### Key Issues:
The site lies close to the foot of Ben Nevis, whose summit at 1,345 m is the highest in the UK. The alloy wheel manufacturing facility (AWF) site is, at its closest, approximately 130 m from the boundary of The Ben Nevis and Glen Coe National Scenic Area (NSA) and approximately 500 m from the boundaries of the Ben Nevis Special Area of Conservation (SAC) and the Ben Nevis Site of Special Scientific Interest (SSSI).

The development site hosts an existing aluminium smelter, therefore is constrained in terms of locating the new facility. The Scottish Environment Protection Agency (SEPA) requested a detailed assessment of the potential effects of depositions from atmospheric emissions on the qualifying habitats of an adjacent Special Area of Conservation (SAC). SEPA collaborated with Scottish Natural Heritage (SNH) on the review of the AQ assessment, with SEPA addressing the dispersion modelling inputs and SNH addressing the evaluation of deposition levels on each of the specific habitat types. The key issue for this project was satisfying SEPA and SNH that all types of SAC qualifying habitats would not be significantly affected with respect to the Critical Load of each.

### Purpose of the project:
The Lochaber aluminium smelter at Fort William is the last remaining aluminium smelter in the UK and produces 48,000 tonnes per annum of aluminium ingots and sow pans. GFG Alliance completed the acquisition of the Lochaber aluminium smelter in 2016. The current total workforce of the smelter is 170.

### Purpose of the project continued:
GFG’s vision for the smelter site is to maximise the use of the molten aluminium it produces, together with the available renewable electricity generation capacity, to provide value-added products for UK manufacturing. The primary focus of the development is to supply the growing presence of the UK motor vehicle industry, thereby reducing its reliance on overseas supply chains. This project concerns the construction and operation of an alloy wheel facility (AWF). It is essential that the AWF is developed on-site adjacent to the smelter to facilitate the safe transfer of molten aluminium from the smelter directly to the AWF.

### Description of the project:
The facility comprises a bespoke building which has been designed to meet technical requirements to deliver a plant with initial capacity of 2 million wheels per annum, with scope to incorporate further expansion to produce 3 million wheels per annum, as well as minimise visual impacts from the surrounding area. The building would be 19.6 m to the highest point and have a gross internal floor area of approx. 31,300 m².

The construction of the AWF will require the removal of peat to facilitate the creation of the development platform. SEPA guidance emphasises the need to avoid peat disturbance as much as possible, or to minimise disturbance where avoidance altogether is not possible. For a project on the scale of the AWF, the disturbance of peat cannot be completely avoided. Mitigation measures in the building design to include and subsequently raise the finished level of piling has reduced the amount of peat disturbance. However, a quantity of peat will require excavation and re-use or disposal. At the time of writing, the estimated quantity to be excavated is 30,000m³.
Lessons learnt:
For the Ben Nevis Special Area of Conservation (SAC), the deposition impacts were calculated at the boundary closest to the proposed facility. At this location, the nitrogen deposition impacts were concluded to be not significant for 7 of the 17 habitats considered and for acid deposition the impacts were concluded to be not significant for 1 of the 17 habitats considered as the process contribution (PC) from the AWF only, the generators only and both cumulatively was less than 1% of the Critical Load for each habitat.

Not all habitats are present at the assessment location. The revised AQIA concluded that the predicted impacts for some of the listed habitats would be lower than reported at the boundary location in the revised AQIA due to their location being further from the proposed development.

Subsequent to submission of the Technical Memorandum, SNH requested that the location of maximum deposition be confirmed by presentation of contour maps and that nitrogen and acid deposition impacts be predicted at the locations of specific habitats within the Ben Nevis SAC, rather than only at the SAC boundary closest to the proposed development which had been assessed in the revised AQIA.

Lessons learnt continued:
The effect of nitrogen deposition from emissions due to the proposed generators was predicted to be not significant for 16 out of 17 sensitive habitats within the Ben Nevis SAC. For the remaining habitat, the additional contribution of 1.5% of the current load which exceeds the Critical Load, has the potential to cause significant effects, however the predicted impacts of nitrogen deposition from the existing generators are over-estimates as they have been modelled for continuous operation during November to February (2,880 hours of operation) whereas in practice their operation will be limited to 150 hours.

The effect of acid deposition from emissions due to the proposed AWF is predicted to be not significant for 9 out of 15 sensitive habitats within the Ben Nevis SAC. For the generators, the impact is predicted to be not significant for 8 out of 15 sensitive habitats within the Ben Nevis SAC. For the remaining habitats, the current acid loads exceed the relevant Critical Loads, and the maximum predicted additional deposition due to the emissions from the AWF and proposed generators have the potential to cause significant effects. However, as outlined above, the predicted acid deposition from the generators has been over-estimated.

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