

THE EXAMINING AUTHORITY'S SECOND WRITTEN QUESTIONS AND REQUESTS FOR INFORMATION (EXQ2)

DEADLINE 6 (26TH JULY 2019)

Ag.2.10 M & R Hosier

Impact on agricultural operations

- i) **Please set out why you consider the current measures in the OEMP [REP4-020], including those relating to private water supplies and the provision of an Agricultural Liaison Officer, would be insufficient to mitigate potential effects on your pig enterprise such that you consider it possible it would need to cease.**
- ii) **Please provide details of any additional measures you consider to be necessary to minimise the impact on these farming operations.**

M & R Hosier response

Response to item i)

We remain unconvinced that the Applicant has a correct interpretation and understanding of the hydrogeology and structural geology of the Scheme area. This is noted in our response to 8.18 items 40.1.16, 40.5.10, 40.5.15, 40.5.18 in relation to water, and items 40.1.20, 40.1.21, 40.1.25, 40.1.26, 40.1.28, 40.1.29, 40.1.31, 40.1.34 in respect of soil protection. If the Applicant remains unwilling to revisit these areas from negotiations with the NFU, then we fail to see how an ALO will be of significant benefit.

Also see our responses within report 8.31.

Private water supplies

In the 8.31 (Applicants response 8.18 to our Written Representation), under their paragraph 40.1.15 the Applicant refers to the pig enterprise having been “taken into account within the OEMP”. We have responded asking for the reference to this as we have not been able to locate it. Please also refer to our comments on lack of feasibility studies to provide either temporary or permanent water to our farm should our borehole supply be compromised.

OEMP measures

OEMP item MW-GEO2 As we have stated in our responses, there is a need for all water abstractors to be notified if there is any groundwater contamination incident on site as there is the potential for this to enter the groundwater that is drunk by farm tenants and livestock.

OEMP item MW-WAT5 Pollution incident monitoring. There is no noting that any “actual significant pollution incidents” will be reported to any private water abstractors for them to monitor their water supplies or seek to take remedial action.

OEMP item MW-WAT8 What will happen if the Scheme needs dewatering and the Environment Agency (EA) do not agree to this due to the fact that the level of dewatering is significantly more than has been identified within the groundwater risk assessment? Will this just go ahead and all private water abstractors will be provided with an alternative supply?

OEMP item MW-WAT10 From independent research we remain concerned that the main works contractor will be relying on the survey works and their interpretation carried out by the Applicant, which we believe to be inaccurate.

There is no requirement to monitor the water quality levels for drinking water standards, therefore there is the potential for private water abstractors to ultimately be drinking contaminated water as only chemical components will be picked up.

There is no noting of how often the water monitoring will take place. If only carried out quarterly or monthly, there is the possibility that water could be contaminated for a period of time before the issue is picked up. If this was to be the case, people and livestock would be drinking contaminated water.

OEMP MW-WAT11 We believe, that as it cannot be proved that the Scheme will not impact on the quality and quantity of water from private borehole abstractions, the Applicant needs to have alternative water supplies already in place prior to the Scheme going ahead. Independent research has shown that alternative water supplies can take as long as 18 months to 2 years to put in place and it would be unreasonable for the Applicant to rely on temporary water supplies over that length of time.

No mention is made of what this “appropriate monitoring” will be and whether farmers will be consulted, to ensure that what is proposed is actually “appropriate” for their farm circumstances. Will water be monitored to drinking water inspectorate standards if people are drinking the borehole water?

We note that main works contractors will consult with existing abstractors for measures to minimise loss or interruption of supply, provision of emergency water supply, and provision of alternative permanent water supplies. However, there is no mention of when this consultation will take place. These elements need to be discussed now, as they may have a bearing on the Scheme.

Point a) states *“Where determined, and agreed with the owners /operators or other abstraction licence holders, targeted risk-based audits and checks of water quality monitoring will be undertaken at abstraction sources by the main works contractor”*

Who will “determine” whether these water quality monitoring will be carried out? Will farmers be able to request this monitoring? Will quality monitoring be to drinking water standards or to standards required by farm assurance schemes? Will farmers be provided with a copy of the results

so they can provide evidence at farm assurance schemes audits? How soon will information be provided to farmers?

Point a) continues *“The period of monitoring will be appropriate to the timing and type of work undertaken, and will include a period of baseline monitoring”*.

Realistically, there is no way of knowing what is an “appropriate period of monitoring”, so we would suggest that this is carried out as frequently as possible. No mention is made of when the baseline monitoring would start. To provide a representative for baseline quality and supply, monitoring should be undertaken as soon as possible and we would suggest that it should already be happening.

The Applicant is relying on water models for the flow of water within the area, but there is no certainty that these will be accurate. The Applicant believes there to be no karstic behaviour of the rock within the area, but if this is incorrect as we believe, then the water flow within the area will be quicker than anticipated, so contamination incidents would show up sooner. Having not carried out any 3 D modelling of the Scheme to show fissure flow, how can the main works contractor or even any landowners etc, properly assess where these monitoring boreholes should be accurately placed within the landscape?

Point b) of MW-WAT11 states *“the main works contractor will arrange any monitoring of water levels in areas where dewatering of the chalk aquifer is required”*

The location of the monitoring will depend on how much water will be abstracted by dewatering. If there is a large volume of water to be abstracted then this could potentially have a large drawdown area within the landscape. We believe that the Applicants water model needs to be backed up by a full fracture 3D model to show the extent of fractures within the geology, which will accurately inform where these additional water monitoring points should be and provide more information to assess the dewatering needs of the Scheme on the chalk aquifer.

Point c) of MW-WAT11 states *“where the water quality monitoring shows an adverse impact on water quality as a result of the works, the main works contractor will contact the relevant abstractor (licence holder and operator) and will put in place appropriate emergency measures to overcome the adverse impact where this has resulted from the construction works”*

Whilst we understand that measures will only be put into place as a result of a construction works impact, the chances of any water quality issues deviating from the baseline monitoring as result of any other incidents, is negligible. We are concerned that rather than notify us of a water quality issue, an attempt will be made to dismiss the polluting incident as being agricultural and therefore no remedial action will be taken. It could take months or even years to establish the cause of a pollution incident which in the meantime, leaves farms and cottages with only contaminated water to drink. This is unacceptable.

As already mentioned in the points above, there should be an alternative water supply available prior to the commencement of construction of the Scheme. The final connection to this alternative supply could then be quickly made.

Point c) continues *“these emergency measures may include the transfer of a potable water supply to another water source and informing the water users.”*

We would suggest that the wording “supply to another water source” should actually read “supply or another water source”.

There is a need for the main works contractor to make provision for any potable water (presumably in the form of tankers) to access our farm and discharge the water into our farm water network. A tanker of water delivered to the farm entrance alone is not sufficient. As already noted, there is a considerable amount of work that needs to take place prior to the Scheme construction to ensure farm water supplies are secure.

We would hope that we would be informed of any suspected problems as soon as it has become apparent so we are able to stop tenants and livestock drinking contaminated water.

OEMP MW-WAT15 Groundwater, this states, “ *The main works contractor shall, where changes in groundwater levels are predicted to occur as a result of construction activity, which would be considered significant using the methodology defined in the groundwater management plan (refer to MW-WAT10) undertake additional site investigations*”.

We understand that this makes the main works contractor responsible for carrying out additional surveys should it be shown that there is a need for dewatering or there is evidence that the tunnel constructed within the water table is having a greater than anticipated effect on the groundwater flow. We believe that this is putting too much responsibility on the main works contractor. It is the Applicant as the purveyor and supporter of the Scheme who should be responsible for fully assessing the structural geology and hydrogeology of the Scheme prior to works commencing. As such, we believe the Applicant needs to carry out a full 3 D fracture model of the Scheme to make the contractors tendering for the work fully aware of all potential problems.

MW-WAT15 continues “*Water levels at selected observation piezometers will be monitored before, during and after any dewatering associated with the construction of the tunnel*”. By carrying out a 3D fracture model it will show where the observation piezometers need to be placed within the Scheme to be able to provide an accurate representation of what is occurring in the groundwater.

In addition to this, we note that some of the monitoring boreholes (that have been constructed on our farm last October with a view to providing baseline information prior to construction), have yet to have any monitoring equipment installed. We would suggest that the Applicant is failing in its duty to carry out adequate base line monitoring for which the groundwater levels will be assessed. This has the potential for the main works contractor to base assessments on insufficient information leading to errors.

MW-WAT15 concludes that “*additional drainage will be provided as mitigation where necessary. Monitoring arrangements will be in defined within the groundwater management plan.*” What happens if the EA does not permit additional drainage within areas? And what measures will be put in place to ensure that water discharge areas are not going to contaminate the groundwater? Much of the land within the Scheme area is livestock farmed, so will carry additional contamination risks as organic matter has the potential to be washed into groundwater with the large volume of discharge water. There is the potential for farmers to be blamed for groundwater contamination due to livestock production rather than the practices of the main works contractor who is water discharging in inappropriate locations.

MW-COM6 states: “*Private water supplies: Where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme*” This only refers to the construction of the Scheme, it does not take into account any problems that will arise in the

groundwater as a result of the tunnel being present within the geology, blocking water flow. This has the potential for devastating long term consequences on our farming business. Wording needs to be changed to include the presence of the tunnel within the groundwater.

“the main works contractor shall, if requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply of water (at the contractor’s option)” We suggest that the cost of providing an alternative water supply for all abstractors needs to be assessed prior to the Scheme construction, as this has the potential to be a considerable cost which would need to be built into any contractors tender. We believe that the Applicant should undertake assessment of costs relating to provision of alternative water supplies and not leave this to the main works contractor. We believe that the alternative supply of water should be in place ahead of Scheme work commencing, as it would take potentially 18 months to 2 years to construct an alternative water network. Studies will need to be carried out to ascertain whether Wessex Water has the capacity to add large farms onto the existing mains network, with a suitable water pressure that the farms can operate with no adversity. Should a mains supply be chosen, then on a like for like basis, farmers should not pay for the water they use. Who will pay for the farmers’ water usage? Will it be the main works contractor or will it be the Applicant?

“Where the supply is affected temporarily by the construction of the Scheme, then the alternative supply need only be supplied for the period during which it is affected.” Temporary water provision will also need considerable assessment by the main works contractor as it is not sufficient for a tanker to be delivered to a farm. The means by which the potable water is transferred by the tanker into the farm water network is important, as is year round access to the farm water network.

“Where a request is made by the farmer or landowner for a permanent supply due to permanent severance of the existing supply caused by the construction of the Scheme” Similar to the first paragraph in MW-COM6, this does not take into consideration the severance of fissures within the geology that supply water to our borehole, ie fissures that are either blocked by grout, or blocked by the physical presence of the tunnel itself. Additional wording is required to take this into account.

“the main works contractor shall, where provision of an alternative means of supply can be demonstrated by the landowner/farmer to be reasonably required for his business, provide or procure or meet the reasonable cost (at the contractor’s option) of a permanent means of alternative supply of water”. We would add that the supply of water would be on a like for like basis, ie at no added water meterage costs and at a similar water pressure as existing water supply, if a mains water connection is decided. We also believe that this alternative supply is in place prior to any Scheme works taking place and is undertaken in consultation with our farm water engineers so they are able to facilitate the design process with their knowledge of the existing water network.

Agricultural Liaison Officer

Although we have been informed that there will be an Agricultural Liaison Officer (ALO), we have not been provided with any other details to know whether or not this will be of benefit to farmers, or merely a “box ticking” exercise by the Applicant.

We do not know:

Whether the ALO will be engaged by the Applicant, or will this be yet another thing that the Main Works Contractor will have to organise.

What qualifications or experience this person will have? From the varied farming issues within the Scheme, the ALO will have to have experience in arable and livestock farming (dairy, beef and pigs), an understanding of the pagan calendar, have good understanding of soil mechanics and geology, have a good knowledge of hydrogeology including engineering experience, to appreciate what is and what isn't possible. I would like to meet someone with all these skills. This brief goes way beyond the capabilities of a land agent.

I do not understand what benefits an ALO would bring in relation to the pig enterprise, as there is no note of referencing the ALO in relation to livestock within the OEMP. From past experience, when we have raised issues with our farming enterprises or farming calendar with the Applicant, there has been little negotiation, instead relying on section 172 to gain entry. Agreements within licences do not seem to filter down to the "on ground" level of operation. I do not see why this situation will change even if we have an ALO.

Farming operations take place 365 days of the year and at all times of the day and night. We do not keep the working hours as 7am to 7pm Monday to Friday and 7am to 1pm on Saturdays. Inevitably issues with water etc occur over bank holidays, or 4pm on Fridays, when it is difficult to get in contact with relevant parties. If we lose our water supply at 4pm on a bank holiday Friday, how is an ALO going to ensure we get an alternative source within 24 hours?

From past experience the Applicant's agricultural representatives have not seemed to grasp the issues we have faced with surveys or understood our farming operations.

Geology and soils

OEMP item MW-GEO3 Notes that a soils management strategy will be produced by the main works contractor. Will the respective farmers be provided with the sections of this report that relates to their farms, where the land will be returned? Will farmers and their agents be part of the discussions relating to these areas on their farms?

OEMP item MW-COM8 We note that the Record of Condition survey will be provided along with sectional drawings and photographs to the landowners. It does not say when the record will be carried out or supplied. Past experience has shown that we are not provided with any information until months after it has been completed.

Impact on pig enterprise

The surveys cannot guarantee that there will not be a negative impact on our water supply. Therefore, if the Applicant fails to install an alternative water supply prior to the construction, they are in effect manipulating the situation so that the pig enterprise will no longer be able to operate on our farm. The risk to animal welfare where there is the potential for breeding sows to be without water for an unknown period of time will not comply with the pig assurance schemes required by the contractual agreements for consumers. Even reducing sow numbers, there is still a large

element of risk in relation to water supply, as well as the enterprise running at an uneconomic production level.

For the above reasons we believe that the Scheme will inevitably lead to the pig enterprise leaving our farm, being forced into this situation by the Applicant's Scheme.

We are of the opinion that a lot of the uncertainty within the Scheme could be lessened by the Applicant having a 3D fracture model produced of the Scheme area at this stage eg Golders Fracman. This would advise contractors who are tendering for the Scheme.

We also believe that the suggestions we have made for inclusion within the various OEMP items would help to mitigate the impact on the pig enterprise.

ii) Please provide details of any additional measures you consider to be necessary to minimise the impact on these farming operations?

M & R Hosier response

The Applicant states that they cannot be completely certain that there will not be an issue with ground water as a result of the tunnel construction, and once the Scheme is in operation. However, the Applicant has not provided a percentage value for this risk to groundwater. Therefore, we are unable to fully assess the impact the Scheme will have upon our farming business and plan any strategies to reduce this risk.

From our independent assessments, there will be a considerable lead in time for infrastructure to be put in place for both temporary and permanent alternative water supplies. With this in mind, together with a requirement to ensure that Animal Welfare issues are not encountered, we believe an alternative water supply (be it a temporary water storage facility with access connected to our existing water network, or a borehole or mains supply) needs to already be in place prior to the Scheme commencing. When circumstances require this alternative water supply to be used, the final connections between the new and existing infrastructure could be made within a 24 hour period to restore supplies.

Alternative water supply should be on a like for like basis, ie:

If this is to be mains water, this would be at no extra cost to farmers. Under abstraction licenses, we do not pay for the amount of water we draw, so we would not pay for any mains water usage or connection charges.

Alternative supply should also be to the similar water pressures that our current network operates to. Provision of a supply with less pressure will not reach the far ends of the farm rendering it useless.

We believe there is a requirement for the Applicant to carry out a 3d fracture model of the Scheme area as soon as possible, as this will provide the main works contractor with information for any potential problems that will be incurred with the tunnelling. The problems, be they groundwater or structural, can then be solved before they are encountered, ensuring the Scheme timetable is met.

A lot of responsibility is being placed on the Main Works Contractor, who has not been involved in any of the scheme surveys, so has not had the opportunity to feed in or comment. The Main Works

Contractor seems to be responsible for: MW-GEO3 (Soil Management Strategy) MW-WAT2 (Producing Water Management Plan) MW-GEO20 (Emergency Preparedness and Readiness Response Plan) MW-WAT4 (Response Plan and Pollution Incident Control Plan) MW-WAT12 (Flood risk Management Plan) MW-MAT1 (Site Waste Management Plan) MW-WAT2 (Materials Management Plan) MW-COM8 (Record of Soil Condition).

We would like to know what responsibilities the Applicant will be retaining within the Scheme as proposers and supporters of the Scheme.