

Note / Memo

Haskoning UK Ltd.
Industry & Buildings

To: Future Water MMJV Ltd
 From: A. Hepworth
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**Subject: Havant Thicket Reservoir: Cut Off Wall Works - January 2026
 Noise and Vibration Technical Note**

Havant Thicket Reservoir: Cut Off Wall Works at the Reservoir Culvert Structure

1. Introduction

As part of the construction works for the Havant Thicket Reservoir, an impermeable barrier must be created below the main embankment in order to retain water in the reservoir. This barrier is known as a 'cut off wall'.

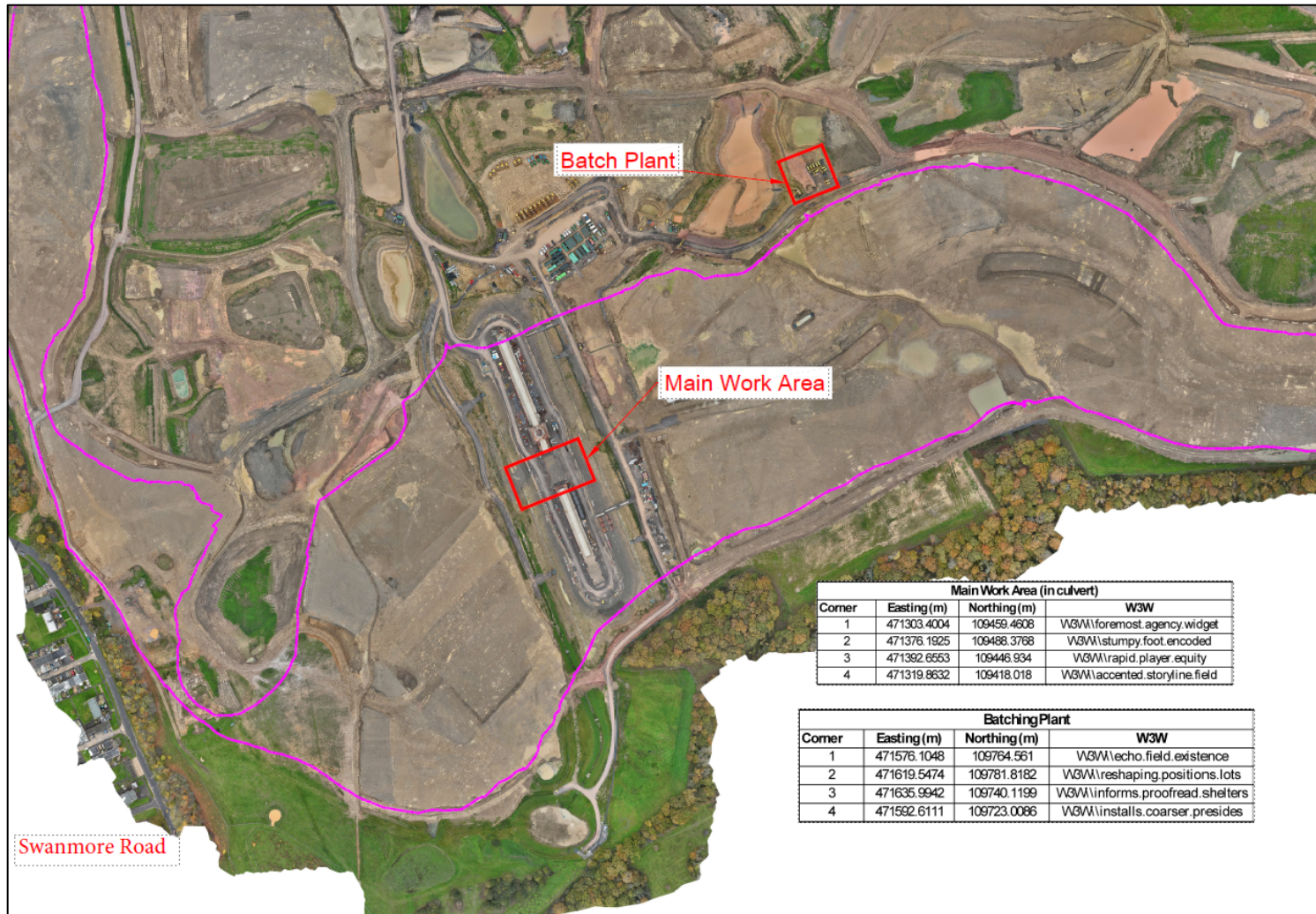
Whilst the majority of the cut off wall can be delivered within permitted working hours, the area where the cut off wall must pass under the reservoir culvert structure is more complex.

Figure 1 shows the location of the proposed works. At this location, there is a critical interface between the construction of the cut off wall and the reinforced concrete reservoir culvert, which necessitates continuous working to prevent the cement-based slurry within the cut off wall from curing before a steel sheet can be embedded. This will ensure the structural integrity and impermeability of the interface between the cut off wall and the reservoir culvert.

The cut off wall works require continuous working for approximately 90 hours commencing in January 2026. The anticipated programme of work is provided below.

12/01/2026	07:30	Works commence
	07:30 – 23:59	Excavation and cement-based slurry fill
13/01/2026	00:00 – 23:59	Excavation and cement-based slurry fill
14/01/2026	00:00 – 12:00	Excavation and cement-based slurry fill
	12:00 – 22:00	Embedded sheet installation
	(No later than) 22:00	Works conclude

Figure 1 – Site location of reservoir culvert structure (main works) and on-site batching plant



2. Cut Off Wall Works - Noise & Vibration

Havant Borough Council and East Hampshire District Council, as Local Planning Authorities, granted Planning Permission in October 2021 for the Havant Thicket Reservoir project in accordance with the Town and Country Planning Act 1990 (as amended) and subject to compliance with the following noise and vibration planning conditions, including:

Planning Condition 9

No phase of the development approved under Condition 4 shall commence until a construction noise and vibration management plan, including a targeted scheme wide construction noise and vibration monitoring and reporting programme, has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Planning Condition 10

No phase of the development approved under Condition 4 shall commence until a revised and updated assessment of potential noise and vibration arising during construction shall be prepared in accordance with BS 5228-1:2009+A1:2014. The assessments shall include likely eligibility for noise insulation or temporary re housing and shall be submitted to and approved in writing by the Local Planning Authority and construction carried out in accordance with the agreed recommendations.

Planning Condition 11

Subject to Condition 10 [ABOVE], no night time working shall take place, unless otherwise in accordance with a scheme submitted to and approved in writing by the Local Planning Authority. Night-time works to be carried out strictly in accordance with the approved scheme.

Noise and vibration level predictions for the main reservoir site construction works were undertaken in the Noise and Vibration Impact Assessment (Future water doc no. HTR-RHD-P2-RE-EN-Z-009) which was approved pursuant to discharge condition 10 of the planning consent for the project. Systems and controls to manage noise and vibration throughout construction are included in the Noise and Vibration Management Plan (Future Water doc no. HTR-RHD-P2-RE-PL-W-0017) which was approved pursuant to discharge condition 9 of the planning consent for the project.

a. Review of planned construction activities

The construction plant required for the cut off wall works at the reservoir culvert structure is relatively small scale, comprising 1no. long reach excavator, 1no. dump truck, 1no. 4x4 pickup truck and 4no. mobile lighting towers and noise emissions are low. The works areas are also at least 500m from the closest residential receptors on Swanmore Road located to the west, and Winterslow Drive located to the south. Hence, noise-related disturbance from night-time working is considered unlikely.

The slurry will be pumped from the on-site batching plant to the excavation via overground pipework. The equipment at the on-site batching plant will comprise 1no. grout mixing plant, 2no. mobile lighting towers and 1no. generator in a silenced enclosure. The on-site batching plant will

be located further to the west of residential receptors on Swanmore Road and further north of properties on Winterslow Drive, as shown in Figure 1.

The Noise and Vibration Management Plan (Future Water doc no. HTR-RHD-P2-RE-PL-W-0017) which was approved pursuant to discharge condition 9 of the planning consent for the project, sets out thresholds for construction noise levels in Table 2 of that report (copy below) and that the duration of works for potential impacts to occur have to be above the threshold for “40 days in a 6 month period or 10 days in a 15 day period”. This criterion applies irrespective of noise level or timing of the works.

Table 2 Construction noise threshold levels

Period	Construction noise threshold level L_{Aeq} (dB)	Duration of works for potential impacts
Monday to Friday 07:00 to 19.00 Saturday 07:00 to 13:00	65	40 days in a 6 month period
Monday to Friday 19:00 to 23.00 Saturday 13:00 to 23:00 Sundays 07:00 to 23:00	55	or 10 days in a 15 day period
Night-time 23:00 to 07:00	45*	
* To ensure potential worst-case impacts are captured and mitigated appropriately, the project has elected to use a lower (i.e., more conservative) night-time threshold value of 45 dB L_{Aeq} , rather than the category B limit of 50 dB L_{Aeq} determined in the ES.		

These thresholds are the same as those identified in the Environmental Statement for the Havant Thicket Reservoir project (Atkins 2021) for a potential impact to occur.

The proposed 90 hours of 24/7 working for the cut off wall would include up to 3 nights; hence a potential noise impact is not anticipated according to the method used in the ES and approved as part of the Noise and Vibration Management Plan.

b. Management Measures

Planning permission was granted on the basis of a number of environmental actions and commitments made in the 2021 Environmental Statement. The Record of Environmental Actions and Commitments (REAC) (NV1-NV6) captures these actions which are required to be adhered to, at the pre-construction, construction and operation stages of the project.

As per REAC commitment NV1, all works will be carried out in accordance with the Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environment Protection Act 1990, and noise control measures, as suggested by BS 5228 Part 1. Best practical means will be implemented to minimise noise & vibration nuisance during the cut off wall works in accordance with the Noise and Vibration Management Plan for the Havant Thicket Reservoir project (Doc Ref: HTR-RHD-P2-RE-PL-W-0017), as follows:

- Only using plant which complies with the relevant EU/UK noise limits applicable to that equipment or is in no way noisier than would be expected from the noise levels quoted in BS 5228: 2009+A1:2014 Part 1. This would include all vehicles and mechanical plant used

for the purpose of the works being fitted with effective exhaust silencers and maintained in good and efficient working order;

- Machines in intermittent use will be shut down in the intervening periods between work, or where this is impracticable, throttled down to a minimum;
- Where practicable, plant with directional noise characteristics will be positioned so as to minimise noise at adjacent properties;
- All plant and equipment will be examined for defects prior to the start of works and under no circumstances will any defective plant be used;
- Reversing on site will be avoided as far as reasonably practicable – if reversing is required, low impact reversing alarms and banksmen will be used;
- All compressors and generators will be ‘sound reduced’ models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools will be fitted with mufflers or suppressers of the type recommended by the manufacturers and will be kept in a good state of repair;
- Works are located 500m from the nearest residential properties, which are uphill from the main works area and largely screened by hedgerows and trees which follow the site boundary;
- All staff and operatives will be briefed on the requirement to minimise nuisance from site activities via the works pre-start briefing and during handover briefings;
- Impact noise will be reduced as far as reasonably practicable by careful handling of materials, minimising drop heights when loading, avoiding body and tailgate slap when tipping;
- Closing engine compartments when equipment is in use and when undertaking inspections/maintenance activities;
- No tracked plant will be moved overnight and the wheeled dump truck will traverse the site using existing site haul roads.
- Use of temporary noise screens or partial enclosures around activities at the on-site batching plant; and
- Undertaking continuous noise monitoring at the Havant Thicket Reservoir site boundary nearest to the closest residential receptors to ensure the noise control measures for the cut off wall works will be effective.

c. Conclusion

So long as Best Practicable Means are employed to minimise noise emissions, which includes informing people beforehand of the proposed works, why they are needed and the measures being implemented to minimise noise emissions, noise from the proposed night-time works will be compliant with the planning consent and are unlikely to cause significant disturbance.