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Cumberland Council
Planning Department
The Market Hall
Market Place
Whitehaven
CA28 7JG

26th July 2024
Ref: K40340.002

For the attention of Sarah Papaleo

Dear Sarah,

APP NO: 4/24/2162/DOC & 4/24/2161/DOC
HOUSING DEVELOPMENT, HARRAS ROAD, WHITEHAVEN
DISCHARGE OF CONDITIONS 15 & 16 (4/16/2415/0O1) AND 11 & 12 (4/16/2416/0O1)

Further to receipt of consultee responses from the LLFA on 4th June and UU on 3rd July 2024 please find enclosed our updated Drainage Strategy & Design report (ref: K40340.DS-001B, dated 26th July 2024) and associated updated drainage drawings and details. Please note the following amendments and clarifications within our Drainage report:

- **Section 2.6 – Existing Surface Water Drainage Systems**
  This section of the report has been updated and split into 2 new sections to address both the off-site culverted watercourse (i.e. from MH04, under Red Lonning and through the Golf course) and the on-site culverted watercourse (i.e. from MH08 to MH04) and associated land drainage system. Further details relating to the CCTV drainage surveys are provided. Figure 2.2 updated with additional annotations to confirm reference numbers for existing manholes.

  There is a displaced section of culvert pipe under Red Lonning (between MH03 and MH02) which has been surveyed on several occasions and has not worsened since the first survey in 2018. The culvert pipe holds water in this section at c. 30% of the vertical dimension, but this quickly equalises downstream of MH02 and through the Golf course, where the flow of water through the pond is unaffected.

- **Section 3.9 – Diversion Works to Existing On-Site Culverted Watercourse**
  This section of the report has been added to clarify that the existing culvert dia. pipe between MH08 and MH07 and between MH07 and MH04 is to be replaced/diverted where it enters the development site on the western boundary. The exact position/depth of the culvert pipe will be confirmed via trial pit investigation and a detailed drainage diversion design will be undertaken. All existing lateral land drainage pipes will become redundant and will be removed. The proposed route of the culvert diversion has been added onto our relevant drainage drawings.

- **Section 5 – Conclusions & Recommendations**
  Additional conclusion added as follows:

  The drainage solution proposes to limit all post-development flows to the pre-development QBAR (i.e. max. 38.4 lit/sec) and as such this will provide a significant reduction of flow into the culvert when compared to the pre-development Greenfield run-off rates for the Q10, Q30 & Q100 storm events. It can therefore be concluded that the development will not adversely affect downstream flood risk and that the on-site storage and attenuation will help to reduce downstream flood risk. As such, there is no

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requirement for Thomas Armstrong to undertake any repairs to the displaced section of culverted watercourse below Red Lonning.

- **Appendix A – RGP drawings**
  Further to receipt of Consultation response from United Utilities on 3rd July 2024 and subsequent meeting with the UU Asset Protection Team on 11th July 2024, the proposed foul and surface water drainage plan has been updated to ensure that no new sewers or manholes are located directly within the existing UU easements to the water mains. Where the new foul sewers cross-over the water mains at the site entrance and EVA the new sewer pipes are to be sleeved through fully sealed/welded larger polyethylene pipes to mitigate the risk of seepage. New surface water sewers that cross the water main on the eastern boundary are to be installed as fully welded polyethylene pipes to mitigate the risk of seepage.

  RGP drawing no. 40 has been updated to show permanent reinforced concrete protection slabs over the water mains at the site entrance and EVA.

We trust that the above clarification are satisfactory to discharge the remaining Planning Conditions but if you do require any further information or clarification, please do not hesitate to contact us.

Yours Sincerely

Troy Melhuish MEng PhD CEng MICE
Associate
R G Parkins & Partners Ltd