

Afon Wen Methodology

- Consents and permits will all be agreed from marine licencing and NRW prior to commencement on site all paperwork and licencing will be available within the site file, all constraints and protective measures set out on the licences must be adhered to with additional protection measures put in place to protect the beach environment.
- All access will be via adjacent access road from the local farmer and set up within Network rail sidings that are located track side. And provide stone hardstanding.
- All refuelling points will be set up within the compound a minimum of 10mts away from any watercourse / coastline with extinguishers and spill kits locally stored, all COSHH regulations adhered to with bunded containers and warning signage.
- Plant access and designated walking routes will be set up using marker posts and site access plans distributed and briefed to all operatives on induction, all works are programmed for low tide working and towable lighting towers will be placed providing access egress lighting across the shoreline, these will be removed at the end of each shift. Signage will also be placed at the start of each shift giving information to other beach users of works and minimise disruption to their enjoyment.
- Maximum plant operating speed on site will be 3mph, and plant movements observed by a banksman when moving. Reversing only permitted in segregated turning areas.
- All plant access routes will be marshalled by MPH banks men with two way radio contact to the operators maintained throughout, should other beach walkers need to cross the access route dumper/excavator operator will be instructed to stop to allow safe crossing.
- Lighting of the work site will be via lighting towers placed track side and shining down to prevent dazzle to plant operators, these lights will be static and left for the works duration, as they are well above the tidal heights.
- 13t excavator with wide low-pressure tracks fitted to reduce ground pressure and reduce rutting will be used for concrete excavation and sheet pile installation, then the stacking of rock armour in front of the replaced sheet piles all these works carried out working from the beach side.
- A 6 tonne dumper with wide floatation tyres will be used for transporting spoil from the beach side to the compound tip, and bringing the rock armour onto the beach for sheet pile protection.
- All plant machines will be modern and fit for purpose with a provable maintenance schedule and all current industry noise reduction fitted.
- All plant will run on bio diesel and use bio oil grease to lower the risk of pollution, spill kits will be supplied on all machines along with spill kits placed around the work site for emergency use should a spill occur, both plant vehicles will also be fitted with plant nappies in case of pipe failure, during all works carried out beach side an industry competent plant fitter will be on site in case of breakdown.

- All existing sheet piles and concrete spoil will be removed from site, with a temporary sandbag protection constructed at the end of first shifts.
- All sandbags are to be purchased “empty” and filled with beach sand adjacent to the sheet pile works on site, when the temporary sandbag protection is completed return sand back to the same area of beach as from where removed, ensure all hessian sacking and ties are removed from site.
- Sandbag protection should only be treated as short duration protection works between tide times on the first two shifts, once sheet piles achieve maximum penetration of the beach no further protection is required.
- Sheet piles to match existing will be installed using the excavator on the beach, then the rear of the sheet piles will be back filled and compacted to design specification.
- A concrete pump will be used for concreting the capping this will be parked track side with no access to the beach and allow controlled flow of concrete to the back of the sheet piles, the installation of the concrete will be programmed to commence as the tide retreats to allow maximum curing time of the concrete before contact with the sea.
- Concrete capping will be replaced using a rapid set c35 or greater mix of concrete, with stainless steel dowels resin fixed in situ to join the slabs together with a fibre additive added to the mix to replace steel reinforcement and prevent future delamination of the concrete, concrete will be trowel finished to all edges and brush finish to surface.
- The stacking of rock armour will be carried out as final works using local sourced rocks (not lime stone) and placed in a random style to match existing rock armour along the beach.