise that they are visible in many views as they rise above the crowns of other trees in the vicinity. However, I do not believe that the significance of the trees visually is such that retention is essential. They are not integral to the scenic quality of the area and, in my opinion, do not represent an essential visual feature in skyline terms. The trees are not the subject of a preservation order and the land on which they stand lies within the area of the extant planning permission for mineral extraction.

45. The community council has suggested that the land on which the Sequoias are located should be retained and should not be the subject of mineral extraction. My assessment of the value of the trees within the landscape is not such as they would merit the protection required by the community council. In turn, I conclude that the retention of an area of ground to allow the continued presence of the trees would not be justified in terms of visual impact.

Note: the ecological importance of the Sequoia trees is considered below.

46. The proposal would have adverse visual impacts on the core footpaths that pass close to the quarry and I accept that the effect would be of a major adverse nature in places.

Nevertheless, the wooded nature of the area and the relatively short distances over which the adverse impacts would be experienced lead me to conclude that these impacts do not justify the refusal of planning permission. I also note that the appellant suggests the possibility of providing screening at those points where the visual impacts would be greatest.

47. The proposed access route from Polmaise Road to the southeastern part of the quarry would have a visual impact. However, this would be localised as the route would pass through a wooded area and the scope for any wider views of the access would be very limited. The access would cross core path 9078Cb/24 at which point there would be a major adverse visual impact but this effect would be limited in extent because of the surrounding woodland. As shown in viewpoint 8, the junction with Polmaise Road would involve the relocation of the existing stone wall to provide adequate sight lines but I accept the overall visual impact would not be significant.

48. I have considered the visual impact of the access on the nearby residential property "The Kennels". The eastern section of the new quarry access would also provide access to The Kennels but the new access would turn north and would be shielded from the house by higher ground thereby reducing, if not eliminating visual impact. The orientation of the house and the principal outlook to the south would also assist in reducing visual impact.

49. In cumulative terms, it may be that further mineral extraction from the western part of Murrayshall Quarry would lead to additional visual impact. However, I consider that the visual impact from the appeal proposal, in its own right, would be limited and would not contribute significantly to any cumulative impact arising from wider mineral extraction at the quarry.

50. All-in-all, I conclude that the proposal under appeal would not be unacceptable in terms of visual impact either in its own right or cumulatively.

### *Ecological impact*

51. The environmental statement explains that protected species surveys were undertaken for bats, otters, great crested newts, badgers, red squirrels and breeding birds.

52. Habitat surveys were also carried out although within the quarry itself, habitats are said not to be significant either in terms of type or species-diversity. In the parts of the site covered by woodland, habitats are generally of moderate to low ecological value and include much rhododendron. Further invasive species are also present. The five giant redwood trees (Sequoia) referred to above are identified as being of value due to public perception. All five trees are said to show signs of stress. Small areas of bluebell are found along the access route.

53. No trees were found to offer potential for bats and there was no evidence of otters or great crested newts. Badgers forage along the proposed access route but at low levels. There is no direct evidence of red squirrels being resident within the application site. Few breeding birds were found within the site. A pair of peregrine falcons were present in the quarry but it appears one has since died. Loss of woodland could lead to local, temporary, negligible or moderate adverse impacts to individual breeding birds; otherwise impacts would be nil or negligible. The proposed access route has the potential to impact on



bluebells and, without mitigation, would have a permanent major impact on trees along the route.

54. On the foregoing basis, the environmental statement indicates that mitigation measures are not required for bats, great crested newts or otters. Best practice measures in respect of site management would be applied to offer protection to badgers although the potential for animals to cross the site is assessed as low. All trees to be felled in a habitat suitable for red squirrels would require to be checked for evidence of dreys and where necessary Scottish Natural Heritage would be consulted for advice. Replacement nest boxes are not considered to be necessary.

55. The environmental statement believes that the restoration of the site could lead to enhanced habitats, including a wider range of native tree species. This could benefit fauna already present along with the potential to encourage bats and great crested newts.

56. The Ironside Farrar audit believes the significance of the history of the use of the quarry by peregrine falcon has been underestimated. A number of considerations for inclusion in the required peregrine protection plan are specified.

57. The audit considers, on the whole, the species action plans are adequate although further details in relation to pirri pirri burr is required as part of the invasive species plan.

58. The audit supports the overall conclusions of the assessment.

59. Scottish Natural Heritage confirms there are no designated sites affected by the proposal and also agrees with the conclusions and mitigation contained in the environmental statement in respect of European protected species, badger, red squirrel, breeding birds, woodland habitats and invasive species.

60. The Royal Society for the Protection of Birds Scotland requires a detailed plan to prevent disturbance to breeding peregrine and any other breeding birds.

61. The Royal Society for the Protection of Birds Scotland also advises that vegetation clearance should not be undertaken during the bird breeding season and there must be a prior ground survey. A bio-security risk assessment is required in respect of seed or plant material for any invasive plant species found on or adjacent to the site. Thereafter a management plan should be provided for approval. The council's bio-diversity officer also queries the effectiveness of the measures proposed in the environmental statement in terms of invasive plants. In response, a peregrine falcon protection plan and an invasive species management plan were prepared by the appellant.

62. Cambusbarron Community Council has lodged comprehensive submissions on a range of ecological issues believing the ecology section of the environmental statement to be generally inaccurate and inadequate:

- non-native species have been misidentified
- the potential for bat roosting opportunities has not been fully investigated and various buildings and other structures along with the quarry walls exist in the vicinity that offer roosting potential;

- disruption of red squirrel movement on Gillies Hill could have both local and wider-reaching negative consequences for the species; a range of stringent additional mitigation measures should be provided;
- badgers regularly cross Polmaise Road with three known instances of badger mortality over the past several years; the proposed access route would add further risk; mitigation measures should include a wildlife crossing and the restriction of lorry movements within an hour after sunrise and an hour prior to sunset;
- there have been sightings of pine martins on Gillies Hill with photographic records: populations are recovering and any disturbance that could reverse this process would not be acceptable;
- a more comprehensive survey of breeding birds is required and no work should be undertaken that would result in habitat destruction;
- the assessment of amphibians is inadequate in relation to lack of mitigation measures; palmate newts, frogs and toads do not receive statutory protection but best practice would provide for mitigation including the creation of water pools with adjacent refuge and hibernation habitats; a further survey is required to update the situation;
- the site offers a suitable habitat for reptiles and a full reptile survey should be carried out prior to any work being undertaken.

63. The community council argues the five Sequoia trees are of historic ecological value insofar as they probably were amongst the first to be planted outside their native California. On this basis, and also taking account of the educational, conservation and biodiversity benefits, the community council is of the opinion that there is an even stronger case for retaining the trees. Although it is now generally illegal to establish exotic species, this limitation did not apply at the time of the planting of the Sequoias and there are many precedents for protecting and promoting non-native trees.

64. Although I note the community council is critical in respect of many aspects of the ecological assessments, it is significant that Scottish Natural Heritage agrees with the conclusions and proposed mitigation measures proposed in the environmental statement. I attach significant weight to the response of Scottish Natural Heritage. It is also significant that the Ironside Farrar audit endorses the methodology undertaken in the preparation of the environmental statement.

65. The Royal Society for the Protection of Birds Scotland requires detailed plans to prevent disturbance to peregrine falcons and to manage the treatment of invasive plant species. The appellant responded to these requirements and I believe both matters, including a claim by the community council regarding the inaccuracy of identified invasive species, would be capable of being dealt with as part of any planning permission.

66. Despite the concerns of the community council about badgers and red squirrels I consider that the mitigation proposed, which is accepted by Scottish Natural Heritage, to be reasonable and proportionate. The proposed site does not extend to the red squirrel core area identified by the community council and whilst I agree it is inevitable that red squirrels

would suffer some disturbance, I am not persuaded that the impact would be as great as feared. Indeed, Scottish Natural Heritage does not require a species protection plan for red squirrels and considers that any activity could be controlled through standard licensing procedure.

67. Similarly, there seems little doubt that badgers would experience a degree of impact although I do not believe that justification has been provided for either an animal crossing point or restricted operating hours. The level of fatal badger incidents in the past appears to me to be relatively low.

68. I note the concern of the community council in respect of bats and accept that further roosting potential could exist in the vicinity. Nevertheless, in view of the lack of adverse comments from others consulted, I am again prepared to accept that the mitigation measures proposed are reasonable and proportionate.

69. Whilst some evidence of pine martins in the vicinity has been provided by the community council, I do not consider that there is justification for the mitigation measures that have been suggested.

70. The community council has also referred to amphibians and reptiles that either do not have statutory protection or have not been shown to be present. Again, noting the lack of other adverse comment, I do not consider it necessary for further measures to be brought forward in these respects.

71. Although the community council argues that the five Sequoias are of historical ecological importance, I do not believe that this justifies the retention of the trees. Although the trees contribute to the bio-diversity of the area, I believe that the impact of their loss in the face of the proposed development would be diminished as they are a non-native species. Non-native trees have been protected and retained elsewhere but, as the community council recognises, these are often located within botanical gardens or historic estates. I do not consider that those examples set a precedent for the retention of the trees at Murrayshall. In any event, it does not appear as if the trees represent an isolated or rare example. Other specimens are to be found. Indeed, the community council provides details of other trees to be found in the surrounding area. I therefore conclude that the retention of the five trees is not justified as a matter of historical ecological importance.

72. The cumulative assessment in the environmental statement concludes that the species potentially affected if the entire quarry becomes simultaneously operational would be breeding birds, particularly peregrine falcons, but this would be at a low and acceptable level. The key ecological issue is regarded as the prevention of the spread of New Zealand burr. Ongoing species control measures would be applied within the site to minimise the potential for spreading. However, the most severe existing problem is said to be within the western part of the quarry beyond the control of the appellant.

73. Scottish Natural Heritage confirms agreement with the conclusions and the mitigation outlined in terms of ecological impacts. Similarly, the scope and mitigation outlined in the cumulative impact assessment is accepted as being proportionate. Scottish Natural Heritage explicitly supports the mitigation proposed for European protected species: badger, red squirrel and breeding birds along with woodland habitats and invasive species.

74. Again, I attach weight to the response of Scottish Natural Heritage and conclude that, subject to the mitigation measures set out in the environmental statement and the supplementary plans for peregrine protection and invasive species treatment, the proposal would be acceptable in terms of ecological impact in its own right and cumulatively.

#### *Cultural heritage impact*

75. The environmental statement identifies nine historic environment assets within the wider study area, some of which have been destroyed through previous quarrying activity. The most notable asset is regarded as being Gillies Hill fort, a scheduled monument. The eastern flank of Gillies Hill is identified in the Inventory of Historic Battlefields as an area associated with the Battle of Bannockburn and is therefore of national significance. A network of tunnels and galleries related limestone workings underlies Gillies Hill. Associated limekilns on the eastern side of the access road to the quarry are a scheduled monument.

76. No discrete assets lie within the proposed development area. The appellant's mineral lease extends to the eastern boundary of the Gillies Hill fort scheduled monument. However, the appeal proposal does not include the land adjacent to the monument. That land, to the east and southeast of the monument has permission for mineral extraction under the 2002 Review of Old Minerals Permission but the appellant has indicated that that part of the permission would be relinquished by means of a formal agreement.

77. The environmental statement believes that the Gillies Hill fort and the Battle of Bannockburn have the potential to experience an effect from the proposal either through proximity or character:

- insofar as the fort is concerned, four characteristics contribute to how the monument is experienced, understood and appreciated: the crag edge, the defended gradient, the woodland clearing and the westerly vista;
- there is some uncertainty about the role of Gillies Hill in the Battle of Bannockburn; however, in the context of the battle, the key characteristic is the mass of the hill within a predominantly rural setting which is visible from Balquidderock Wood – the likely area of conflict on the second day of the battle – and the modern heritage centre which provides battlefield interpretation.

78. In terms of the Gillies Hill fort, the environmental statement indicates the belief that the monument has no prominent visibility in the wider context of the proposed development. Woodland and the retention of the south side of the gorge would prevent any infringement on the setting of the fort.

79. Insofar as the battlefield is concerned, the environmental statement argues the felling associated with the development, especially the access road, would not substantially alter the appearance or perception of the hill or its context (this is illustrated in Viewpoint 15). Similarly, there would be little impact from the heritage centre (as seen in Viewpoint 17).

80. The environmental statement explains that the access design has sought to maximise tree retention and re-use existing linear passages through the woodland. Potential visual impacts have therefore been minimised. Anticipated effects of negligible magnitude on the

setting of the battlefield would result: the overall indirect impact would be insignificant.

81. The environmental statement deals with the potential for unknown archaeological sites and, overall, no residual impacts are anticipated during either the construction or the operational phase of the development.

82. Historic Scotland (now Historic Environment Scotland) does not object to the proposal insofar as scheduled monuments, category A listed buildings and their setting, battlefields and designed landscapes in their respective inventories and world heritage sites are concerned (these being matters within the statutory remit).

83. There is broad agreement with the overall conclusions of the environmental statement although Historic Environment Scotland does not agree that there would be no impact on the setting of the fort. Nevertheless, the degree of change to the current setting would be unlikely to have a significant adverse impact.

84. Historic Environment Scotland believes that Gillies Hill would have had a peripheral role in the Battle of Bannockburn, if any. Mineral extraction as proposed would have no direct impact on the designated battlefield. The appearance of Gillies Hill would remain essentially as it is when viewed from other parts of the battlefield. Similarly, the proposed access would have no significant impact on the understanding of the potential role of the hill during the battle and would have no impact on any key landscape characteristics.

85. On balance, the council's archaeology officer has no objections to the proposal subject to a programme of pre-development mitigation works.

86. Cambusbarron Community Council believes the development would lead to the destruction of part of the Battle of Bannockburn site. The development could also cause further water ingress to the historic limestone workings with additional flooding in the network of tunnels and the loss of historic artifacts. The indirect effects on the Gillies Hill fort are understated in the environmental statement. Noise and dust would be a cause of adverse effects on the fort and its setting.

87. The community council states Gillies Hill is of national importance. Despite suggestions to the contrary, there is a strong argument that the hill played an important role in the Battle of Bannockburn. The hill also has other historical value as much of the area was within the grounds of Polmaise Castle. There are also important remnants of the former limestone industry.

88. All-in-all, the community council considers the environmental statement fails to show the link between the magnitude of the effect of the proposal and the importance of the receptor in terms of the significance of that effect.

89. I have noted the concerns of the community council but, on the other hand, I attach weight to the comments submitted by Historic Environment Scotland and the council's archaeology officer. Clearly, implementation of the proposal would result in a degree of adverse impact on the historic environment. In respect of the Battle of Bannockburn there is considerable doubt about the role of Gillies Hill. However, even if the hill played a more central role, as argued by the community council, I do not consider that the development would have a significant impact on the understanding and interpretation of the battle.

90. I also note it is intended to relinquish that part of the extant permission allowing mineral extraction to the east and southeast of the Gillies Hill fort. This would significantly reduce the potential impact. Nevertheless, despite the restricted area of extraction in the proximity of the scheduled monument, I agree with Historic Environment Scotland and the community council that the indirect impact of the development on the Gillies Hill fort would be greater than assessed. Nevertheless, whilst I acknowledge the concerns of the community council in terms of impact from dust and noise, I attach weight to the opinion of Historic Environment Scotland that there would not be a significant adverse impact. In turn, I conclude that the impact of the development would not be unacceptable in this respect and the refusal of planning permission would not be justified on this basis.

91. The community council is also concerned about the potential impact on part of the grounds of Polmaise Castle and remains of the former limestone workings in the vicinity. In respect of Polmaise Castle, I am not persuaded that the level of impact on the grounds would be such that any significant effects would result from the development. Insofar as the limestone workings are concerned, I do not believe that substantive evidence has been provided to indicate that unacceptable harm to this aspect of the cultural heritage would result as a consequence of the development.

92. The environmental statement concludes that there would be no identifiable cumulative effects on the historic environment should mineral extraction re-commence in the western part of the quarry. Similarly, a wider review of other developments did not identify any cumulative effect in conjunction with the proposal. These opinions have not been challenged and appear to me to reasonably assess the situation.

93. All-in-all, subject to an agreement in respect of relinquishing the extant permission between the application site and Gillies Hill fort and the imposition of an appropriate archaeological condition, I conclude the proposal would be acceptable in terms of cultural heritage impact in its own right and cumulatively.

### Operational impacts

#### *Air quality*

94. The environmental statement points out that, in terms of PAN 50, Annex B, The Control of Dust at Surface Mineral Workings, there are no facilities that are highly dust-sensitive within the immediate area. Much of the land surrounding the site is wooded or agricultural. Existing dust levels are influenced mainly by farming, limited forestry activity and, possibly, by the existing concrete batching plant. A survey was undertaken to assess existing dust levels and, as explained in the environmental statement, the results indicated that levels were below the guidance criteria. Indeed, it is claimed, a marked increase would be necessary to approach those guideline figures.

95. The environmental statement recognises that, if not properly controlled, the operation of the quarry would have the potential to give rise to dust and other airborne pollutants. Soil and overburden could generate dust in the formation of the access and the clearance of woodland in the northern part of the quarry. However, these operations would be of limited timescale and water sprays could reduce impact in very dry weather. Excess material would be used to create mounds which would be graded and seeded.

96. In respect of drilling, the environmental statement indicates that mitigation would be provided by air filtering. In any event, the handling and processing of rock requires a permit issued by the Scottish Environmental Protection Agency under the Pollution Prevention and Control (Scotland) Regulations 2012. There is a statutory requirement to provide dust suppression sprays and so these operations can only be undertaken when there is an adequate water supply on site. Further mitigation can be achieved by practical measures including the reduction of “drop heights” and prevention of overloading to avoid spillages on haul roads. Stockpiles would be sited to reduce wind effects.

97. The environmental statement explains that speed limits and water sprayed on to haul roads would reduce dust emissions. Vehicles using the public highway would be sheeted. Upward facing exhausts and radiator cowls, now understood to be fitted as standard to all vehicles, would also reduce the potential for dust. Wheel cleaning when leaving the quarry would avoid depositing dust, mud and other debris onto the public highway.

98. Diesel powered plant and equipment is a source of exhaust emissions, especially nitrogen dioxide and very fine particulate matter (PM<sub>10</sub>). The environmental statement explains that all machinery would operate to strict emission limits using the latest technology. It is not anticipated that vehicle emissions associated with the development would have a significant impact on nearby roads.

99. An assessment of the seven closest residential receptors has been carried out taking climatic conditions into account. Although the occurrence of dry, windy days could give rise to dust potential, the environmental statement believes that the specified suppression measures would be effective and would minimise emissions.

100. In terms of other airborne pollutants, the environmental statement indicates that an assessment of PM<sub>10</sub> particulates has been undertaken and concludes that the proposal would not be likely to exceed the relevant air quality objectives.

101. Overall, the environmental statement indicates that the impact on air quality from quarry operations with suitable mitigation measures is expected to be negligible and in line with the guidance contained in PAN 50, Annex B.

102. Cumulatively, the environmental statement assumes that similar best practice dust control and management measures would be applied to any operations undertaken in the western part of the quarry. On this basis, taking into account the distance from the nearest receptors, the environmental statement concludes that cumulatively it would be unlikely that any significant decrease in local air quality would occur.

103. An assessment of pollutants generated by traffic should both quarries be operational was undertaken using five receptor locations along the preferred route. Both quarries were assumed to have an average of 132 heavy goods vehicle movements a day. With both quarries working concurrently, the environmental statement concludes that the significance of impact for both nitrogen dioxide and PM<sub>10</sub> particulates would be negligible at all five locations.

104. The Ironside Farrar audit accepts that the environmental statement identifies potentially sensitive receptors. There are some criticisms of the techniques applied in the assessment but, nevertheless, because of the distances to most receptors and the

specified mitigation regime, the broad conclusions of the assessment are said to be appropriate. However, the initial environmental statement did not undertake a cumulative assessment of impact. The council's environmental health department endorses the terms of the audit.

105. The Scottish Environment Protection Agency has no objections to the proposal and confirms that crushing, grinding, size reduction and screening of products would require to be authorised under the Pollution and Prevention Control regulations. Any permit would include conditions relating to the control of dust arising from these activities. It is the opinion of the Agency that the proposals are potentially consentable.

106. The Agency points out that there would be a number of significant sources of particulate matter and accepts that the environmental statement assessment identifies several relevant exposure sources within 1000 metres of the site. However, the council should be satisfied that air quality at the sensitive receptors does not experience unacceptable impacts. If necessary, ambient air monitoring should be undertaken to assess the likely impact.

107. Cambusbarron Community Council is concerned about the effect of dust emissions on human health. The community council also points out that the environmental statement did not include a cumulative assessment of air quality. Accordingly, there was insufficient information to assess the proposal. Similarly, there is no reference to an environmental management system, a further deficiency.

108. More particularly, the community council points out that there is no year-round water source within the development site to ensure the required dust control. There is no reference to providing wheel washing facilities or justification for using wheeled transport within the site rather than conveyor belts. The community council also believes the surrounding woodland is regarded as a filter for dust emissions but the current density of trees and proposed future management plans removes the certainty of this process.

109. I have noted the comments of the Scottish Environment Protection Agency to which I attach considerable weight. In particular, I have noted the need to obtain a permit for those activities that require to be authorised under the 2012 Regulations and the opinion that the proposals are potentially consentable. It is also significant that the Agency accepts the relevance of the exposure sources identified within 1000 metres of the site. These locations are also accepted by Ironside Farrar whose findings are endorsed by the environmental health department. Subject to the mitigation measures identified, and because of the distance of most of the receptors from the quarry, the audit accepts the assessments contained in the environmental statement.

110. Whilst I can appreciate the community council's concern about the impact on human health, the regulatory framework is intended to provide the Scottish Environment Protection Agency and local authorities the ability to ensure that mineral operations are subject to appropriate control. In this respect, I have no reason to believe that the relevant authorities would not apply an appropriate level of air quality regulation to any quarrying activities.

111. The community council is also concerned about the lack of an environmental management plan but the matters with which such a plan would be concerned are capable of being the subject of planning conditions. The provision of water for dust control and



wheel cleaning facilities are also matters that could be controlled through conditions. In this respect, I note the appellant's acknowledgement that an adequate water supply must be available.

112. Further, the community council also believes the surrounding woodland is intended to serve as a dust filter but that such a function may be unachievable. I note that the 2002 review of conditions indicates that the woodland is likely to act as a barrier to fugitive dust and particulate emissions. However, whilst the woodland does provide a buffer between the quarry and various sensitive receptors, there is no suggestion in the current proposal that an intended function of this area would be dust control. The measures set out in the environmental statement make no mention of the woodland providing dust mitigation.

113. Despite the concerns of the community council I conclude that, subject to conditions requiring appropriate mitigation measures, and the application of best practice techniques, the proposed development is acceptable in its own right.

114. As the audit and the community council point out, the environmental statement did not include a cumulative assessment. However, the appellant prepared an addendum to assess cumulative impact including cumulative air quality impact. In general terms, the addendum concluded that the operation of the proposed quarry would result in air quality being "well within" the guidance limits. As a consequence, the simultaneous operation of the adjacent quarry would be unlikely to breach the limits subject to the implementation best practice.

115. Both the community council and Ironside Farrar believe that the information provided in the addendum remains inadequate. However, Ironside Farrar suggests conditions requiring a scheme of dust management, monitoring and a dust action plan in the event of planning permission being granted. The appellant would accept these conditions, indicating that the management plans would incorporate good practice techniques contained within PAN 50, Annexes A-D.

116. Whilst any conditions applied in respect of the proposal under appeal could not be applied to the remaining (western) part of the quarry, I note the 2002 permission includes a condition to minimise the arising and propagation of airborne dust. I therefore accept that, cumulatively, the operation of the proposed quarry would not have an unacceptable impact on air quality.

### *Hydrology and Hydrogeology*

117. The environmental statement includes an assessment of those matters of relevance to the water environment including catchment analysis, groundwater and aquifer characteristics along with consideration of licenses under the Controlled Activities Regulations and private water supplies in the vicinity. For the most part, the environmental statement assesses impacts as being low or negligible although the potential for some silty run-off, discharges of groundwater and sedimentation could lead to a medium magnitude impact prior to mitigation.

118. Mitigation would involve best practice general site management in terms of the relevant codes of practice and guidelines. A surface water management strategy would be adopted in respect of stockpiles, oil, fuel and site vehicle use and storage and other

contaminants (for example, herbicides and septic tanks). Staff training and awareness would also be an important consideration.

119. Overall, the environmental statement believes that all residual impacts would be low or negligible.

120. The Ironside Farrar audit draws attention to proposed quarry ponds. Further details are required on the method for discharging water in the case of high rainfall events. Similarly, more information is required in respect of the creation of water bodies as part of the restoration scheme, particularly regarding the potential for flooding.

121. The appellant has responded to these comments through the provision of supplementary information. As the catchment area would be very small, the volume of run-off during heavy rainfall would also be limited and could probably be contained within the quarry as a settlement pond without the need for discharge arrangements. Water balance calculations could be undertaken to demonstrate whether adequate storage exists or if a consented discharge would be required. Ironside Farrar notes this response and, in the event of planning permission being granted, indicates the calculations referred to should be provided under a condition requiring a water management plan.

122. The Scottish Environment Protection Agency has no objections to the proposal, providing practical advice in respect of several aspects of the water environment, flood risk and related matters. This advice relates mainly to detailed operational techniques and also includes reference to the potential impact of high rainfall on the quarry ponds. Any de-watering proposals should involve management details, the amount of groundwater to be abstracted and anticipated timescales. The closed loop system proposed for surface water management and rainwater collection is welcomed by the Agency. Suitable drainage should be provided to ensure that flood risk from nearby watercourses does not increase downstream, especially in Stirling.

123. As previously indicated, Cambusbarron Community Council points out that a reliable year-round supply of water would be required for dust suppression. Again, concern is expressed about the impact on caverns related to historic lime workings close to the site.

124. Reference is made by the community council to a site included in the Joint Nature Conservation Committee Geological Conservation Review in the immediate proximity of Murrayshall Quarry. An assessment of the importance and significance of the geology should be included in the environmental statement. The lack of such an assessment, including also the relevance of the link between the proposed quarry and the limestone workings, leads the flood risk assessment to be called into question along with the impact on groundwater and surface water. These matters are said to be too important not to be fully considered at the application stage of the process. More information is required to explain the discharge from the wheel washing facility and the run-off provisions for the access road.

125. All-in-all, the community council believes the environmental statement to be superficial and fails to address a number of important aspects of the proposal.

126. Responding to the community council, the appellant argues that the hydrological and hydrogeological impacts, including surface water drainage, have been fully assessed in the

environmental statement, which also includes a surface water management plan.

127. I have noted that the Scottish Environment Protection Agency has no objections to the proposal. It is clear that the Agency is generally satisfied that the development would be acceptable and foresees no insurmountable problems. I attach significant weight to the response.

128. The two matters raised by Ironside Farrar have been the subject of responses by the appellant with a further offer to provide water balance calculations. I believe these matters are unlikely to cause a serious problem but, in any event, it would be possible to require details of water volumes and balancing as a condition of consent in the event of granting planning permission.

129. The community council raises a number of concerns which, for the most part, as pointed out by the appellant, are addressed in the surface water management plan included in the environmental statement. For example, the management plan considers the access road and the wheel wash facility. Adequate drainage, including ditches would be required for the access road and water from the wheel wash would be collected and treated prior to discharge. Despite the community council concerns on these matters, I consider that the environmental statement and the surface water management plan provide a good basis for the hydrological management and control of the site.

130. I note the reference to the former limestone workings and that land in the vicinity of the appeal was the subject of a geological conservation review. However, I have no substantive evidence to support the need for further assessment. Lacking any comments from the Scottish Environment Protection Agency on this matter, I am not persuaded that the environmental statement is deficient in this respect.

131. Overall, subject to the imposition of appropriate conditions and the implementation of the specified mitigation measures, I conclude that the impact of the proposal in hydrological and hydrogeological respects would be acceptable both in its own right and cumulatively.

#### *Noise (excluding blasting)*

132. The environmental statement explains that with the elimination of detonating cord, the characteristic noise of a blast is no longer a sharp crack but rather a dull thump. It is claimed that experience shows residents soon become accustomed to such noise and, since the great majority of blast related complaints concern the fear of property damage, once it is clear that such noise is harmless, complaints are said to be unlikely.

133. The environmental statement compares the noise of a blast to the level of noise generated by cars, pointing out that blasts are relatively infrequent and the noise exists for less than a second. On this basis, the environmental statement indicates that blast noise is rarely measured in terms of dB(A) but considered as part of the air overpressure generated. This is said to be a more meaningful parameter and, in the lack of any evidence to the contrary, I have accepted this approach.

134. Nevertheless, the environmental statement accepts that the effects of noise on a neighbourhood are varied and complicated. It can interfere with speech communication, and cause disturbance of work, leisure or sleep. Some individuals can be more sensitive to

noise than others.

135. Graystale Farm, Murrayshall Farm, The Kennels and 14, Quarry Road, Cambusbarron were selected as noise measurement locations. Noise prediction calculations were also applied to noise sensitive properties at 96 Gillies Hill and Polmaise Lodge. Absolute worst-case noise level predictions including road lorry movements were calculated in all cases. Additional calculations consider the potential noise impact to The Kennels and Polmaise Lodge due to the construction of the access road. Calculations have been undertaken with and without drilling as such operations would take place intermittently.

136. Calculations at Graystale Farm predict a highest worst-case level within both the current site noise criterion level imposed on the planning permission for Murrayshall Quarry and the most stringent criterion level set out in PAN 50 which is the existing background noise level + 10 dB. At Murrayshall Farm, the environmental statement indicates the worst-case noise level prediction would be “comfortably below” the current noise limit and would also meet the most stringent PAN 50 level.

137. The construction of the access road would lead to a predicted highest worst-case level at The Kennels of 55 dB  $L_{Aeq,1h}$ . This level would occur during the initial workings when operations would be closest to the property. As a temporary operation, PAN 50 recommends a noise limit of 70 dB  $L_{Aeq,1h}$ . Other than during the initial workings, the predicted worst-case noise levels would meet the most stringent daytime restriction suggested by PAN 50. Similarly, Polmaise Lodge would experience a level of 56 dB  $L_{Aeq,1h}$  during the construction of the access road. Otherwise, indicates the environmental statement, the predicted worst-case range of noise levels would easily comply with the current planning condition.

138. The environmental statement believes the predicted worst-case noise levels at 14 Quarry Road would again be comfortably below the most stringent daytime restriction suggested by PAN 50. This would reflect the distance from the operations, and the screening attenuation provided by the quarry void. At 96 Gillies Hill, the highest worst-case noise level is predicted during the initial workings with the creation of the access ramp when a drill rig would also be operating. Nevertheless, this predicted noise level “easily meets the current planning criterion”. Levels would fall following the initial workings. These two properties are the closest in Cambusbarron to the proposed development: the environmental statement indicates it is likely that noise levels elsewhere in the village would be even lower.

139. The environmental statement also contains an assessment of noise impact on core footpaths in the vicinity of the quarry. For the most part, almost all worst-case predictions would meet the PAN 50 recommendation of a 65 dB  $L_{Aeq,1h}$  limit for open spaces used by the public for relaxation. The exception would involve the path to the north during phase two operations when a maximum level of 81 dB  $L_{Aeq,1h}$  could be experienced. However, insofar as walkers would be travelling along the path, the environmental statement explains that the exposure to this level would be for only a few minutes. The supplementary information prepared by the appellant indicates that temporary acoustic barriers could be erected when operations were being undertaken in the vicinity of the footpath close to the site boundary.

140. In terms of site traffic, the environmental statement explains that the Department of the Environment, Transport and the Regions considers an increase of 3 dB to be a significant change. A 50% increase in traffic leads only to a 1.8 dB increase. As traffic movements on Polmaise Road would increase by approximately 45%, the environmental statement believes that site traffic noise levels would be barely noticeable to the human ear.

141. The Ironside Farrar audit explains that that PAN 50, Annex A, refers to the need to consider the cumulative effects of proposals. A cumulative assessment is therefore necessary in this case. Further detailed criticisms were made and, for the most part, the appellant subsequently provided clarification.

142. The subsequent cumulative assessment confirms that, as in the case of the initial noise assessment, the calculations were undertaken in accordance with the guidance contained in PAN 50. In terms of potential traffic noise, the predicted impact was assessed by analogy against the magnitude of impact recommended within the Design Manual for Roads and Bridges.

143. In respect of quarry noise, the assessment indicates that should both quarries be operating there would be an increase in noise levels at only three receptors. The highest predicted increase would be 2 dB at Murrayshall Farm providing a predicted worst-case level of 47 dB  $L_{Aeq1h}$ . All worst-case levels are predicted to meet the PAN 50 limit of 55 dB  $L_{Aeq1h}$  which is also equal to the current planning permission limit for Murrayshall Quarry.

144. Regarding predicted traffic noise impact, the environmental statement explains that all traffic associated with the operation of the proposed site would enter and leave the site along Polmaise Road. The section of the road to the north of the site access, known as Bearside, with a small number of houses – including Cranston, Bearside and Bearside House - on the western side, was considered in the traffic noise assessment. The assessment indicates the magnitude of impact on the section of road to the north of the proposed site entrance would be major in the short term and moderate in the long term as a consequence of the appeal proposal. The short term is defined as “shortly after operations commence on site” whereas the long term is said to be “around 15 years after opening”. Heavy goods vehicles generated by the operation of the western part of the quarry would not change these predicted magnitudes of impact for the properties closest to Polmaise Road in Bearside. Tillicoultry Quarries Ltd draws particular attention to the major level of impact on these properties.

145. Overall, the cumulative assessment believes there would be little or no increase in the noise levels predicted in the original assessment due to cumulative impact.

146. I have noted the calculations in respect of the six sensitive receptors selected as noise measurement locations, two of which were included because of proximity to the proposed access route to the quarry from Polmaise Road. I accept that the predicted noise level calculations, including the cumulative impacts, demonstrate acceptable predicted levels. I have some concern about the impact on The Kennels, a property close to both the quarry itself and the route of the proposed new access, where even without the cumulative impact of the western part of the quarry, the predicted level approaches very close to the PAN 50 maximum 55  $L_{Aeq}$ . However, the property lies to the west of higher ground which,

especially taking account of the prevailing wind, may assist in reducing the impact of noise in the creation of the access ramp.

147. I find the assessment of the predicted off-site traffic noise levels for properties in Polmaise Road to be troubling. The three properties have predicted traffic noise levels of 59.7, 59.4 and 59.7 dB LA<sub>10,18h</sub> for the operation of the appeal site alone. These predictions rise to 60.1, 60.4 and 60.7 dB LA<sub>10,18h</sub> on a cumulative basis. Even the operation of only the appeal site leads to an assessed major magnitude of impact in the short term. The impact assessment is reduced to moderate in the long term.

148. Although the impact assessment for these properties falls from major (a change of over 5 dB LA<sub>10,18h</sub>) in the short term to moderate (a change of over 5 – 9.9 dB LA<sub>10,18h</sub>) in the long term, I consider the noise levels to be significantly adverse. No mitigation has been proposed and therefore I conclude that the predicted noise impact of off-site traffic on Cranston, Bearside and Bearside House to be unacceptable.

### *Blasting*

149. The environmental statement explains that drilling and blasting the mineral deposit is the first stage of the rock extraction process. Even the most well-designed and executed blasts generate energy in the form of both ground and airborne vibration.

150. Typical face heights in the quarry would be 12 metres where the maximum instantaneous explosive charge would be 110 kg. Detonation would generate borehole stress waves causing very localised distortion and cracking. Beyond the immediate vicinity, permanent deformation would not occur. The magnitude and the significance of the stress waves can be accurately predicted at any location.

151. Vibration in the form of pressure waves would also be generated within the atmosphere. “Air overpressure” describes both audible and sub-audible frequency components, that is, sound and concussion. Levels can be predicted along with an assessment of significance although values may be significantly influenced by atmospheric conditions. Accordingly, the most effective method of control is minimisation at source.

152. The environmental statement points out that the sensitivity of the human body is such that vibration can result in subjective concern being expressed at energy levels well below the threshold of damage. Experience indicates that virtually all complaints regarding blast damage arise because of the concern over the possibility of damage to owner-occupied property as a consequence of vibration level. Blast vibration data monitored at quarries similar to Murrayshall has been used in the prediction of vibration levels. The vast majority of blasting events would result in vibration effects significantly below guidance levels.

153. Seven receptor locations were assessed as follows:

- Gillies Hill: the effects of the vibration levels would be perceptible but comfortably below the recommended criterion, this being the most stringent limit set out in PAN 50, Annex D;

- Garden Cottage: there would be perceptible effects on occasions but they would remain comfortably below the recommended vibration limit;
- Whinneyknowe: there would be limited perception of vibration as a consequence of blasting at the closest point (phase two) and in other phases, the levels would be comfortably below the recommended limit;
- Polmaise Lodge: blasting at the closest point (phase two) would result in perceptible vibration but this would be comfortably within the most stringent PAN 50 criterion; vibration levels in both earlier and later phases would be lower but may give rise to limited perception;
- Graystale Farm: blasting in phase two would be some 490 metres distant at the closest point when vibration effects would be perceptible but would remain below the lowest criterion in PAN 50; perceptible effects would result during earlier and later phases of working;
- The Kennels: this is the closest residential receptor with the minimum separation distances in phases one and two being less than 366 metres; the explosive charge would therefore require to be reduced from 110 kg to ensure the recommended criteria would not be exceeded; phase three would involve greater separation distances to allow a charge of 110 kg which would give rise to perceptible vibration effects but which would be below the lowest PAN 50 criterion;
- Murrayshall Farm: there would be limited perception of vibration at the time of lowering the quarry floor whilst, in earlier phases, the levels would be comfortably below the recommended criterion for residential property.

154. The environmental statement concludes a vibration criterion of  $6 \text{ mms}^{-1}$  for 95% of the blasting events as detailed in PAN 50, Annex D, would provide a satisfactory magnitude for blasting at Murrayshall. The low order of magnitude would be entirely safe. These low ground vibration levels would ensure accompanying overpressure would also be of a very low and hence safe level although possibly perceptible at the closest properties.

155. In terms of air overpressure, the environmental statement argues that it is “totally impracticable” to set a maximum limit. In accordance with current best practice, safe and practical measures should be adopted to ensure the minimisation of air overpressure generated by blasting.

156. Monitoring should be undertaken as part of the control of blasting operations.

157. The Ironside Farrar audit regards the environmental impact assessment of blasting to be adequate subject to conditions being applied to any planning permission. PAN 50 suggests the number of blasts permitted on a daily or weekly basis should be restricted in number, important in this case because of the potential cumulative impact resulting from the simultaneous working of the western section of the quarry. A cumulative assessment is therefore required including details of how blasts would be controlled within acceptable environmental limits. The audit requires the cumulative assessment to consider health and

safety aspects of blasting such as exclusion zones and how these would be managed with a second operator.

158. The supplementary information provided by the appellant suggests that should both quarries be operating simultaneously, goodwill would be likely to ensure that blasts do not occur at the same time. In terms of health and safety, the operator would be responsible for ensuring blasting operations were undertaken in accordance with the Quarries Regulations.

159. The cumulative assessment undertaken by the appellant indicates that the worst-case levels predicted from the western part of the quarry would be very similar to those predicted for the appeal site. Suitable mitigation could ensure that ground vibration would not exceed the stipulated levels. In particular, the proximity of The Kennels would again require a reduced charge to ensure the vibration criterion would not be exceeded. Again, such low vibration levels would ensure air overpressure levels would also be very low. Indeed, at these low levels, the cumulative assessment believes there would be no requirement to limit the number of blasts at the quarries on a daily or weekly basis. Sensible co-operation between the two operators could be anticipated in respect of ensuring the safety of personnel and that plant and equipment was not damaged.

160. The assessment also explains that PAN 50 accepts that where suitable site specific vibration criteria are adopted, a condition limiting the number of blasts daily or weekly is unnecessary. As indicated, the environmental statement identifies appropriate vibration criteria. Accordingly, it is argued, there would be no requirement to limit blasts at either quarry. In any event, the appellant estimates that blasting in each part of the quarry would be undertaken at a rate of one blast every three or four weeks. In the unlikely event that both quarries initiated a blast at the same time, the differing separation distances between the blast location and receptors would ensure that ground vibration effects would not arrive at the same instant.

161. Cambusbarron Community Council is concerned that there is no formal commitment by the appellant to the recommendations contained in the environmental statement, no scheme for overpressure control and no mention of “flyrock” issues.

162. In response, the appellant points out that the planning application contains detailed assessments of the potential impacts of blasting. An agreed scheme of blast monitoring at nearby receptors would be required and all the recommended conditions in this respect are accepted by the appellant.

163. I note the Ironside Farrar audit accepts the adequacy of the assessment prepared by the appellant. Despite the reference to the number of blasts being limited, I am satisfied that, in terms of PAN 50, the application of site-specific vibration criteria would render such a condition unnecessary. In any event, the appellant has indicated that the anticipated level of blasting would be of a lower frequency than even one blast a week from each part of the quarry.

164. I accept the difficulties of formally requiring the co-ordination of blasting activities should the two quarries be active but I believe, in effect, the level of blasting and the practical and safety requirements would be self-regulating. I consider the prospect of properties experiencing simultaneous vibrations from blasts in both quarries to be so



remote as to be reasonably discounted.

165. Although the community council refers to a formal lack of commitment to blasting levels by the appellant, the environmental statement is an integral part of the planning application and contains details of the blasting regime. In my experience, conditions imposed on planning permissions ensure that technical matters, such as vibration criteria, are incorporated into the consent. The community council is also concerned about the lack of control of air overpressure levels. The appellant argues that “it is totally impractical to set a maximum air overpressure limit” because of the significant and unpredictable effect of variable weather conditions. As a consequence, the appellant believes that sensible ground vibration limitation through safe and efficient blasting would automatically ensure that air overpressures are kept to reasonable levels. On this basis, the appellant suggests, “in line with the current best accepted modern practice”, the minimisation at source of air overpressure generated by blasting would be achieved.

166. PAN 50, Annex D, recommends a scheme which details the intended methods to be employed in minimising air overpressure from blasting operations in preference to limiting values. In the event of planning permission being granted, I consider that such a condition would be appropriate and could incorporate the measures intended by the appellant.

167. The community council also refers to “flyrock” which I understand to be fragments of rock thrown and scattered during blasting operations. I consider that this is a matter best controlled through blasting techniques. A responsible quarry operator would clearly be aware of the potential for flyrock and have regard to the need to comply with the appropriate safety regulations. I do not consider this to be a matter for regulation by means of a planning condition.

168. Overall, I conclude that there would be an impact from blasting in terms of both ground vibration and air overpressure. In its own right and cumulatively I further conclude that the impact of the proposal could be retained within acceptable limits subject to the imposition of appropriate conditions. The Quarries Regulations would also be applicable.

### *Traffic*

169. The transport report contained in the environmental statement explains that heavy goods vehicle movements to and from the quarry would take place between 7am and 6pm from Monday to Friday, a total of 55 hours a week. An annual extraction rate of 300,000 tonnes would require 30,000 vehicle movements (arriving and departing) annually, being 626 a week, 132 a day and 12 an hour.

170. A preferred route between Murrayshall Quarry and the M9 was determined following consideration of options and consultation with the council. The route would be via Polmaise Road, King’s Park Road, the B8051 (Victoria Place and Queens Road), the A81 (Dumbarton Road), the B805 (Raploch Road) and the A84.

171. The environmental statement points out that Polmaise Road to the west of the M9 carries very light traffic levels and therefore the percentage increase of heavy goods vehicles is disproportionately high at 3,300% representing 46% of all vehicles. Along other sections of the route, heavy goods vehicles would represent between 2% and 5% of all vehicles. Overall, the impact of heavy goods vehicles on the route would result in an

impact not exceeding 5% of all traffic. The environmental statement believes such a level of impact would not normally merit further detailed assessment. Nevertheless, the impacts on the route were analysed taking account of the Guidelines for the Environmental Assessment of Road Traffic published by the Institute of Environmental Assessment.

172. The environmental statement reports the outcome as follows:

- severance (ease of pedestrian crossing): total traffic flow is insignificant in terms of severance; despite the 45% increase of traffic on Polmaise Road west of the M9, the impact is “slight”; there is very little frontage access with little or no demand to cross the road other than in the vicinity of the existing core path, this crossing point being to the south of the proposed quarry access;
- driver delay: additional traffic would be negligible in terms of potential delay on the preferred route or at junctions;
- pedestrian delay: predicted increases in traffic flow would cause negligible delay;
- fear and intimidation (lack of protection for pedestrians due to, for instance, narrow footways and vehicle speed): the analysis states that other than for Polmaise Road west of the M9, good standard pedestrian footways are provided; in some sections, footways are set back from the moving traffic; there appears to be general adherence by drivers to the 30mph speed limit;
- accidents and safety: recorded accidents do not suggest a “blackspot” or a common causation factor with no evidence to suggest additional heavy goods vehicle movements associated with the quarry would cause or increase the risk of accidents occurring on any part of the route;
- dust and dirt: all vehicles would leave the quarry via a wheel-wash facility and loaded vehicles would be sheeted to control airborne dust; the junction of the site access and Polmaise Road would be surfaced; impact in terms of dust and dirt would therefore not be significant;

Note: noise and air quality aspects of traffic have been dealt with previously.

173. In terms of mitigation, the environmental statement suggests that there is no reason to believe that drivers would not have regard to the speed limit. However, most of the vehicles would be owned by the appellant, Patersons Quarries Ltd, and fitted with a global positioning system (GPS) to allow the monitoring of location, speed and direction and enable appropriate vehicle management.

174. To increase driver awareness of the possibility of schoolchildren crossing Polmaise Road, consideration should be given to supplementing the existing “school” signs and upgrading the existing signs to vehicle-activated illuminated signs.

175. Having assessed the various traffic related aspects of the proposal, the environmental

statement considers the overall impact would be “not significant”.

176. The Ironside Farrar audit points to the need for cumulative traffic impact assessment. Other concerns are: the transport report is limited to vehicle movements with no reference to walkers, cyclists and equestrians; there is no reference to sensitive receptors such as schools; limited information is provided on the existing characteristics of the road. More details are required in respect of vehicles not owned by Patersons Quarries Ltd and whether these would be managed. The section on mitigation is regarded as being weak.

177. Access, traffic and transport aspects of the proposal were also reviewed on behalf of the council by WSP / Parsons Brinckerhoff. This review argues that pedestrian amenity requires more attention, particularly in respect of the local concerns over impacts upon vulnerable road users and residential areas. In terms of trip generation, the implications of extraction from the western section of the quarry are important. Traffic movements other than the heavy goods vehicles transporting aggregate are assessed by the transport report as being negligible but staff, servicing and other movements could lead to an increase in traffic forecast. Mitigation measures should be further assessed taking account particularly of pedestrian safety. Clarity should be provided regarding vehicle movement relative to school start and finish times.

178. Tillicoultry Quarries also believes that account should be taken of all traffic movements including staff and service vehicles. Furthermore, traffic is generated by the CEMEX concrete batching plant. Despite the substantial increase of traffic on Polmaise Road, most of which would involve heavy goods vehicles, pedestrian amenity on this section of the route appears to have been ignored. As there is no footpath on Polmaise Road to the west of the M8, severance, fear and intimidation are important considerations. Significantly, no mitigation has been proposed in this respect.

179. Cambusbarron Community Council reflects many of the concerns raised by individual third party submissions. The community council points out that whilst the traffic assessment has been undertaken on the basis of 300,000 tonnes of mineral extraction per annum, account should be taken of the western section of the quarry which could increase the total to 600,000 tonnes. Indeed, the community council fears that the annual figure could rise well beyond this total. Even extraction of 600,000 tonnes would involve some 264 vehicles daily which would equate to one heavy goods vehicle every 2-3 minutes. More likely, however, the vehicles would pass in convoys.

180. The community council believes that lack of local knowledge has led to the conclusion in the report that driver delay would be negligible. Assessment of pedestrian delay has not demonstrated evidence of pedestrian flow rates or considered the relevance of pedestrian amenity. In terms of fear and intimidation, the section Polmaise Road to the west of the M9, some 875 metres, unlit and without footpaths, has minimal consideration.

181. In contrast, the community council explains that it has undertaken a survey of pedestrians on Polmaise Road. Measurements on site have demonstrated that the width in places is less than that claimed by the appellants. Ten residential properties at Bearside have a direct access to the road. There is a weight restriction of 7.5 tonnes other than for access. Gradient and alignment suggest that stopping distances would be a problem, especially in wet or icy weather conditions.

182. All other sections of the route to the M9 are of concern to the community council:

- Torbrex over-bridge is a pinch point: should it be closed the only alternative route is through the village of Cambusbarron; this would be unacceptable;
- the section of Polmaise Road east of the Torbrex over-bridge to Park Place (some 800 metres) lacks a continuous footpath and already includes traffic calming measures; many pedestrians use this section including children going to St Ninians Primary School or Stirling High School, often with a need to cross the road; a large increase in heavy goods vehicles could be anticipated during school start and close times; no protection has been offered from noise, vibration, potential structural damage and loss of amenity; there would be impacts on residential property, a hospital, a nursery for children and a home for the elderly;
- the section along Kings Park Road to Victoria Place (some 360 metres) is a cycle route; adjacent recreation uses cause parking problems which can reduce the free flow of traffic and cause problems for pedestrians crossing; as a consequence of the increased use there would be an impact on road safety and loss of amenity;
- the section along Victoria Place and Queens Road to Dumbarton Road would experience similar problems in terms of road safety and loss of amenity;
- the Dumbarton Road and Raploch Road section offers fine views of the castle and is close to venues for tourism events.

183. The community council believes a range of mitigation measures could be put into effect. Reference is made to constructing a new slip road to the M9 at the Torbrex over-bridge, the widening of Polmaise Road with the provision of footpaths, resurfacing, cutting back vegetation, introducing a 15mph speed limit, providing new pedestrian crossings, speed limits near schools and prohibiting heavy goods vehicles on Polmaise Road to the west of Torbrex over-bridge before 8am.

184. In providing supplementary information, the appellant accepts that the information previously provided did not include details of staff vehicles but argues that the levels would be minimal in comparison with the identified heavy goods vehicle movements. Despite the concern that had been expressed locally about the increase in traffic levels along the urban section of the route, the levels would increase by between 1% and 3%. The appellant claims even a 10% uplift would not be significant.

185. The appellant emphasises the mitigation measures in the transport report were not a requirement of the traffic impact assessment but indicate a willingness to address local concerns. Those vehicles not owned by the appellant would be instructed to use the agreed route and to adhere to the specified speed limits. The appellant would also agree to consider future arrangements to restrict or manage movements during school starting and finishing times.

186. The cumulative impact assessment prepared by the appellant took into account the potential for the extraction of 600,000 tonnes of rock per annum from Murrayshall Quarry. This would involve an estimated 60,000 heavy goods vehicle movements a year or 1,250 a week, 264 a day and 24 each hour. Additionally, there would be an estimated 24 staff vehicle movements a day.

187. The assessment was again undertaken of environmental criteria identified in the “Guidelines for the Environmental Assessment of Road Traffic”. In terms of severance, the assessment finds that Polmaise Road to the west of the M9 would experience a “moderate” impact. The road has limited frontage access with little demand to cross the road other than in the vicinity of the core path to the south of the proposed new site access. The increased traffic levels would not be significant in terms of causing driver delay and negligible insofar as pedestrian delay is concerned.

188. In respect of pedestrian amenity, the guidelines suggest tentative thresholds for judging the significance of changes in pedestrian amenity as being where traffic flow is halved or doubled. In this instance, the appellant points out there would not be a doubling of the traffic at any point along the route to the east side of the M9. Nevertheless, the various sections of the route were assessed: the potential cumulative impact on pedestrian amenity was not considered to be significant. Taking into account the guidance, the potential cumulative impact was also assessed as not having a significant impact in terms of pedestrian fear and intimidation. There is no evidence suggesting that the additional heavy goods vehicle movements would cause an increase or risk of increase in accidents occurring on any part of the identified route. Management practices would enable dust and dirt impact to be controlled to a level that would not be regarded as significant.

189. The cumulative assessment maintains the opinion that there is no requirement for mitigation. However, the appellant re-affirms the measures previously identified.

190. I acknowledge that the proposed route was chosen as the “preferred” route after a consideration of alternatives. The council has been reluctant to provide a definitive analysis of the route on the basis that the traffic impact assessment did not take account of the possibility of 900,000 tonnes per annum as part of the cumulative impact assessment. However, the council has agreed that the preferred route is the optimum of the alternatives considered. Nevertheless, I recognise this falls short of endorsing the preferred route being “acceptable”.

191. The concern of the community council and numerous third parties in respect of traffic input has been very clearly stated. On the other hand, the appellant has undertaken a transport assessment, including a cumulative assessment on the basis of 600,000 tonnes, in accordance with the “Guidelines for the Environmental Assessment of Road Traffic”. The outcome of the assessment is that even at this level there would be no significant impacts. In turn, the assessment concludes no mitigation measures would be required although the appellants have suggested some mitigation could be introduced to meet local concerns.

192. The community council has claimed that the conclusions of the report demonstrate a lack of local knowledge and I agree that, for instance, the reference to a continuous footpath at a point where there is no footpath on one side of the road, could be regarded as an incomplete or misleading description. Nevertheless, traffic information provided by the council provided the basis of the assessment and it is clear to me that, overall, the report

was prepared in accordance with accepted guidelines.

193. I acknowledge there are concerns about the impact on residential property in terms of amenity as a result of noise and vibration. However, I believe it is important to consider the anticipated traffic levels in the context of the existing situation. As explained in the transport report, the B8051, A811 and A84 form part of the Centre Inner Ring and Radial routes in City Transport Strategy. These are clearly important roads within an urban environment on which significant traffic flows would be anticipated.

194. Similarly, concerns about the impact on pedestrians, including schoolchildren must be set against the existing traffic levels on these important routes within the local road network. Ideally, schoolchildren would be able to benefit from a traffic-free journey to and from school and hospitals and homes for the elderly would be located where traffic impact would be minimal. The current situation does not allow these ideals to be achieved.

195. I have noted that, other than for the section of the route between the site access and the Torbrex over-bridge, the increase in traffic levels would result in heavy goods vehicles being no more than 5% of the total traffic flow. On this basis, I accept that, in terms of the guidelines, the impact would not be significant in respect of the specified environmental criteria and would not cross the threshold of acceptability. In this respect, I also note that the appellant has nevertheless suggested some measures of mitigation, especially regarding providing improved crossing facilities and school warning signs.

196. To the west of the Torbrex over-bridge, the route assumes a rural character. As indicated, it is some 875 metres between the bridge and the proposed access to the appeal site and there is no street lighting. In assessing options for the haul route the appellant accepts that the use of Polmaise Road to the west of the Torbrex over-bridge is inevitable. The transport report also refers to the extant planning permission for mineral extraction at Murrayshall Quarry and states “this should be recognised when considering the impacts...”

197. As I indicated previously, whilst I accept the planning permission for mineral extraction at Murrayshall Quarry to be a fact, I have not regarded the permission as providing guidance for the determination of the current proposal other than cumulatively. On this basis, I do not regard the transport arrangements relating to the extant permission to be directly relevant to the consideration of traffic impact in respect of the current proposal. Indeed, as emphasised by the appellant, the current proposal must be considered in its own right.

198. At this point, Polmaise Road is the subject of an order prohibiting vehicles of over 7.5 tonnes in weight other than for access purposes. In itself, this restriction is a clear indication that the road is not suited to use by heavy goods vehicles, including those that would serve the proposed quarry. According to the transport report, those vehicles would have a load carrying capacity of 20 tonnes. Despite the extant planning permission, I consider that the weight limit indicates that a new planning permission should not be granted which would generate heavy goods vehicles in excess of the level allowed.

199. I have observed that the standard of Polmaise Road reduces further beyond the location of the proposed new access. Nevertheless, between the new access point and the Torbrex over-bridge, free flow of traffic in both directions cannot be guaranteed. Measurements of this section of the road taken by the appellant indicate that some 76% of

the section is of a width that two heavy goods vehicles could pass with care. This would not be possible over the remaining 24% whilst at three points there is adequate width for only one vehicle of any type and one-way working is required. The community council has also undertaken a survey of this section of road which indicates that, in a number of instances, the width is less than suggested by the appellant. The community council believes that two heavy goods vehicles could pass with care along only some 56% of the route.

200. I note the appellant argues that, for the most part, heavy goods vehicles on this section of Polmaise Road would be able to pass with care and, on average, only nine times a day would passing vehicles offer more of a challenge to drivers. On the other hand, the community council believes this figure would inevitably be higher. As indicated, the community council argues that in some places the road is not as wide as suggested by the appellant. In any event, it is claimed, traffic would be concentrated into a shorter period of time because of driver rest time and the potential need to avoid school start and finish times. Accordingly, traffic theoretically generated during an eleven-hour shift would, in practice, be concentrated into a period of nine hours.

201. I recognise the concern of the community council and the arguments suggesting that traffic conflict in terms of passing heavy goods vehicles in this part of Polmaise Road would be at a higher level than predicted by the appellant. In assessing the situation, I have taken account of the use of the road by pedestrians (I observed several during the course of my site inspections), the lack of pavements, the restricted road width (on the basis of the appellant's measurements), the potential for heavy goods vehicles not being able to pass one another (having regard to the appellant's prediction) and the access to the road from the residential properties at Bearside. I have also taken account of the predicted major magnitude of impact of traffic noise levels on properties at Bearside as previously discussed.

202. In terms of the impact of traffic on residential amenity, I also note that the proposed access is intended, in part, to follow the line of the existing access to The Kennels. The new quarry access and the access to The Kennels would separate some 250 metres from the residential property (as scaled from drawing SCT3874/1/GL/01, New Access Road General Layout). I have previously expressed concern about noise impact on this property although I concluded that local landform would assist in reducing the impact of construction work on the proposed ramp into the quarry. However, the new access would effectively lead to a shared access arrangement for the quarry and The Kennels. I believe this arrangement would have the potential to cause conflict between the residential access and heavy goods vehicles. In turn, there would be an unacceptable reduction in the level of residential amenity.

203. As explained, the appellant does not consider that any mitigation measures are required but, nevertheless, has made a number of proposals in the hope of allaying local concern. I appreciate the intention to use GPS but, whilst this could well be beneficial, I share the concern expressed that such a system would not apply to drivers of vehicles not owned by Patersons Quarries Ltd. I also note the offer to consider safety measures for school children. These would be beneficial but would not have a direct effect on the Polmaise Road section of the route to the west of Torbrex over-bridge.

204. The community council has also suggested a range of mitigation measures but, as the

appeal has been unsuccessful, there is no requirement to consider these in detail. Suffice it to say that I have been provided with no evidence to persuade me it would be possible to require slip roads to the M9. Similarly, in the context of the appeal, I do not believe it would be possible to achieve those measures involving improvements to Polmaise Road. These improvements would be difficult to implement though planning conditions.

205. On the basis of the foregoing I conclude the route, in total, would not be suitable for use by the level of heavy goods vehicles generated either as a consequence of the appeal proposal in its own right or cumulatively. In particular, I am concerned about the section of Polmaise Road to the west of the Torbrex over-bridge, recognising the prohibition of vehicles with a weight of over 7.5 tonnes, the impact on other road-users and residential amenity. In respect of residential amenity, I also believe there would be an unacceptable impact on The Kennels.

### Summary of impacts

206. I have concluded that the proposal is acceptable in its own right and cumulatively in terms of the following impacts:

- landscape character;
- visual;
- ecological;
- cultural heritage;
- air quality;
- hydrology and hydrogeology;
- blasting.

207. The proposal is unacceptable in its own right in terms of the following impacts:

- noise, insofar as traffic noise would have a major impact on properties at Bearside, Polmaise Road;
- road traffic, insofar as Polmaise Road from the Torbrex over-bridge to the proposed site access is of a standard unsuited to the type and level of traffic generated by the development; this would have a further unacceptable impact on the residential amenity of properties at Bearside and, additionally, insofar as the site access road is concerned, would have an unacceptable impact on the residential amenity of The Kennels.

208. This conclusion requires to be assessed against the provisions of the development plan.

### Development plan assessment

209. The Stirling Local Development Plan was adopted in September, 2014 and therefore



provides relatively up-to-date development plan guidance. As previously indicated, Primary Policy 11, Minerals and Other Extractive Industries, is of specific relevance to the appeal proposal.

210. The policy is divided into four sections, the first of which, section (a), relates to the sterilisation of important mineral deposits. This protective measure is not relevant in this instance. Section (a) also offers qualified support for extraction that contributes to the minimum 10-year supply of permitted reserves of construction aggregates. I have previously concluded that insofar as need is concerned there is no justification for refusing planning permission. I further conclude that the proposal carries the support of section (a) subject to the provisions of section (c).

211. Section (b) is not relevant to the proposal as it relates to the area east of Stirling and south of the Forth.

212. Section (c) requires sufficient information to be submitted to enable a full assessment to be made of the likely effects of development. The council believes that insufficient information has been provided insofar as a cumulative assessment of the environmental impacts arising from an extraction rate of 900,000 tonnes per annum has not been made available. I have previously concluded that assessments based on 300,000 and 600,000 tonnes per annum provide an adequate basis on which to determine the appeal. In turn, I conclude that the likely effects can be assessed as required under section (c). In the event of the proposal being approved, I believe that the other requirements of section (c) relating to restoration, appropriate control, mitigation, and monitoring, along with financial provisions, could be met through the imposition of conditions and by means of legal agreements. Waste management plans could also be the subject of a planning condition.

213. My conclusions in respect of assessing the operation of the quarry, as also required under section (c), are included below under Policy 1.1, Site Planning.

214. Section (d) is not relevant to the proposal as it relates to unconventional gas extraction.

215. On the foregoing basis, I consider that it is possible to assess the likely effects of the development, as summarised in paragraphs 206 and 207, against the relevant local development plan policies as follows:

- *Primary Policy 1, Placemaking:* My assessment leads me to conclude that, other than as set out in my assessment against Policy 1.1 below, the proposal would safeguard the built and natural environment. In the long term, the restoration of the quarry would represent an enhancement of natural heritage. Overall, however, I conclude that the proposal would not comply with this primary policy guidance to the extent set out below under Policy 1.1.
- *Policy 1.1, Site Planning:* I consider that the proposal would not contribute to the quality of the surrounding built environment because of the unacceptable adverse impact of site traffic on Polmaise Road between the proposed site access and the Torbrex over-bridge, including the adverse impact on properties at Bearside. I accept the appropriate standards for the junction between the new access and Polmaise Road could be achieved. However, there appears to be no potential for

adjusting the access route from the Torbrex over-bridge and, as a consequence, the proposal would not meet the policy requirements for safe access. Additionally, the proposed access road would have an adverse impact on the residential amenity of The Kennels in further contravention of the policy. The failure to meet the requirements of Policy 1.1 also demonstrates shortcomings in the assessment of the operational aspects of the proposed quarry required under Primary Policy 11(c).

- *Policy 1.3, Green Network and Open Space:* Whilst there would be some adverse impact on core paths close to the proposed quarry, I do not consider that proposal could be regarded as being contrary to the wider objectives of this policy.
- *Policy 3.1, Addressing the Travel Demands of New Development:* I accept that accessibility may not necessarily be as convenient as required by this policy. However, because of the particular locational limitations of mineral extraction – extraction can only take place where minerals occur in the natural environment - I am prepared to accept non-compliance with this policy need not be a determining factor.
- *Policy 3.2, Site Drainage:* I accept that appropriate site drainage could be provided.
- *Policy 3.3, Developer Contributions:* In the event of the approval of the proposal I have no reason to believe that any required developer contributions would not be provided in accordance with this policy.
- *Policy 5.1, Reinstatement of Natural Watercourses:* Insofar as relevant, I have no reason to expect that compliance with this policy could not be achieved.
- *Primary Policy 6, Resource Use and Waste Management:* A waste management plan has been submitted in support of the application. A condition could be applied requiring the submission for approval of any outstanding details.
- *Primary Policy 7, Historic Environment:* My assessment of the impact on the historic environment leads me to conclude that the safeguarding and preservation requirement would be met. A condition requiring a programme of archaeological works could provide the opportunity for enhancement. Site restoration could also enhance the setting of Gillies Hill fort in the longer term.
- *Policy 7.1, Archaeology and Historic Building Recording (designated and undesignated buildings and sites):* The proposal would not impact physically on the neighbouring scheduled monument or significantly detract from the setting. As indicated above, a programme of archaeological works could be required.
- *Policy 7.8, Development affecting Battlefields, Gardens and Designed Landscapes:* I have concluded that the proposal would not have a significant adverse effect on the designated area of the Battle of Bannockburn and therefore the proposal would not be in contravention of this policy.
- *Primary Policy 8, Conservation and Enhancement of Biodiversity:* The proposal would not have a significant effect on a designated site of either international or national designation.

- *Policy 8.1, Biodiversity Duty:* I have concluded that the proposal does not have a potential impact on biodiversity.
- *Policy 8.2, Proposals affecting Local Conservation Sites:* There would be no adverse impact on any such designated site.
- *Primary Policy 9, Managing Landscape Change:* I have concluded that the landscape character and visual impacts would be acceptable
- *Primary Policy 9.1, Protecting Special Landscapes:* The site lies within the Southern Hills Local Landscape Area but my conclusions in respect of landscape character and visual impacts lead me to further conclude that the impact on the local landscape area would be acceptable.
- *Primary Policy 10, Forests Woodlands and Trees:* Existing woodland is to be protected but I do not believe that woodland removed as part of the proposal, including the Sequoia trees, would be of high natural, recreational or cultural heritage value or of a scale to justify retention under this policy.
- *Policy 10.1: Development Impact on Trees and Hedgerows:* I have noted particularly the policy objective of protecting important trees or groups of trees from adverse impacts, especially those that contribute to local amenity or have nature conservation and historic interest. In this respect, I have taken account of those representations concerned about the potential loss of the five Sequoia trees should the development proceed. However, my assessment concluded that the trees did not justify retention and, in turn, I find that there is no significant conflict with this policy.
- *Primary Policy 13, The Water Environment:* I have concluded that the water environment would be adequately safeguarded should the development proceed.

216. Overall, I conclude that the proposal is contrary to local development plan policy guidance under Policy 1.1, Site Planning, as (i) the access route to the site from Torbrex over-bridge is unacceptable in terms of the standard of Polmaise Road with a consequent adverse environmental and safety impacts and (ii) the access road would have an unacceptable impact of the residential amenity of The Kennels. In turn the proposal does not meet the requirements of Primary Policy 1, Placemaking, and also fails the operational assessment under Primary Policy 11(c). In my opinion, these are crucial considerations and point to the refusal of planning permission. On this basis, it is necessary to take account of material considerations to determine whether, despite my development plan assessment, planning permission is warranted.

### Material considerations

217. The extant planning permission for mineral extraction at Murrayshall Quarry is a material consideration. For the most part, the appeal site lies within the area of that permission. Other than for some minor boundary discrepancies, the proposed new site access from Polmaise Road to the southeast is the only significant area not contained within the quarry consent.

218. As previously discussed, the extant planning permission was originally granted in 1982 and subject of a review of old mineral permissions in 2002. That review did not include an environmental assessment and I believe this significantly reduces the weight that can be given to the planning permission in terms of the current proposal. The long-standing history of the land as a quarry clearly is important in land use terms but the appeal proposal requires assessment against current environmental impacts. On this basis, I previously indicated that the extant planning permission should simply be regarded as a fact but not treated as a determining consideration. Of course, the fact of the permission requires the potential for extraction to be taken into account in the cumulative assessment.

219. The Third National Planning Framework seeks to achieve an 80% reduction in greenhouse gas emissions by 2050 ensuring that Scotland is a “low carbon place”. Just under a quarter of greenhouse gas emissions are generated by the transport sector and I therefore acknowledge that the haulage by road of minerals from Murrayshall Quarry would contribute to the level of emissions. On the other hand, I recognise that economic benefits flow from the construction industry which, in turn, requires an adequate supply of aggregates. Additionally, as explained previously, minerals can only be extracted where they naturally occur. In this case, road transport is the only practical method of delivering minerals from quarry to customer. This gives rise to a tension with the low carbon objectives but, in this instance, I do not consider that the National Planning Framework provides a basis for opposing the development. Indeed, the document acknowledges the need for minerals as construction materials.

220. Scottish Planning Policy has a presumption in favour of development that contributes to sustainable development. In this respect, decisions should be guided by a number of principles including giving due weight to economic benefit and responding to economic issues, challenges and opportunities. I believe that the proposal, if implemented, would provide net economic benefit taking into account the employment provided, albeit limited and by providing materials for the construction industry. Similarly, the proposal would represent a response to economic challenge and opportunity through the need to replace a quarry which is becoming exhausted in order to continue to service the construction industry. I have previously concluded that the proposal would not be unacceptable in terms of cultural heritage, including the historic environment, and natural heritage. Indeed, it is apparent the proposal meets a significant number of the guiding principles for sustainable development.

221. Scottish Planning Policy emphasises the aim to achieve the right development in the right place and not to allow development at any cost. I have recognised the locational limitations of mineral working whereby extraction can only take place where the mineral occurs. Further, I have accepted that this can give rise to tensions between carbon emission objectives and economic development aims. In this case however, my over-riding concern is the poor standard of Polmaise Road between the Torbrex over-bridge and the site access. In my opinion, the need to use this section road clearly indicates that the proposal does not represent the right development in the right place contrary to the guidance contained in Scottish Planning Policy.

222. Scottish Planning Policy reflects the National Planning Framework in recognising minerals make an important contribution to the economy. Their responsible use should be facilitated and a steady supply should be available to meet the needs of the construction industry. I recognise the appellant’s argument that the proposal is intended to ensure a

continuation of this steady supply.

223. It is a requirement of Scottish Planning Policy that operators should provide sufficient information to enable a full assessment of proposals. The council believes the information was deficient but I have accepted that an adequate level of detail was provided including the characteristics of the various environmental effects likely to arise. It was the unacceptable environmental effects of the traffic on Polmaise Road between the site access and the Torbrex over-bridge and the impacts on residential amenity that led me to conclude the proposal should not be granted planning permission.

224. PAN 50, Controlling the Environmental Effects of Surface Mineral Workings, identifies the various effects of road traffic, particularly where this is the primary means of transport. "Intimidation" by large vehicles, danger, roads unsuitable for the size of vehicle, vibration and congestion are among the concerns identified. Vehicles are often among the heaviest to use local roads and are frequently out of scale, especially in the vicinity of the workings. These considerations are apposite in this case.

225. PAN 50 advice in respect of good practice includes a requirement for operators to avoid sensitive areas and the use of large vehicles in narrow winding roads by agreeing routes. In this case, there is no alternative to using part of the narrow section of Polmaise Road along which vehicles over 7.5 tonnes are prohibited other than for access. I have considered very carefully whether this situation should be tolerated in the light of mitigation measures suggested by the appellant. However, I have concluded that planning permission should not be granted having also noted that PAN 50, Annex C, states that planning legislation cannot be used directly to regulate traffic on public roads.

226. At the end of the day, PAN 50, Annex C, explains that if there is serious doubt whether local roads can accommodate such increase in heavy traffic as the proposed development is likely to generate, then, unless improvements are made or there is convincing evidence that control of traffic is feasible, planning permission may have to be refused. This advice is pertinent in this case.

227. Third party representations are an important material consideration. The appeal response form submitted by the council indicates over 1,000 interested parties submitted representations. All representations are opposed to the proposal. In addition, petitions were received containing several thousand signatures objecting to the proposal.

228. The representations related to a range of environmental concerns which are relevant to planning and have therefore been the subject of my assessment of the impacts of the proposal. As suggested in PAN 50, the predominant concern related to traffic generation. In particular, I agree with the fears expressed in respect of the impact on Polmaise Road between the proposed site access and the Torbrex over-bridge.

229. Some of the topics contained in the representations are not normally considered to be of relevance to planning: loss of property value or a private view. The fragile mental health of a local resident was also raised although my decision does not hinge on this particular consideration.

230. I am aware that the council has reviewed the local development plan and has submitted the replacement document for examination by the Scottish Ministers. At this

stage of the plan preparation process, limited weight can be attached to the proposed replacement but I have noted the terms of the plan and there is nothing that leads me to amend the conclusions I have reached in respect of this appeal.

### **Conclusion**

231. All-in-all, material considerations have not led me to conclude other than that planning permission should be refused. I have particularly taken account of the economic benefits offered by the proposal but believe these to be outweighed by the adverse impacts I have identified. I have considered all the other matters raised, but there is none which would lead me to alter my conclusions. I therefore dismiss the appeal.

*Richard Dent*

Reporter