Report on open house session and evening workshop, Nenthead Village Hall, Nenthead, 31 October 2016

Introduction:

This report captures the discussion points raised at the public meetings which took place on Monday 31 October 2016 at Nenthead Village Hall, Nenthead. Karen Saunders and Simon Wilson from Wilson Sherriff wrote the report drawing on notes taken at the open house session and the evening workshop. Wilson Sherriff are the independent facilitation and engagement specialists engaged by The Coal Authority to support the consultation and engagement activities for the mine water treatment schemes in Nenthead and Nentsberry.

Two sessions were held:

- an open house drop-in session held from 2pm to 5pm, where people could come and meet members of The Coal Authority/Environment Agency project team to discuss individual concerns and queries
- a public workshop, held from 6pm to 8pm, involving a facilitated discussion, with a mixture of whole group and small group discussions

Twenty-one people attended the drop-in session and 16 people attended the evening workshop. Of these, 9 people had attended both sessions.

Eighteen feedback forms were received following the two events and a summary of the feedback is provided in the Appendix.

Open house drop in session

A series of exhibition boards were available for people to have a look at and members of staff from The Coal Authority and Environment Agency were available to speak with on a one to one basis. A flip chart was on display and people were invited to write comments on post-its and leave them on the flip chart for other people to read.

Comments from the flip charts:

- odour - hydrogen sulphide is a gas, how can you stop it from going beyond the site boundary?
- would be good to see published flow data for the sites
- what impact will this have on tourism in the area, the Coast to Coast Cycle route and the Roof of England – a new enterprise to improve tourism in the area? smell and visual impact
- concern for potential of high flows to erode the scheme long term maintenance issue

In addition to points made on the flip chart ‘any comments?’ the project team noted the following points/queries that came up in their discussions with individual people:

- concern that The Coal Authority had already decided which site to use
- confusion over the exact location of the different ‘levels’ and the proposed site locations, the issue over the site locations was mainly because the maps used were too small to identify the sites clearly.
- a sense that this first event wasn’t telling members of the community anything new, but was simply prolonging the uncertainty
people wanted to understand the involvement process and the time frame for when things were going to happen
queries about the hydropower scheme above the village and links/impacts with/on the proposed treatment scheme and vice versa
feeling under pressure as there are a lot of community issues at the moment, for example Alston Hospital and a sense that there is limited capacity to ‘engage’ with this
lack of recognition for the caring role that some members of the community have, affecting their ability to attend events
concern over the presence of protected orchids and the potential impact if that site was chosen
suggestion that an alternative SSSI site, could be used where the flowers are only there, and protected, because the site is already contaminated
the project team needs to think about the engagement process and how to ‘reach’ the people that don’t attend these events
concern raised over the validity and accuracy of the metals data
a lot of feedback on issues relating to the previous event in April 2016, for example too long, people weren’t heard, too much information given, too busy/crowded, questions weren’t answered
some differences of opinion among individuals ➔ some accepting the need to treat the discharges/clean up the River Nent, while others are still not convinced that anything needs doing
suggestion that the ecology had evolved and was metal-tolerant, so no change is needed
concern about high flows and how they could affect the final treatment site
concern over site security and how that would be managed
queries as to whether the ponds could be covered
concern that any scoring system used to evaluate the different sites could be manipulated to give a preferred answer

**Evening Workshop - 6pm to 8pm**

The evening workshop was facilitated by Simon Wilson and Karen Saunders from Wilson Sherriff. Simon welcomed everyone to the evening and asked everyone to introduce themselves.

**Session One: presentation and questions**

Cheryl Donohoe from the Coal Authority gave a brief update on the current status of the project, explaining that the project team were restarting the engagement and technical evaluation process for Haggs Level, and were also investigating options for treating mine water discharges from the Caplecleugh and Rampgill discharges.

Following the presentation, participants were invited to ask questions. These are summarised below and are grouped into themes, so do not appear in the exact order in which they were asked:

**Pond size:**

**Question:** How many ponds will there be and what size will they be?

**Response:** The size and number of ponds is something that will be worked out during the design stage. The flow at Haggs is estimated to be approximately 10 to15 litres per second. Initial estimates are that the surface area of the treatment ponds would need to be between 3,000 and 3,500 sqm (a football pitch is about 5,000 sqm). The flow at Caplecleugh and Rampgill is greater than Haggs and varies much more so is likely to be the equivalent between of 1 and 2 football pitches. The EA/CA will continue the flow monitoring at all three sites and will then need to review the data before the number and size of the ponds can be finalised.

**Question:** If the pond is constructed higher up, will the water then need pumping uphill first and won’t that cost more?
Response: The overall cost is something that needs to be considered and it is cheaper not to pump, but can’t rule out the need for pumping at this stage.

Location of the ponds:

Comment: There was a lot of concern in April 2016 when the location for the proposed ponds was right in the centre of Nenthead. From the maps, there now appears to be a lot of sites that are higher up, outside the village that could be used.

Response: The process is still at an early stage. All the potential sites that have been identified, will be evaluated using the site evaluation criteria and will need to be visited to ground truth the information and see which ones are still potential options for assessing in more detail.

Odour management:

Question: Will the ponds be the same as the ones that were proposed at Haggs and won’t there be a smell?

Response: Hydrogen sulphide is generated as part of the process, but the odour is only generated when the treated water flows out of the pipe and meets the air. The plan is to inject the water with a chemical before it reaches the atmosphere which converts the sulphide back into sulphate which has no odour.

Question: Can you guarantee that there will be no odour?

Response: The scheme will need to be able to demonstrate that there is effective odour control in place as part of any planning conditions so there won’t be any smell outside the treatment site boundary.

Level of pollution:

Question: What is the amount of zinc and cadmium coming out annually?

Response: About 120 tonnes of zinc and about 40 tonnes of lead enter the Tyne estuary each year – about half comes from the River Nent.

Question: Water quality has improved over the past 14 years. Is there really a need for this scheme if the river is improving on its own?

Response: The EA has been monitoring water quality and this doesn’t show any change over the last 30 years. The Nent is horrendously polluted and although the River Tyne is the second best salmon river in England, that is at least in part because it is a stocked river (via the North Tyne/Kielder). The salmon population could be even stronger and more sustainable.

Scheme maintenance:

Question: How often would you need to dredge/clean out the ponds?

Response: The compost mixture is expected to last between 10 and 20 years. When it needs to be cleaned out, it could be done all at once or phase, for example one pond at a time that could be something to discuss with residents at a later stage as part of a discussion on the operation and maintenance of the scheme.

Question: What will happen to the waste compost and can you extract the metals from it?

Response: It isn’t financially viable to extract the zinc or cadmium from the waste compost. The two main options are to send it landfill or potentially soil improvement companies may be interested in using it, which would be a better option than sending it to landfill.

Question: What governs the period of 10 to 20 years for the expected life of the compost?

Response: The range reflects the different reasons why the compost may lose its effectiveness. Over time the physical compression of the compost stops the water flowing through it or alternatively, the level of
metals in the compost becomes too high for the naturally occurring bacteria to work effectively at removing any more metals from the water. The range reflects the uncertainty, as we don’t have a large number of schemes to refer to.

**Question:** The weather can get very cold. Will the temperature be too low for the bacteria to work?

**Response:** The bacteria generate their own heat and the mine water is at a fairly consistent 8 to 9 degrees celsius, so winter isn’t expected to completely stop the process although the scheme may be slightly less effective in winter.

**Question:** What will happen when you need to close the site down for maintenance?

**Response:** We will need to look at that in more detail to work out how to do that in a way that has the least impact on communities and the environment. We are looking at Force Crag scheme to see what can be done in the construction phase to minimise disruption at a later date, for example when clearing the ponds, ideally we would leave the pipes and limestone layer at the base of the ponds in place while the compost was replenished.

**Treatment technology:**

**Question:** Is there proof that this will work?

**Response:** Force Crag was scaled up from an original lab experiment and has proven that the technology works and is performing better than expected.

**Question:** Given that water could be treated to drinking water standards, as is done in the oil/gas industries, could that be done here?

**Response:** It would be more expensive, but could be done. The cost of treatment would be an issue that the Coal Authority would need to consider, as well as the siting of the scheme. Active schemes cost more to build and operate than the passive scheme being considered at Haggs.

**Question:** This area suffers from quite regular power cuts. If pumping was needed, what would happen in a power cut?

**Response:** We will need to consider this as part of the detailed design work. Any discharge would have to be permitted by the Environment Agency, and in common with other dischargers such as water companies, conditions are likely to require a back-up generator in case of power cuts.

**Question:** Why can’t the ponds be covered?

**Response:** It is possible to cover the ponds and this is done in some areas of the United States because it is much colder there. We have not actively considered this as an option here and the engineering requirements would be more complex since the ponds are relatively large.

**Question:** Is there anything that you have learned from Force Crag?

**Response:** Force Crag has been in operation for 2.5 years and we have learned quite a lot, including:

- where the odour is generated, for example, not from the ponds, but as the treated water flows out of the pipes beneath the ponds and meets the air
- the metal and sulphate concentrations are lower than at Haggs or Caplecleugh but this is not expected to significantly affect metal removal performance
- the scheme is working at a higher performance than was expected, as it was designed for 70% but is performing at around 90 to 95% removal of zinc, cadmium and lead
- research is ongoing into scheme sizes and the current design is based on a contact time of between 15 and 18 hours of the water with the compost, but research is testing whether that contact time could be reduced by increasing the flow rates without a drop in performance, which could then mean that the overall scheme size could reduce

**Funding**
Question: How long will the funding last?

Response: The government is committed to treating mine water discharges which includes the cost of the ongoing operation of schemes. The Wheal Jane treatment scheme in Cornwall currently has an annual ongoing cost of around £1.5 million, which funded by government.

Question: What about the £10million funding from Europe. We are about 5 years into that scheme.

Response: Neither the Environment Agency or Coal Authority recognised that figure as there has been no funding from the European Union. Around £16m was allocated by the Department for Environment Food & Rural Affairs between 2011 and 2015 for the Coal Authority and Environment Agency to manage pollution from abandoned metal mines.

Session two: site evaluation criteria

Michael Sherman, the Coal Authority, briefly explained the process that would be used to identify and evaluate potential sites, on which a scheme could be located. There was then an opportunity for comments or questions, all of which are shown below:

Response: Agree with the need to clean up the river, but the main issue is the closeness to housing and odour, as well as the potential for insects/midges from the ponds.

Question: There is a nearby SSSI designated for flowers that are only there because the site is contaminated. It seems madness to clean up the water upstream and then let it flow into a polluted site. Couldn’t that site be used?

Response: Under planning rules, the Coal Authority would not be granted planning permission to build on a protected site.

Question: If there are further sources of pollution on the River Nent, can’t you just do one large scheme rather than several small ones.

Response: It is possible that more discharges will need to be treated, but at present the Environment Agency and Coal Authority are only considering Haggs and Caplecleugh/Rampgill on the River Nent since these are the most significant inputs of metals.

Question: How are safety issues being considered? There are a lot of children in the area ➔ danger of open ponds.

Response: The Force Crag treatment ponds have a post and wire stock fence, but there is a balance between making a site safe and minimising visual impact from signs/fences.

Question: When will you visit the sites? You can’t decide all this from an office?

Response: Once we’ve reviewed the feedback from these meetings, we’ll apply the site evaluation criteria to each site and then visit each one to do a proper assessment. We’ll share the results of that with people in February ➔ a list of about 15 sites and each site will be scored.

Question: What about Nent Force Level? It’s difficult to access, but shouldn't The Coal Authority just do one big scheme to the south of all the discharges, below Alston?

Response: The Nent Force Level is known to have collapses and so encouraging water into it would be unwise and could create an outbreak / flood risk in Alston. It is more cost effective and practical to manage individual discharges with high metal concentrations and low flows than try to treat the relatively low concentrations (compared to mine water) but sometimes very high flows in the river.

Question: Will each criteria/site scoring be public?

Response: Yes, it will. The scoring for each criteria is likely to be banded

Question: Can we view the sites on-line?

Response: Yes. We will make the maps, showing the sites available on the gov.uk website.
**Question:** What’s the process for suggesting new sites?

**Response:** You can send an email or include suggestions on the feedback forms.

**Question:** How much can the public influence?

**Response:** Once we get to the shortlist stage, each site on that list should be possible to use. There will then be detailed discussions with the public and others to see which is the preferred site, as all of them should be technically feasible.

**Question:** How long will it be from decision to build?

**Response:** Once a preferred site has been agreed, there will need to be further detailed design work before a planning application is submitted. There is then a 16 week determination period for planning, so probably work would not start until mid-2018 and then, subject to weather, the build would take 6 to 9 months.

**Question:** Will we see the detailed design?

**Response:** Yes. We will involve people in the ongoing discussions around design and we will also be in discussions with planners. Concern expressed about the time pressure imposed by the planning ‘clock.’ The Coal Authority would not submit an application until there was agreement on a preferred site.

In addition to the questions above, the following comments were also made about the site evaluation criteria and the site evaluation process:

- acceptance of the need to clean up the river down to Tynemouth but main concern was around the cost of the scheme and how far away from the village the treatment site could be located
- need to consider the impact on human health
- very important that the site is not located close to houses
- the impact on people is the most important thing to consider
- weather conditions could be a limiting factor on access to some sites
- concern about the impact of odour and traffic on the village, particularly the disruption during the construction and maintenance of the scheme
- pipelines may need to cross designated sites
- the visual impact is important, with the scheme presented in April 2016 showed minimal visual impact with mature trees, but there could be a visual impact while the trees are growing

**Session three: how do you want to be involved:**

In the final session, participants were asked how they would like to be involved as the project progresses and whether there were other groups or individuals that the team should be talking to.

Comments made in this session are outlined below:

- involve the Parish Councils
- make it obvious where information is available
- need fairly regular mailshots to everyone in the area ➔ ‘snail mail’
- more meetings like this
- village hall is a good venue as people can walk to it
- keep things transparent

**Any other people we should be talking to?**

- Alston Moor Partnership
- Alston Moor Business Association
- Nenthead Ward of Parish Councils

Note: the project team are aware of these groups and are already in discussion with them.
Summary of actions agreed:

1) EA/CA to share information on the evaluation of the different treatment options
2) CA/EA provide information from ecologists on the potential of the scheme to increase the midge population
3) CA/EA to publish a summary of the public events on the gov.uk website

Wilson Sherriff
November 2016
Appendix - analysis of feedback forms

Below is a summary of the feedback forms received from individuals who attended either the open house session or workshop session on Monday 31 October 2016 at Nenthead Village Hall, Nenthead.

1. Summary of attendance

In total 21 people attended the open house session and 16 people attended the evening session. 9 people attended both sessions. Eighteen feedback forms were received in total - 2 people who had attended both sessions, submitted a single feedback form.

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of feedback forms - Open house session</th>
<th>Number of attendees - Evening workshop</th>
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<tbody>
<tr>
<td>31 October, Nenthead Village Hall</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

2. How did you find out about this event?

![Graph showing how attendees found out about the event]

- Social Media – Nentsbury Community Group
- Other – email communication

3. Which village, parish or community do you live in?

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nentsbury</td>
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<tr>
<td>Alston</td>
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</tr>
<tr>
<td>Nenthead</td>
<td>8</td>
</tr>
<tr>
<td>Garrigill</td>
<td>1</td>
</tr>
<tr>
<td>Frosterley</td>
<td>2</td>
</tr>
<tr>
<td>Nenthead/Greenheads</td>
<td>2</td>
</tr>
</tbody>
</table>
4. What, if any, are your concerns about the proposal to treat mine water discharges on the River Nent?

- that there should be no detrimental effect on the local population, for example on health, on finances, on safety
- odour and proximity to housing
- visual impact, must be outside of village, consider further down river
- impact on landscape and continuing access to mines
- impact on the landscape, its heritage and the various scheduled monument areas
- impact on housing, odour, visual impact, viability
- closeness to housing, safety issues, ecological impact locally
- made (and noted) during meeting
- smells from treatment works and impact on tourism
- concerns about the impact this will have on tourism C2C, regarding smells and an impact on the area
- the immediate impact on the area/community, the risk of the smell of hydrogen sulphide and the long term funding and commitment to the required maintenance and upkeep
- future upkeep, maintenance and funding
- that it will be sited away from housing
- where are you going to be able to put it as houses are close to potential good sites, I appreciate that the river needs to be cleaned
- impact on the community, impact on tourism, impact on businesses and air pollution
- proximity to houses, businesses and visual impact - this is an AONB best enjoyed on foot or bicycle; odour and odour from the elimination process; the vertical flow ponds have a large 'footprint' for the amount of water/sediment treated

5. How useful did you find the exhibition materials? (Score 1 = not useful at all; 10 = very useful)

![Score Chart]

6. Please let us have any comments on the exhibition – this will help us plan future events.

- make it relevant and useful
- site plans not clear - hard to see
- maps too small
- bigger site maps showing preferred areas
- make maps bigger
- useful, but maps too small
• maps of area and possible future sites are too small on display
• maybe larger information boards for people with sight impairment
• some of the enlarged graphics were not very clear but the handouts of the boards are useful
• staff available to talk to were knowledgeable and informative.
• more site specific information
• well set out; helpful staff
• maps too small and unclear; background odours too strong; very difficult to locate places
• I was involved in the initial planning earlier this year and with the exception of the maps showing the possible sites, I thought the material on display was the same
• the maps were too small

7. What are your views about the public workshop (held from 6-8 pm)? (Score 1 = not useful at all; 10 = very useful).

![Bar chart showing scores from 1 to 10]

Please note below any further comments you would like to make about the workshop:

• it is very important that speakers project their voices so that all can hear, as this was a problem in the bigger venue
• copies of site selection maps were difficult to read/see locations
• useful to learn other local people's opinion and the responses from the Coal Authority members as sometimes people asking questions or answering were too quiet, there was very little projection of voices
• workshop good idea in that everyone can hear the questions and answers - need to encourage more residents/businesses to attend

8. What, if anything, would you like to know more about or to have explained more clearly?

• scoring system = points criteria
• will the flow of the river be slowed down by the cleaning process?
• this is an early stage, so in the future I would like to know more about the proposed sites
• all our questions were fully answered
• future upkeep and funding to prevent smells of treatment process
• I will be interested when site identification is being decided
• it would be good if the pools could be close to the mine outlets, but at Haggs there may be problems with housing. In Nenthead there's potential away from housing, but we have the problems of scientific interests which seem to be against people.
• why is the only process being discussed that of vertical flow ponds? Other decontamination methods exist. There are large underground spaces - can't these be used? Is it a question of limited financial resources?
9. Would you like to be kept informed in the future?

<table>
<thead>
<tr>
<th>Option</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16 people</td>
</tr>
<tr>
<td>No</td>
<td>1 person</td>
</tr>
<tr>
<td>No response</td>
<td>1 person</td>
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</tbody>
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How would you like to be kept informed?

- Local paper: Cumberland and Westmorland Herald
- Local newsletter: Alston Moor Newsletter
- Other routes: email, Parish Council and Ward meetings; by word of mouth.