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| **Name of Hydro Scheme GLEANN CASAIG.** | |
| Location Loch Lomond and Trossachs National Park.  OS Map Landranger 57 ( 2009 revision ) |  |
| Date of Survey: 12th July 2017 | Surveyor name: Jim Robertson |
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| Any comments on survey (weather, area walked) Warm and sunny walk from Brig o’ Turk to Ben Ledi. | |

Notes for surveyors: it would help if you can take photos to illustrate your answers

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| **Development details** | |
| Landowner | Woodland Trust |
| Developer (if different) | (Kenny Hunter) MEG Renewables |
| Contractor (where known) | Luddon Construction |
| Planning reference/s | 2014/0221/DET |
| Date planning permission granted | 8th December 2014 |
| Date work started (if known) |  |
| Date work completed (if known) | November 2016 |
| Monitoring period post completion (if any) |  |
| Size of scheme in generating power (K/W) | 500 |

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| **Overall landscape assessment** | |
| Can the development be seen from hill summit areas or ridges? Y/N. If so which? | Yes. From Ben Ledi summit and part of ridge ( see photograph taken from summit area. ) |
| Is the development next to an access route to hills? Y/N. If so, which? | Yes . Old established Estate track leading from Glen Finglas reservoir to Stuc Dhubh ( see photograph ) |
| Were there previously hydro schemes or electricity infrastructure in area? If so, describe | No. |
| Were there previously hill tracks in area? | Yes…...see above. |

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| **Access Track - location** | |
| Is access track permanent Y/N? | Yes. |
| Access track starting point (Grid Reference) | NN530092 |
| Length of track, intake to powerhouse? | 3.5k |
| Was there a track to area of intake previously Y/N | No. |
| If yes, how much of track follows line of previous track? |  |
| If no, how much of track is new? | All new. |
| Can the access track be seen from hill summits or ridges? If so which? | Yes………….see above. |
| Is there any evidence of off-road track erosion caused by vehicles leaving the track? If so, please describe | No. |
| Any other comments on line/location of track? | A good rising line above the burn. |
| **Access track – standard of construction** | |
| Is width greater than 2m on flat sections and 2.5m on bends? | Yes. |
| If yes, how much of track is broader than this: (All, most, more than half, less than half, little, none) | More than half. |
| What is maximum width? | 3 metres. |
| Is there evidence of unnecessary passing places/turning points? | No. |
| Does the upward inclination of the track exceed 14% in any place? (The max for light vehicles) If so how frequently? | Yes, but only on a very small section----circa 2% of track. |
| Is there evidence of gullying on the track? If so what is cause of this (eg too steep, inadequate drainage) | No.. |
| Is there a vegetated strip running down the middle? | No. |
| Have any of uphill banks/batter slopes been blasted through rock? | No. |
| If yes, have these been restored? |  |
| Are any uphill batters too steep (eg over 45% or too steep to retain vegetation)? | I wouldn’t think so. Revegetation was in evidence in all batter slopes. |
| Is there any evidence of spoil from track spilling down slopes? | No. |
| Have the edges of the track been finished through replacement of vegetation? | Yes. It was obvious to me that an attempt has been made to replace vegetation. |
| Is there evidence that surface vegetation and different soil types have been stored separately and then replaced separately? (All, most, more than half, less than half, little, none) | Most. |
| Has downhill side spoil been moulded to match existing landscape? | Definitely. |
| Approximately how much of the land on either side of the track has been restored through replacement of vegetation? (All, most, more than half, less than half, little, none) | Most. |
| To what extent have the culverts been cut back and covered? (All, most, more than half, less than half, little, none) | Most. |
| Any other specific comments? | It was obvious to me that the Contractor has made every effort to give due attention to the landscaping of the area on each side of the track. In my limited experience it’s the best I’ve seen to date. |
| How would you rate the walking experience along the track?  (Excellent, good, medium, poor, terrible) | Very good. |
| Has the track impacted on existing paths? If so, how? |  |

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| **Intake/s** |  |
| How many intakes are there? (Please repeat for each intake starting with largest intake) | According to the Contractor there is one primary and five secondary intakes. However I could only find one primary and one secondary intake! |
| **Intake 1** |  |
| Altitude and Grid Reference | 1---375m NN544116  2---400m NN547115 |
| Setting (eg open flood plain, gorge, set between banks) | Both set between banks. |
| How visible is intake from neighbouring summits and ridges? | Neither visible. |
| Has the intake dammed the river or is it true “run of river”? | Both dammed. |
| If dammed, length of pool | 1--- 25 metres.  2--- 3 metres. |
| Approx max height intake walls | 1----7 metres.  2----1 metres. |
| Have intake walls been faced with natural materials? | No ( see photographs.) |
| Approx width of intake (across burn/river) | 1----25 metres.  2----6 metres. |
| Has rip rap bouldering been used on upstream side? Extent? Visible from what distance? | Yes on both. Given the site it is difficult to see from a distance. |
| Has rip rap bouldering been used on downhill side? Extent? Visible from what distance? | Yes. 1………..30 metres.  2….5 metres. |
| Are safety fences metal or wood? | None ( see photographs ) |
| Is exposed pipework in natural colours? | Yes. |
| Any other comments (e.g signs, lifebelts, size of turning area, presence other structures?) | No. |

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| **Pipeline** | |
| Is the pipeline buried (except for specific places)? Y/N | Yes. |
| Locations of exposed pipe (eg crossing streams, by powerhouse or intake) and colour | I have been unable to identify the line of the pipe track. The only area I could see where the pipe had been laid was that between the power house and the tailrace and only then because there were marker posts laid out ( see photograph.) |
| If pipes cross burns, have they been buried or hidden under bridges? | None seen. |
| Is there evidence that surface vegetation and different soil types have been stored separately and then replaced in the right order above the pipeline? (All, most, more than half, less than half, little, none of the time) | I would say all. |
| Have air/pressure release valves/pipeline access points been finished properly? | Yes. |
| Other comments |  |

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| **Powerhouse** | |
| Location | NN529092 |
| How visible is powerhouse from neighbouring summits/ridges? | Not visible. |
| Construction materials walls | Wood. |
| Construction material roof | Profiled metal decking. |
| Is there tree planting around powerhouse? | No. |
| Is there hardstanding around powerhouse? If so, how much and what materials? | No. |
| How visible is tailrace? | From the bank of the reservoir. ( See photoghaph. ) |
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| **Other** | |
| Have new pylons/overhead wires been required to connect scheme to grid? | No. |
| If yes, describe extent? |  |
| Have construction compounds been restored? | Yes. |
| Was there evidence of construction materials or equipment being left on site (eg old pipes, imported aggregate left in spoil heaps) Please describe | Pipes left at the end of the existing estate track. ( see photograph ). |
| Evidence of other rubbish left on site? | No. |
| Are there bridges and if so what materials have they been constructed from? | One wooden bridge ( see photograph. ) |

Useful references

<http://www.snh.org.uk/pdfs/publications/heritagemanagement/constructedtracks.pdf>