

## Bruar Hydro Scheme – Note to CNPA September 2016

Gilkes Energy Limited (GEL) and the Cairngorm National Park Authority (CNPA) visited the Bruar Hydro Scheme on Monday 26<sup>th</sup> September 2016.

Following the visit GEL provided a summary of further reinstatement works that would be carried out.

CNPA responded with ten key points that they require further details on. GEL has provided further narrative to CNPAs points in the text below. *Original CNPA text in italic.*

1) *The narrowing of the access track on corners by restoring levels to match surrounding and proposals for reinstatement of vegetation/appropriate seeding.*



The corner after the existing bridge will be narrowed and reduced, taken back to existing profiles with a small passing place retained - as the existing track had prior to construction.

The stones and as much of the type 1 road layer as possible will be removed. The mound at the rear of the widening (see picture above) will then be used to cover over the track. There is evidence of regrowth in this mound and this will be carefully reutilised to assist in regenerating the area. Small areas of turfs will also be 'robed locally' and distributed across the area should the cover of vegetation be minimal. Removal of material in the bank will present the opportunity to smooth the banks and lessen the sharpness. The dashed line above in red shows the proposed profile.

2. *The restoring and reinstatement of the 'lay down' areas as above. (This may be already covered in the 18/2/16 note). as well as the various turning areas*

There is a large laydown area on the midpoint of the pipeline route. Prior to construction this was originally a storage area for stone to repair the road – allowing a local stock pile to aid repair of pot holes. This is why it was proposed to retain this but following dialogue with CNPA we consider it would be better to reduce it significantly to a similar scale to the existing lay down prior to construction commencing. See picture below with arrow showing reduction in size.



3. *Clarification of timetable for checks and action for the reinstated area on the west bank of the river below the intake i.e. effectiveness of rip rap/ erosion or not of replaced soils/ establishment of vegetation on this area/tree and shrub planting/tree and shrub protection. Regular photographic evidence of progress to be provided.*

*we would like more information on how you are treating the almost “stepped” effect here where the upper level is to be smoothed off with the lower level beside the river to be considered carefully in terms of how best to stabilise for any future river movement and also consideration of planting with willows etc. to assist stability. Details of your approach are required for example phasing of works, fencing off planting, final profiles etc. and final restoration proposals.*

In spring 2017 we intend to carry out a check on the rock armouring on the west side of the river. We will be assessing the rock armouring for its durability and performance through winter. Should remedial works or strengthening be required this will then be done by the end of May.

This lower section, shown on the left in picture 1 below is part of the planting plan, refer to approved planting plan (Drawing No. L01.Revision I Mitigation Planting ).On the plans it was indicated that we may undertake this as a second stage and this will indeed be the case. So following the assessment of the rock armour (and completion of any remedial works) we will commence fencing this area and then proceed with planting in the Nov 17 season.

This lower section will have a higher percentage of willow; the approved main planting area at the intake has Grey Willow and Eared willow at 20% (each) we would propose to raise this to solely willow on the lower section with a 50/50 split on the species. We consider that willow would be best suited to this type of material.

We have rounded the tops of slopes as previously reported. The fencing for the main planting area is installed; planting will be complete by the end of the month. We have carried out the removal of eyebrows.



Picture 1 eyebrows removed from terrace to the south west of intake. The lower area in the picture will undergo secondary planting.

Picture 2 – example of improvement to terraces with sharp feature at change in topography replaced with rounded edge.

#### 4. *Vegetation of gabion mattresses at the intake.*

Following further discussion with CNPA we will utilise small clumps of grass to cover the gabbions.

5. *Area of 'up-building' at the turbine house. - we will need to check the detail of permitted plans/sections - however a more natural and stable profile is required to be achieved along the river bank.*



We do intend to stabilise this slope by taking material from the boulder field. We will need to liaise with SEPA on this matter further as it will require working next to the river.

*6. Given the prominence of the 'boulder field' along the pipeline route, the lack of action thus far, and winter fast approaching, we need a timetable of proposed activity and regular photographic evidence of progress on the revegetation of this area.*

As was discussed in correspondence the boulder field was a function of the minimal vegetation and organic material on the top layer substrate in this section of the pipeline. It meant there was very little material to reinstate with. GEL have organised the removal of significant volumes of boulders from this area and more will be removed. GEL remains committed to utilise the robbing turfs technique in this area which will be fully reported on in the late spring progress report for CNPA.

*7 information on how stones will be redistributed around the minor intake to make this look more natural*

The minor intake tributary carries significant bed load as such the head pond of the minor intake must be maintained. See picture 4 for typical upstream appearance.

GEL consider that a larger head pond, removing river bed material on north bank in picture 3 and moving this material downstream will assist in making it more natural, the fence and planting will then be brought close to this larger head pond area.

Moving forward maintenance of the headpond will be required and the fence will act as a barrier to avoid further spoil being dumped and maintenance regime will be clear that all excavated river bed will be placed downstream where it will move further down the water course system in spates.

	
<p>Picture 3 material on north bank will be removed. Head pond will increase in size as a result and fencing will be placed across this area to restrict. All operatives to be told to place stone on downstream side of intake when clearing head pond.</p>	<p>Picture 4 – tributary that feeds minor intake form upstream of estate track, larger deposits of boulders and cobbles present.</p>

*8 For area downstream of dam/main intake information on how the land profiles will finally be treated*

We have rounded of edges and removed eyebrows in this area – please refer to point 3 for more information on this area.

*9 painting of the blue pipes in dam*



This is complete pipes painted grey.

*10 removal of the gantry at dam once the screens are removed*

We are currently undergoing a process of commissioning of the screens, which takes time as we understand how the load on the screens changes through each season. This is ongoing and GEL will report on the process in the May report.

It may be worth noting that the approved plans at planning approval stage showed a structure 1m higher than was built and showed a very prominent bosker raker mechanical screener these are typical 3m high.

**Additional works discussed.**

- 1) Pipe bridge peat was brought in round the northern face to cover the concrete abutment greatly reducing the area of visible concrete. This was carried out on Wednesday 28<sup>th</sup> October.



Profile over pipe modified to reduce exposed concrete

- 2) Culvert pipe ends exposed at water crossing near the start of the intake access track- these shall be trimmed back.

Programme for completion of reinstatement works:

Fencing to commence **24<sup>th</sup> October 2016**

All cell grown trees planted by **December 16th 2016** (in accordance with agreed planting plans)

(5000 trees have been ordered)

Completion of all Reinstatement Works by the **end May 2017**

Lower platform at intake by **end of November 2017**

Reporting Dates

GEL to report to CNPA on the fencing and planting works by the **December 16th 2016**.

GEL to report to CNPA by the **end May 2017** on reinstatement works completed. Site visit with CNPA as required.

Final report by **end November 2017**