

20/01238/outmaj Sandleford Park, Newtown Road, Newbury :
LLFA consultation response in respect of flood risk and Surface Water
Management

These are the comments of the LLFA in respect of flood risk and Surface Water Management on the development. The following documents have been reviewed to inform this response:

- Planning Statement
- Design and Access Statement
- Strategic Landscape and Green Infrastructure Plan [which shows the locations of proposed attenuation basins]
- ES Vol.1 Ch.11 “Water Resources”
- ES Vol.1 Ch.16 “Summary of Effects and Mitigation”
- ES Vol.3 Appendix K1 “FRA and Drainage Strategy”
- Illustrative Layout Plan (Boyer ref. 14.273, dwg no. 171)
- Transport Assessment (Appendix F)
- Draft Conditions (section 4 “Drainage”)
- Draft S.106 agreement
- Response to Reasons for Refusal
- other matters

As a general comment, the “River Enborne” has been incorrectly referred to as “River Embourne” throughout Vol.1 Ch.11 and Vol.3 Appendix K1.

In the same order as they are listed above, these documents are commented on as follows:

Planning Statement

Para 5.5 : this states “Sustainable Urban Drainage features will be provided within the area of built development and the Country Park, drawing from the options identified in the Drainage Strategy.” The phrase “...within the area of built development...” is particularly important as it is necessary to provide good SuDS measures within these areas in accordance with the WBC SuDS Supplementary Planning Document (Dec.2018). This will be secured by Condition.

Appendix 7: Brookbanks Consulting Technical Note (Thames Water Position Statement) deals with a proposed upgrade of surrounding sections of TWU foul sewer network. It also records in section 5 (Summary) that “There may be some capacity for an initial quantum some local capacity within the existing network, to allow for some initial early development, in advance of the reinforcement works. The current local capacity within the network and total quantum of development which could be supplied, without reinforcement, is still to be confirmed from Thames Water.” That being the case, there would need to be an agreed timeline for this, which will be secured by Condition (see also Vol.3, Appx K1, Section 6 Foul Drainage below).

Design and Access Statement

A number of sections of this document deal with proposals for water management and SuDS, notably :

- Para 2.2.3 (Water Features and Drainage) states : The site consists of existing watercourses and ponds which will be retained and enhanced. Existing attenuation ponds will be complemented with new ponds designed sensitively to respond to the site”;

- Para 3.2 (Design Rationale – box 8) “Existing network of streams and ponds will be retained within the development. Surface water from the new development will be managed by appropriate use of SuDS techniques, minimising use of externally sourced water and promoting biodiversity”;
- Para 5.1.4 (Drainage Strategy) “The SuDS system has therefore been considered at the outset, with the water management strategy being an integral part of the overall design development”;
- Para 5.1.4 (Drainage Strategy) “Design of SuDS : SuDS features have been used as an integrated network within the Country Park and the development area i.e. the different housing ‘parcels’, which will be developed in a phased basis. A requirement for attenuation volume and control of flow output from each parcel will be enforced based on the assumption source control methods that will be utilised extensively within the parcels. These source control (SuDS) techniques catch and attenuate runoff close to where it is generated, which will help to reduce the peak flow of stormwater. Open features may include water butts and grey water recycling and permeable paving to driveways, potential for green roofs in nonresidential buildings. From these primary collection and attenuation locations within the parcels, stormwater will be routed along the natural falls of the site via culverts. These conveyance features will route stormwater to detention basins for further attenuation and storage at the naturally occurring low areas of the site. Detention areas are vegetated depressions in the ground and are dry except during and immediately after heavy rainfall. They detain surface water for a short period, usually from one day to one week, until it is either able to soak into the ground, taken up by plants, evaporates or slowly released into subsequent features. These will provide an opportunity for the creation of new wildlife habitats and the enhancement of existing ones on site as well as an opportunity for recreation and amenity. SuDS features will also be present in the verges along the main road.” See also figs 42 & 43.
- Para 5.2 (Landscape Masterplan) p.53 “The aims of the Sandeford Park green infrastructure plan is as follows:” *[a number of examples are then listed]*;
- Section 7 (Creating Character) indicates a number of roadside swales. The LLFA would like these to as extensive as possible and to be included in all areas.

In principle, there are a number of welcome ideas / proposals shown in this document which are in accordance with the WBC SuDS SPD. We will seek for these to be secured by Condition.

In addition, in relation to para 5.3.3 (Valley And Wetland Corridor), any works over, under or adjacent to existing water courses or water bodies will be subject to the Ordinary Watercourse Consent process through the Land Drainage Authority (WBC) outside of the Planning Application process. Application details are obtainable via sudsapproval@westberks.gov.uk

ES Vol.1 Ch.11 “Water Resources”

With respect to Local Policies, this chapter omits any reference to Policy CS16, or to the WBC SuDS SPD (adopted in December 2018). However DNH have referred to this in their package. The Local Plan should be the ‘starting point’ for any assessment whereas with this submission the NPPF seems to have been given prominence.

ES Vol.1 Ch.16 “Summary of Effects and Mitigation”

In respect of the heading “Water Resources - Construction and Occupation” we disagree that the “effects on surface water quality and quantity, groundwater quality and population through changes in flood risk” will be “negligible” during the Construction Phase. Until suitable measures to control pollution in surface water run-off have been proposed and evidence provided that they can be rigorously and practically adhered to during construction, this matter will form the basis of an objection.

ES Vol.3 Appendix K1 “FRA and Drainage Strategy”

As with ES Vol.1 Ch.11, the FRA and Drainage Strategy omits any reference to Policy CS16, or to the WBC SuDS SPD (adopted in December 2018). Again DNH have referred to this in their own package of information. The Local Plan should be the ‘starting point’ for any assessment whereas with this submission the NPPF seems to have been given prominence.

Previous LLFA consultation responses (to Applications 15/02300 / 16/00106 / 16/03309) have discussed a number of SuDS measures which the LLFA would like included. This document does include some of these as potential measures, but throughout the document, the phrases “may be included” and “could be included” are used when referring to them - these terms must be replaced with “will” and “shall” and “must”. Additionally the proposed Illustrative Surface Water Drainage Strategy Plan (dwg. No. 10309-DR-02), which only shows conveyance channels and basins, offers very little in terms of where these other measures would specifically go and whether their inclusion is practical. Some of these measures are dealt with in more detail below, and their inclusion will be sought by Condition.

Paragraph 3.15 refers to the “South Essex catchment”. Clearly this is copied from a predecessor document previously prepared by the Consultant and should be amended for this site.

Para 3.18 Fig. 3b lists potential flooding mechanisms, with zero risk attached to each. Although boreholes from the site investigation show no groundwater strike, our own mapping indicates that in the central and southern part of the site, groundwater is very high : “Groundwater levels are between 0.025m and 0.5m below the ground surface” and that “Within this zone there is a risk of groundwater flooding to surface and subsurface assets. There is the possibility of groundwater emerging at the surface locally”. It is highly likely that groundwater emergence occurs, it being the source of water in the existing watercourse running north to south through the site, so that should be reviewed.

Paras 3.26 and 3.39 should be amended to refer to Sewers for Adoption 8th edition, now being the current document.

Para 4.15 Fig. 4b shows a table based on the SuDS Manual C753 listing possible SuDS options that are available to developers, with comments as to what the Applicant has considered for this development. In order to comply with our SuDS SPD Policy referred to above, it is WBC’s intention that developers will include as many ‘green SuDS’ measures as possible. In particular, from that list therefore, the Applicant should particularly look to include (but not be limited to) :

- Green roof / rainwater harvesting for the school and C3, A1-A5, B1a, D1 provision;+
- Localised bio-retention measures in built areas, particularly as on-parcel SuDS where possible;
- Trees incorporated into the built development as well as SUDS areas (this is partly indicated on the proposed master planning document);
- Ponds & Wetlands - permanent wet features should be designed into the SuDS features and their inclusion will be secured by Condition.

Paras 4.17 / 4.18 / 4.20 / 4.25 / 4.26 / 4.27 (including Figs. 4c & 4d) show a number of welcome measures. The measures discussed in these paragraphs (such as carriageway filter strips, roadside swales, attenuation basins as local source control with dry and wet areas) are all considered to be in line with the WBC SuDS SPD and should be worked into the final design. No specific details are provided, instead it is stated the intention will be to include these at Reserved Matters stage. Their inclusion will be secured by Condition, as raised above. It must be noted at this point that we have concerns with the design of the

attenuation basins, which appear to have vertical sides, upon evaluation of figures shown on the Drainage Strategy Plan later in the document; this will be addressed later in these comments.

Para 4.29 states suggested SuDS maintenance periods, but in some cases these frequencies should be amended to accord with the SuDS Manual C753 maintenance regime; See also para 4.74.

Para 4.31 touches on the proposed conveyance channels to direct surface water run-off to attenuation basins. There are two channels indicated on the Illustrative Surface Water Drainage Strategy Plan which run broadly parallel to an existing ordinary watercourse in the vicinity of Detention Basins A and C. It is assumed that these channels will cut into the existing ground which therefore has the potential to adversely affect ground water levels to the detriment of existing areas of copse in particular. No information is currently provided as to the form these channels will take and until clarified, this matter will form the basis of an objection.

Draft Condition 28 requires an 8m buffer zone on one bank alongside watercourses within the development site. This 8m buffer zone should be extended to both banks and apply to the conveyancing channels as well, including in relation to the existing watercourse as well. This matter will be secured by Condition.

Para 4.32, and following paragraphs, discusses management of water on site during construction. It is vitally important not to allow contaminated surface water run-off to reach existing drainage channels or watercourses, particularly to keep fuel/chemical and silt pollution under control. With regard to para 4.35 in particular, EA approval is not required for discharge relating solely to Ordinary Watercourses within the site. Instead this is a responsibility of the Land Drainage Authority and therefore would be subject to an Ordinary Watercourse Consent application made to the LDA. Further, we would not approve any silt pollution to be discharged into a sewer system, even if the water utility company accepted such discharge in principle, since this can cause problems with silt drop-out thereby reducing capacity. The issue of management of pollution of surface waters will be secured by Condition.

Para 4.45 states an assumed impermeable percentage of 55% for residential development but this is on the low side and we would expect a figure of 65% or even 70% to be used. This matter will be secured by Condition

Paras 4.55 – 4.57 claims that there is a 69% reduction from Peak Greenfield Rates, but we require that run-off restricted to 1 in 1 year in accordance with the WBC SuDS SPD so this rate can be improved upon further by adopting that criteria (refer also to para 4.52 where attenuation is stated to be to the mean annual flow Q_{bar}).

Linking to this, para 4.60 states : “...the implementation of source control measures can achieve a minimum 50% betterment in peak run-off from each development parcel, thus should this be a viable option, a further betterment may be achieved.” This should be aimed for.

Para 4.71 states “The conceptual drainage proposals have been developed in a manner that will allow the site wide system to be designed to encourage passive treatment of discharged flows and to improve the water quality by removing the low-level silts, oils which could be attributed to track/parking area run off of this nature. Final design will provide for appropriate geometry and planting to maximise this benefit.” This will be secured by Condition

Para 4.74 (& as raised in 4.29 above), the SuDS maintenance frequencies should be increased.

Section 5 Hydrology Appraisal of Proposed Valley Crossing raises questions of any impact on local biodiversity once completed as well as during the construction stage. Control of pollution at this location will be more difficult to manage in this location anyway but is especially important in regards to existing habitat & biodiversity (see also comments on Transport Assessment below). Further details are required to provide sufficient certainty that control of pollution at this location is achievable and until these details are provided this matter will form the basis of an objection.

Section 6 Foul Drainage notes necessary upgrades to the Thames Water foul sewer network. There should be a timeline tying together any necessary upgrades and proposed new foul sewer infrastructure alongside the various phases of the development. In order to ensure there is sufficient capacity in the foul water network at all times this will be secured by Condition.

Appendix A - We note that the proposed Drainage Strategy Plan (DSP) (dwg. No. 10309-DR-02) misses the bottom edge of the application site which includes the River Enborne and an existing pond/watercourse as per the FRA (ES Appendix K1) submitted with the application. It also omits the other part of the allocated site (application 18/00828/OUTMAJ). This was shown in the previous application FRA, which demonstrated that the surface water flow from both parts of the allocated site were not dependent on the other in respect of surface water drainage. Now this is no longer provided, it is unclear as to how both sites relate to each other in respect of surface water runoff/drainage.

Surface water flow arrows shown on this plan appear to show surface water flowing almost in line with the contours in several places, rather than angled to them as would be expected. Furthermore, flow appears to be being directed through Dirty Ground Copse and Slockett's Copse which is unacceptable due to potential ecological damage this would cause. This must be reviewed and modelling provided in due course to show that no new flow will affect these sensitive sites.

We further note that the detention basins A, B and C are shown with approximately the same surface area in metres square as the volume in metres cube, and therefore by implication they will be 1m deep with near vertical sides. This scenario is unacceptable. Basin side slopes should be 1 in 4 to enable maintenance to be carried out and to achieve a more natural appearance.

The Illustrative Layout Plan indicates a number of additional ponds/basins which are not shown on the DSP (nor the Strategic Landscape and Green Infrastructure Plan) - for example to the north of Crooks Copse and south of Dirty Ground Copse where they are scattered through the developed areas. These plans are therefore not consistent and if SuDS features have been missed from the DSP, that plan should be amended.

We object to the application until these details have been provided on the grounds that parts of the proposed surface water measures as shown are not practical, conflicting information has been submitted and there is insufficient certainty that the development will not introduce run-off into the other part of the allocated site (or vice versa) such that a full assessment cannot be completed until the drainage strategy includes the whole of this application site.

Transport Assessment (and ES Vol.2 Fig 4.9 "Illustrative Valley Crossing")

Appendix F gives details of the proposed "Valley Crossing". As a minor point, it is arguable whether this information should have been duplicated in Section 5 of ES Vol.3 in order that the implications of the design could be better appreciated when examining that document. Notwithstanding that, the proposals detailed in this document indicate a structure in excess of 10m spanning the watercourse with substantial earthworks either side. This will have a sustained impact on local biodiversity once completed regardless, but it will also have a major impact during the construction stage that will be difficult to manage. Further details are required in reference to 4.32 above to provide sufficient certainty that control of pollution at

this location is achievable specifically for construction access, temporary hardstandings, movement of spoil etc.

Draft Conditions (section 4 “Drainage”)

As a general comment, we wish to use our own standard Conditions (and modified to provide bespoke wording where appropriate) as set out below.

Notwithstanding that, we wish to emphasise that we cannot accept proposed conditions 14 & 16 in particular. It is our opinion that all of the final drainage design for the entire site should be supplied before any Reserved Matters can be approved. It is essential that we are able to assess and be satisfied that the entire system works in a satisfactory manner.

We therefore request the following :

No development shall take place until details of sustainable drainage measures to manage surface water within the site have been submitted to and approved in writing by the Local Planning Authority.

These details shall:

- a) Incorporate the implementation of Sustainable Drainage methods (SuDS) in accordance with the Non-Statutory Technical Standards for SuDS (March 2015), the SuDS Manual C753 (2015) and West Berkshire Council local standards, particularly the WBC SuDS Supplementary Planning Document December 2018. This should include, but not be limited to, the following : green roofs & rainwater harvesting measures for the school and C3/A1-A5/B1a/ D1 provision; localised bio-retention measures in built areas particularly as ‘on-parcel SuDS’; trees planted in tree-pits incorporated into the built development as well as SuDS areas - as indicated on the proposed master planning document; ponds & wetlands; carriageway filter strips; roadside swales; attenuation basins as local source control with dry and wet areas, all as outlined in ES Vol.3 Appendix K1 paras 4.17 / 4.18 / 4.20 / 4.25 / 4.26 / 4.27 and Figs. 4c & 4d. and other reviewed documents listed in the consultation response above;
- b) Include and be informed by a ground investigation survey which establishes the soil characteristics, infiltration rate and groundwater levels. Any soakage testing should be undertaken in accordance with BRE365 methodology;
- c) Include a drainage strategy for surface water run-off from the site since no discharge of surface water from the site will be accepted into the public system by the Lead Local Flood Authority;
- d) Include a buffer zone of 8m buffer zone extended either side of both banks of any existing watercourse and conveyancing channel;
- e) Include attenuation measures to retain rainfall run-off within the site and allow discharge from the site to an existing watercourse at no greater than 1 in 1 year Greenfield run-off rates;
- f) Include construction drawings, cross-sections and specifications of all proposed SuDS measures within the site;
- g) Include run-off calculations, discharge rates, infiltration and storage capacity calculations for the proposed SuDS measures based on a 1 in 100 year storm +40% for climate change;
- h) Include flood water exceedance routes, both on and off site; Include flow routes such as low flow, overflow and exceedance routes;
- i) Include pre-treatment methods to prevent any pollution or silt entering SuDS features or causing any contamination to the soil or groundwater;
- j) Ensure any permeable paved areas are designed and constructed in accordance with manufacturers guidelines.
- k) Ensure any permeable areas are constructed on a permeable sub-base material such as Type 3 or reduced fines Type 1 material as appropriate;

- l) Include details of how the SuDS measures will be maintained and managed after completion. These details shall be provided as part of a handover pack for subsequent purchasers and owners of the property/premises;
- m) Include a management and maintenance plan for the lifetime of the development. This plan shall incorporate arrangements for adoption by an appropriate public body or statutory undertaker, management and maintenance by a residents' management company or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime;
- n) Include a Flood Risk Assessment (FRA) for developments located in areas at risk of flooding (in Flood Zone 2 and 3 or from surface water) or developments larger than 1 hectare;
- o) Include a Contamination Risk Assessment for the soil and water environment (assessing the risk of contamination to groundwater, develop any control requirements and a remediation strategy);
- p) Include measures with reference to Environmental issues which protect or enhance the ground water quality and provide new habitats where possible;
- q) Apply for an Ordinary Watercourse Consent in case of surface water discharge into a watercourse (i.e. stream, ditch etc.);
- r) Show that attenuation storage measures have a 300mm freeboard above maximum design water level. Surface conveyance features must have a 150mm freeboard above maximum design water level;
- s) Include with any design calculations an allowance for an additional 10% increase of paved areas over the lifetime of the development;
- t) Include details of permanent foul drainage proposals for the site, to include a timeline with respect to provision of new foul sewer infrastructure in relation to the proposed development. Those details shall also include written confirmation from Thames Water of their acceptance of the foul sewer discharge from the site into their foul sewer network and that the downstream sewer network has the capacity to take this flow.
The proposals shall specifically include any information supporting limited development which would discharge to the existing network in advance of the network reinforcement works, as suggested in Planning Statement Appendix 7, page 118. No dwelling shall be occupied in any main development parcel identified on the parcel plan 14- 73/PP05 RevB or sub-phase defined by Condition until the foul drainage scheme for that main development parcel or sub phase has been implemented in accordance with the approved details.
- u) Provide details of catchments and flows discharging into and across the site including through existing areas identified as Ancient Woodland and Copse, how these flows will be managed and routed through the development and where the flows exit the site both pre-development and post-development must be provided;
- v) Provide details of how surface water will be managed and contained within the site during any construction works to prevent silt migration and pollution including by silt of watercourses, environmentally sensitive areas, highway drainage and land either on or adjacent to the site.

Reason: To ensure that surface water will be managed in a sustainable manner; to prevent the increased risk of flooding; to improve and protect water quality, habitat and amenity and ensure future maintenance of the surface water drainage system can be, and is carried out in an appropriate and efficient manner. This condition is applied in accordance with the National Planning Policy Framework, Policy CS16 of the West Berkshire Core Strategy (2006-2026), Part 4 of Supplementary Planning Document Quality Design (June 2006) and SuDS Supplementary Planning Document (Dec 2018). A pre-condition is necessary because insufficient detailed information accompanies the application; sustainable drainage measures may require work to be undertaken throughout the construction phase and so it is necessary to approve these details before any development takes place.

Draft S.106 agreement

With reference to paras 1.4 and 1.5 of Schedule 3, Green Infrastructure, Country Park, of the Draft S.106 agreement, the LLFA has no problems in principle with the setting up of a Management Company to carry out the stated functions as this currently seems to be the preferred way of managing such assets for the LPA and most developers. However, it would be desirable to have the Management and Maintenance Scheme submitted and approved in writing by the LPA prior to commencement of works on site, as well as the establishment of the Management Company (para 1.6). If the latter is not achievable then it is suggested the wording of para 1.6 of this Covenant is set to read such that the Applicant is not to use or Occupy or cause, suffer or permit to be used or Occupied more than 100 Dwellings without first having established the management company or body referred to in the Management and Maintenance Scheme etc.

Response to Reasons for Refusal to Application 16/03309/outmaj

Under Reason for Refusal 10 on p.12 of the above document it is stated that the two parts of the overall allocated site (BH/SFP and DNH) drain independently of each other (relating to surface water) and it is implied that the refusal reason is therefore not valid. We suggest however that the Applicant has mis-interpreted the original reason for refusal in their statement on p.12 – which was that “The submitted FRA is based upon a masterplan for the whole of the allocated site, including land beyond the application boundary, the use of which has not been secured as part of the proposals and does not account for the surface water drainage flows from the rest of the allocated site outside this application boundary. Furthermore, significant lengths of swale channels and two large attenuation basins are proposed to be located within Country Parkland that is not to be delivered with the development proposed in this application.” The important thing here is the latter part of the last quoted sentence.

The current Application does include some surface water measures within the country park area and this therefore *potentially* would have removed a part of the objection reason leading to the refusal. However, referring to the comments above concerning the proposed Drainage Strategy Plan (dwg. No. 10309-DR-02 in Appendix A of the ES Vol.3 Appendix K1), there is still vital surface water information omitted and as such that original refusal reason has not been entirely overcome after-all.

Under Reason for Refusal 11 on p.12 of the above document it is stated that the two parts of the overall allocated site drain independently of each other (relating to waste water). We are unable to find reference to this in our original responses to Application 16/03309/outmaj so are unsure if the reason for the refusal at that time resulted from insufficient waste water information for both parts of the allocated site being available. Now however subject to a suitable Condition (as dealt with above), it would appear that a solution to the Bloor Homes site (20/01238/outmaj) may be achievable.

Other matters

We note that BBOWT have commented on the Application and would share their concern that the Drainage Strategy should enhance biodiversity and not potentially compromise existing biodiversity.

We note that the Environment Agency’s response and would support their requested Conditions.

Jon Bowden
Senior Engineer, Drainage
14th September 2020