# Appendix A

# Donich Water Hydroelectric Scheme

# Access & Traffic Report

## Report No: P626/Access & Traffic r1

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# 1 Introduction

This report provides an assessment of the likely access and traffic impacts associated with the proposed Donich Water hydroelectric scheme located at Lochgoilhead, within the Loch Lomond & the Trossachs National Park. Section 4 provides an assessment of construction and operational traffic and Section 6 addresses the impact on recreational access.

# 2 Assessment Methodology

The assessment aims to predict the likely increases in traffic on the main access routes to the site. By comparing this to the existing traffic levels it is possible to assess whether the proposed scheme will have a significant impact on these access routes.

The assessment refers to guidance given in *"Guidelines for the Environmental Assessment of Road Traffic",* published in 1993 by the Institute of Environmental Management and Assessment (IEMA). The guidelines include two rules of thumb whereby assessment is undertaken only on:

- Highway links where traffic flows will increase by more than 30% (or the number of Heavy Goods Vehicles (HGVs) will increase by more than 30%)
- Any specifically sensitive areas (schools etc) where traffic flows have increased by 10% or more.

Therefore, the threshold for assessing whether an effect is likely and detailed assessment is required is a 30% increase in either total traffic flows or in HGV flows.

# 3 Existing situation

The construction of the proposed hydroelectric scheme will require the importation of construction materials and heavy plant to the site. The route of construction access will be via the A83 and the B828 at the Rest and Be Thankful. The site will be an accessed by the B839 at Lochgoilhead. These roads are shown in relation to the hydropower scheme on the Site Location Plan, drawing number P626 10100.

Access to the intake will be via the existing forestry road. Three spurs of new forest road will extend from the existing forest road, to enable construction of the pipeline. These roads will be permanent and will be retained for forestry purposes on completion of the scheme. The powerhouse will be accessed via the existing road at Inveronich.

Traffic data was made available by Argyll & Bute Council. Data was limited to one survey station on the B828 (between the junction with the B839 and the A83) and once survey station on the B839 (between the A815 and the junction with the B828). The latter station is less useful as this section of the B839 would not be the preferred route of construction access. The survey periods for both stations were limited to 19th -26$^{th}$ July 2011.

## 3.1 B828

During the survey period, the B828 yielded a daily average of 575 vehicles. A daily average of 8 HGV movements was recorded on this road during this period.

## 3.2 B839

During the survey period, the B839 yielded a daily average of 649 vehicles. A daily average of 2 HGV movements was recorded on this road.

It is worth noting for both datasets that there was no forestry exportation during this survey week. According to Argyll and Bute Council, during timber exportation, there could be 20-50 HGV movements in the day over and above these figures.

# 4 Anticipated Vehicle Movements Due to Construction

It is estimated that the following vehicle movements will result from the construction of the hydropower scheme:

**Table 1 - Potential increase in traffic movements during the construction phase**

| Activity | Total Number of Vehicles | Duration of Activity | Vehicle Frequency | Total Two-Way Movements |
|---|---|---|---|---|
| 18 tonne flat bed lorries | 7 | 7 weeks at start of construction | 1 per week | 2 per week |
| 20 tonne 12 m articulated lorries delivering pipes and fittings | 34 | 8 weeks in months 2 and 3 | 4 every week | 8 every week |
| 25 tonne concrete and aggregate lorries | 44 | In months 2 to 6 | 2 every week | 4 every week |
| Flat bed 18 tonne lorries delivering plant and machinery | 4 | In weeks 36 to 47 | 1 every 3 weeks | 2 every 3 weeks |
| Vans and small trucks making deliveries | 400 | Spread over 52 weeks | 8 every week | 16 every week |
| Personnel using cars (Assuming a max. of 15 personnel on site) | 15 | Spread over 52 weeks | Maximum of 15 per day | Maximum of 30 per day |

The above information indicates that a typical day at the peak of the construction period would see an average of 1-2 HGVs on site. Deliveries using vans and small trucks would account for an average increase of 1 to 2 vehicles travelling to site per day throughout the construction period. The maximum number of vehicles resulting from site personnel travelling to and from the site would be 15 per day. This figure assumes that many personnel will travel separately and it should be borne in mind that this level of traffic would not be experienced every day. This is a total of 19 vehicles per day or 38 traffic movements.

## 4.1 B828

The increase of 38 traffic movements would represent a 6.6% increase on the B828, based on a daily average of 575 vehicles. The addition of 1-2 HGVs would represent an increase of 25%. The threshold set out by the IEMA for assessing whether an effect is likely and detailed assessment is required if a 30% increase in either total traffic flows or in HGV flows. The projected increases set out in this report are well below the specified guidelines; therefore the impact of the hydro scheme on traffic levels on the B828 is insignificant.

## 4.2 B839

The increase of 38 traffic movements would represent an increase in traffic on the B839 of approximately 6%. This is well below the 30% threshold of the IEMA and therefore the impact from increased traffic flows can be considered negligible. The addition of 1-2 HGVs per day would have a significant impact on the road, based on the minimum daily average of 2 HGVs. However, as noted in Section 3, the construction access would leave the B839 at the B828 junction. Hence, due to the location of the survey station between the junction and the A815, the dataset is less useful for the analysis.

# 5 Residual Effects

The proposed hydroelectric scheme will be unmanned once in operation. The site will be visited approximately 1-3 times a week by an inspection engineer to ensure that the equipment is fully functional and not damaged or blocked in any way. Such personnel are likely to use a van or four-wheel drive vehicle to access the site. Occasional maintenance work may be required, which may necessitate the use of heavy plant on site, and therefore HGV access. However, this is likely to be infrequent. On average vehicle movements to and from the site are unlikely to exceed 3 vehicle movements per week during the operation of the facility.

Therefore, the low number of vehicle movements associated with the operation of the facility indicates that impacts to traffic flows would be negligible.

# 6 Recreational Access

The Cowal Way is a long distance recreational route that is located along the opposite bank of the proposed hydro scheme. Consequently the scheme will not place any restrictions on this route during construction. However, there are a number of core paths within the vicinity of the scheme. Core paths are paths that provide for a variety of recreational and everyday uses and form a network across the National Park area. A pedestrian access management plan is available in Appendix L – Drawings. However, for clarification the following general measures will be taken:

- Signage will be erected at the start and middle sections of each track/path affected by the construction traffic. These signs will warn walkers of the construction traffic and give details about the scheme.
- Any diversions will be short term whilst works progress.
- Passing places will be made at tight bends or pinch points to enable walkers to avoid oncoming construction vehicles.
- Due to the number of core paths in the vicinity it will be possible to temporarily restrict access to paths directly affected by construction and still maintain a good coverage of connectivity in the area.

Once operational, the scheme will place no restriction on access for the public.

# 7 Summary of Key Findings

The construction phase of the project will have the most significant effect on traffic flows on local roads in the vicinity of the site, with an average of 1-2 HGVs, 1 or 2 vans or small trucks and up to 15 cars on site per day (38 vehicle movements per day). This would account for a 6.6% increase in traffic flows on the B828 and a 6% increase in traffic flows on the B839, based on the daily average. This is well below the threshold set out by industry standards. Data for these roads is limited to one week and is exclusive of HGV movements due to forestry operations. Therefore it is likely that baseline HGV figures have been largely underestimated, thus exaggerating the impact of the proposed hydro scheme.

Furthermore, this situation is likely to last only for a limited period as materials are transported to the site. The construction period is estimated to last 12-14 months. Once operational, the increase in traffic resulting from the scheme will be negligible.

The impact on walkers will be minimal and short term. Where appropriate, diversions, signage and passing places will be provided during the construction phase of the scheme to ensure that inconvenience is kept to a minimum. Once operational, the scheme will place no restriction on access for the public.