Our Ref: 1675/118/DR/msk

 cc: 1845/25/DR/msk

55 Fitzroy Park: ABA comment/query summary

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| Comment/Query No | Subject | ABA Comment/Query | Campbell Reith initial assessment/audit | Current status (following Campbell Reith second assessment) |
| A) Information | (See Letter 18/10/2018) |  |  |  |
|  | Does Geotechnical assessment and Hydrological/ Hydrogeological assessment constitute a BIA? | Includes standard screening and scoping assessments, but lacks detail. | Accepted that the information constituted a BIA.  | It has been accepted by CR that the information and addendum information constitutes a BIA.  |
|  | Have hydrogeological and hydrological issues been considered? | No factual SI information or groundwater monitoring. Little information on buried valley feature and groundwater flows. | The SI had been provided by the time CR carried out their audit, but no groundwater monitoring. | The factual SI was subsequently provided, along with some groundwater monitoring results as part of addendum BIA. |
|  | Groundwater flows | Only broad statements on surface water flows, source of water in pond and SUDS strategy. No evidence and little detail.  | Further assessment is required to verify the impact of the development on surface water flows off site. | Some further information and plans showing SUDS and flow routes analysis provided with addendum BIA. Any surface water from Fitzroy Park and parking areas is to discharge to the combined sewer.  |
|  | Proposed pipe below Millfield Lane to feed Nature Reserve | No details provided and could disrupt existing water regime.  | CR were wrongly under impression there was an existing pipe under Millfield Lane.  | The addendum BIA indicates that flows from the SUDS swale at the boundary will discharge across Millfield Lane. The discharge rate is to be agreed with CoL. CR have indicated this falls outside the BIA and audit. However It remains as a significant concern to CoL. |
|  | Existing/proposed surface and foul water proposals | No information on existing combined sewer, foul sewer (under tennis court) or possible connection to Kenwood sewer. | Insufficient information supplied to allow changes to surface water treatment to be assessed. It should be confirmed that the tennis court drains to the sewer network.  | Further proposals and existing details of the combined sewer in Fitzroy Park have been provided. Still no details have been provided on foul water.  |
|  | Depth/extent of Excavations | Only schematic sketches and statements provided, with no details. | Excavations will extend below the groundwater and the water level in the pond and the need for dewatering should be clarified.  | Some further schematic sections for plots 1-3 provided as part of BIA addendum. CR have acknowledged excavations up to 2.5m deep. There is no mention of temporary dewatering and CR have accepted the measures proposed to mitigate the effects of flooding. |
|  | Slope stability | No drawings, details of calculations provided of proposals. Unclear whether reliance on existing retaining wall to Fitzroy Park.  | Outline designs of retaining walls (including temporary structures) is required along with confirmation ground movements will not affect surrounding roads or the pond.  | A technical note provided (appendix 3 of CR final audit) which shows basement to plot 3 moved back away from the road and that excavations for plots 1 and 2 should not undermine the boundary. CR have accepted statements that there is negligible impact. |
|  | Damage Assessment | No PDAs carried out although risk of movements which could impact carriageway. | See 7. above. Mitigation measures are required. | CR have accepted based on appendix 3, that no PDAs required to retaining wall.  |
|  | Material volumes/HGV manoeuvres  | Contradictory statements and no cumulative assessments. | Not considered in audit. | Outside scope of BIA, but queries remain. |
|  | Cumulative hydrogeological and hydrological impacts | No cumulative assessments of impacts in relation to neighbouring properties. | Cumulative impact of the various changes to surface water flows requires further detail.  | Still no cumulative assessment has been undertaken to assess the impact in conjunction with basement construction at 51 and 53 Fitzroy Park. CR note that a network of drainage is proposed around the houses. Whilst they note this will have to be developed into a detailed design it is accepted as a mitigation strategy. |
|  | Engineering input | No engineering plans/details on basement construction or drainage and no Basement Construction Plan.  | No engineering drawings are presented. Outline calculations and sketches demonstrating the proposals for retaining walls, basement slabs and foundations are required.  | A broad structural and civil engineering design statement, one drawing and some calculations for the new basement walls provided. No details of drainage proposals or adequacy of existing retaining wall.  |
| B) Impacts  | (see reports 7/9/18, 5/12/18/ and 9/1/19) |  |  |
|  | The garden pond | The hydrological and hydrogeological report indicates the pond is surface water fed. However, it is known (see Lynne Turner-Stokes letter 3/7/2008) that the pond is also fed by natural springs and that ground water flows are variable). | The risk of flooding from surface water around the man made pond is high. The excess outflow is discharged via the weir and pipe to the heath below. The surface water drainage will be directed to the same pipe. Clarification required to confirm the feasibility of this proposal.  | CR have accepted the addendum BIA showing the proposed SUDS and flow route analysis. However, the hydrology in the area is more complex than assumed and includes springs. There remains a risk that the works could affect the flows to the pond and the nature reserve.  |
|  | Contamination of the pond | Excavations for the basements will cut through groundwater bearing soils and temporary sheet piled retaining walls and water retention bunds are proposed to plots 4 and 5 to direct and collect groundwater. The water is to be disposed of in combined sewer. No details/drawings provided and risk of contamination of ground water, the pond, nature reserve and Bird Sanctuary Pond.  | Not considered as part of the CR audit, but groundwater monitoring data requested. | Not considered as part of further CR audit. Given the scale and proximity of excavations close to the pond the risk of contamination remains.  |
|  | Permanent design for groundwater | There is a risk that the proposals will change groundwater flows to the garden pond and nature reserve. The temporary sheet piling should be fully withdrawn. The new basement will redirect the groundwater flows and consideration should be given to introducing free draining material below the basement slabs (which are piled and suspended). More detail required on SUDS design and proposals for pipe below Millfield Lane. | The cumulative impacts of the change to surface water management requires clarification to allow further assessment of the local hydrology. | CR have accepted the proposals following review of the BIA addendum. We consider the groundwater regime to be complex and variable and likely to change as a result of the construction of the basements. We still think consideration should be given to introducing free draining material below and around the basements so the groundwater flows can remain similar to existing.  |
|  | Slope stability and stability of existing retaining wall to carriageway | No details of proposals to excavate for swale at steep boundary with trees to Millfield Lane. Unclear what reliance is placed on existing retaining wall to the carriageway during excavations for the basements to plots 1-3.  | Require outline design of temporary and permanent retaining walls to assess their suitability. | CR have accepted that the basements are sufficient distance from the existing retaining walls not to affect stability (Appendix 3). With basement to plot 3 moved away from the road this is justifiable. CR have accepted that the stability of slope and retaining wall next to the pond is beyond the scope of the BIA, but suggest a detailed assessment is carried out to eliminate adverse impacts.  |
| No details associated with raising levels around the pond.  | Slope analysis required for the MSE wall to confirm stability of the embankment to the south of the pond. |
|  | Construction Access | It is unclear how HGVs will manoeuvre during initial demolition or later when the access is via north-east corner of the site.  | Not considered as part of BIA audit. | No further information provided. Comments remain unchanged.  |
|  | Impact on Trees | The true impact of the basement excavations, site access roads and excavations for SUDS on existing trees is not made clear. | Not considered as part of BIA audit. | CR have commented on the removal of mature trees, but only with regard to piled foundations to the buildings. Excavations for the swales will impact on trees, particularly along the boundary with Millfield lane. |
|  | Drainage | There is no information on the temporary or permanent surface or foul water proposals.  | A detailed utility survey is required, along with details regarding the pipe under Millfield Lane (which doesn’t exist). | Some utility information provided, including the combined sewer in Fitzroy Park. No information provided on the foul drain below the tennis court. |
|  | Ground Movements | There are no damage assessments of adjacent properties or the existing retaining wall to the carriageway. | Accepted that adjacent properties far enough away not to be affected. Outline designs of retaining walls required along with confirmation ground movements will not affect the road/pond.  | CR have accepted that adjacent properties and the retaining wall to carriageway are far enough away from the basement construction not to be affected. |
|  | Vehicle Movements | There is contradictory information on vehicle movements and these should be assessed cumulatively with other local sites. | Not considered as part of BIA audit. | Some further clarification has been provided but inconsistencies remain. |