

Hannah Lucitt
Bradford MBC
Development Services
Britannia House Hall Ings
Bradford
Bradford
BD1 1HX

Our ref: RA/2023/146610/01-L01
Your ref: 23/00829/MCF
Date: 19 January 2024

Dear Hannah Lucitt,

**SUBMISSION OF SUPPLEMENTARY HYDROGEOLOGICAL IMPACT
ASSESSMENT AS PART OF PRELIMINARY PLANNING APPEAL PROCESS -
PUBLIC INQUIRY: HORN CRAG QUARRY, LAND OFF FISHBECK LANE, SILSDEN,
BRADFORD, WEST YORKSHIRE, BD20 0NR
REF: APP/W4705/W/23/3332884**

Thank you for consulting us on the submission of the supplementary Hydrogeological Impact Assessment (ref: 3080/ HIA, Version D1, September 2023) that we received by email on 6th December 2023 from your colleague, Carole Howarth.

We recognise that the priority has correctly since been given to the Appeal process and the Environment Agency, as a potential defendant witness to Bradford Metropolitan District Council, has sought to support your preparation for this. As such, we have responded to all requests from Bradford Metropolitan District Council (Bradford MDC) with urgency and in due regard to the deadlines administered by the Planning Inspectorate, while following the recommendations of our own legal framework.

We have nonetheless underlined on several occasions of our requirement to fully and formally respond to the supplementary Hydrogeological Impact Assessment to ensure that our statutory duties had been performed and all relevant hydrogeological impacts within our remit were assessed.

The key priority recently has been our important contribution in the submission of a headline response to the above referenced supplementary Hydrogeological Impact Assessment, while applying this view to the collective drafting of development planning conditions between the local planning authority and other key consultees.

Indeed, we understand that a tacit agreement between the Appellant and Bradford MDC has been reached to potentially remove hydrogeology as an item from the formal Appeal process. We will continue to support this process in achieving an amicable

outcome for all parties and consider this formal response will strengthen any steps towards a resolution.

Environment Agency position

The proposed development presents a potential risk to groundwater which is particularly sensitive in this location because the proposed development site at Land off Fishbeck Lane, Silsden, West Yorkshire, BD20 0NR:

- is within Source Protection Zone 1
- is within 50 metres of a spring possibly used for the supply of water for human consumption

The supplementary Hydrogeological Impact Assessment (ref: 3080/ HIA, Version D1, September 2023) submitted in support of this planning application provides us with a degree of confidence that it may be possible, with relevant planning conditions, to suitably manage the risks posed to groundwater resources by this development. Further detailed information will however be required before any development is undertaken. It may be possible to grant planning permission, subject to additional information being provided by the applicant and consequently approved, but we respect that this is a decision for the local planning authority.

In light of the above, the proposed development will be acceptable to the Environment Agency if planning conditions are included requiring submission and subsequent agreement of further details as set out below. Without these specific 2no. conditions, we would object to the proposal in line with paragraph 180 of the National Planning Policy Framework because it cannot be guaranteed that the development will not present unacceptable risks to groundwater resources.

Condition 1

The development hereby permitted may not commence until such time as a scheme is submitted to and approved by the Council which;

- i. details the 50 metre Source Protection Zone 1 for the potable groundwater supply source.*
- ii. identifies the highest potential water table by either site-specific water level readings taken over a suitable period or conceptual modelling. A climate change factor should be incorporated.*
- iii. sets out a programme of further ground water measurements after quarrying commences to establish any changes that may occur to the water table*

Reason(s)

To ensure that the proposed development, including mineral extraction, does not harm the water environment in line with paragraph 174 of the National Planning Policy Framework and Position Statements B3, N7, N8 and N11 of the 'The Environment Agency's approach to groundwater protection'

Condition 2

There shall be no:

- *de-watering of the site*
- *interruptions to ground or surface water flows*

- *quarrying within 1 metre of the highest agreed water table*

without the written consent of the local planning authority.

Reason(s)

To ensure that the proposed development, including mineral extraction, does not harm the water environment in line with paragraph 174 of the National Planning Policy Framework and Position Statements N8 and N11 of the 'The Environment Agency's approach to groundwater protection'

Additional Observations and Informatives

The Environment Agency acknowledges the subject of hydrogeology forms an element of the Planning Appeal (ref: APP/W4705/W/23/3332884). We have been informed that round table discussions will shortly be scheduled between all relevant parties to explore how best to reach an agreement of development consent subject to the inclusion of planning conditions.

Importantly, in our opinion, there are outstanding points presented in the supplementary Hydrogeological Impact Assessment (ref: 3080/ HIA, Version D1, September 2023) to which we strongly recommend the local planning authority seeks clarification before any planning conditions are formally agreed.

Further to this, Bradford MDC may wish to also seek similar input from other relevant consultees who were either involved during the determination of the planning application and/ or the Appeal process.

For clarity, the need to strengthen the development proposal reinforces our position that was summarised in an email sent to Bradford MDC on 11th January 2024.

Below, we have directly referenced key sections of the supplementary Hydrogeological Impact Assessment report and summarised our position, inserted suggested action where appropriate, while providing a justified reason for each:

Point i: Section 2.2

There is repeated and subjective reference to the relationship between a spring and potable water supply, and corresponding with paragraph 6.1 in the report at which the existence of a spring is recognised.

"No wells or springs are indicated within 500 m of the quarry, according to current Ordnance Survey (OS) mapping. However, historical OS maps indicate the presence of such features and these are shown on Drawing 3080/HIA/02. One spring has been identified within the quarry, located close to the access track. The spring is situated at an elevation of approximately 232mAOD and located at the western margin of the mapped outcrop of the sandstone.

A water collection chamber is located close to the western site boundary, at an elevation of 228.3mAOD. Two manholes are present at this location. The first contains a collector pipe that receives water from the historical waste tip on the western boundary of the site. A 50 mm egress pipe, fitted with a filter, is located close to the base of the chamber, which conveys water westwards. The water passes to a second chamber, in which it is filtered, before it is presumably piped to several properties.

It is noted that the spring is not a registered private water supply. Furthermore, it is understood that the original agreement to supply water from the spring has lapsed.

i: Suggested action

Appropriate investigations need to be made into the exact set-up at the spring and where exactly the SPZ1 should be situated. Drawing 3080/HIA/06 v2 in the September 2023 Hydrogeological Assessment has the SPZ1 centred around what is labelled as a “*collection chamber*”. The SPZ1 needs to be confirmed as being centred on the actual source of supply for the properties. By “source of supply” we mean the point at which the spring comes naturally out of the ground, and not any sealed infrastructure associated with water collection and distribution. If it comes out of the ground at several locations, SPZ1’s will need to be constructed around each location and referenced on a revised drawing for approval by the local planning authority.

The statements “*presumably piped to several properties*” and “*purportedly used as a water supply*” gives the impression that the source of supply, the means of collection and the means of delivery have not been thoroughly investigated by the appellant. This needs to be addressed and/or clarified. The report suggests that the source of supply is partially from the historical waste tip.

The statement “*it is understood that the original agreement to supply water from the spring has lapsed*” implies that there is no permission from the landowner for water to be supplied to the properties. Again, this needs to be clarified.

i: Reason

Without appropriately addressing these matters, the accuracy and enforceability of any related planning conditions may be brought into doubt.

Point ii: Section 4, Paragraph 2 (and corresponding with Section 5.2)

Proposed wider site activities, such as screening and crushing operations, may present additional pollution impacts from surface water/ run-off. At Section 5.2 the report acknowledges that “*...the operation of fixed and mobile plant within the quarry has the attendant potential to impact upon water quality...*”

ii: Suggested action

Seek specific representations from the Lead Local Flood Authority and/ or Environment Team and consider drafting related site management condition/s.

ii: Reason

To minimise the risk of water pollution by requiring appropriate mitigation measures to be implemented.

Point iii: Section 5.1 (and referenced at 6.2)

The report proposes that all mineral extraction would be undertaken above the watertable. Consequently, impacts to the existing groundwater flow regime or groundwater levels are not predicted. There is consequently not considered to be any potential for impact upon the volume of water received at the spring collector and mitigation measures are therefore not proposed.

At Section 6.2, however, the report itemises the following measures which are proposed in reference to deploying chemicals and fuels:

- *There will be no activities involving potentially contaminating materials, such as storage of fuel and oil, within 50 m of the collector*
- *Neither mineral extraction to within a 75 m radius of the spring, nor mineral extraction below 240mAOD, will be undertaken until groundwater monitoring has been completed over two winter periods*
- *Storage of potentially contaminating materials should preferably be kept off the sandstone, possibly in the southwest corner of the site, where the ground is underlain by mudstone. All potentially contaminating materials will be stored in accordance with best practice. Fuel tanks will be bunded and refuelling of plant will be undertaken, where feasible, on hardstanding. No refuelling of mobile plant should be undertaken within the mineral extraction area*
- *In the unlikely event of a pollution incident occurring, absorbent materials within spill kits would be deployed to contain the incident. The resultant contaminated material would be disposed of at a suitable facility. Site personnel will be trained in the correct usage of spill kits.*

The proposed measures are illustrated on Drawing 3080/HIA/06.”

We welcome the statements in Section 6.2 and are somewhat confused by Section 5.1. In particular, at Section 2.2, *“The spring is situated at an elevation of approximately 232mAOD and located at the western margin of the mapped outcrop of the sandstone...”*

and *“The first contains a collector pipe that receives water from the historical waste tip on the western boundary of the site. A 50mm egress pipe, fitted with a filter, is located close to the base of the chamber, which conveys water westwards. The water passes to a second chamber, in which it is filtered, before it is presumably piped to several properties.”*

It is therefore implied that there are two possible sources of supply: one from the natural bedrock, and one from the historical waste tip. It is not clear what the quality of the water from this waste tip is, or what is the composition of the waste tip.

Further, if people are drinking this water, the implications of the proposed developments on site need to be established. If the waste tip materials are in continuity with the surrounding bedrock, the interaction between water in the waste tip and the rest of the water environment need to be established.

Also, if the waste tip contains historical contaminants, this potentially has implications for the general quality of groundwater in the vicinity, as well as to the spring.

We note that the waste tip is referred to as “rock waste” on Drawing 3080/HIA/04.

iii: Suggested action

Clarification and further assessment are recommended to determine that the proposed development activities would not create potential impacts.

To this end, could it be confirmed whether it is “rock waste” or a “waste tip” and what is the main material composition thereof?

iii: Reason

To provide required clarity and demonstrate no unacceptable impacts by proposing suitable mitigation measures that will ensure the potable spring supply is protected

These are the position statements that cover proposals to quarry in SPZs:

[The Environment Agency's approach to groundwater protection \(publishing.service.gov.uk\)](http://publishing.service.gov.uk)

B3 - Default source protection zones for private water supplies

All groundwater abstractions intended for human consumption or food production purposes have a default SPZ1 with a minimum radius of 50 metres. In some cases depending on the volumes abstracted, a default SPZ2 with a minimum radius of 250 metres applies.

N7 - Hydrogeological risk assessment

Developers proposing schemes that present a hazard to groundwater resources, quality or abstractions must provide an acceptable hydrogeological risk assessment (HRA) to the Environment Agency and the planning authority. Any activities that can adversely affect groundwater must be considered, including physical disturbance of the aquifer. If the HRA identifies unacceptable risks then the developer must provide appropriate mitigation. If this is not done or is not possible the Environment Agency will recommend that the planning permission is conditioned, or it will object to the proposal.

N8 - Physical disturbance of aquifers in SPZ1

Within SPZ1, the Environment Agency will normally object in principle to any planning application for a development that may physically disturb an aquifer.

N11 – Protection of resources and the environment from changes to aquifer conditions

For any proposal that would physically disturb aquifers, lower groundwater levels, or impede or intercept groundwater flow, the Environment Agency will seek to achieve equivalent protection for water resources and the related groundwater-dependent environment as if the effect were caused by a licensable abstraction.

Point iv: Section 6.2 and 6.3

Aim to establish the highest anticipated water levels through proposed mitigation measures to protect the water source and establish groundwater level monitoring.

The report proposes at Section 6.2 that neither mineral extraction to within a 75 m radius of the spring, nor mineral extraction below 240mAOD, will be undertaken until groundwater monitoring has been completed over two winter periods.

Additionally, at Section 6.3, the 'Old' monitoring borehole is confirmed as operational and would be used to monitor groundwater levels regularly. Monitoring will establish natural temporal groundwater variation and provide information to suitably control the elevation of the base of the working area. Two new groundwater monitoring boreholes will be installed between the existing ('Old') borehole and the spring collection chamber. The boreholes will be completed using 50 mm diameter plastic pipe, slotted at its base. The proposed locations of the boreholes are shown on Drawing 3080/HIA/06.

In Table 3080/HIA/T1: Borehole data, the water level in BH5 is stated to be 248.15mAOD. Critically, this is at odds with the statement, "*nor mineral extraction below 240mAOD, will be undertaken*", as the report reads as if the water table has already been shown to be greater than 240mAOD in BH5.

Moreover, we hold specific concerns with Drawing 3080/HIA/06 as key details are not referenced in the map legend and/ or omitted entirely: these include (but may not be limited to) no activities within the 50m of the collection chamber; 240mAOD not clearly demarcated; no mineral extraction within 75m radius of spring not reflected; relationship between spring and collection chamber not illustrated.

iv: Suggested action

We note that there is a selection of existing boreholes on site, and that the drilling of two more are proposed. Water levels have been particularly high this winter and could be the basis for some excellent measurements. We would advise strongly that water levels should be taken now, if they haven't already been.

As already listed, we are additionally proposing planning conditions to cover the establishment of the highest anticipated water level – see Condition 1 (ii) and protection of the water environment.

Further to the planning conditions, we recommend that advance attention is required by the appellant of the wider presentation detail and omissions that we consider underpin and may support the main content of any agreed planning conditions. In short, by failing to address these points now, the enforceability of any related planning conditions may be brought into doubt.

iv: Reason (a)

To ensure that the proposed development, does not harm the water environment in line with paragraph 174 of the National Planning Policy Framework and Position Statements B3, N7, N8 and N11 of the 'The Environment Agency's approach to groundwater protection'

iv: Reason (b)

To ensure that the proposed development, does not harm the water environment in line with paragraph 174 of the National Planning Policy Framework and Position Statements N8 and N11 of the 'The Environment Agency's approach to groundwater protection'

The Environment Agency hopes these comments are useful. If you have any further questions, please do not hesitate to contact me.

Yours sincerely

Mr. Neil Wallace
Planning Specialist

Direct e-mail Neil.Wallace@environment-agency.gov.uk

Team e-mail sp-yorkshire@environmentagency.gov.uk