

## **Landscape Comments on Planning Application**

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**On Behalf of Forest of Bowland AONB**

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**Ribble Valley Borough Council Planning Application Reference: 3/2021/0661**

### **Haweswater Aqueduct Resilience Project – Marl Hill Section**

**Marl Hill Section. From land northwest of New Laithe Farm off the B6478 Slaidburn Road; and land north of Cross Lane, near Sandy Ford Brook, off the B6478 Slaidburn Road; with highway mitigation works at various locations from Pimlico Link Road, Clitheroe to Slaidburn Road, north of Waddington, via Chatburn Road, Ribble Lane and Grindleton Road; a haul route from land south of West Bradford Bridge to West Bradford Road, west of Healings Farm, West Bradford; a vehicle marshalling facility on land at the Ribblesdale Cement Works, West Bradford Road, Clitheroe and a park and ride facility at the existing Ribblesdale Cement Works car park west of West Bradford Road. Proposed works for and use of replacement section of aqueduct, including earthworks and ancillary infrastructure including: new valve house buildings within fenced compounds with permanent vehicular access provision. With the installation of tunnel shafts; open cut connection areas at either end of the replacement section within temporary construction compounds, to include site accesses, storage areas, plant and machinery, and drainage infrastructure. In addition, a temporary haul route with bridge over the River Ribble (as one of two options for vehicular access to the temporary construction compound); a series of local highway works together with a temporary satellite park and ride facility and a vehicle marshalling area.**

#### **A. Introduction**

I have reviewed the above planning application and associated documents for the Haweswater Aqueduct Resilience Project (HARP) with particular reference to landscape and visual matters for the Forest of Bowland Area of Outstanding Natural Beauty Joint Advisory Committee (JAC).

The proposed HARP works are the subject of several planning applications to be determined by different planning authorities. The comments below relate only to planning application 3/2021/0661 (referred to by United Utilities as the 'Marl Hill Section') to be determined by Ribble Valley Borough Council. Other planning

applications relating to the proposed works will have their own specific impacts and requirements and as such are dealt with in my other responses to the local planning authorities.

The determination of United Utilities application to Lancashire County Council for the disposal of arisings generated by the HARP scheme at Waddington Fell Quarry will have significant implications for the disposal of arisings from the Braddup compound. If alternative disposal locations are necessary, then the landscape and visual impacts of the scheme will need to be re-assessed.

The following elements of the HARP, Marl Hill Section, are required to facilitate the replacement of a 4.3km section of the aqueduct and are the subject of my review and assessment of landscape and visual issues that would likely arise:

### **1) Bonstone compound**

This would be located within the Forest of Bowland Area of Outstanding Natural Beauty (AONB), a landscape of national importance and will connect the existing Haweswater Aqueduct into the new aqueduct. This site would house the reception shaft for the tunnel boring machine which would be driven from the Braddup compound to the south. Surplus tunnel arisings would be temporarily stored within the compound's boundaries and then removed from the site. The compound is located to the south of Newton in Bowland

### **2) Braddup compound**

The Braddup Compound would also be located within the AONB and is the launch site for the tunnel boring machine which would be driven to the Bonstone compound to the north. Surplus tunnel arisings would be temporarily stored within the compound's boundaries and then removed from the site. The compound is located to the north of Clitheroe.

### **3) Off-site highway works**

These would be located within the Forest of Bowland AONB and an area beyond it to the south along road haulage routes which would serve the main construction compounds.

### **4) Parking and access**

A park and ride facility would be constructed within an existing car park opposite the Ribblesdale cement works. There would also be a heavy goods vehicle holding facility within the Ribblesdale cement works.

**As park and ride facility and heavy goods vehicle holding facility would not be in the Forest of Bowland AONB, and their location would make good use of screening provided by existing buildings and vegetation, the AONB and the area which forms part of the setting to it would not experience any landscape and visual effects of moderate significance or above (the threshold at which they would be considered to be materially important). Consequently, no further information on these elements of the scheme is presented in this document.**

## **B. Information Submitted in Support of the Planning Application**

The HARP scheme is a major infrastructure project of at least regional significance, and in support of this the applicant, United Utilities has submitted a large suite of documents with the planning application. My review and assessment of these documents where they relate to landscape and visual issues has identified several weaknesses and omissions which I describe in some detail in this response.

It should be noted that some of the landscape and visual related documentation submitted with the Marl Hill application is the same as that submitted for the Haweswater Aqueduct Resilience Project - Bowland Section 3/2021/0660 which is also to be determined by Ribbles Valley Borough Council. These shared documents cover the Ribble Crossing and Haul Road, and the off-site highway works (south). To view my comments on the documentation submitted in support of these elements of the Bowland and Marl Hill schemes and my assessment of their likely impacts and overall acceptability in landscape and visual terms, reference should be made to my response to the planning application for Haweswater Aqueduct Resilience Project - Bowland Section, application number 3/2021/0660.

It should also be noted that in my response to the Marl Hill Section planning application, I have not commented on the Clitheroe Cement Works aspects of the scheme as they would not have any significant effects on the Forest of Bowland AONB which puts them beyond the scope of my role as an advisor to the AONB's Joint Advisory Committee.

As could be expected when sharing the same documentation, the planning application for the Marl Hill Section of the HARP also 'shares' similar problems relating to a lack of key landscape information necessary for determining overall impacts. These are summarised below:

### **1) Arboricultural Impact Assessment (AIA)**

A detailed tree survey/arboricultural assessment of the areas affected by the offsite highway works has not been submitted.

**Until a full arboricultural survey of all areas that would be affected by the proposals and accurate details of the full impacts on the area's trees have been provided (including accurate numbers of actual tree losses), I recommend that the HARP Marl Hill Section planning application should not be determined.**

As with the other sections of the HARP, the documents submitted with the planning application provide confusing and inconsistent information on the likely number of tree losses and it must be said that the applicant has not attempted to accurately quantify the full extent of losses arising from the proposed works or the effects on trees which could be retained. Reference should be made to my response to the planning application for Haweswater Aqueduct Resilience Project - Bowland Section, application number 3/2021/0660 for a more detailed review of my concerns regarding the effects of the HARP on trees.

As with the Bowland Section, it is hard to make sense of how many trees may be lost as a consequence of the Marl Hill Section. With reference to the planning application documents, the following picture emerges of likely tree losses:

*(please note that due to the use of "could," "at risk" and "approximately" the figures below cannot be relied upon to give an accurate picture of losses or be used to determine the significance of effects of the proposed tree losses)*

a) **Volume 4 Appendix 6.6: Arboricultural Assessment (AIA)**

**Executive Summary**

This confirms in bullet point 5. that, *"It is anticipated that further consideration would be given to at risk and notable features as the design process progresses and engineering constraints are further defined."* This of course places an expectation on the planning authority to approve the application without all of the information it needs to determine the full extent of the proposed Marl Hill Section's effects on trees, woodlands, and hedgerows.

Bullet point 5 also states, *"Overall, the Proposed Marl Hill Section (excluding off-site highways losses reported in Volume 5) could give rise to the loss of 46 tree features falling into all British Standard grades A – U. This is regarded as being a significant effect under the EIA Regulations."*

Once again *"Tree features"* is used but not defined in the document's glossary. Why can we not use the words 'tree,' 'woodland' and 'hedgerow?' I think most people would find that terminology more useful.

b) **Environmental Statement, Volume 2, Chapter 19: Cumulative Effects**

**Table 19.3: Inter-Project Cumulative Effects, United Utilities Developments**

*"The combined potential habitat loss across the Proposed Programme of Works is expected to be over 150 hectares, including... 4.8 ha of young broad-leaved plantation woodland."*

*"Tree Loss. As a result of the overall Proposed Programme of Works there would be approximately 368 individual trees at risk of removal plus 301 tree groups and ten woodlands at risk of varying extents of loss."*

**Table 19.4: Intra-Project Effects**

*"Losses associated with the proposals around the main construction areas of the Bonstone and Braddup compounds in combination with those linked to the off-site highways and Proposed Ribble Crossing would give rise to cumulative effects when considered overall as elements of the wider Proposed Marl Hill Section. A total of 37 features (trees, tree groups and hedgerows) are at risk of removal, and 28 features (trees, tree groups and hedgerows) are at risk of partial removal."*

c) **Volume 5 Marl Hill and Newton-in-Bowland Compounds Highways Works Part I: Environmental Assessment (excluding Ecology)**

**3.1.1 Marl Hill and Newton-in-Bowland Compound Traffic Route Highways Works**

Para 73) *"A total of 13 tree and hedgerow features have been assessed to be at risk of removal, along with 22 features assessed to be at risk of partial removal. An additional 17 features were also assessed as being at risk of removal but with the aim of being retained where possible."*

Irrespective of the confusing data on potential tree losses outlined above, none of this information is a meaningful substitute for a simple table which *accurately states* the number of losses of the following due to the Marl Hill section of the HARP scheme:

- a) veteran trees.
- b) ancient trees.
- c) other tree categories.

The planning application process is sufficiently flexible to respond to and accommodate any changes to figures for the above which may be necessary due to unforeseen problems, design changes, etc. which can occur on large-scale construction projects. Any necessary changes made to a scheme post planning approval which affected the previously submitted tree, woodland and hedgerow losses figures could be reported back to the planning authority and dealt with accordingly.

A RAG assessment system has been used as *"a precautionary approach"* to tree losses. The problem I have with this system is that its value for the off-site highway works in particular is undermined by the fluid nature of this element of the Marl Hill Section scheme. With only a minimal amount of design work being undertaken, much of it being informed without a tree survey, how can we be sure that the worst-case scenario underpinning the RAG system has been considered?

Whilst I have highlighted concerns relating to the accuracy of numbers of trees that would be lost as a result of the HARP scheme, their validity is undermined even further by this from **1.8 Survey Limitations**, *"GPS locations are considered accurate to within 5 m therefore all tree positions must be assumed to be indicative"* and *"Due to restricted safe access, the stem diameter of some trees has been estimated where appropriate."* 5m is a sufficiently large distance to significantly affect the options that would otherwise have been available when trying to determine whether a tree affected by construction works can/cannot be retained.

The AIA does include veteran or ancient trees and the methodology the survey team used is set out in Appendix B.5 **Ancient/Veteran Tree Assessment Methodology**. However, what the AIA does not do is address notable trees and other trees of special interest which is unfortunate as it means that these important cultural and historic resources will not have been considered by the HARP project design team(s). The absence of this category of trees from the survey is surprising given that reference is made to them in Appendix B.5, *"some systems have been published and used to formalise surveying of... notable trees."* Whilst there is no recognised method to survey notable/special interest trees such is their importance, they cannot be ignored. It should be noted that there is also no recognised method for surveying veteran/ancient trees but despite this, the AIA does identify them using a reasonable set of survey criteria.

The information provided in **3.4 Quantitative Results of the Tree Survey** is useful, but it must be borne in mind that it was informed by the requirements of BS5837 which was published back in 2012. As we are now facing a climate change emergency/catastrophe due in part to tree removal, it must be said that the tree categorisation process used in BS5837 must now be treated with caution to avoid unnecessary losses of trees. Trees play a vital role in absorbing carbon dioxide emissions and oxygen production, factors which are not given due consideration in the largely horticultural categorisation criteria used in BS5837. This for example from para 41) of the BS is no longer appropriate in my opinion, "*B' grade trees are of moderate quality and value... care should be taken to avoid misplaced retention.*" In my career I have seen hundreds of trees removed not because they were literally in the way of development but because they were deemed sub-standard when assessed against quite narrow arboricultural criteria.

In the context of the climate emergency that we face, judgements made on tree removal must take account of the role trees play in helping to tackle this existential threat. Therefore, I recommend that when determining this planning application, the local planning authority should be guided by a principle that **all trees** are key, and in many cases irreplaceable environmental features which in addition to their value in landscape and biodiversity terms play a crucial role in combating the adverse effects of climate change. In the context of this broader and more 'holistic' approach to trees, I also recommended that tree removal should only be deemed acceptable if the applicant can demonstrate that all reasonable options for avoidance and retention have been exhausted.

**Table 1.8: Follow up arboricultural input relating to the proposed development** recommends a range of actions but surprisingly not a tree survey for the off-site highway works or more accurate location fixing of the trees so their positions can be regarded as actual rather than indicative.

Sometimes with technical documents, the terminology used can reduce accessibility especially for lay people within the communities that will be most adversely affected by the proposed scheme's landscape and visual impacts. With this in mind, I have to say that some of the AIA terminology could be more user friendly. 'Tree features' (not listed in the document's glossary) and 'features' should not have been used in place of 'trees' and the reference in para 7) of **1.4 Deliverable Scope** that trees "*should be taken to include individual trees, woodland, tree groups and hedgerows where appropriate*" is not helpful.

## **2) Off-site Highway Works**

Para 35) **Volume 2 Chapter 1: Introduction** confirms that "*As the off-site highways works were developed at a late stage in the EIA programme, it was necessary to report these a separate volume (Volume 5).*"

According to para. 33) of **4.6 Data Limitations and Technical Assumptions (Chapter 4: EIA Methodology)** "*the design is limited to that sufficient to inform the EIA process and design details will continue to evolve, up to and including the detailed design stage. To enable the level of design to be developed in sufficient detail to inform the EIA a number of assumptions have been made in advance of*

*detailed design by a design and build contractor.*" This is understandable but, given the location of the off-site highway works (and the launch/reception compounds) **within** the Forest of Bowland AONB, there has to be an appropriate balance struck between assumptions made and actual details of what will be carried out being provided. As the applicant has got the balance wrong on this occasion (no tree survey for the off-site works), the planning authority is placed in a difficult position in that it is expected to determine the acceptability of proposals which would affect a nationally important landscape without full details of their likely effects on one of the key features of its landscape character.

When viewed against the considerable engineering challenges posed by the tunnel boring works and taking account of the fact that the local country lane network provides few route options, it does not seem unreasonable to expect the relatively simple off-site highway works to be developed in full in conjunction with the tunnelling design so that their environmental effects could be considered by the local planning authorities both at the pre-application and planning application stages rather than much later as the applicant expects.

What information the applicant has provided with the planning application on the off-site highway works lacks detail and as indicated above has not even been informed by critical survey work such as a tree survey which undermines the validity of assumptions the applicant has made. The number of trees that may be affected by the off-site highway works is a concern and with this in mind it would not be appropriate to determine the planning application without tree specific information on losses, crown raising, pruning, etc.

### **3) Consideration of Design Options**

***Volume 2 Chapter 3: Design Evolution & Development Description*** seems to be the main source of information submitted with the HARP planning application which explains the iterative process United Utilities have used in developing and designing this scheme. Unfortunately, this information lacks detail and as a consequence – and despite repeated requests during pre-application stage meetings with United Utilities for option assessment information – I am still not sure why many elements of the scheme would be located where they are currently proposed.

At the pre-application stage United Utilities gave repeated assurances that a rigorous options assessment process was being used to find appropriate locations for the various sites and that full details of this would be submitted with the planning application for the HARP scheme. However, except for the case for locating the HARP scheme Marl Hill section within the AONB, which is compelling, the information which has now been submitted does not provide the details of the assessment and 'optioneering' process that I had expected and need to see – only a brief overview has been submitted.

This gives me a serious problem in that I am unable to fully explain to the AONB Joint Advisory Committee the precise reasons why certain sites have been selected, which ones were ruled out and why and, whether the chosen sites are optimal in landscape and visual terms. We have been very much presented with a fait accompli supported by scant details of the selection/elimination process used to choose the

aqueduct route and final sites for the compounds, off-site highway works, etc. In my opinion, given the national significance of the AONB landscape and the fact that some of its special characteristics would likely be affected by the proposed HARP scheme, this lack of transparency is unacceptable.

Of particular concern regarding the dearth of information alluded to above, are the following:

- I accept that the HARP scheme must be located in part within the AONB and the process – described in brief outline only – used by the applicant to justify this key decision appears to be robust. However, what is disappointing is that from the information provided, it is not possible to determine the weight the applicant attached to landscape and visual considerations in the decision-making process.
- Para. 21) of **3.2 Consideration of Alternatives**, confirms that the applicant's decision-making approach was informed by multi-criteria analysis that included 'environmental impact.' However, no information is provided on whether any landscape criteria were used to inform judgements made on likely environmental impacts. The summary provided in **Table 3.1: Outcome of the Robust Decision-Making Process** makes no reference to any landscape and visual issues. Para 23) states that *"to support United Utilities' decision making, the solutions were subject to Environmental and Social costings, Strategic Environmental Assessment"* but these crucial documents are not available to view and at the pre-application stage there was no opportunity to review and comment on them. With regard to Option D, this *"was ultimately selected as the preferred option as it delivers the long-term resilience benefits and delivers the best value to customers."* As this confirms that Option D was selected primarily for commercial reasons, there is no way of knowing what weighting was applied to likely landscape and visual impacts against these and of the 9 options considered and whether D fared best in landscape and visual terms.
- Section **3.4 Design Evolution** confirms, *"Route alignment was defined though an assessment process as described in Section 3.4.1"* but little information on this 'process' is provided. Para 35) states that an appraisal of the route alignment options was undertaken, and this included a *"review of the information from an environmental... perspective"* but again no details of this are provided. From this process, we are informed that Option 4B was taken forward to the EIA and design stages but, from the information provided, it is not clear what landscape and visual factors were considered and the weighting applied to them when making this choice. In the absence of any information on whether landscape and visual issues were even considered, my concerns about whether commercial pressures wholly dictated so many of the decisions made on the choice of alignment are not allayed by **Table 3.2: Route alignment options for the Proposed Marl Hill Section** as the information provided with each option relates to the need to maintain minimum cover only.

#### 4) HARP Scheme Programme



The indicative programme provided in **3.7 Construction and Commissioning of Volume 2 Chapter 3: Design Evolution and Development Description** conflicts with information provided elsewhere in the planning application documents. In addition, para 84) confirms that **Illustration 3.7: Indicative construction programme** does not include reinstatement works, which *"may continue for several years beyond the completion of construction."* No timescale is provided for the reinstatement works and no reason is given for their omission. It also seems that illustration 3.7 does not include for connection and commissioning works, the timescales for which are also not provided. Illustration 3.7 is also light on detail regarding the various elements of the scheme – all it does is focus on the HARP scheme's sections rather than the various projects within them. United Utilities will have produced detailed work programmes for their own purposes so why not submit them? It would have been helpful too if the applicant could have explained why the Bowland Section would likely take 5 times longer to complete than the Marl Hill Section. Obviously, there is more tunnelling involved, but *5 times longer* to complete?

Para 87) refers to decommissioning of the existing aqueduct but other than a commitment to commence this *"as early as feasible following completion of the connection and commissioning works"* programme details are sketchy.

Clearly much more – accurate – information is required regarding timescales for all stages of the HARP scheme before the application can be determined.

## 5) Commissioning

Para. 94) **3.8 Commissioning of Volume 2 Chapter 3: Design Evolution & Development Description** states that *"multi-line to multi-line connection has been assumed on the basis that it represents the reasonable worst-case scenario with regard to area of land required and depth of excavation."* This may or may not be the case, but were any landscape and visual factors considered during the analysis and assessment of the two options and, which of them would likely be more acceptable in landscape terms taking account of site location, visibility, opportunities for mitigation, etc? In the absence of this information, it is difficult to make judgements on the acceptability in landscape and visual terms of the two options.

As with so many components of the proposed scheme, para. 92) confirms that *"it is not possible at this stage of design development to confirm which of the two approaches might be adopted."* Is this an appropriate approach for a major infrastructure project situated within – and I make no apology for repeatedly labouring this point – an AONB, the landscape of which is of national importance?

## 6) Land Reinstatement

According to para. 96) of **3.8.3 of Volume 2 Chapter 3: Design Evolution & Development Description** *"Access tracks would be reinstated to the original land on completion of the commissioning works with agreement of the landowner."* Even when surfaced with local stone new access tracks can appear as manmade scars in the rural landscape. Any tracks created for the proposed HARP scheme should be

removed upon completion of the construction and commissioning works and the land reinstated to its original appearance to maintain the area's landscape character.

## **7) Decommissioning of the Existing Asset**

**3.8.5 Decommissioning of the Existing Asset of Volume 2 Chapter 3: Design Evolution & Development Description** does not contain any information on the landscape and visual issues relating to this important component of the HARP project. Para. 100) confirms "*A future maintenance and usage strategy for the redundant sections of aqueduct is being prepared*" but not even outline details of this are provided. Of most concern in landscape and visual terms is whether any sections of the decommissioned aqueduct would be removed or brought into some form of commercial use.

**For these reasons, before the HARP planning application is determined, I recommend that the applicant provide more information on the future proposals for use/removal/abandonment/mothballing of the decommissioned aqueduct.**

## **8) Embedded Mitigation and Good, Volume 2 Chapter 6: Landscape and Arboriculture**

Please refer to my response to the planning application for Haweswater Aqueduct Resilience Project - Bowland Section, application number 3/2021/0660 for comments on this aspect of the scheme as they are equally applicable here.

## **9) Volume 2 Chapter 6: Landscape and Arboriculture**

The applicant's assessment of the likely significant effects of the Proposed Marl Hill Section on landscape and visual receptors and arboricultural features is generally a robust and well executed piece of work. My main concern is that the off-site highway works have not been included in the assessment. Irrespective of the applicant's timescale issues and work procurement model, the relative simplicity of these works especially when compared to the technically complex tunnelling operations and aqueduct construction mean that it is not unreasonable to have expected off-site highway works and the Ribble crossing and haul road to be developed in conjunction with them and included within the landscape and visual receptors and arboricultural features assessment.

Para. 73) of ***County- and District-Level Landscape Character Assessments*** confirms that "*LCTs have been excluded from this assessment due to their broader geographical extent and occurrence across multiple geographical locations.*" I do not think that this is an appropriate approach.

I accept that LCA's are useful for determining localised effects on landscape character, but assessment against LCT's should also be undertaken. As LCT's have a broader geographical extent and occur across multiple geographical locations, an assessor can determine the combined extent of the more localised effects of change within the smaller LCA's to help determine the overall extent of change, i.e., at the LCT scale. I am not advocating the abandonment of assessing effects on LCA's -

their combined effects on the LCT's need to be included to provide a balanced assessment of the HARP scheme's effects on landscape character.

During the operational phase year 15 (ref, **Volume 4 Appendix 6.4: Schedule of Landscape Effects**) the assessment considers that residual effects arising from the introduced structures, fencing, hardstanding, etc. would be of negligible significance despite describing the change as "*Barely perceptible.*" I do not agree with this as the changes made to the landscape are essentially permanent and would, depending on the location of the viewer and position of view filtering landscape features, always be visible. In such circumstances, these residual effects cannot be described as negligible – slight or minor adverse would be more appropriate in my opinion.

## **10) Off-site highway works landscape and visual impact assessment**

These works are not covered by the landscape and visual impact assessment within the application's Environmental Statement. Landscape and visual issues have been considered in **Volume 5 Marl Hill and Newton-in-Bowland Compounds Highways Works Part I: Environmental Assessment (excluding Ecology)** but there is not the depth and detail required and as such this work is not an adequate substitute for a full landscape and visual impact assessment.

I have concerns regarding the following information provided in **Table 2: Technical Assumptions, Data Limitations and Embedded Mitigation**:

- *"The assessment of landscape and visual effects was undertaken based on a reasonable worst-case scenario of full clearance of landscape features within the planning application boundary at each location."* It is difficult to determine in the absence of a tree survey and accurate data concerning tree root protection areas whether this really would be the worst-case scenario.
- *"The assessment was based on a scenario of reinstatement and mitigation measures that would reasonably be expected for works of this nature. Such measures included... Trees reinstated at a minimum ratio of 3:1 for each tree removed."* As explained in my response to the planning application for Haweswater Aqueduct Resilience Project - Bowland Section, application number 3/2021/06601 this would be inadequate reinstatement for certain types of trees.
- *"The Proposed Bowland Section off-site highways works arboricultural assessment was based upon a fixed design."* I cannot see an arboricultural assessment for these works. Only one has been provided for the Braddup and Bonstone compounds.
- *"however there is potential for additional construction details to become available at detailed design stage. Examples of additional elements / construction detail may include:*
  - *The provision of full topographical survey of existing tree stems and vegetation extents within the assessment area."*

This information should have been available at this stage of the planning process. Its absence means that the planning authority would have to approve

the application before a full assessment of the scheme's effects has been completed. This is not acceptable in principle. Detail matters can be resolved post approval but only if fundamental issues concerning overall impacts have been deemed acceptable in the first place.

## 11) Compound boundary fencing

In para. 103) of **6.6 Assessment of Likely Significant Effects of Volume 2 Chapter 6: Landscape and Arboriculture**, there would be "2.4 m high branded hoarding around compound areas." The design of this will need to ensure that it does not resemble something used within an urban area complete with garish colours, corporate branding, etc. as this would be inappropriate for the AONB location. There is no landscape capacity within, for example, the Bonstone Compound area for a large urban style construction compound – the design of site elements like hoarding must take account of the highly sensitive landscape context.

## 12) Volume 2 Chapter 19: Cumulative Effects

The methodology used to undertake the assessment of cumulative effects is provided in 19.4 Assessment Methodology. This methodology does not explain whether the significance of cumulative effects at the different stages of the HARP project was assessed and over what timeline the whole process was focused on. Consequently, it is not clear which stage of the project the presented judgements on cumulative effects actually relate to which greatly limits the assessment's value.

Para 21) of **19.5.1 Stage 1 Inter-Project Effects (Local)** advises that "*Table 19.2 presents a list of the proposed local developments that were selected from the long list for further consideration in the respective topic chapters of the ES.*" Even though this table is supposed to relate to chapters 6 – 18, no reference is made to local developments that would have been assessed by the team which produced **Chapter 6: Landscape and Arboriculture**. In addition, it is not clear why the local developments listed in Table 19.2, especially those relating to biodiversity, would likely not have any cumulative landscape and visual effects with the Marl Hill Section works.

**Table 19.3: Inter-Project Cumulative Effects** sets out details of tree losses: "*Tree Loss. As a result of the overall Proposed Programme of Works there would be approximately 368 individual trees at risk of removal plus 301 tree groups and ten woodlands at risk of varying extents of loss. Given the regional scale of the combined developments and the extent of likely tree loss across this large regional area, this combined effect is not considered to constitute an additional potentially significant effect.*" The problem with the numbers provided is that they are caveated with "at risk," i.e., they are merely a forecast which could of course at a later stage be found to have significantly underrepresent the true overall losses. In addition, it is not clear what elements of the scheme are included within the "*overall Proposed Programme of Works.*" As we are dealing with potentially significant tree losses on a scale not seen within the AONB for a generation, much more accurate tree/woodland loss data should have been provided.

It should be noted that for effects of the proposed scheme on biodiversity, 4.8 ha of young broad-leaved plantation woodland loss is identified – compare that with this vague information on woodland losses in table 19.3, "*ten woodlands at risk of varying extents of loss.*"

In the absence of accurate data on tree/woodland losses likely to result from the HARP scheme, it is difficult to see how the applicant can claim that these combined effects are "*not considered to constitute an additional potentially significant effect.*" Furthermore, it is not clear what threshold the applicant used to determine the significance of these 'forecasted' losses and whether for example any weight was attached to losses of key environmental features such as veteran and ancient trees and, ancient woodland.

If the actual numbers of tree/woodland losses are not known, then it seems premature and risky to make judgements on the acceptability of cumulative landscape and visual impacts based solely on estimated numbers. In effect, this places the local planning authorities in a difficult position as if they were minded to approve the HARP scheme this would have to be done on the basis that full details of cumulative tree/woodland losses would only be available for review and assessment after the decision had been made. It would then have to be hoped that the final details of tree/woodland losses were subsequently found to be acceptable in landscape and visual terms, not to mention biodiversity too. In this situation, it would not be unreasonable to expect members of the local community to ask what would happen if – post granting of planning permission – the subsequent assessment work found that the losses were unacceptable in landscape and visual terms?

From my experience I have found that it is possible to work out with a high degree of accuracy losses arising from major infrastructure projects before the scheme's planning application is submitted – it just requires suitable tree surveys and a lot of detailed design work based on knowledge of root protection areas, tree significance, etc.

Similar tree/woodland data problems also occur with the proposed off-site highway works as in **Table 19.4: Interaction with Off-Site Highways Works** the numbers of likely losses are also caveated with the words, "*at risk.*" This table also confirms that the cumulative effects on landscape, visual and arboricultural resources "*are judged to be 'significant' in the context of the EIA Regulations.*" This creates a degree of confusion as in Table 19.3 which, looks at inter-project cumulative effects, the applicant is of the view that "*likely tree loss ... is not considered to constitute an additional potentially significant effect.*"

### **13) Volume 5, Newton-in-Bowland and Marl Hill Compounds Highways Works, Part I: Environmental Assessment (excluding Ecology)**

Para 2) identifies the following documents that make up Volume 5 Part 1:

- "*Figure P1.1: Master Plan (RVBC-BO-FIG-V5-P1-001) - an overview key plan identifying the specific locations of each of the off-site highways works locations.*"

- *"Figure P1.2: Environmental Assessment Figures (RVBC-BO-FIG-V5-P1-002, Pages 1-33) - a set of detailed environmental assessment reporting sheets covering each of the off-site highway works locations."*

These drawings provide some information on the off-site highway works but then so do drawings RVBC-BO-APP-004-12\_01 Highways Works Proposals Sheets 1 – 12 which are not referred to in para 2).

Para. 4) confirms that whilst *"any likely significant effects identified in this report have been included in the concluding sections of each topic chapter of the main ES,"* Volume 5 Part II comprises an ecological assessment of the proposed off-site highway works. In my opinion, the off-site highway works should have been included in full in the landscape and visual impact assessment.

As highlighted throughout my comments, a recurring weakness of the application documents relating to options assessment at macro and site level scales is a lack of detailed supporting information and a sufficient level of detail design to enable the local planning authorities determine the full extent of likely landscape and visual impacts. The latter is acknowledged to some extent in para. 11) of **1.2 Design Evolution** which states *"it is likely that the extent of the construction areas and construction easements assessed in this report may be greater than will be required... it does create some uncertainty around the exact nature and scope of impacts and losses at some locations along the construction access route."* These outcomes are inappropriate for sites located within a highly sensitive and nationally important AONB landscape.

Para. 43) of **2.1 Introduction** highlights *"that within the available timescales it was only possible to enter into a limited iterative design process to allow for design optimisation against identified environmental constraints."* This is useful information, but it does not explain the reasons why the timescales were such that the applicant was unable to design of the HARP scheme to a level which enables the local planning authority to determine the full extent of likely landscape and visual impacts.

In para 43) the applicant also tries to make the case that despite the timescales and the lack of detailed design the adoption, in many cases, of a *"parameters-based approach, based on reasonable worst case envelopes"* effectively compensates for this even claiming that *"this approach has the drawback of over-estimating anticipated likely significant effects in some cases, for example, in relation to estimations of tree losses and consequent landscape impacts."* In the absence of information and the lack of certainty over the numbers of tree losses, it is difficult to determine whether any 'over-estimating' has been done. Regarding the off-site highway works for example, this seems very unlikely as the applicant confirms in para. 11) of **1.2 Design Evolution** that the very opposite would occur: *"it is likely that the extent of the construction areas and construction easements assessed in this report may be greater than will be required."*

More uncertainty and the applicant's requirement for the planning authority to consider likely landscape and visual impacts after the planning application has been determined is referred to in para. 60) of **2.5.2 Arboricultural Impact Assessment** which confirms that *"mitigation and reinstatement plans are not proposed at each*

*location. Instead, where potential tree impacts are indicated on the reporting sheets, these would be re-appraised at the detailed design stage in consultation with relevant LPA officers."* Such an approach could at quite a late stage of the planning process place the local planning authority in a difficult situation as:

- a) the identified effects may be deemed unacceptable.
- b) it may not be possible to provide adequate mitigation/compensation for the losses due to, for example, a lack of space within the highway.

According to **Table 2: Technical Assumptions, Data Limitations and Embedded Mitigation**, *"Zone of Theoretical Visibility (ZTV) modelling was not undertaken as the modelling points across each of the many proposed off-site highways locations would overlap."* Surely this is precisely why ZTV mapping should have been carried out so the likely cumulative visibility of all the proposed off-site highway works could be assessed? Cumulative ZTV mapping is widely used for example with wind energy developments where numerous visibility zones from different wind farms overlap.

**Table 2: Technical Assumptions, Data Limitations and Embedded Mitigation** also confirms that *"The operation of compounds and highways construction activities would be undertaken during daytime hours only, with no requirement for temporary task lighting during nighttime hours."* To ensure this is maintained, I recommend that should the planning authority be minded to approve the Marl Hill Section scheme planning application then, amongst other things, it should be subject to a requirement to undertake the construction activities in daytime only as described in Table 2.

#### **14) Volume 2 Chapter 3: Design Evolution and Development Description**

In **1.2 Design Evolution** the applicant confirms, *"the proposed works have been developed to a sufficient level of detail for the purposes of a full planning application and to enable an environmental assessment of their likely significant effects."* I cannot agree with this due to the weaknesses and omissions that I have outlined above. The lack of detail on the project's options appraisal, absence of key arboricultural information, a suite of off-site highway proposals which are barely beyond the concepts stage and the lack of certainty over the scheme's effects on the area's trees and woodlands mean that except for the Lower Houses compound and Wray satellite compound, there is insufficient detail for the purposes of a full planning application.

The applicant is aware of this and recognises that the extent of the construction areas and construction easements assessed in the Environment Statement may be greater than will be required. However, this again places the planning authority in a difficult position as it is effectively being asked to determine a major infrastructure project within a nationally important and highly sensitive AONB landscape without being able to assess all of its likely landscape and visual impacts due to the planning application lacking detail and containing scheme elements that have not been designed in any real detail.

#### **15) Newton and Marl Hill Off-site Highways Works, Environmental Assessment Figures 1 to 33**

The usefulness of these sheets is limited by a lack of information, particularly with regard to tree, shrub, and hedgerow root protection areas. There is no distinction between these features graphically on the plans/aerial photographs, e.g., light red coloured hatched areas are identified in the key as "*Tree group/Woodland/Hedgerow Feature to be Removed.*" These should have been identified separately as their susceptibility to construction works is not the same due, for example, to big differences in the size of their root protection areas.

The descriptions of the proposed works and associated mitigation/reinstatement are too vague and seem to have not been particularly well thought through in landscape and visual terms. Where receptors are identified as likely being significantly affected by the highway works, it is not clear why others within similar distances of these works are not even referred to. It is tempting to assume that this is because there would be no visual impacts on these other receptors – which seems unlikely given their close proximity to the works – but it is not for the planning authority to make these assumptions or 'fill in' the missing gaps in the applicant's landscape and visual impact assessment.

As the level of information provided on the effects of the proposed highway works is lacking in detail, it is not possible to determine whether the study areas shown on sheets 1 – 33 are sufficiently large enough for landscape and visual effects to be adequately assessed. Highway works can have significant adverse visual effects at distances of at least 0.5 – 1.0km from a road's centreline especially when seen in combination with others. With reference to sheet 2 of 30 for example, it can be seen that the extent of the area shown in the aerial photograph drops to as little as 0.25km away from the road centre line which may be an insufficient distance to ensure that all of the highway works likely significant landscape and visual impacts have been captured. Had full details of the proposals been provided then it would be much easier to determine whether the study area was sufficiently large enough.

In addition to the above, the following are typical examples of other problems evident in many of the drawing sheets:

#### Sheet 1 of 33

Road widening would be undertaken within the canopy of existing trees which are identified as "*Individual tree to be retained with protection measures.*" No details of the protection measures are provided but if they were in accordance with BS5837, then the road widening work would have to be undertaken within the tree's fenced off root protection area. The excavation required for the road widening and hedgerow removal would result in tree root loss and adverse effects on many of those retained. In such a scenario it seems very unlikely that these trees could be retained. Whilst these comments are by necessity speculative due to a lack of information, e.g., tree survey, what is certain is that there is insufficient information to determine whether these trees could/could not be retained within the scope of the proposed road widening works. As no site specific options appraisal information has been provided there is no way of knowing whether the site chosen for road widening has to be where it is – location just a few metres further north or south for example would have avoided the existing tree's root protection area altogether. This issue highlights the problem I have flagged up above regarding the applicant's view that the assessment



of landscape and visual effects of the proposed off-site highway works is based on a reasonable 'worst-case' scenario. This is unlikely as on this one sheet for example, we can see that the worst case scenario has not been considered as trees have been identified for retention where there seems to be little chance of them actually being retained due to the close proximity of the proposed road widening.

In the ***Mitigation / Reinstatement*** column of the drawing's table, the applicant has deemed that regarding the proposed hedgerow removal, there is *"No mitigation required."* This is not acceptable and not in line with the commitments to replace vegetation removed for the Marl Hill Scheme works stated in other documents submitted with the planning application, e.g., ***Volume 5, Newton-in-Bowland and Marl Hill Compounds Highways Works, Part I: Environmental Assessment (excluding Ecology)***.

Sheet 5 of 33

The highway works are described vaguely as *"Road Widening (RW.)"* Whilst there is no detail provided on what these works will entail the applicant confirms that there would be an *"Individual tree to be removed"* and the removal of a *"Tree Group/Woodland/Hedgerow Feature."* In response to these losses the drawing confirms *"No mitigation required."* This clearly contradicts the approach stated in other documents submitted with the planning application, e.g., ***Volume 5, Newton-in-Bowland and Marl Hill Compounds Highways Works, Part I: Environmental Assessment (excluding Ecology)*** and the approach stated on the Lower Houses Compound off-site highway works drawings 1 – 30 which was, *"tree and shrub planting to replace any removed vegetation."*

As an *"Individual tree"* and a *"Tree Group/Woodland/Hedgerow Feature"* would be removed, the size of the assessment area shown – considerably less than the 500m radius study area referred to in other planning application documents – it is doubtful whether all of the likely affected receptors have been considered. It is not clear why such a small study area was selected.

Sheet 6 of 33

This drawing shows that a passing place would be constructed directly within a tree's likely root protection area. If construction of this passing place would involve excavation, then it is inevitable that the existing tree would see root loss and ground compaction within its root protection area with all the adverse consequences this brings for survival and long-term viability. Despite this the tree is identified in the drawing as a *"Feature at Risk of Removal but Aiming to Retaining."* Although no tree survey information has been provided it does seem likely that there is little chance of the tree being retained unless the passing place is relocated. As no options assessment information has been provided it is not clear whether the passing place could have been located a few metres to the south to avoid impacts on the existing tree. In addition, as with the other drawings the proposed mitigation for the loss of these features is, *"no mitigation required."* This is not acceptable for a site within an AONB.

The following is stated on sheets 1 – 33, *"Effects on arboriculture are instead reported in Volume 5, Off-Site Highways Works, Part 1: Environmental Assessment"*

(excluding Ecology) report" but a review of this document shows that there is nowhere near the level of detail that should have been provided.

Where individual trees have been identified on sheets 1 – 33, the value of this information is limited as the following key survey information has not been provided:

- a) Tree Category.
- b) Species, height, age, condition, etc.
- c) Root protection areas.

Item c) from the above list is particularly important information that must be available to the local planning authority before the application is determined. This is perhaps best illustrated with reference to sheet 19 of 33 which illustrates proposals for widening Slaidburn Road. Existing trees are in close proximity to the western edge of Slaidburn Road, especially in the vicinity of the area where road widening is planned.

As can be seen in the screenshot below from sheet 19, these trees are not marked with any graphic symbol indicating for example the extent of their root protection areas even though it is likely that road widening works would be within them. The absence of any graphic symbol overlaid on the existing trees suggests that the applicant intends to retain these trees, presumably based on an assumption that they will be unaffected by the road widening works. However, in the absence of tree survey data this could only be an assumption at best. Given the location of these trees within the Forest of Bowland AONB and their close proximity to a residential receptor it would be inappropriate to expect the local planning authority to make judgements on the acceptability of these road widening works without the basic survey information needed to determine if any of the roadside trees would be directly affected.



## 16) Volume 4, Appendix 3.2: Construction Code of Practice

In section **2.3 Key Environmental Personnel** it would be helpful if the minimum level of qualification/experience required was stated. Information should have been provided on how the applicant will monitor the principal/sub-contractor's performance and ensure that landscape and ecology mitigation/compensation work comply with the required standard. It is important that this information is provided as on many large-scale construction contracts, the standard of landscape mitigation works if completed at all, can be very poor. Landscape mitigation/compensation works are

usually undertaken towards the end of a construction contract when budgetary pressures can be a significant issue. Over reliance on use of sub-contractors who often sub-let the work to other sub-contractors can affect the quality of materials/workmanship too.

Reference is made in para 2.6) to the scheme's Construction Environmental Management Plans but little information has been provided on them and I cannot find them in the planning application documents. The applicant advises that the Contractor would produce and implement site specific Construction Environmental Management Plans but just 3 sentences are provided on what these documents might contain. I presume that the applicant is expecting this matter to be resolved through a planning condition. This would only be a workable outcome if much more detail of the plan's contents was provided at this stage.

No landscape specific issues and requirements are referred to in the general principles listed in para 31) of **General Housekeeping and Construction Site Layout**. Decisions on these aspects of the construction scheme should be informed by landscape and visual considerations.

As the working areas will be within an AONB, temporary hoardings, fencing and screening should be designed to a high standard and located carefully to minimise their landscape and visual effects. It would not be appropriate to use the same type of fences/screening used in say, for example, an industrial estate within an urban area.

Given the highly sensitive AONB location it is important that visual clutter is kept to a minimum so CCTV/lighting should use shared columns where possible.

Para 44) in **5.2.1 Landscape Management – General Provisions** provides some information on height of temporary topsoil storage mounds but nothing on hard landscape elements such as fences, hoarding, lighting, CCTV, etc. It is essential that the applicant's landscape architects have an input into the specification, location, and mitigation of likely effects of these industrial features.

Para 47) in **5.2.2 Tree Works and Protection of Trees**, contains a list of important measures but leaves out arguably the most important one which is provision of fencing along the boundary of a tree's root protection area.

Of concern is this in para 48) of **5.2.3 Tree Planting and Landscaping**, "*Trees intended to be retained which die as a consequence of construction works.*" With appropriate protection no trees should die because of the construction works.

Unfortunately, the applicant has no real commitment to undertake mitigation planting in advance of the main contract thus losing valuable establishment time. No reasons have been given as to why this decision was made.

The 'temporary' soil storage proposals are a cause for concern principally due to the length of time involved and the height of the stockpiles.

**5.6.2.4 Soil Storage** confirms "soils are likely to be stored for up to six years at construction compound sites." Topsoil when stored above ground for such a length of time will undergo potentially damaging biological, chemical, and physical changes. And this would of course be on top of the damage done to the soil when it is transported and formed into stockpiles. No exact heights are stated for temporary soil stockpiles but there is confirmation that they "would not exceed 4 m for topsoil and 6 m for subsoil." This is too high and would result in compaction and anaerobic conditions developing at the core of stockpiles.

The measures proposed in **5.6.2.5 Soil Reinstatement** would not fully address the adverse effects arising from changes brought about by the proposed soil stockpiling method.

I recommend that the applicant provide a more detailed work method statement for soil stripping, stockpiling and placement before the application is determined so that certainty regarding the sustainable use of soils can be obtained. It is especially important that these issues are resolved at this stage of the HARP project because they have important implications for the size of the construction compounds.

#### **17) Volume 4 Appendix 20.2: Planting Proposals**

To maintain local biodiversity and landscape character, I recommend that new planting is grown from native seed sourced from an appropriate seed zone.

In section **1.2.2 Proposed Native Woodland Planting** the applicant states an intention to plant coniferous species "to aid visual screening." According to **Table 2: Proposed Native Woodland Planting**, Scots pine is the proposed conifer. This is not appropriate for the area's landscape character and Scots pine is threatened by a serious disease, Dothistroma needle blight. As there are issues regarding fit with the local landscape character and the risk of spreading a dangerous tree pathogen, I recommend that Scots pine is avoided.

Section **1.2.3 Proposed Reinstatement of Native Hedgerow** does not provide any information on translocating existing hedgerows. Why is this option not being used? Are the existing hedgerows not worth translocating?

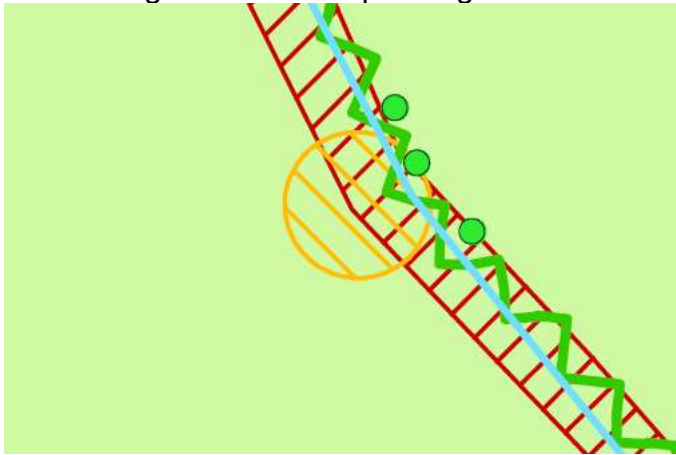
The planting schedules indicate that the applicant intends to plant bare root stock. As some of the planting locations are in elevated windswept locations and likely to have thin soils, consideration should be given to planting cell grown stock rather than bare root as it is more resilient and easier to establish.

#### **18) Bonstone and Braddup Compounds Environment Masterplan Drawings 1 – 4**

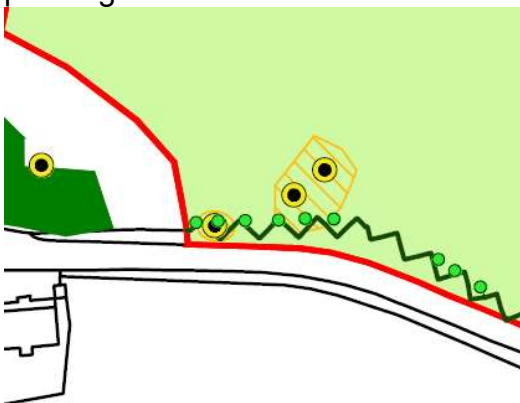
None of the drawings have specific titles that relate to the name of the site they are covering, e.g., Bonstone Compound. Just a generic title, 'United Utilities Water Limited Haweswater Aqueduct Resilience Programme Environmental Masterplan' has been provided on all the drawings, maps, etc. Consequently, lay people will have to rely on their plan/map reading skills to determine which site is which.

The proposals regarding existing vegetation do not differentiate between trees or shrubs. Everything is lumped together under the words, "*Existing vegetation.*" It is possible to determine what the various existing vegetation 'shapes' are with reference to the tree survey, but for ease of use, the different types of vegetation should have been clearly labelled on the environmental masterplans.

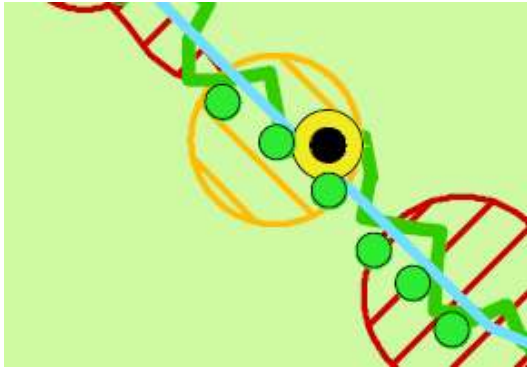
The approach to what will or might be removed is inconsistent. As can be seen in the screenshot below from page 2 of 4, one plant (a tree?) is shown at risk of removal even though it lies within planting which would be removed.



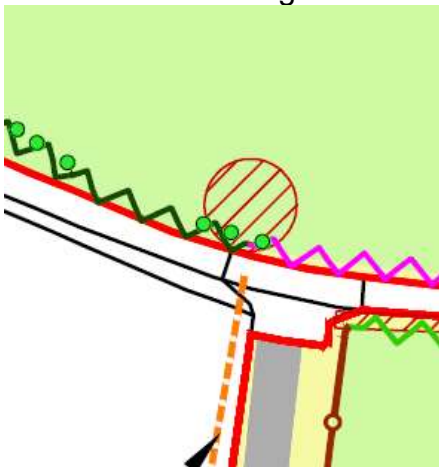
At the location in the screenshot below, the vegetation adjacent to the hedgerow is identified as being at risk even though the hedgerow itself is down to be retained. As the two are so close together I cannot understand why only some of the vegetation is at risk of removal. Their location on the edge of the compound site also suggests that removal is unnecessary. Removal of the vegetation would likely have adverse impacts on the retained hedgerow – root compaction, root loss, etc. New tree planting is also shown within the root protection areas of the existing hedgerow.



At various locations – see an example in the screenshot below – the applicant proposes to plant trees within the root protection areas of existing vegetation (which is presumably trees, shrubs and hedgerows - the drawings do not clearly mark the different types). Generally, it is advisable to avoid undertaking any works within root protection areas especially if they involve excavation.



In the screenshot below another tree is intended for removal even though it is on the edge of the site and adjacent to hedging which is down to be retained. Removal of the tree would have adverse effects on the hedgerow. New tree planting is also shown with the hedgerow root protection area.



The plans show that long lengths of reinstated fencing are proposed. To minimise effects on the local landscape character this fencing should be of the timber post and wire stockproof type rather than post and rail which is proposed for the valve house compounds.

With the field boundary proposals generally, opportunities to enhance the local landscape character and habitat connectivity through new hedgerow planting, trees and hedgerow gapping up have not been maximised.

Within the notes on each drawing, reference is made to *"Embedded mitigation measures set out in this EMP are described in the following chapters"* but the specific document references for these are not listed. In addition, the notes also state that *"All grass seed mixes and tree species to be agreed with landowners."* The local planning authority should also be involved in this decision.

As can be seen in Viewpoint Tr03\_04 - Sheet 6 of 8 (drawing **LCC\_RVBC-BO-FIG-006-011**) the proposed planting would do little to mitigate the visual effects of the existing building and the above ground structures. The new valve house building in particular is much larger than the existing one, sits in a prominent elevated location and due to the separation distance between them no functional agricultural building cluster is created. The use of stone building materials and a reference to the local

agricultural building vernacular are helpful but ultimately, insufficient to assimilate it fully into the landscape.

## **19) Proposed Bonstone Compound Construction Phase Drawing Sheets 1 - 2**

No explanation of the location of the various compound features and how they have been selected to minimise their effects on views has been provided.

I have concerns regarding the proposed temporary fences as the types chosen are not appropriate for the AONB landscape and as such will require careful siting and mitigation if used. Of particular concern are:

a) 2.4m high hoarding fence is usually constructed from large painted boards and covered with corporate branding, health and safety notices, warning notices, etc.

b) 2m high temporary fencing ('Heras' type) is constructed from galvanised steel mesh and has a utilitarian industrial appearance.

c) 1.3m high timber stock proof post and rail fence has a rustic appearance, but it reads as a strong horizontal feature across the rural landscape. Timber post and steel wire fencing is more appropriate as it is widely used in the area, and it is far less visible than post and rail fencing.

According to the drawing notes, "*Acoustic screening to be provided by Contractor during noisy works within overall site extents.*" Presumably, this means that the planning authority will receive no information on the dimensions, location and appearance of this fencing until shortly before works commence on site. No specification requirements for this type of fencing are stated on the drawings so it seems likely that this will all be left to the applicant's contractor to 'design and build' this potentially intrusive structure (noise fencing can be a solid 3 – 5m high barrier). Full details of this fencing and its location should have been submitted at this stage of the project not sometime after the planning application has been determined.

No details of the surfacing materials to be used for the access tracks have been provided. I recommend locally sourced stone oversewn with grasses (seed mix to be agreed with the county council ecologist) to minimise the visual effects of what would be temporary scars across the landscape.

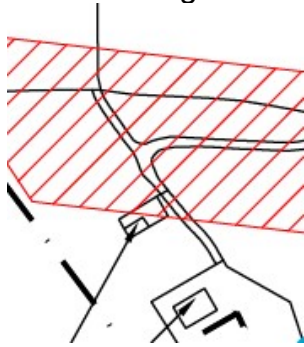
As with the other compounds within the Bowland section of the HARP, there appears to be no proposals for any temporary mitigation of the visual effects of the construction works at the Bonstone compound. With so much material likely to be generated by the tunnel boring and soil stripping works, I am surprised that there are no proposals to use some of this for temporary screen bunds. In addition, instant hedging could be used to filter views of hoardings, fences, cabins, etc. If the applicant has considered this proposal but ruled it out, it would be appreciated if an explanation of the landscape and visual reasons behind this decision could be provided.

Locations for storage of materials are shown but insufficient information on the heights or slope profiles of the stockpiles has been provided. A comprehensive suite

of cross sections through the compounds is required so that the full impacts of the temporary changes to the landform through cut and fill and stockpiling can be evaluated.

## 20) Proposed Bonstone Compound Connection Phase Drawing Sheets 1 - 2

This hatching is shown on the plan, but it is not referenced in the key:



I have concerns regarding the proposed temporary fences as the types chosen are not appropriate for the AONB landscape and as such will require careful siting and mitigation if used. Of particular concern are:

- a) 2.4m high hoarding fence is usually constructed from large painted boards and covered with corporate branding, health and safety notices, warning notices, etc.
- b) 2m high temporary fencing ('Heras' type) is constructed from galvanised steel mesh which creates a very utilitarian appearance.
- c) 1.3m high timber stock proof post and rail fence has a rustic appearance, but it reads as a strong horizontal feature across the rural landscape. Timber post and steel wire fencing is typical of the area's field boundary fencing and far less visible than post and rail fencing.

Please refer to **19) Proposed Bonstone Compound Construction Phase Drawing Sheets 1 – 2** for my comments on acoustic fencing as they are equally applicable here.

## 21) Compound Elevations - Bonstone Compound Drawing

Only 2 elevations/sections have been provided which is not enough to give a full picture of the extent of the Bonstone compound works. What is clear from the elevations is the absence of any temporary mitigation of the compound's visual effects. Fencing, cabins, construction machinery, etc. would all be fully in view over a wide area.

Due to its 45m boom height, the crane would be widely visible. To limit visual impacts, it is recommended that the crane's boom is lowered when not in use.

## 22) Highways Works Proposals - Typical Passing Place Cross Sections



The sections provided are indicative only and not site specific. As such, little reliance should be placed on the sections when considering the effects of the proposed off-site highway works. The value of the sections as a tool for use in determining landscape and visual effects is diminished further by the absence of existing trees, hedges, and shrubs.

The proposed off-site highway works will likely affect many trees and shrubs. As described above, the applicant has not provided enough information to enable an assessment of the effects of the highway works on these key environmental features. Where passing places, road widening, regrading etc. are proposed there were, presumably, options available to the applicant regarding which side of the existing roads these features could be located. Due to a lack of information, it is not clear why a particular 'side' of the highway for example was chosen and what weighting was applied to landscape factors when decisions were being made, especially where existing trees would be affected. From the information provided it is not even possible to determine whether the proposed tree losses are avoidable.

### **23) Lighting Management Plan Overview**

This document is comprised primarily of generic non-scheme/site specific information which seems to be aimed principally at the applicant's prospective construction contractors rather than local planning authorities.

With reference to **4.10 Potential Mitigation Measures** for example, here are some examples of where the document's generalised approach to lighting generates more questions than answers:

- a) a requirement to adopt the lowest safe lighting levels possible for the task being undertaken is stated but there is no explanation of what levels are appropriate and why.
- b) a commitment is given to "*Limit the hours of lighting where practicable*" but no details of what they will be and why are provided. It is not clear whether there would be any flexibility in the number of hours, particularly where sensitive receptors may be affected.
- c) reference is made to manufacturers supplied custom louvres used on a "*if required*" basis - who decides, when and where?
- d) a requirement to provide lighting where "*it makes use of the existing and proposed topography*" is stated but suitable locations – if there are any – are not identified which makes it difficult to determine whether the proposed lighting's effects on landscape tranquillity and dark skies can be mitigated.
- e) there is a requirement to position equipment so that it "*is not visible to residential and ecological sensitive receptors*" but no details of these locations have been provided which makes it difficult to determine whether the proposed lighting's effects on landscape tranquillity and dark skies can be mitigated.

f) *"All lighting installations would be designed by a competent lighting professional."* This to some extent explains why the document contains so much generalised information and requirements – the construction compound lighting schemes have not been designed. In the absence of this design work, the applicant cannot be sure that there are opportunities to effectively position equipment and make use of existing and proposed topography to minimise effects on landscape tranquillity and dark skies to acceptable levels.

Para 30) of **4.1 Environmental Zone and Bortle Scale** confirms that *"The Bortle Dark Sky Scale classifies the Lower Houses Compound and Wray Satellite compound as a Bortle 4... The Bortle 4 is rural/suburban transition."* I have not used this classification system myself but have to say I am surprised at this part suburban result – the level of darkness at night experienced in the Bonstone Compound area for example is in orders of magnitude darker than the suburban area where I live.

Whilst para 30) classifies the night sky as Bortle 4, 'rural/suburban transition,' para 27) confirms that in accordance with ILP (2020), the Lower Houses compound is within an environmental zone assessed as E1 which is 'natural.' From the information provided, I am not sure what to make of these seemingly contradictory judgements and wonder how two high level lighting assessment tools – ILP (2020) and the Bortle scale – used to inform the lighting strategy have produced such different judgements on the night sky (part 'suburban' and 'natural'). In addition, it should be noted that para 98) of **Dark Skies in Volume 2 Chapter 6: Landscape and Arboriculture** states that *"Generally, the night-time environment within the assessment areas is dark in character."* A more detailed explanation of how these assessment tools interrelate should have been provided so that their findings could be placed in an appropriate context to meaningfully inform lay people's – myself included – understanding of the area's night sky.

**Table 4: Indicative lighting levels** in **section 4.4 Indicative Lighting Levels** confirms that 12m high lighting columns would be used. This is comparable with motorway or industrial area lighting column heights which is inappropriate for the AONB landscape. 8m column heights are recommended.

Unlike the ecological considerations section **4.8 Landscape Considerations at the Proposed Lower Houses Compound and Wray Satellite Compound** no landscape specific recommendations for the proposed lighting have been provided.

Figure 8 is of limited value as:

- a) the level of receptor sensitivity is not stated.
- b) receptors are referred to in general terms. The variations in visibility between different receptors due to topography, direction of main aspect, vegetation, walls, etc. are not described.
- c) receptors such as road users are not considered. No reference is made to the proposed lighting's likely impacts on the Forest of Bowland's 5 dark skies discovery sites.

d) only receptors within near distances have been considered – lighting intended to provide 500 lux and mounted on 12m high columns would likely be seen over a wide area.

e) effects of the proposed lighting on the identified receptors are not described.

Confirmation is provided in para 64) of **4.10 Potential Mitigation Measures** that *"All lighting installations would be designed by a competent lighting professional."* As the application sites would be situated within the Forest of Bowland AONB which is noted for its dark skies, is it appropriate to expect the local planning authorities to determine the HARP application without full details of the proposed lighting scheme? As para 63) states, the proposed lighting will aim to *"reduce light spill onto sensitive receptors (including ecological receptors) to below thresholds where significant effects are predicted"* but only *"where practicable."* Whilst – especially in the absence of lighting scheme details – it is not clear what this actually means in practice, of even more concern is that the local planning authorities will only get an opportunity to test the effectiveness of the lighting mitigation proposals sometime after the HARP scheme had been approved (should the local authority be minded to do so). It would have to be hoped at this late stage that the effects of the proposed lighting scheme could be mitigated to acceptable levels. It could be argued that this is an unacceptable risk given the application site's AONB/dark skies location.

Para 70) of **5.3 Mobile lighting unit operation** confirms that prior to setting up mobile lighting units *"Up-to-date advice on the location of light sensitive receptors shall be obtained from the Contractor's Environmental Clerk of Works."* As with other elements of the proposed lighting scheme, the effects of mobile lighting on dark skies and landscape tranquillity should be reviewed and assessed when the planning application is being determined not weeks/days before the equipment is delivered to the construction compound.

## **C. Landscape and Visual Impacts**

### **1. Insufficient information provided**

As repeatedly highlighted throughout my comments, there are some significant omissions from the applicant's suite of documents submitted with the HARP planning application for the Marl Hill Section. Where necessary, I have requested further survey and assessment work so that I can complete my assessment of the Marl Hill Section planning application's likely landscape and visual impacts. Until the information I have requested has been provided, I am unable to comment on the likely landscape and visual impacts of the off-site highway works and the overall cumulative effects of the combined schemes.

With reference to the application documents, the following assessment work focuses solely on the landscape and visual impacts of the Bonstone and Braddup compounds. For my comments on the Ribble crossing and haul road reference should be made to my response on the Bowland Section planning application, 3/2021/0660 which can be viewed on Ribble Valley Council's website.

## 2. Assessment of likely landscape and visual impacts

My assessment of the appropriateness of the proposed works at Bonstone and Braddup compounds in landscape and visual terms both in isolation and in combination with operational and consented development in the area considers the following:

- a) suitability of the site for the proposed works through an analysis of the landscape's sensitivity and capacity which uses criteria developed in published work such as that by Lancashire County Council, the Landscape Institute and Natural England.
- b) likely significance of impacts of the proposals on landscape character, landscape value, landscape fabric, landscape, and visual amenity.

My approach to the assessment of the proposed Bonstone and Braddup compounds likely landscape and visual impacts has involved the following:

- a) a review of relevant landscape policies, strategies, and good practice guidance together with an assessment of the proposals against the key tests of relevant planning policy.
- b) use of good practice guidance on landscape and visual impact assessment such as that produced by the Landscape Institute, Institute of Environmental Management and Natural England.
- c) a review of published management plans and landscape character assessments covering the Forest of Bowland AONB.
- d) a review of the Applicant's Environmental Statement particularly regarding the predicted landscape and visual impacts.
- e) a combination of desktop and in the field survey/analysis/assessment work which made use of the applicant's visibility mapping, photo sheets and photomontages.
- f) consultation with a wide variety of stakeholders.

## 3. Policy context

This section very briefly identifies the Forest of Bowland Area of Outstanding Natural Beauty (AONB) statutory requirements, key policy tests and issues which have been used to guide my assessment of the acceptability of the proposed works at Lower Houses likely landscape and visual impacts.

The following legislation and national and local planning policy are particularly relevant for the Bonstone and Braddup compounds planning application:

- ***Countryside and Rights of Way Act 2000*** (CRoW)
- The ***National Planning Policy Framework, February 2019*** (Ministry of Housing, Communities and Local Government)
- Lancaster City Council Local Plan policies

- Ribble Valley Borough Council policies.

According to the **Countryside and Rights Of Way Act 2000 Explanatory** Notes document the CRoW Act 2000 places a duty on any 'relevant authority', *"in exercising or performing any functions in relation to, or so as to affect, land in an AONB, to have regard to the purpose of conserving and enhancing the natural beauty of the AONB"*.

The National Planning Policy Framework (NPPF) seeks to ensure that opportunities for net gains are secured which, in environmental terms, means contributing *"to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change"*. The NPPF also requires *"that developments... are sympathetic to local character and history, including the surrounding built environment and landscape setting"*. Where development is of poor design *"that fails to take the opportunities available for improving the character and quality of an area and the way it functions"* the NPPF confirms that *"Permission should be refused"*.

#### **4. Area of Outstanding Natural Beauty (AONB)**

The Bonstone and Braddup compounds would be situated within the nationally important Forest of Bowland AONB. This is materially significant as the NPPF confirms, *"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues"*.

In determining planning applications within an AONB, the NPPF requires planning authorities to consider whether the development proposals will have *"any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated"*.

It is important that the Bowland Section of the HARP scheme takes account of the following:

- The 14 Landscape Character Types and 82 Landscape Character Areas, landscape sensitivities and future forces for change identified in the **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment, September 2009**.
- The core principles, vision, and action plan of the **Forest of Bowland Area of Outstanding Natural Beauty Management Plan 2019 – 2024**.

#### **5. Landscape Character, Landscape Sensitivity, Landscape Tranquillity and Landscape Amenity**

##### **Landscape Character**

Of particular relevance for my assessment of the Bonstone and Braddup compounds are the following landscape character assessments:

- **Lancashire Landscape Character Assessment** (Lancashire County Council). This indicates that the Bonstone compound lies within the *Moorland Fringe Landscape Character Type* but close to the *Undulating Lowland Farmland Landscape Character Type*. The Braddup compound lies within the *Undulating Lowland Farmland Landscape Character Type* and close to *Moorland Fringe Landscape Character Type*. As both compounds are close to the boundaries of other landscape character types, key environmental features of both are evident – the compounds are effectively situated within transition zones between different character types.
- **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment** (Lancashire County Council)

Due to the finer grain of assessment that was used for its production, my main focus has been on the **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment**. This indicates that the Bonstone compound would lie within *G Undulating Lowland Farmland with Parkland Landscape Character Type* and *G3 Upper Hodder Landscape Character Area*. The Braddup compound would also lie within *G Undulating Lowland Farmland with Parkland Landscape Character Type* but differs in that the Landscape Character Area is *G7 Browsholme*.

### **Landscape Sensitivity**

I agree with the applicant's judgement that the Bonstone and Braddup compounds are situated within areas of high landscape and visual sensitivity.

The **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment** advises that overall sensitivity for the *Undulating Lowland Farmland with Parkland Landscape Character Type* is moderate and there "is strong intervisibility with the *Unenclosed and Enclosed Moorland Hills, Valley Floodplain and Moorland Plateaux Landscape Character Types*" (para 1.1.13).

The natural features of the areas the compounds would lie within are highly susceptible to the damaging effects of built development. The area's natural scenic beauty has been recognised through the AONB designation and the condition of the landscape features is generally good.

Due to the elevated locations, there is good intervisibility between the compound sites and surrounds, much of which is also within the AONB. This intervisibility also ensures that the Bonstone compound sits within an area which forms part of the setting to the village of Newton in Bowland most of which is within a Conservation Area full of listed buildings. The compound would also be visible from nearby public rights of way. By contrast the Braddup compound is situated within an area much closer to the southern boundary of the AONB – there is intervisibility with larger areas of non-designated land and some man-influenced features not characteristic of the AONB landscape can be seen. The compound would also be visible from nearby public rights of way.

Because of these vulnerable landscape features and high landscape and visual sensitivities, I conclude that the *G3 Upper Hodder Landscape Character Area* has limited to moderate capacity to accommodate change and the *G7 Browsholme Landscape Character Area* has moderate capacity to accommodate change without compromising key characteristics.

### **Landscape Tranquillity**

Landscape tranquillity mapping produced by the Campaign for the Protection of Rural England indicates that the areas surrounding the Bonstone and Braddup Compounds site are some of the most tranquil landscapes in Lancashire.

The Bonstone Compound would lie within a large area of moderate – high landscape tranquillity it should be noted that the Braddup Compound would be situated just 4.6km from Clitheroe which, of course, has very low levels of landscape tranquillity.

### **Landscape Amenity**

The special qualities of the AONB landscape afford the areas the compounds would lie within considerable recreation and amenity value. The quality of the recreational and amenity experience is directly linked to the scenic quality and natural beauty of the area's landscapes. Not surprisingly, this creates a recreation resource which like the landscape is, overall, of at least national importance. The Forest of Bowland is a popular visitor destination for the whole of the UK and beyond. The AONB in particular provides an important recreational resource for nearby settlements and the East Lancashire mill towns.

The Bonstone compound site is located close to Newton Conservation Area and the River Hodder and, has intervisibility with wild and windswept uplands, much of which are designated as Access Land accessible from public rights of way which cross the site or pass nearby. The area's natural scenic beauty is striking and recognised of course by the AONB designation.

To the west of the site is Knowlmer Manor which has a nationally significant unregistered historic designed landscape (ref. ***A Local List of Lancashire's Unregistered Historic Designed Landscapes 2013***, Lancashire County Council, Manchester Metropolitan University and Lancashire Gardens Trust). According to this listing study, *"The house is situated amongst stunning scenery with sinuous walks, rocks and shrubberies, and sublime picturesque views of the River Hodder. Views of the knoll and the sublime River Hodder give this house perhaps one of the finest of picturesque situations in the county."*

The Braddup Compound site is located close to Waddington Conservation Area and, has intervisibility with wild and windswept uplands, much of which are designated as Access Land accessible from public rights of way which cross the site or pass nearby. The area's natural scenic beauty is striking and recognised of course by the AONB designation.

To the west of the compound site is Browsholme Hall which has a nationally significant unregistered 600-acre historic designed landscape (ref. ***A Local List of***

**Lancashire's Unregistered Historic Designed Landscapes 2013**, Lancashire County Council, Manchester Metropolitan University and Lancashire Gardens Trust). Described in this listing study as "*a wonderfully picturesque site*" Browsholme is open to the public and is one of Lancashire's most important historic houses and designed landscapes.

## **6. Landscape and Visual Impacts of the Bonstone and Braddup Compounds**

### **Bonstone Compound:**

#### **Site and Surrounding Area**

The proposed Bonstone Compound site would be situated on the north facing side of the Hodder Valley overlooking Newton in Bowland. The valley side falls from around 165m at the site to around 125m close to the river. There is good intervisibility between the compound site, the valley floor and the elevated south facing side of the Hodder Valley. Numerous field boundary trees and copses create a well treed appearance and frame views across the highly scenic natural valley landscape. There is a strong sense of enclosure provided by the valley sides – this is not a broad valley like the one Braddup Compound site would lie within – and the visual 'interlocking' of the boundary trees, hedgerows and copses. The nationally important historic designed rural estate landscape of Knowlmore Manor to the west of the Bonstone Compound site provides an intriguing visual contrast with the more natural and wilder looking areas such as Birkett, Beatrix and Newton Fells.

The Bonstone compound site is comprised of irregular shaped – a remnant of ancient and post medieval enclosure – grassed fields bounded by a mixture of small woodlands, access tracks, fences and hedges which are frequently punctuated with scattered trees of mixed ages. Standing isolated within the site are two small United Utilities buildings. Visibility from the site is extensive with the wild and windswept fells to the north (e.g., Whin, Beatrix and Dunsop) providing a dramatic backdrop to the pastoral and parkland valley landscape. A well-developed network of public rights of way, two of which lie close to the compound site, provide good access to, amongst other things, the Access Land of the fells to the south. The site is situated wholly within the **G3 Upper Hodder** Landscape Character Area with many of the key character features being well represented and in **moderate – good** condition.

#### **Proposed Compound**

The Bonstone Reception Compound with its mix of construction works and related infrastructure would likely have **significant adverse** landscape and visual effects. The significance of these effects is very project stage dependent. Of particular importance in landscape and visual terms, are the effects of the following:

- creation of site access tracks and car parking
- limited vegetation clearance with potential for effects on trees, hedgerows intended for retention due to the planning application boundary lying within their root protection areas.
- soil stripping, with storage for reinstatement
- substantial earthworks – up to 11m high embankment with a 2.4m high hoarding – to create level areas in the site



- site fencing, hoarding, and lighting
- provision of construction paraphernalia including offices, workshops, generator and a tunnel boring machine
- delivery and storage areas for materials.
- 45m high crane
- generation of surplus material arisings for removal off site.
- temporary attenuation/storage lagoon.
- lighting for the main shaft (24 hour working)
- security lighting in the wider compound area
- temporary closure and diversion of the local PRow network
- a new permanent valve house building with a hard standing area and boundary fencing on regraded land served by a permanent access track. There would be no 'rationalisation' of United Utilities buildings as the two existing ones would be retained.
- new permanent raised chambers with a substantial concrete hardstanding

The above works would be undertaken in the following stages:

- enabling
- construction
- commissioning

The applicant has assessed the landscape and visual effects of the above works in these three stages. These are conveniently summarised in **Volume 4 Appendix 6.4: Schedule of Landscape Effects** and **Volume 4 Appendix 6.5: Schedule of Visual Effects**.

**Having carefully reviewed the applicant's tables and supporting evidence and, cross checked them with my analysis and assessment, I confirm that I agree with most of the judgements made on the likely significance of landscape and visual effects arising from the proposed Bonstone Compound works.**

As already discussed in this document, my only disagreement with the judgements presented in Appendices 6.4 and 6.5 concerns residual effects in the commissioning stage where, in my opinion, I think the applicant has incorrectly described them as being of **negligible** significance. My judgement is that these effects would be of **slight** significance – an increase, but one which in my opinion is not materially significant.

Notwithstanding the above, I think it is important to stress that the proposed Bonstone Compound works would bring about some **significant adverse** landscape and visual effects during the enabling, construction and commissioning phases in what is a highly sensitive landscape in the nationally important Forest of Bowland AONB. This is a simply inescapable brute fact which must be considered when determining this planning application.

In landscape and visual terms, the proposed Bonstone Compound would likely result in the following significant adverse effects:

- loss of landscape fabric, e.g., grassland, trees, and field boundaries.

- loss of landscape tranquillity due to the use of lighting, construction works, a tall vertical structure, noise and use of generators.
- loss of landscape amenity due to footpath closure/diversion and the introduction of construction plant, materials, vehicles, noise, etc. close to a historic village and nationally important historic designed landscape.
- loss of visual amenity due to natural features being replaced by construction plant including a tall lighted crane, access roads, fencing, lighting, parking areas, stored materials, etc.
- loss of undulating farmland with parkland landscape character.
- adverse effects on the setting and character of Knowlmore Manor's nationally important historic designed landscape.
- creation of incongruous landforms for construction works and materials stockpiles.

These effects would be of **moderate** or **major adverse** significance and as such are materially significant. Options for mitigating these effects would be extremely limited and are discussed later in this document.

During the operational phase there would be landscape and visual impacts arising from the new valve house building and changes to character and views resulting from loss of vegetation during the earlier phases. Mitigation and compensation planting are proposed to replace some of these losses, but it would be at least 25 years before much of this would have reached a size sufficient to make a noticeable impact and restore the pre-construction landscape.

As highlighted earlier in this document, details of the exact period of time these effects would be experienced have not been provided. However, from the information available in the application documents it seems likely that including reinstatement works, the Bonstone Compound could be in operation for at least 7 years. Given the technically challenging nature of the tunnelling works and the innate unpredictability of large complex construction projects there is also a distinct possibility that this period may have to be extended.

Set against these issues are the following:

a) landscape scale

The broad sweeping rounded landforms, broad panoramic views and big skies give the landscape a medium scale. Within this scale context, the proposed Bonstone Compound would not be of such a size (helped by much of the HARP works being undertaken underground) that it appeared as an overbearing discordant feature in the landscape visible over a wide area. Whilst there would be a tall vertical structure used during the construction works, its lattice type boom would provide a degree of visual transparency reducing its presence in the landscape. In addition, its height of around 45m is considerably less than that of other more permanent vertical structures in the AONB.

b) timescale

As the HARP scheme is a large and technically complex project, a timescale of approximately 2 – 3 years for the Bonstone Compound works seems a reasonable

proposition and an acceptable period in landscape terms for the AONB landscape to be 'on loan.'

c) reversible landscape and visual effects

All construction works and the proposed tree, hedgerow and grassland losses would be temporary and limited in scale. In addition, no woodland cover would be lost. All these losses could be compensated for within the application site and the applicant has put forward proposals which address most of these losses.

The applicant's compound site restoration proposals would be sympathetic to the area's landscape character and aligned with para 4.8.13 of the **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment** which requires development proposals to "*Conserve open views towards the surrounding higher Moorland Plateaux and Unenclosed and Enclosed Moorland Hills Landscape Character Types*" and "*Maintain the distinctive pattern of hedgerows and stone walls at field boundaries.*"

d) permanent structures

During the operational phase there would be a larger compound based around the new valve house building located in the vicinity of two of United Utilities existing buildings. The larger compound would by necessity have a larger hardstanding area and longer lengths of boundary fencing. Whilst the compound would be larger than the existing one its overall size would still be relatively small and utterly dwarfed by the medium scale landscape, significantly diminishing its impacts. Where visible in near distance views, the compound would appear as a small component of a very broad landscape – at distances greater than 0.5km there would likely be almost negligible impacts on views due to the beneficial effects of the topography and new/existing vegetation.

The applicant proposes to use traditional building materials and reflect the local built vernacular in the design of the valve house which should ensure that it does not appear as an incongruous structure in the landscape. In addition, there would not be a significant difference in size between the new valve house building and the existing nearby buildings ensuring a degree of visual harmony. These buildings would, where visible, also form a relatively small component of nearby views.

**Braddup Compound:  
Site and Surrounding Area**

The proposed Braddup Compound would be situated on the south facing side of the Ribble Valley overlooking Clitheroe, Longridge Fell and Pendle Hill. The valley side falls from around 190m at the site to around 65m close to the river. This elevation above the river affords the compound site good intervisibility with the wider landscape. Numerous field boundary trees and copses create a well treed appearance and frame views across the highly scenic natural valley landscape. Despite Ribble Valley being broad in its form there is a sense of enclosure at the compound site provided by the visual 'interlocking' of field boundary trees, hedgerows and copses. The nationally important historic designed rural estate landscape of Browsholme Hall to the west of the compound site provides an intriguing visual contrast with the more natural and wilder looking areas to the north

such as Browsholme Moor, Waddington Fell and Easington Fell. In addition, historic designed landscapes south of the compound site at Chaigley Manor, Bashall Lodge, Bashall Hall, Eaves Hall and Waddow Hall further emphasize the 'parkland' character of much of the local landscape (***Undulating Lowland Farmland with Parkland Landscape Character Type***, ref. **Forest of Bowland AONB Landscape Character Assessment**).

The Braddup Compound site is comprised of irregular shaped – a remnant of post medieval enclosure – grassed fields bounded by a mixture of small woodlands, access tracks, fences and hedges which are frequently punctuated with scattered trees of mixed ages. Standing isolated within the site are some small United Utilities buildings and scattered barns. Despite having an elevated location above the Ribble Valley floor, visibility from the site is limited by nearby woodlands, copses and field trees. Notwithstanding these features there is limited visibility of the wider landscape including Pendle hill and Longridge Fell which provide contrasts markedly with the site and surrounds pastoral/parkland landscape. A well-developed network of public rights of way, two of which lie close to the compound site, provide good access to, amongst other things, Access Land of the fells to the north. The compound site is situated wholly within the **G7 Browsholme** Landscape Character Area with many of the key character features being well represented and in **moderate – good** condition.

### **Proposed Compound**

The Braddup Launch Compound with its mix of construction works and related infrastructure would likely have **significant adverse** landscape and visual effects. The significance of these effects is very project stage dependent. Of particular importance in landscape and visual terms, are the effects of the following:

- creation of site access tracks and car parking
- soil stripping, with storage for reinstatement
- limited vegetation clearance with potential for effects on trees intended for retention due to the planning application boundary lying within their root protection areas. In addition, this as stated on drawing **RVBC-MH-FIG-020-001 Rev D0** gives cause for concern "*Mixed plantation woodland - any tree loss needs replacing and must be consistent with adjacent existing/retained woodland.*" There appears to be no reason why trees within the surrounding woodland should be removed.
- substantial cut (5.5m) and fill (2.5m) earthworks to create level areas in the site
- site fencing and hoarding
- provision of construction paraphernalia including offices, workshops, generator and a tunnel boring machine
- delivery and storage areas for materials
- 45m high crane
- generation of surplus material arisings for removal off site
- temporary attenuation/storage lagoon
- lighting for the main shaft (24 hour working)

- security lighting in the wider compound area
- a new permanent valve house building with a hard standing area and boundary fencing on regraded land served by a permanent access track. There would be no 'rationalisation' of United Utilities buildings as the existing ones would be retained
- new permanent raised chambers with a substantial concrete hardstanding

The above works would be undertaken in the following stages:

- enabling
- construction
- commissioning

The applicant has assessed the landscape and visual effects of the above works in these stages. These are conveniently summarised in various tables in **Volume 4 Appendix 6.4: Schedule of Landscape Effects** and **Volume 4 Appendix 6.5: Schedule of Visual Effects**.

**Having carefully reviewed the applicant's tables and supporting evidence and, cross checked them with my analysis and assessment, I confirm that I agree with most of the judgements made on the likely significance of landscape and visual effects arising from the proposed Bonstone Compound.**

Notwithstanding the above, I think it is important to stress that the proposed Braddup Compound and associated infrastructure would bring about some **significant adverse** landscape and visual effects in what is a highly sensitive landscape within the Forest of Bowland AONB. This is a simply inescapable brute fact which must be considered when determining this planning application.

In landscape and visual terms, the proposed Braddup Compound would likely result in the following significant adverse temporary effects:

- loss of landscape fabric, e.g., grassland and field boundaries.
- loss of landscape tranquillity due to the use of lighting, construction works noise, frequent passing by trucks and use of generators.
- loss of landscape amenity due to introduction of construction plant, materials, vehicles, noise, etc. in a rural landscape close to a historic village and historic designed landscape.
- loss of visual amenity due to natural features being replaced by construction plant including an access road, fencing, lighting, parking areas, stored materials, etc.
- loss of undulating farmland and river floodplain landscape character.

These effects would be of **moderate** or **major adverse** significance and as such are materially significant. Options for mitigating these effects would be extremely limited and are discussed later in this document.

During the operational phase there would be landscape and visual impacts arising from the loss of vegetation during the earlier phases. Mitigation and compensation planting are proposed to replace some of these losses, but it would be at least 25

years before much of this would have reached a size sufficient to make a noticeable impact in the landscape.

Set against these issues are the following:

a) landscape scale

The Braddup Compound site would be situated within a broad river valley notable for its broad panoramic views, big skies and dramatic distant backdrop provided by the Forest of Bowland AONB uplands such as Pendle Hill. Mature flood plain trees and copses help to frame views of these uplands and lend a maturity to the landscape. Collectively these features create a medium to large landscape scale. Within this scale context, the proposed Bonstone Compound would not be of such a size (helped by much of the HARP works being undertaken underground) that it appeared as an overbearing discordant feature in the landscape visible over a wide area. Whilst there would be a tall vertical structure used during the construction works, its lattice type boom would provide a degree of visual transparency reducing its presence in the landscape. In addition, its height of around 45m is considerably less than that of other more permanent vertical structures in the AONB.

b) timescale

As the HARP scheme is a large and technically complex project, a timescale of approximately 2 - 3 years for the Braddup Compound and access road to remain in place seems a reasonable proposition. This length of time is deemed to be insufficiently long to constitute a major factor when determining the application, more so when considered in conjunction with the limited scale and nature of the proposals.

c) reversible landscape and visual effects

The proposed vegetation losses would be temporary and, especially with regard to the trees, we are not being asked to consider the effects of many tree losses. All these losses could be compensated for within the application site and the applicant has put forward proposals which address most of these losses.

c) reversible landscape and visual effects

All construction works and the proposed vegetation losses would be temporary and limited in scale. All these losses could be compensated for within the application site and the applicant has put forward proposals which address most of these losses.

The applicant's compound site restoration proposals would be sympathetic to the area's landscape character and aligned with para 4.8.13 of the **Forest of Bowland Area of Outstanding Natural Beauty Landscape Character Assessment** which requires development proposals to "*Conserve open views towards the surrounding higher Moorland Plateaux and Unenclosed and Enclosed Moorland Hills Landscape Character Types*" and "*Maintain the distinctive pattern of hedgerows and stone walls at field boundaries.*"

d) permanent structures

During the operational phase there would be a larger compound based around the new valve house building located in the vicinity of United Utilities existing buildings. The larger compound would by necessity have a larger hardstanding area and longer lengths of boundary fencing. Whilst the compound would be larger than the

existing one its overall size would still be relatively small and utterly dwarfed by the medium scale landscape, significantly diminishing its impacts. Where visible in near distance views, the compound would appear as a small component of a very broad landscape – at distances greater than 0.5km there would likely be almost negligible impacts on views due to the beneficial effects of the topography and new/existing vegetation.

The applicant proposes to use traditional building materials and reflect the local built vernacular in the design of the valve house which should ensure that it does not appear as an incongruous structure in the landscape. In addition, there would not be a significant difference in size between the new valve house building and the existing nearby buildings ensuring a degree of visual harmony. These buildings would, where visible, also form a relatively small component of nearby views.

## 7. Determining the Planning Application

Should the planning authority be minded to approve the Bonstone and Braddup Compounds, then I recommend that this is subject to the following reasonable conditions (over and above the usual ones covering plant species, planting method, maintenance, etc.) which will reduce the likely landscape and visual effects of the enabling, construction and commissioning phases:

### a) planting

A detailed explanation of why trees originally identified in the planning application as being at risk subsequently have to be removed should be submitted to the planning authority for approval before any felling, pruning, lopping starts.

Wherever possible, replacement planting should be undertaken in the first planting season after plants have been removed rather than being left to the final stage of the construction/commissioning works. This is essential to ensure that the new plants are established as early as possible within the construction period. This also provides an option for early replacement of plant failures. With these requirements in place a reasonable degree of mitigating vegetation cover could be established in readiness for the operational phase of the HARP scheme.

Planting should be undertaken using native species grown from seed sourced from an appropriate seed zone and, in terms of quantities required, should be in accordance with requirements set out in **8) Embedded Mitigation and Good Practice, Volume 2 Chapter 6: Landscape and Arboriculture e)** above.

All opportunities for advance planting should be explored and consideration should be given to temporarily planting rapid growing species such as Eucalyptus (subject to agreement with the county council's ecologist) along the site boundaries where they would be most visible from and closest to public rights of way. ALL these plants would have to be removed upon completion of construction and reinstatement works.

Opportunities to translocate existing hedgerows and replant within the application site should be exploited where possible.

b) topsoil and subsoil stockpiles should generally be a maximum of 1m high and certainly no more than a maximum of 2m high to minimise the damaging effects of relatively long-term storage as proposed. A detailed work method statement setting out the measures proposed to minimise the adverse effects of soil stripping and long-term storage of stockpiled topsoil and subsoil should be submitted to the planning authority for approval.

Topsoil and subsoil stockpiles should be shaped and graded to appear as 'naturalistic' landforms, free of artificial looking engineered slope profiles. Where possible, some of these temporary stockpiles should be located along the boundaries of the site compound(s) to provide some mitigation of its visual effects.

Cross sections through proposed stockpiles showing existing and proposed levels should be provided for approval by the planning authority before any are formed.

c) any proposal for landform reprofiling as part of the reinstatement works should be supported with cross sections showing existing and proposed levels. These proposals should be submitted to the planning authority for approval before works commence on site.

d) a detailed work programme should be submitted to the local planning authority for approval which, amongst other things, provides information on:

- tree/shrub/hedgerow removal.
- topsoil and subsoil stockpile formation and re-use.
- mitigation planting works.
- site restoration.
- long term maintenance of mitigation planting.

The work programme should provide a high degree of certainty and any likely risks to it should be clearly identified and reviewed with the planning authority.

e) a detailed lighting scheme should be submitted to the planning authority for approval before any works commence on site. This will enable the authority to determine whether the likely effects on landscape tranquillity – especially dark skies – would be acceptable. To minimise visual clutter caused by vertical structures, the lighting scheme should also demonstrate that good use would be made of lighting columns through, for example, their use for mounting the compound's CCTV cameras.

f) details of the design(s) for the site compound structures including offices, welfare cabins, hoardings and fences should be submitted to the planning authority for approval before any works commence on site. These structures should be designed to take account of the high landscape and visual sensitivity of the Bonstone and Braddup Compound's rural location within a nationally important AONB. Garish colours, large advertisements, corporate branding paraphernalia, etc. are deemed to be inappropriate for the location.

g) all materials used for temporary access tracks and parking areas should be surfaced with locally sourced stone to minimise their effects on views. Where



practicable, these areas should be oversewn with grasses to create a locally typical farm track type appearance to further aid their assimilation in the landscape.

All access tracks required for the establishment, construction and commissioning phases should be removed upon completion of the works and the land reinstated to its former appearance.

h) when not in use, the 45m high crane should be lowered to minimise its effects on views and landscape tranquillity.

i) the construction compound, material storage areas, etc. will have to be managed to the highest standards to ensure that the various essential mitigation measures proposed here are maintained to their maximum effectiveness throughout the duration of the construction contract. This cannot be emphasized enough due to the highly sensitive nature of the landscape and views. The norms of construction site use, management, etc. that invariably lead to a host of visual issues simply cannot be allowed to apply here.

j) the size of concrete hardstanding's for the new permanent raised chambers should be kept to an absolute minimum. If possible, concrete should be replaced with a locally sourced aggregate seeded with appropriate native wildflowers.

## **8. Cumulative Impacts**

There is a high probability that there would be cumulative impacts arising from the different elements of the Marl Hill section of the HARP scheme being seen in various combinations with each other. However, due to the absence of key survey and assessment data relating to the proposed off-site highway works as discussed in this document, I am unable to undertake a meaningful assessment of the Marl Hill section's cumulative effects with the other elements of the Bowland Section.

## **9. Acceptability of the Proposals in Landscape and Visual Terms**

The proposed Bonstone and Braddup Compounds enabling, construction and to a lesser extent, commissioning works would have significant adverse temporary landscape and visual impacts in what is a highly sensitive and designated AONB of national and possibly international importance. The principal impacts would arise from landscape fabric losses caused by the compound establishment, related infrastructure, construction works and connection to the Haweswater Aqueduct. There would be a temporary loss of landscape character within areas with good intervisibility with the surrounds and damage to the special landscape and scenic qualities. Due to the use of a 45m high crane, there would be a minor interruption of the Hodder Valley and Ribble Valley skyline that forms part of the setting and character to listed buildings, the historic village of Newton and the nationally important historic designed landscapes at Knowlmore and Browsholme. There would also be a temporary degradation of the quality of available recreational experience due to the presence in views of construction works.

Whilst these effects are of great concern, determining their acceptability in landscape and visual terms must take account of their reversibility and the temporary nature of

the Marl Hill Section works – they would be undertaken within what I deem to be a reasonable period for a designated landscape to be 'on loan.'

The applicant's suite of proposals for mitigating the Bonstone and Braddup compounds works likely significant adverse landscape and visual effects have the potential to be effective but, more information on them is required and additional mitigation measures are necessary to further minimise effects as much as is reasonably possible (please refer to **7. Determining the Planning Application** above).

During operation, the former compound sites would contain valve houses that due to their small scale, mass and building style reflecting the local vernacular they would have very minor long terms effects on views.

**Subject to this missing information being provided and it adequately addressing the issues I have raised, and the applicant providing the additional essential mitigation measures required, in my opinion, the landscape and visual effects of the proposed Bonstone and Braddup compound works would likely be acceptable in landscape and visual terms.** Whilst there would be significant adverse short-term effects the natural beauty and special qualities of the Forest of Bowland AONB landscape would not be permanently harmed.

Steven Brereton  
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29<sup>th</sup> July 2022