

Date: 9th September 2015
To: Gerry Geoghegan
Ref: 150909WSP1_Lough Derg AA Screening Update_A01
Re: Review of AA screening outcome in light of revised instrument location

1.0 Introduction

The Water and Hydrographic Sampling Programs (Lough Derg) - Appropriate Assessment Screening Statement (150126WSP1_LoughDergAAScreening) ('The Screening Report') concluded that the proposed water quality and hydrographic sampling programs are not likely to have a significant effect on any European sites, either alone or in combination with other plans or projects.

This conclusion was informed by the locations and design of sampling works. Since the issue of the Screening Report, the locations and installation methods for certain sampling equipment have been revised. Prior to approving these revisions with the relevant contractor, an objective scientific assessment was conducted to assess the potential for the revisions to result in significant effects to European sites.

This memo documents the rationale behind the objective scientific assessment of these revisions.

2.0 Horizontal ADCP

2.1 Original ADCP Proposal

The Screening Report identified that *"1 horizontal ADCP will be bolted to a quay wall or other existing structure in the main Shannon channel near Portumna..."* (Figure 1)

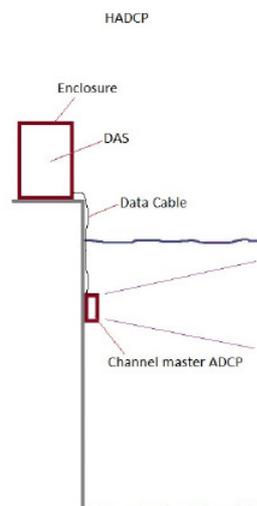


Figure 1: Original Horizontal ADCP configuration

2.2 Revised ADCP Proposal

This location has since been revised to a frame-mounted bank side location downstream of Portumna Bridge (Figure 2)

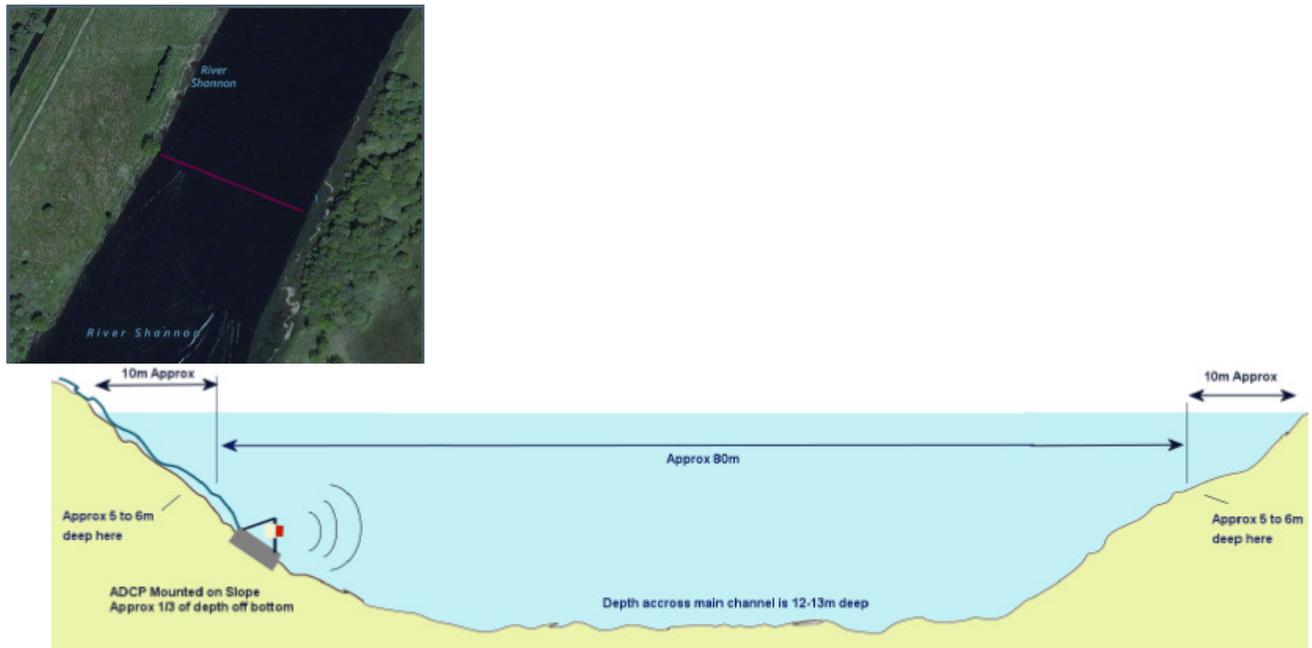


Figure 2: Revised Horizontal ADCP configuration and location

The frame will consist primarily of two steel poles driven to refusal from a floating barge, to which a supporting structure will be attached, and upon which the ADCP will be mounted. The ADCP will be installed at approximately 35% of water depth at this location. The installation will be removed at survey completion.

2.3 Assessment of Revised ADCP Proposal

No new source-pathway-receptor links will arise between the proposed survey programme and the Qualifying Interests of any European sites, as a result of the amended ADCP location and installation methodology. The revised ADCP location is within the Lough Derg North East Shore cSAC and Lough Derg (Shannon) SPA. However, there is no potential for Qualifying Interest habitats of any European sites to occur within the footprint of the works. There is no potential for the temporary localised disturbance associated with the installation or servicing of the ADCP to significantly affect mobile species including birds. The Screening Report ruled out the potential for underwater noise from ADCP operation to affect mobile fauna as the operating frequency does not overlap with the auditory bandwidth of any QI species. A highly precautionary approach was adopted when assessing the potential for silt to affect the highly sensitive freshwater pearl mussel populations within the Lower River Shannon cSAC downstream. However the zone of influence for potential siltation effects associated with the disturbance of the river bed will be limited to the scale of sub-catchment or hydrometric area scale (i.e. silt mobilised from the disturbance will not settle out beyond this boundary) and there are no designated freshwater pearl mussel populations within hydrometric area 25 within which the works will be located.

3.0 Met Stations

3.1 Original Met Station Proposals

The screening report noted the following in relation to the location of met stations:

Meteorological monitoring using two meteorological stations ...located outside qualifying interest habitats of designated areas [Figure 3]:

- *10m cable-stayed mast by northern shore at Portumna Water Recreation Park: to be installed using pre-cast block buried in a shallow hole; on rough ground beside amenity grassland beside a car park; 'collocated' beside existing c.10m high lamp post with attached sensor meteorological installation; proposed footprint of c. 4x4m.*
- *2-9m high mast on southern lough, on or adjacent to the existing Parteen Weir; to be installed on hardstanding on or adjacent existing weir*



Figure 3: Original Met Mast Locations at Portumna and Parteen Weir

3.2 Revised Met Station Proposals

Kilmastulla Pump House No.3

The meteorological station is to be sited on a greenfield area in close proximity to the existing pump house (Figure 4). This is adjacent to the Lower River Shannon cSAC boundary, beside the Kilmastulla River.



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Figure 4: Revised Met Mast Location at Killmastulla

The Meteorological station will be a lattice tower that will stand approximately 15m high, installed using pre-cast block on amenity grassland beside the pump house access area. Its location is immediately adjacent to the ESB embankments at this location, of existing height circa 9m from ground level.

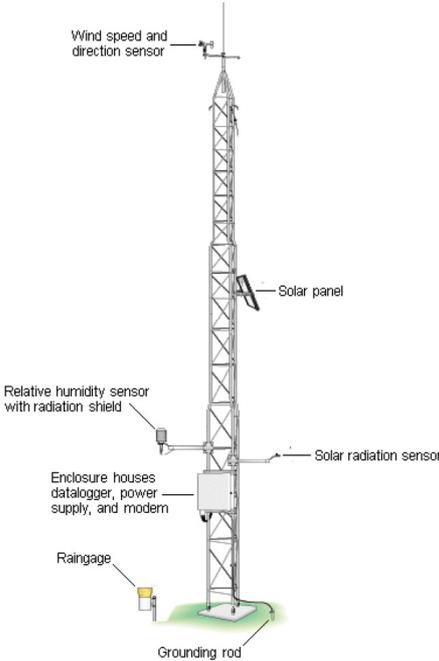


Figure 5: Killmastulla Met Mast structure

Boula Pump House at Portumna

The meteorological station is proposed to be affixed to the existing pump house, location confirmed below.



Figure 6: Revised Met Mast Location at Boula

The design of the Meteorological station is a mounting pole attached to original pump house via existing brackets protruding from the structure. The pole mounting will be of sufficient length so that it is positioned sufficiently high above the building to avoid turbulence (circa 4m). An enclosure will be affixed to the existing building to hold the battery pack (of similar size to the life buoy enclosure) and instruments will be mounted at height on the pole.

A separate rain gauge and irradiance sensor will be placed beyond the lee of the pump house. This will be a small enclosure, either free standing or bracketed to an available supporting structure.

3.3 Assessment of Revised Met Mast Proposals

No new source-pathway-receptor links will arise between the proposed survey programme and the Qualifying Interests of any European sites, as a result of the amended met mast locations and installation methodologies.

There is no potential for Qualifying Interest habitats of any European sites to occur within the footprint of either works. There is no potential for the temporary localised disturbance associated with either installation to significantly affect mobile species such as otter, as there will be no need to break ground at Kilmastulla (use of pre-cast concrete blocks) or Boula (affixed to existing structure). There is no significant strike risk to designated bird populations because neither structure is located near significant breeding areas for cormorant (e.g. Goat, Silver, or Rabbit islands on the north shores of Lough Derg). Any negligible strike risk to wandering birds away from core areas is further reduced by the 'collocation' of both vertical structures beside/on existing buildings which will increase the visibility of the masts to flying birds.

4.0 Conclusion and Recommendation to Irish Water

We confirm to Irish Water, that there remains no likelihood for significant effects to any European sites to arise from the survey programmes. The conclusion of the Screening Report has not been altered by the revised works.