

Response to Mr Dean Talbot's Comments on the Hydrological & Hydrogeological impact Assessment carried out by BCL Hydro on behalf of NRS Aggregates Ltd

Planning Inspectorate Ref: APP/1855/W/22/3310099

Introduction

The report provided by Mr Dean Talbot ascertains to act as a review of the report produced by BCL Hydro (21st October 2019), and the supposed comments of Governing bodies and interested parties to that work.

A key point to note is that none of the Governing Bodies and Interested Parties comments referenced in the report of Mr Dean Talbot were submitted during the determination of the application (19/000053/CM) and therefore have not been formed in relation to the Hydrological and Hydrogeological Impact Assessment (HHIA) prepared by BCL and submitted as part of the planning application (CD1.13). The referenced comments in section 1 of the report, are taken from the following sources:

1. Natural England, Severn Trent and South Staffs Water responses were in respect of the Third Stage Consultation for the then emerging Worcestershire Minerals Local Plan (now adopted as of July 2022); and
2. The comments from the Environment Agency and North Worcestershire Water Management (NWWM) are taken from the Scoping Opinion dated 29th June 2018.

Response

This response report seeks to set out the further work conducted during the determination of the application to address the actual comments received by the statutory bodies referenced above, which ultimately led to Planning Officer support for the proposal.

The following list contains all relevant documents referenced within this response / produced by the relevant statutory bodies and the Appellant.

| Planning Application Stage | Core Document Index Reference | Document Title |
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| Original Submission | CD1.13 | Technical Appendix I – Hydrological and Hydrogeological Impact Assessment (HHIA) |
| Initial Consultation Responses | CD2.02 CD2.22 CD2.34 CD2.37 | Severn Trent Water – 12.2.20 North Worcestershire Water Management – 12.3.20 Environment Agency – 31.3.20 Natural England – 1.5.20 |
| 1 st Regulation 25 Request | CD3.03 CD3.06 | Appendix A – BCL Hydro Consultant Report Appendix C – Surface Water Management Plan |
| 1 st Regulation 25 Consultation Responses | CD4.11 CD4.13 CD4.17 CD4.39 | Lead Local Flood Authority – 3.12.20 North Worcestershire Water Management – 9.12.20 Environment Agency – 15.12.20 Natural England – 9.3.21 |

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| | CD4.40 | Severn Trent Water – 14.1.21 |
| 2 nd Regulation 25 Request | CD5.25 | Response to the North Worcestershire Water Management |
| 2 nd Regulation 25 Consultation Responses | CD6.06 CD6.16 CD6.21 CD6.27 CD6.31 | North Worcestershire Water Management – 11.8.21 Environment Agency – 6.9.21 Natural England – 7.9.21 Severn Trent Water – 10.9.21 Natural England – 14.10.21 |
| 3 rd Regulation 25 Request | CD8.04 | Appendix 2 BCL Hydro |
| 3 rd Regulation 25 Consultation Responses | CD9.13 CD9.14 CD9.19 CD9.21 CD9.28 CD9.29 | North Worcestershire Water Management – 29.3.22 Severn Trent Water – 30.0.22 Severn Trent Water – 8.4.22 Environment Agency – 12.4.22 Natural England – 26.2.22 Natural England – 3.5.22 |

In line with the structure of the report from Mr Talbot, this document will address how the concerns of each relevant body were resolved individually during the determination of the application; starting with the initial consultation responses received to the original submitted planning application documents (19/000053/CM), followed by the Regulation 25 Responses.

As part of the original planning application, Hydrology and Hydrogeology matters were covered within Technical Appendix I of the Environmental Statement - Hydrological and Hydrogeological Impact Assessment (HHIA) (CD1.13).

Natural England (NE)

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| Initial Consultation Response (CD2.37) | <p>From the information initially submitted, Natural England sought further clarification on how the Hydrological and Hydrogeological Impact Assessment has considered the potential for continuity between the aquifer and the SSSI's referenced within the HHIA and NE response.</p> <p>They has concerns regarding the efficacy of the proposed land drainage scheme, that they may deteriorate over time without ongoing maintenance and monitoring. Request further information on what arrangement would be put in place to ensure maintenance of the drainage scheme in perpetuity.</p> <p>Natural England requires further information on proposals for monitoring which should address both groundwater quality and groundwater level impacts (the latter to ensure the drainage scheme is operating effectively). Monitoring proposals should also identify what realistic and available mitigation options could be deployed if monitoring identifies issues of groundwater contamination or undesirable levels of disturbance to recharge patterns.</p> |
| 1 st Regulation 25 Submission (CD3.03) (CD3.06) | <p>Groundwater within the aquifer beneath the Site is not expected to be contributing to flows through the identified protected areas (being located down hydraulic gradient of the areas associated with the Wannerton Brook and separated from the areas associated with the River Stour by the</p> |

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| | <p>Staffordshire and Worcestershire Canal. This combined with the distance between working level and the watertable indicate that the development will not result in a negative impact at the identified sites.</p> <p>Detail provided on the efficacy of the proposed scheme and that the provided soakaway areas. In discharging rainfall runoff to the identified soakaway areas, recharge will be provided both centrally and generally down hydraulic gradient of the restored Site. On this basis, the general pattern of groundwater flow down gradient of the Site is not expected to be significantly varied from the prevailing situation.</p> <p>It is suggested that formal monitoring program will be submitted for approval prior to commencement of infilling operations. For the Environmental Permitting application it is expected that a minimum of 12 months of groundwater sampling data will be required in advance of submission. With regard to mitigation options for the proposed development, these are set out in the HHIA (section 5.6) - options for prevention of placing material unsuitable for inclusion within the restoration landform (lining, waste acceptance and control of rogue loads etc).</p> |
| <p>1st Regulation 25 Consultation Response (CD4.39)</p> | <p>No Objection – subject to appropriate mitigation being secured. Requested the following mitigation measures be secured:</p> <ul style="list-style-type: none"> • “Monitoring scheme to ensure potential implications for the groundwater quality and groundwater levels are effectively mitigated. • The proposed soakaway systems which are to ensure the recharge patterns for the site stay unchanged, need to be maintained in perpetuity.” |

Severn Trent

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| <p>Initial Consultation Response (CD2.02)</p> | <p>No Objection – As the proposal has minimal impact on the public sewerage system they have no objections to the proposal and do not require a drainage condition to be applied.</p> |
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All of their subsequent consultation responses were a reproduction of this.

South Staffs Water

South Staffs Water were not consulted as part of the planning application process.

Environment Agency

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| <p>Initial Consultation Response (CD2.37)</p> | <p>Concerned with the ongoing impacts of reduced permeability over the site and the need for the land drains and soakaway ponds once restoration is complete. They considered that the next stage would be to devise a monitoring programme that can establish the following parameters:</p> <ol style="list-style-type: none"> 1. Mounding beneath the soakaway ponds is not occurring; 2. Water quality in and groundwater around soakaway pond is unpolluted; |
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| | <p>3. Groundwater levels in and around the site are not reducing (as a result of the development).</p> <p>They proposed the implementation of a condition for groundwater, surface water level and quality monitoring scheme to be approved prior to commencement of development.</p> |
| 1 st Regulation 25 Submission (CD3.03) (CD3.06) | <p>It is of note that the EA do not object to the proposed development but do identify three areas of monitoring that they consider are needed to ensure no detrimental impact is caused to the water environment in the locality: i. monitoring of groundwater levels in proximity to the soakaway areas, ii. monitoring of water quality (groundwater and surface water) in the same areas and iii. monitoring of groundwater levels in and around the Site to confirm no detrimental reduction in groundwater levels is caused.</p> <p>With regard to the first two points, it is of note that a program of groundwater and surface water monitoring will be required as part of the Environmental Permit Application (EP) needed to allow the proposed inert infill placement for restoration of the Site. The third point also relates to assessment of water levels following placement of infill material.</p> |
| 1 st Regulation 25 Consultation Response (CD4.39) | <p>State that it may be possible to combine the monitoring networks for the environmental permit application with the monitoring required as part of their suggested condition.</p> |

The Environment Agency made no further comment within their subsequent consultation responses.

North Worcestershire Water Management

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| Initial Consultation Response (CD2.22) | <ol style="list-style-type: none"> 1. Requested clarity on whose responsibility it would be to maintain the land following restoration. 2. Requested consideration of above ground SuDS rather than buried land drains. 3. Requested it is made clear when in the phasing the land drains soakaway ponds will be installed. 4. They agree that there is not a risk of flooding onsite. Queried whether excess water could leave the site as the land will be lower than the surrounding land. Requested an assessment should be made of any changes in 'exceedance' overland flow routes leaving the site following the development. 5. Requested a condition for detailed surface water drainage. |
| 1 st Regulation 25 Submission (CD3.03) (CD3.06) | <ol style="list-style-type: none"> 1. The responsibility for maintenance of the soakaway areas and continued related efficacy will revert to the landowner following of the restoration and aftercare period. 2. The restoration has been amended to enhance the ecological potential for the Site and this has included a series of open water ditches installed to enable capture of surface runoff, for transfer to |

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| | <p>the identified soakaway areas. The open water ditches and linked ephemeral soakaway areas (above ground SuDS referred to above) are deemed preferable to subsurface features with regard to longer-term maintenance and operation, as well as providing the additional aforementioned ecological benefit. With the inclusion of the above ground drainage and gradient of the restored landform areas, the recommendation for subsurface drainage made within the HHIA is no longer expected to be required.</p> <p>3. Soakaway 1 (Northwestern boundary) – On completion of Phase 1; Soakaway 2 (Southwestern boundary) – On completion of Phase 3; Soakaway 3 (East of causeway) – On completion of Phase 5.</p> <p>4. The restoration landform has been designed to capture runoff from the infilled sections of the Site and direct accumulating water to the aforementioned soakaway areas. The various soakaways are located within areas of closed catchment within the restoration landform. Each of the areas is located a minimum of 2m below the retaining boundary landform, offering a significant volume of storage in comparison to the expected volume of runoff generated during storm events and the expected infiltration rate to the underlying aquifer. As such, overland flow from the soakaway areas/general restoration landform is not expected, with incident rainfall being managed within the Site boundary.</p> <p>The only area where runoff will occur from the restored Site is from the area of insitu (unworked) ground located between Phases 2 and 3 on the western boundary of the Site. Rainfall falling onto the unworked section of ground immediately adjacent to the western boundary would be expected result in any runoff in accordance with the prevailing situation. Runoff into this area will however be reduced by the series of surface water drains included within the central section of the Western area of the restored Site which will serve to reduce the existing catchment area for runoff across the western boundary. In this regard the proposed development will result in less overland flow passing across this section of Site and hence will provide an improvement with regard to potential runoff related flood risk to adjacent property.</p> |
| <p>1st Regulation 25 Consultation Response (CD4.13)</p> | <p>Accept the additional information provided within the Reg 25 answers their questions.</p> <p>Further questions raised regarding surface water management and discharge of surface water. Additionally, they note that further information and discussion is required regarding the nature of the proposed open water ditches (well defined traditional ditches or shallow depressions?) and how the continued existence and maintenance of the surface water drainage features on the site can be secured. I would also ask whether the in principle commitment to install land drains can be removed so that any installation would require further assessment as to whether the surface</p> |

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| | <p>water drainage features installed would require amendments to ensure that rainfall can continue to be managed within the site boundary including in extreme events.</p> |
| <p>2nd Regulation 25 Submission (CD5.25)</p> | <p>The scheme is proposing to restore discrete, shallow depressions to concentrate and direct surface water down towards the soakaway area. This will be achieved as part of the landform restoration formation and final soil placement works in accordance with the specified contours on the attached Concept Restoration Drawing. As such, the shallow depressions will be part of the morphology of the overall restored landform. This approach will ensure the resilience of the shallow sloping depressions and their ability to transport surface water to the soakaways, surrounded by higher ground on three sides. This will minimise the risk of any ploughing / agricultural practices affecting the landform. If ploughing is to take place, it will be carried out along the alignment of the gradient and not across it.</p> <p>In respect of guaranteeing the proposed discharge of surface water, there will be a 5 Year Aftercare Period (which will be paid for by the operator and implemented by the landowner). All land will then revert back to the landowner for management. This process is standard for all mineral extraction sites. The land will be farmed as it will be during the initial 5 Years post restoration and the landowner will manage and maintain the land within the restored landform. The landowner is content that if a further period of monitoring / management is required that this can be secured via an appropriate condition.</p> <p>For clarification, it is confirmed that the surface water management / containment and soakaway scheme has been designed taking into account the possibility of the implementation of agricultural land drainage. It is confirmed that there is significant spare capacity to hold and allow water to soakaway during peak events, either with or without the implementation of agricultural land drains. As such, we confirm your request for the removal of a commitment in principal to the installation of land drains and that this can be assessed within the Aftercare Period. The MPA therefore having control of the process. If additional agricultural drainage is required, as stated there is sufficient capacity but these works would not be carried out until North Worcestershire Water Management / the MPA have been provided with any further specific details, that maybe required. As Kirsten's email suggests, we are happy for this to be placed within an appropriate condition.</p> |
| <p>2nd Regulation 25 Consultation Responses (CD6.06)</p> | <p>Accept that the response addressed the concerns previously raised and hold No Objection to the proposal.</p> |

No further comments relevant from the 3rd Regulation 25 request.

Conclusion

The individual sections of this report set out the issues raised by the relevant statutory bodies and the approach taken by the applicant to address each point until they were satisfied with the

outcome. At the time of the Planning Officer making their recommendation, none of the above statutory bodies objected to the proposals.