

# Bingham Yates Limited

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Date 21 February 2023

## **For the attention of B Metcalfe Esq**

MJN Associates  
Grange Bungalow  
Low Road  
Brigham  
Cockermouth  
CA13 0XH

Dear Sirs

## **WHITEHAVEN GOLF CLUB, RED LONNING**

### **WHITEHAVEN CA28 8UD**

Further to our most recent site visit of 27<sup>th</sup> January 23, the receipt of the attached updated drawings 336 Rev 4 (Existing) and 337 Rev 7 (Proposed), and with reference to David Bechelli's emails to Christopher Harrison of 11<sup>th</sup> February 22, and 6<sup>th</sup> January 2023, we are pleased to update you as follows.

#### 1. General Surface Water Runoff (ref drawing 336)

The existing ground surface is very impermeable, being clay based material, and the vast majority of the runoff, excepting some of the area occupied by the 14<sup>th</sup> hole near to the ditch to the West side of Moresby Park Road, is directed to the on-site ponds, ditches and culvert pipes. The system includes various inherent attenuation features which have been insitu since the course was built. Some of the runoff directly enters the system via the impermeable surface, and, elsewhere, it is likely to slightly infiltrate to the nearly open features through the ground.

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The general nature of the attenuated flows entering the system, and the layout of the system itself, with ponds etc at low lying positions, is such that there is substantial provision for accommodating any exceedance situations. Furthermore, there is no historical evidence that the system has not been able to easily accommodate the resulting flows either on the site, or at the off-site outfall(s).

It should be appreciated that trying to accurately determine the actual flow rates in the system is virtually impossible, but the proposed general intention is to improve the free draining nature of the surface layer (ie reduce direct surface water runoff), allowing rainfall to infiltrate through this layer into underlying filter drains, and then into the feature (limited open ditches) ponds and the outfall system. This proposition should have no significant impact on the suitability of the existing system, as it merely lessens the impermeability of the surface.

2. Moresby Parks Road (ref drawing 336)

The ditch flow, and the outfall position has been investigated and, in good faith, the ditch cleaned, and the outfall is confirmed to be a culvert under the public road at the North East corner of the site.

The entry into the culvert, from the ditch, has been determined, however, as the culvert is under the highway, the responsibility for its suitability and maintenance is likely to be Cumbria Highways (ref aforementioned email of 6<sup>th</sup> January 23). It is rather unclear who owns the ditch, although there are street lights behind the footway fence, so this may infer that it also maybe the Highway responsibility ? In any event, the ditch size is quite substantial relative to the cross sectional area of the culvert under the road, and the intended site modifications (ref drawing 337) should actually lessen any potential direct surface water runoff into it, and therefore this should not result in any significant detrimental effects on its suitability.

3. Scilly Banks Road (ref drawing 336)

We have observed the operation of the underground system on the East verge of the public highway, and the pipework and flows definitely flow toward the site, entering the pond immediately Southeast of the 10<sup>th</sup> green, which has been proven by dye testing.

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In any event, it should be respectfully noted that the level of the pond is much lower than the road, or the ground to the North West immediately beyond the latter, so it is difficult to envisage how the system could actually flow in the opposite direction ?

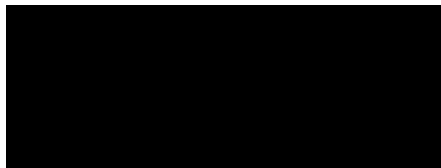
4. Red Lonning/Harras Moor Inlet (ref drawing 336)

The inflow from the culvert under road (from the potential future housing site) has been confirmed, and the culvert outfall onto the site has been identified into a ditch to the South of the 2<sup>nd</sup> green, which then flows into the pond in front of the 2<sup>nd</sup> green.

This could remain as part of the new scheme or, alternatively, the Southern end of the culvert may be simplified and directed straight into the pond, however, this is merely to improve the connection to the site system, and should not have any signified impact on flood risk.

We now trust that this further information offers some clarity on the historical queries, and the future intentions, and if a further meeting is required on site to assist the hopeful Approval, please do not hesitate to contact us.

Yours faithfully



C. J. WALTERS B.Sc. (Hons), C.Eng., M.I.C.E., F.Cons.E.  
for  
BINGHAM YATES LIMITED