Curraghinalt Project, County Tyrone, Northern Ireland

Further Environmental Information (FEI): Addendum to the Landscape & Visual Impact Assessment (LVIA) and Visualisations

– Appendix C.16

Prepared by LUC for Dalradian Gold Limited

July 2019

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Client: Dalradian Gold Limited

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Contents

1 Introduction

Overview

1.1 LUC (Land Use Consultants Ltd.) was commissioned by SRK Consulting Ltd. on behalf of Dalradian Gold Ltd. (DGL) in June 2019 to update the Landscape and Visual Impact Assessment (LVIA)[1] for the proposed Curraghinalt Project in Co. Tyrone, Northern Ireland to:

- incorporate within the baseline the required reinstatement of the existing exploratory (surface infrastructure) site and assess the impacts arising from the retention of the existing site;
- to consider the changes to the proposed main mine which have been developed since the application was submitted (detailed in the Addendum to the Environmental Statement (SRK 2019)); and
- to draw these aspects together into this **Addendum to the Landscape and Visual Impact Assessment**, including reporting and new visualisations.

Background

1.2 LUC prepared the Landscape and Visual Impact Assessment (LVIA) for the proposed Curraghinalt Project in Co. Tyrone, Northern Ireland forming part of the planning application[2], submitted in November 2017, and was commissioned by SRK Consulting Ltd. on behalf of DGL in June 2019 to update the LVIA for the proposed Curraghinalt Project.

1.3 Some aspects of part of the baseline environment have now altered, in that it is assumed the baseline includes the required reinstatement of the existing exploratory (surface infrastructure) site, given reinstatement was a Condition of the consent for the exploratory mine. The waste rock storage area (WRSA) will remain as an elevated landform but is now soiled and grassed over.

1.4 To account for the required restoration of the existing exploratory site, the assumed baseline situation for the purposes of the assessment of landscape and visual effects of the main Curraghinalt Project is therefore the fully restored site in line with the agreed Decommissioning and Restoration Method Statements. As such, the effects associated with the retention of the surface infrastructure at this site also need to be considered. These are set out in **Appendix 2** of this **Addendum to the Landscape and Visual Impact Assessment**.

Scope of Addendum

1.5 This technical addendum sets out a review of the proposed changes and the potential for these to have implications for the findings of the 2017 LVIA. The review focuses on the likelihood of alternative and/or additional landscape and visual effects arising as a consequence of the proposed changes. It then draws conclusions as to the prospect of changes in the level and/or significance of effects identified in the 2017 assessment.

1.6 It also considers the effects of the surface infrastructure at the exploratory mine, because in the absence of consent for the main mine, most surface infrastructure would be removed, leaving the raised landform of the restored WRSA and the water treatment facility, the latter being changed from an active to a passive facility after a number of years. The current application would alter this position, with the surface infrastructure at the existing site remaining in place for the duration of the operational life of the main mine.

1.7 The surface infrastructure at the exploratory mine is located to the north of the site for the main mine, and is seen from the north side of the Mullydoo to Crockanboy Hill ridge, whereas the main mine will be seen from the south side of the ridge. There will be very limited opportunity for receptors to experience both together, except sequentially as part of a journey. Given the fact that different receptors are affected by the exploratory mine, it is considered separately in detail in **Appendix 2**, with the findings being summarised into **Table 2.1** and **Table 2.2** of this addendum. These tables therefore set out the updated and combined landscape and visual effects of the project in its entirety.

2017 Landscape and Visual Impact Assessment (LVIA)

1.8 The 2017 planning application was accompanied by an Environmental Statement (ES) which included the LVIA. The findings of the 2017 LVIA are summarised in **Curraghinalt Project County Tyrone – ES Volume 2, Chapter 8: Environmental and Social Impact Assessment – 8.2 Landscape and Visual** and **Chapter 9: Cumulative Impacts – 9.3 Cumulative Landscape and Visual Impacts**.

1.9 The detailed LVIA with accompanying figures and visualisations are presented as **Appendix C16: Landscape and Visual Impact Assessment and Visualisations** (Volume I: Main Report, Volume II: Figures & Visualisations) to the ES.

2013 Landscape and Visual Impact Assessment

1.10 A LVIA was prepared for the exploratory mine by SLR Consulting in 2013[3]. The LVIA in **Appendix 2** of this addendum draws from this and provides and up to date description of the effects that would continue should the site continue to operate for the life of the main mine, as proposed.

Updated Project Description

1.11 The proposed changes to the main mine are detailed within Chapter 2 of the Addendum to the ES. There will be no changes to the overall footprint of the Proposed Infrastructure Site (Area A), and the extent and form of the Dry Stack Facility (DSF) will remain unchanged.

1.12 Many of the proposed changes are unlikely to have any implications for landscape and visual receptors. However, a number are considered to have potential to alter the findings of the assessment of landscape and visual effects presented in the 2017 LVIA. These changes are set out below.

1.13 A system of overland conveyers is now proposed, extending the conveyor system in place, and leading to the following changes:

- The primary crusher will be moved from the surface into the underground mine, and so will no longer be a visible feature in the landscape;
- The design of the portal has been altered and its orientation changed, leading to a slight change in appearance;
- The design of the main decline has been altered, again leading to a slight change in appearance;
- A transfer tower will be installed at the mine surface portal, and a second transfer tower adjacent to the stockpile feed and the DSF, forming new visible features in the landscape;
- An overland conveyer will connect the two transfer towers, reducing the need for haulage via trucks along a haul route, which would have been visible in the landscape (including during hours of darkness), but which will have a different appearance; and
- Two conveyers will connect the second transfer tower with the dry stack facility and the stockpile feed respectively, forming additional visible features in the landscape.

1.14 The following physical changes in componentry are now proposed, together reducing the extent or number of new visible features in the landscape:

- The number of tanks needed at the processing facility will be reduced;
- The flotation tanks will be relocated to the north of the processing plant;
- The processing plant building will have a reduced footprint; and
- The processing plant will have fewer vent stacks.

[1] Landscape & Visual Impact Assessment (LVIA) for the Curraghinalt Project, County Tyrone, Northern Ireland. Volume I: Main Report (October 2017) LUC on behalf of Dalradian Gold Limited

[2] Planning Application Ref: LA10/2017/1249/F | Underground valuable minerals mining and exploration, surface level development including processing plant and other associated development and ancillary works, Greencastle, County Tyrone.

[3] Curraghinalt Gold Project, Co. Tyrone Proposed Exploration Tunnel Extension Landscape & Visual Impact Assessment (February 2013) SLR Consulting Ltd. on behalf of Dalradian Gold Ltd.

Implications for Landscape and Visual Receptors

1.15 These changes in the project design may result in perceptible changes in the following landscape and visual effects:

- Physical effects on the site – changes in the direct effects on the physical features of the site;
- Effects on landscape character – changes in direct and indirect effects on the landscape character of the site and immediate surroundings; and
- Effects on views and visual amenity – including views from representative viewpoints, the settlement of Greencastle, groups of residential properties and sequential routes through the study area.

1.16 It is considered that the changes to the project design will not result in effects on additional landscape and visual receptors, as they will not increase in the overall footprint of the Proposed Infrastructure Site (Area A). In addition, the changes will predominantly be contained within close proximity to the DSF and will be barely perceptible once cell one of the DSF reaches its full extent, scheduled for approximately year four of the operational life of the mine.

1.17 Additional effects associated with the retention of the surface infrastructure for the existing exploratory mine are detailed in **Table 2.1** and **Table 2.2**, but will include some visibility of componentry from additional viewpoints to the north of the ridge.

Input to Project Design Evolution

1.18 LUC contributed to the iterative design process undertaken to ensure that proposed changes sought to avoid or minimise potential additional or alternative effects on landscape and visual receptors.

1.19 Changes had the potential to influence both adverse (negative) or beneficial (positive) landscape and visual effects arising from the project, in comparison to the effects identified in the 2017 LVIA. A number of alternative proposals for individual components were explored including an elevated overland conveyor (approximately 10m in height) and larger transfer towers which would have increased the perceptibility of these components over a wider area, and which were consequently superseded.

2 Potential Changes in Landscape & Visual Effects

Additional and Updated Information

2.1 To inform the production of this technical addendum, LUC reviewed the 2017 LVIA to consider whether the proposed changes will result in alternative and/or additional landscape and/or visual effects, and required the existing submitted materials (e.g. written assessment, figures, visualisations) to be updated.

2.2 In order to verify the implications of the changes in the project design, the physical changes to the componentry were updated in the 3D modelling prepared for the production of the 2017 LVIA visualisations. Using this modelling, the perceptibility of the changes in the proposed infrastructure/componentry was reviewed from each viewpoint location (Viewpoints 1 to 9 for the main mine site). Given the limited extent and nature of the proposed changes, it is considered they are unlikely to be discernible by most receptors across the LVIA study area.

2.3 However, in order to illustrate and verify the extent of the changes and the implications for the assessment, updated visualisations were prepared for the following viewpoints, where the changes are most likely to be perceptible:

- **Viewpoint 2: Mullydoo Road** (Figure 9.2a-i in LVIA Volume 2);
- **Viewpoint 4: Aghaboy Road - South of site** (Figure 9.4a-h in LVIA Volume 2);
- **Viewpoint 7: Aghaboy Road – South-west of site** (Figure 9.7a-i in LVIA Volume 2).

2.4 Updated visualisations are presented in **Appendix 1** to this technical addendum, in the same format as those presented in the existing LVIA (Volume II: Figures & Visualisations).

Theoretical Extent of Visibility

2.5 The Zone of Theoretical Visibility maps (ZTVs) contained in the existing LVIA have not been updated, as the proposed changes will fall within the parameters as previously proposed. Whilst some changes to componentry are proposed, the area experiencing a change in view will remain the same. The DSF will remain the largest and most visible feature, and will be unchanged. As such the theoretical extent of visibility will remain essentially consistent with that indicated on **Figure 6.3a** to **Figure 6.3d** contained in LVIA Volume 2 of the ES.

Review of Landscape and Visual Effects

2.6 The tables below set out the effects as assessed in 2017 and identify any changes that would arise from the redesign of project componentry. They also incorporate changes arising both from the alteration to the baseline, to take account of the retention of the existing exploratory mine (surface infrastructure).

Table 2.1: Review of Potential Changes in Landscape Effects

Landscape Receptor	2017 LVIA Figure No.	Construction Period	Operational Period	Closure and Restoration Period	Potential Effects from Lighting	Potential for Future Cumulative Effects	Updated FEI Figure No.	Potential for Material Change / Significant Effects	Comment on Implications of Changes to 2017 LVIA Findings
The Project Site	Figure 1.1	**Major** (Significant)	**Major** (Significant)	**Moderate** (Significant)	**Moderate** (Significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	n/a	n/a	Minor change to componentry around the portal and processing plant facility, and because of the retention of surface infrastructure at the exploratory mine site, which will not alter the magnitude of change or the level of effect.	No change to assessment.
LLCA 24 South Sperrin	Figure 6.5	**Moderate** locally (Significant) and Negligible for the LLCA as a whole (Not significant)	**Moderate** locally (Significant) and Negligible for the LLCA as a whole (Not significant)	Minor locally (Not significant) and Negligible for the LLCA as a whole (Not significant)	**Moderate** locally (Significant) and Negligible for the LLCA as a whole (Not significant)	Minor (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility apparent from this area, which will not alter the magnitude of change or the level of effect. Minor change because of the retention of the surface infrastructure at the exploratory mine site. (See **Appendix 2**)	No change to assessment.
LLCA 25 Beaghmore Moors & Marsh	Figure 6.5	**Moderate** locally (Significant) and Negligible for the LLCA as a whole (Not significant)	**Moderate** locally (Significant) and Negligible for the LLCA as a whole (Not significant)	Minor locally (Not significant) and Negligible for the LLCA as a whole (Not significant)	**Moderate** (Significant) locally, and Negligible (Not significant) for the LLCA as a whole during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Minor (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility apparent from this area, which will not alter the magnitude of change or the level of effect.	No change to assessment.
LLCA 26 Bessy Bell & Gortin	Figure 6.5	Minor locally (Not significant) and Negligible for the LLCA as a whole (Not significant)	Minor locally (Not significant) and Negligible for the LLCA as a whole (Not significant)	Minor locally (Not significant) and Negligible for the LLCA as a whole (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility apparent from this area, which will not alter the magnitude of change or the level of effect.	No change to assessment.
LLCA 29 Sperrin Mountains	Figure 6.5	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	No perceptible change.	No change to assessment.
LLCA 43 Carrickmore Hills	Figure 6.5	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	No perceptible change.	No change to assessment.

Table 2.2: Review of Potential Changes in Visual Effects

Visual Receptor	2017 LVIA Figure No.	Construction Phase	Operational Phase	Closure and Restoration Phase	Potential Effects from Lighting	Potential for Future Cumulative Effects	Updated FEI Figure No.	Potential for Material Change/ Significant Effects	Comment on Implications of Changes to 2017 LVIA Findings
Viewpoints (Main Mine)									
VP1: Farmsteads off Crockanboy Road	Figure 9.1	**Major** (Significant)	**Major** (Significant)	**Moderate** (Significant)	**Moderate** (Significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around mine portal and proposed conveyor, which will not alter the magnitude of change or the level of effect. Conveyor will be visible until the DSF screens the bulk of this by around year 4.	No change to assessment.
VP2: Mullydoo Road	Figure 9.2	**Major** (Significant)	**Major** (Significant)	**Moderate** (Significant)	**Major** (Significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	Figure A9.2a-i (found in **Appendix 1**)	Minor change to componentry around the processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor and transfer towers will be visible until the DSF screens these by around year 4.	No change to assessment.
VP3: Crockanboy Road (B46)	Figure 9.3	Minor (Not significant)	**Moderate** (Significant)	Minor (Not significant)	**Moderate** (significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around mine portal and proposed conveyor, which will not alter the magnitude of change or the level of effect. Conveyor will be visible until the DSF screens this by around year 4.	No change to assessment.
VP4: Aghaboy Road – South of site	Figure 9.4	**Moderate** (Significant)	**Moderate** (Significant)	Minor (Not significant)	**Moderate** (Significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	Figure A9.4a-i (found in **Appendix 1**)	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
VP5: Greencastle Road	Figure 9.5	Minor (Not significant)	**Moderate** (Significant)	Minor (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
VP6: Cashel Rock	Figure 9.6	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
VP7: Aghaboy Road – South-west of site	Figure 9.7	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	Figure A9.7a-i (found in **Appendix 1**)	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be	No change to assessment.

Visual Receptor	2017 LVIA Figure No.	Construction Phase	Operational Phase	Closure and Restoration Phase	Potential Effects from Lighting	Potential for Future Cumulative Effects	Updated FEI Figure No.	Potential for Material Change/ Significant Effects	Comment on Implications of Changes to 2017 LVIA Findings
								visible until the DSF screens these by around year 4.	
VP8: Barony Road (A505)	Figure 9.8	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
VP9: Mullaghcarn	Figure 9.9	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
Viewpoints (Exploratory Mine) – See Appendix 2									
VP1: Camcosy Road	Not assessed in 2017 LVIA							Medium sensitivity and small magnitude of change resulting in a minor effect.	Not assessed in 2017 LVIA.
VP2: Glencullin Road	Not assessed in 2017 LVIA							Medium sensitivity and small magnitude of change resulting in a minor effect.	Not assessed in 2017 LVIA.
VP3 – Gorticashel Road	Not assessed in 2017 LVIA							High sensitivity and small magnitude of change resulting in a minor effect.	Not assessed in 2017 LVIA.
Settlements									
Greencastle	Figure 6.6?	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant) during construction and operational periods, reducing to Negligible (Not significant) following closure and restoration	Negligible (Not significant)	n/a	Minor change to componentry around the portal and processing plant facility, which will not alter the magnitude of change or the level of effect. Conveyor, transfer towers and processing facility will be visible until the DSF screens these by around year 4.	No change to assessment.
Residential Property Groups									
Property Group A	Figure 6.7	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	n/a	No perceptible change.	No change to assessment.
Property Group B	Figure 6.7	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	n/a	No perceptible change.	No change to assessment.
Property Group C	Figure 6.7	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	n/a	No perceptible change.	No change to assessment.
Property Group D	Figure 6.7	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change.	No change to assessment.
Property Group E	Figure 6.7	**Moderate** (Significant)	**Major** (Significant)	**Moderate** (Significant)	**Moderate** (Significant) during construction and operation and reducing to Negligible (Not significant) following closure and restoration.	n/a	n/a	No perceptible change. DSF will screen views of changes.	No change to assessment.
Property Group F	Figure 6.7	**Moderate**	**Major** (Significant)	**Moderate** (Significant)	**Moderate** (Significant) during construction and	n/a	n/a	No perceptible change. DSF	No change to assessment.

Visual Receptor	2017 LVIA Figure No.	Construction Phase	Operational Phase	Closure and Restoration Phase	Potential Effects from Lighting	Potential for Future Cumulative Effects	Updated FEI Figure No.	Potential for Material Change / Significant Effects	Comment on Implications of Changes to 2017 LVIA Findings
		(Significant)			operation and reducing to Negligible (Not significant) following closure and restoration.			will screen views of changes.	
Property Group G	Figure 6.7	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change.	No change to assessment.
Property Group H	Figure 6.7	**Moderate** (Significant)	**Moderate** (Significant)	Minor (Not significant)	**Moderate** (Significant) during construction and operation and reducing to Negligible (Not significant) following closure and restoration.	n/a	n/a	No perceptible change. DSF will screen views of changes.	No change to assessment.
Property Group I	Figure 6.7	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change. Glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
Property Group J	Figure 6.7	Minor (Not significant)	**Moderate** (Significant)	Minor (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change. DSF will screen views of changes.	No change to assessment.
Property Group K	Figure 6.7	Negligible (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change. DSF will screen views of most changes though glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
Property Group L	Figure 6.7	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	n/a	No perceptible change. DSF will screen views of most changes though glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
Property Group M	Figure 6.7	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change. DSF will screen views of most changes though glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
Property Group N	Figure 6.7	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)	Minor (Not significant)	n/a	n/a	No perceptible change. DSF will screen views of most changes though glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
Routes (Main Mine)									
B46 – Crockanboy Road	Figure 6.8	**Moderate** locally (Significant) and Negligible for the route as a whole (Not significant)	**Moderate** locally (Significant) and Negligible for the route as a whole (Not significant)	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	**Moderate** locally (Significant) during construction and operation and reducing to Negligible (Not significant) following closure and restoration.	Negligible (Not significant)	n/a	No perceptible change. DSF will screen views of most changes though glimpses of transfer tower, portal and conveyor may be available.	No change to assessment.
A505 – Barony Road	Figure 6.8	Negligible (Not significant)	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	Negligible (Not significant)	Minor locally (Not significant) during construction and operation and reducing to Negligible (Not significant) following closure and restoration.	Negligible (Not significant)	n/a	No perceptible change.	No change to assessment.
Minor roads within 5km of site	Figure 6.8	**Moderate** locally (Significant) for sections of local road network within approximately 3km	**Moderate** locally (Significant) for sections of local road network within approximately 3km	Minor locally (Not significant) for sections of local road network within approximately 3km	**Moderate** locally (Significant) for sections of local road network within approximately 3km during construction and operation and reducing to Negligible (Not significant) following	Negligible (Not significant)	n/a	No perceptible change. Views of transfer tower, portal and conveyor may be available, but the apparent differences will be minimal.	No change to assessment.

Visual Receptor	2017 LVIA Figure No.	Construction Phase	Operational Phase	Closure and Restoration Phase	Potential Effects from Lighting	Potential for Future Cumulative Effects	Updated FEI Figure No.	Potential for Material Change/ Significant Effects	Comment on Implications of Changes to 2017 LVIA Findings
					closure and restoration.				
Central Sperrins Scenic Route	Figure 6.8	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	Negligible (Not significant)	Minor locally (Not significant) during construction and operation and reducing to Negligible (Not significant) following closure and restoration.	Negligible (Not significant)	n/a	No perceptible change.	No change to assessment.
White Hare Cycle Route	Figure 6.8	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	Minor locally (Not significant) and Negligible for the route as a whole (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)	n/a	No perceptible change.	No change to assessment.
Routes (Exploratory Mine) – See Appendix 2									
Central Sperrins Scenic Route, Cycle Network Route 95 and the Gold Cycle Route	See above.							High sensitivity and small magnitude of change resulting in a minor effect.	No change to assessment.
Vinegar Hill Loop	Not assessed in 2017 LVIA.							High sensitivity and small magnitude of change resulting in a minor effect.	Not assessed in 2017 LVIA.

3 Summary & Conclusions

Summary of Effects of Proposed Changes at Main Mine

3.1 Whilst there will be some changes to a small part of the baseline against which the project is assessed, as well as to the proposed componentry, none of these will significantly alter the likely magnitude of change or the level of effect. The proposed changes will be beneficial in reducing the size or extent of componentry, particularly through the relocation of the crusher beneath ground into the interior of the mine, and replacement of the proposed haul route with an enclosed ground surface conveyor, thus reducing the need for haulage by vehicles across the hillside, with associated vehicle lighting which would previously have been seen during hours of darkness.

3.2 The reduction in size of the processing plant facility will also be beneficial. The landscape and visual effects resulting from the DSF will remain unaltered. Attention has been given to seeking to keep componentry below the skyline, as seen in the majority of views, and to position much of it behind the DSF, which will screen views as it increases in height, after around four years. The proposed conveyor will be located behind an earth bund and will be enclosed, so that any lighting associated with its interior will not be seen. The uppermost new transfer tower at the portal will be apparent in some views but will be a relatively small scale feature in views, given it will lie furthest from potential visual receptors. As with the other buildings, the use of a simple enclosed design, with muted colour tones will assist with its assimilation into the landscape.

Summary of Effects of Exploratory Mine (Surface Infrastructure)

3.3 The study area for the exploratory mine was identified as an area of approximately 2km radius surrounding the existing surface infrastructure. This area includes a section of the Owenkillew River Valley which is characterised by gently undulating slopes and a pastoral landscape with a well-defined field pattern on the lower valley sides. This valley landform restricts longer distance views seen from outside of the valley, to the north or south.

3.4 In terms of effects on landscape character, although there has been a permanent change to the topography (as detailed and assessed in the 2013 LVIA), and some loss of limited areas of open grassland, there will be no further loss of hedgerows or mature woodland and trees, which are an important feature of the South Sperrin LLCA. The location of the site on the lower northern flanks of Mullydoo Hill helps to limit impacts on the rounded summits and valley horizons of the LLCA. The existing exploratory (surface infrastructure) site has been sited and designed to fit within the field patterns, and the overall scale of the development is small within the context of the South Sperrin LLCA. The buildings within the site are located in close proximity to Camcosy Road, and are in keeping with the existing development pattern, with scattered farmsteads and agricultural buildings located to the west and east along this road. Whilst the retention of aspects of the exploratory (surface infrastructure) site means the changes will be in place for longer than previously anticipated, no significant effects on landscape character are predicted.

3.5 The exploratory (surface infrastructure) site is located within the Sperrin AONB. It affects a very small part of the AONB (approximately 1.97ha). The broad ridge formed by Mullydoo, Crocknamoghil and Crockanboy Hill is located at the southern periphery of the Sperrins, marking the transition from the more dramatic and exposed hills and ridges of the Sperrin Mountains and the lower hills to the south. Direct and indirect effects associated with the exploratory (surface infrastructure) site are geographically limited to a small area within the Owenkillew River Valley, on lower ground to the north of Mullydoo Hill. In most views the exploratory (surface infrastructure) site is contained well below the horizon. Vegetation loss (including woodland which tends to be associated with narrow glens and valleys) has been very limited. The retention of infrastructure at the site for an extended duration of c.25 years will not significantly alter these changes, given the restoration of the WRSA will remain, and the fact that vegetation across and around the site will progressively mature over time, helping with its integration into the landscape.

3.6 The assessment of effects on the landscape character of the Sperrin AONB is based on the assessment of the South Sperrin LLCA that covers the extent of the AONB within the study area. Given that the exploratory (surface infrastructure) site results in no significant effects on landscape character within the 24 South Sperrin LLCA, the landscape effects are not judged to *'unduly compromise the integrity of the area as a whole or threaten to undermine the rationale for the designation'*.

3.7 No significant visual effects have been identified from any of the three representative viewpoints or sequential routes (Central Sperrins Scenic Route, Cycle Network Route 95, Gold Cycle Route and Vinegar Hill Loop) considered within the LVIA. In closer proximity views from Camcosy Road, hedgerows and trees retained along the site boundaries help to screen the exploratory (surface infrastructure) site. In longer distance views across the Owenkillew River Valley (which are also representative of sequential views) several factors combine so that visual effects fall below the significance threshold. These include the increased viewing distance; changes being contained below the horizon; screening provided by retained boundary vegetation; and the nature of the exploratory (surface infrastructure) site, as seen in the context of existing development along Camcosy Road.

3.8 In terms of lighting there is some perceptibility of lighting associated with onsite componentry and infrastructure located within the existing surface infrastructure site, experienced during hours of darkness. This is typically experienced in a context were views of subdued lighting associated with housing and farms along Camcosy Road are already apparent.

Conclusions

3.9 The conclusions of the 2017 LVIA for the proposed infrastructure site presented in the Environmental Statement (ES) will not be affected by the proposed changes in the project design, and there would be no change to the findings of significant effects identified in the 2017 assessment.

3.10 In addition, assuming the assessment baseline is the restored exploration (surface infrastructure) site, its retention is not judged to result in any further significant landscape or visual effects. Whilst the effects of its retention would be longer-term (c.25 years), other than the permanent changes to topography and water treatment, as detailed and assessed in the 2013 LVIA by SLR Consulting, they would be largely reversible at the end of the operational phase. Furthermore, once the site has been restored with structures and areas of hardstanding removed; land cover returned to grassland; new woodland planting introduced around the passive water treatment works, the permanent and lasting effects on landscape character and views are likely to be negligible.