BROOKBANKS

Sandleford Park, Newbury

Lee Witts' response to WBC Drainage Statement of Common Ground
10th May 2021

1 Introduction

1.1 This note reviews the Drainage Statement of Common Ground provided by Mr Bowden on 4th May 2021.

1.2 Mr Bowden's commentary is noted in *italics* wwith my response noted in blue.

2 Drainage Statement of Common Ground

Matters of Agreement

2.1 Mr Bowden provides his agreement to a number of drainage matters. I have no further comment.

Matters of Dispute

2.2 The matters of dispute have been tabulated and use the paragraph numbers as Mr Bowden's document.

2.3 NOTE: In the table I refer to the reserved matters stage a number of times. Whilst not explicitly referenced in the table, I also acknowledge that following the grant of outline permission there is a design cascade sequence in accordance with the Sandleford Park SPD (CD8.14). With particular reference to Principles L2 and L3, there will be the development of the Strategic Landscape and Green Infrastructure Plan, with each character area and phase of site having a detailed Landscape and Green Infrastructure Design and Management Plan. Principle L2 states that this process will "provide details on SuDS, non-vehicular access, greenlinks and recreation and open space provision." Principle L3 will develop a detailed Country Parkland Design and Management Plan. These Principles are intended to provide further details in respect of SuDS (amongst many other things) in line with the wider landscape and green infrastructure detail, all of which will occur prior to any reserved matters application.

WBC LLFA	Mr Witts
2.11 The Council's position is that the groundwater investigation was carried out from 9th -15th September 2014 at what is normally the driest time of year and when groundwater levels are at their lowest in relation to ground level. All ground investigation was carried out in areas of the site where new development is proposed, not where the SuDS conveyance channels and basins are to be located. The groundwater information is therefore unreliable and is not representative of where SuDS are to be located in the refused schemes, or later proposed alternatives, and where harm will occur.	I agree that further groundwater investigation should be carried out to accompany a reserved matters application. Any further investigation should be conducted during the winter months (Dec, Jan, Feb) and be located on site where proposed SuDS is to be situated (with their fixed and final positions being a matter for the design cascade sequence). Within the Council's draft planning conditions (CD7.4), Condition 14 b) refers to obtaining infiltration and groundwater investigations to accompany a reserved matters application. I agree with the need for a condition such as this though would consider that the

	current wording may need discussion.
2.12 The proposed SuDS – namely conveyance channels and basins – are all 'site control' features. No 'source control' measures have been shown on drainage strategy plans 10309-DR-01, DR-02, DR-03 or DR-04 (various revision numbers). The only information relating to source control features are the so-called "toolbox" of measures as referred to at paras 1.68 and 1.70 of the Rebuttal Statement APP/36 when referring back to the FRA. The Council's position is that this is unacceptable because "… all development will manage surface water runoff as close to the source as possible…" (SuDS SPD : "Our Vision"); and basic SuDS principles stated in the SuDS Manual C753 at p28, p70, p86 Box 4.3 and p88 para 4.3.2 for example.	The statement that "all development will manage surface water runoff as close to the source as possible" is entirely relative. I argue that managing surface water anywhere within the development redline boundary could be classified as 'close to the source'. However, the statement made concerning source control is incorrect when considering the details provided on the Boyer Illustrative Masterplan (CD1.31). The illustrative masterplan shows a number of green areas between carriageway and housing where SuDS features could be situated. It will be for the reserved matters application to define and formalise these SuDS measures within the development parcels. The 'toolbox' measures discussed within the FRA act purely as a set of potential options for what these development parcel SuDS may be at the detailed design stage (which in themselves formed some of the illustrative proposals for the masterplan).
2.13 The SuDS measures indicated on the Drainage Strategy are all located within the wet valleys between the various areas of Copse designated as Ancient Woodland (AW), with the possible exception of Basin A identified on drawings 10309-DR-02 and DR-02 A (but not part of the feeder channel). The Council's position is that there is a requirement for a minimum 15m buffer zone surrounding these AWs where SuDS should not be located. Hence there is insufficient room to accommodate the proposed SuDS through the valleys. This is exacerbated by the 8m buffers to the existing streams through the valleys. The alternative drainage strategy at Option 1 on drawing 10309-DR-04 A shows a new conveyance channel through Slockett's Copse West (the additional area to the west of the main Slockett's Copse) with the direct loss of AW in this area. This is not acceptable	The Council's position on SuDS not being located within the buffer zones is acknowledged. However, within my rebuttal proof (CD10.36) para 1.44, I state that "In accordance with GOV.uk guidance (CD8.31) and the Woodland Trust Planning Manual for Ancient Woodland and Veteran Trees 2019 (CD17.3), SuDS can be placed within a buffer as long as it avoids the root protection areas and does not impact the hydrology of the woodland." Supporting this further, the Sandleford Park SPD (CD8.14) under Principle L4 b) states "Use of set backs / buffer zones - development of roads or buildings will not be permitted within the buffer zones. They can be used for informal recreation and planting and informal footpaths. Services will only be permitted in buffer zones if they do not impact on root protection zones." Principle L4 g) states that "Root protection areas - drainage runs, soakaways and the installation of other services can cause disruption to Root Protection Areas (RPAs) and result in important trees being damaged. All such drainage runs must therefore be kept out of RPAs except where the Council has provided prior written approval." The SPD itself stating here that drainage features are permitted within the buffer, but not within RPAs. The SuDS placement as set out in the drawings listed by Mr Bowden were illustratively situated within the 15m buffer zone, but sat outside of all root protection areas and the 8m stream buffer. In an attempt to illustrate an alternative option which Mr Bowden may be more receptive to, the Option 1 on

	drawing 10309-DR-04 A was provided (CD.10.17 Appendix E). The new conveyance channel to Slockett's Copse west is incorrectly referred to by Mr Bowden as resulting in a loss of AW. Again being illustrative, the new conveyance channel would take the line within the available open space between two sets of AW. The intent to provide SuDS at the low-lying areas of the site, adjacent or close to existing watercourses, has been a key aim of the developments drainage proposals throughout the entire life of the project. My proof (CD10.16) in Section 3 has already commented that for application 18-00764/OUTMJ West Berkshire Council LLFA approved the drainage proposals, with the SuDS being located in the same areas where they are now being deemed as unacceptable. Further underpinning the core aim of providing SuDS in the most suitable location (low-lying and close to the watercourses) was the work produced by West Berkshire Council themselves. Referring to Council's Sandleford Park SPD supporting documentation (as published on their website) the 2009 White Young Green Flood Risk Assessment illustrative layout shows SuDS situated within the watercourse between Slockett's Copse and High Wood. This layout is provided as **Appendix A**.
2.14 The original SuDS layouts shown on drawings 10309-DR-02, DR-02 A and DR-03 A show Basin C and its outfall into the stream being located very close to the northern extension of Waterleaze Copse and ancient tree T166. This is not acceptable;	Whilst this is noted, the basin and outfall in question are illustrative, as the name of the plans referenced suggest (Illustrative Surface Water Drainage Strategy). The detail of these SuDS and their true and fixed locations will be subject to reserved matters design. All required aspects of detail will be supplied as draft condition 14 (CD7.4).
2.15 All of the alternative drainage strategies shown on drawings 10309-DR-03 A and DR-04 A also impact on the purple moor grass and rush pastures HPI (Habitat of Principle Importance). This is not acceptable;	Placement of SuDS within existing grassland and rush pastures should be considered in context with the overall gain in biodiversity that the development will provide. In Mr West's proof (CD10.13), para 2.3.5, it states that "The creation of a Country Park, providing both a net gain for biodiversity and an area for informal recreation to minimise off site trips. This will include creation of new grassland and hedgerow habitats. A quantified assessment of the biodiversity net gain that development will deliver was completed and found that there would be a net gain of 111.48 units of non-linear habitat (17.23%) and 11.88 units of linear habitat (9.36%). Based on these calculations the proposed development would achieve a net gain for biodiversity."

	However, Mr Bowden's concern is duly noted, and the detailed design exercise to fix the location of SuDS will look to avoid the small area of HPI. Up to date surveys can inform the extent of HPI prior to the detailed design fix.
2.16 The Council's position is that the SuDS measures indicated on the Drainage Strategy located between the various areas of AW will draw off groundwater to the detriment of the hydrology in and around the AWs. The alternative proposals such as lining of the SuDS or bunds will restrict the capacity to develop into biodiverse habitats or adversely affect the landscape of the valleys respectively. Neither option is acceptable;	It appears that Mr Bowden refuses either lining or non-lining of SuDS. This would suggest a fundamentally different approach to the way the site is developed, which would then be at odds with the Core Strategy Policy CS3 and the SPD. It is entirely reasonable to have a mixture of none, partially, or wholly lined SUDS as the specific locations or needs of the features require. I have stated in my rebuttal (CD10.36) that the evidence supplied by Mr Bowden in relation to groundwater levels is flawed (para 1.7 to 1.30). I have also acknowledged Mr Bowden's comments that there has been no groundwater investigations carried out within the AW corridors where some of the proposed SuDS are situated. Therefore, both of our parties must accept that the level of groundwater at this location, in the 'worst case' winter months, is currently unconfirmed. Further testing and design analysis which can all be captured within draft condition 14 (CD7.4) would be able to confirm the groundwater characteristics of this area and determine what form the final SuDS proposals will take. Lined SuDS, allowing water retention, enhances biodiversity. This aligns exactly with Principle H3 of the Sandleford Park SPD (CD8.14) which states: "Swales, ponds and filter strips can be colonised by a variety of wetland plant, fish, animals and invertebrates. They also provide a place for people to enjoy nature and relax. Ponds and wetlands are probably the most important SuDS technique in terms of providing amenity and wildlife habitat. There are also a number of other opportunities to enhance the biodiversity of the site including the inclusion of native planting within SuDS." Furthermore, Principle H2 States "Surface water drainage should utilise a range of Sustainable Drainage Systems (SuDS) which could include source and site control measures such as car park drainage, green roofs, swales, wetlands, attenuation ponds and detention basins (both dry areas and with ponds)." Mr Bowden stating that neither wet nor dry ponds are acceptable is a direct contradiction of Principle.
2.17 The stone filled trench, effectively a French drain, shown below the swale (Conveyance Channel) in the "Example Design of a 3m Swale" detail on drawing 10309-DR-03 A (submitted on 7th April 2021) is not acceptable due to the adverse impact it will have on	I would propose that this drain could be lined to prevent the draw-off from groundwater within the locality of the AW. This is a detailed design matter.

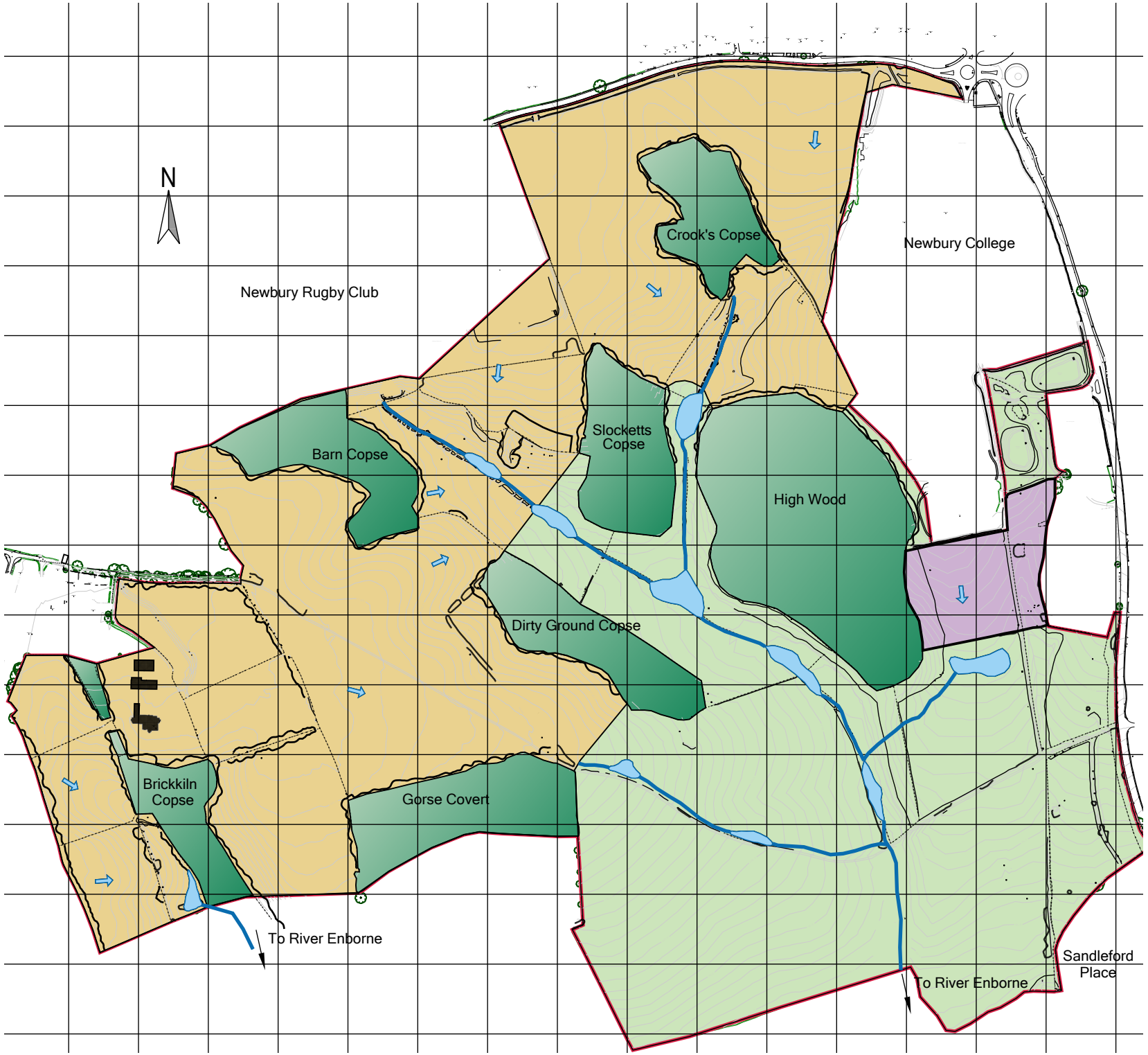
drawing off groundwater to the detriment of the hydrology in and around the AWs;	
2.18 The damage caused to the site through excavation of SuDS will be significant as it will all be carried out by heavy plant on existing marshy ground. This will lead to substantial churning up of the ground when excavating and removing spoil disturbing existing flora that will take a significant time to recover. Additional construction to line the SuDS and/or create bunds, as per the suggested alternative SuDS profiles, will exacerbate even more the damage caused from construction;	Any and all SuDS, regardless of type, location or development require excavation. The core principle of necessary excavation must be accepted by Mr Bowden. However I accept the point that excavation on a marshy ground would incur an increased level of ground disruption. Prior to any excavation of SuDS, there will be a Construction and Environmental Management Plan (CEMP) produced, which will be submitted to the Council for approval, which will set out the precise method of groundworks proposed to construct the SuDS. For example, the CEMP may insist that Marsh Mats are used for construction vehicles in places of high groundwater. This could go even further and include the requirement of a 'watching brief' which would allow either Mr Bowden or associated professionals to attend site and observe the excavation to ensure minimal disruption to the local vicinities is achieved. The form of excavation is a matter of detail and would be a requirement of any reserved matters application. I am happy to discuss and agree a suitably worded planning condition to support this.
2.19 The serpentine Crook's Copse Link shown on drawing VD17562-SK021 in Appx. 4 of the Section 78 Appeal : SoC, crossing the valley between Crook's and Highwood/Slockett's will affect adversely hydrology in this valley; the link road will effectively block the natural flow of water through the upper ground layer down through this valley permanently causing detriment to the marshy or boggy areas to the south of this crossing;	It is correct for Mr Bowden to state that the natural flow of water will be altered. The circa 15m long culvert beneath the Link is the proposed conveyance system for water once the Link is in place. However, the Link is not currently fixed in terms of arrangement and is subject to detailed design. The proposed culvert, along with all other details associated with the Link, will be tested and agreed further through reserved matters. However, the principal of a culvert within or near to Crook's Copse is nothing new. Mr West's Proof (CD10.13) under para 4.2.10 when discussing modular river surveys states: "For the Crooks Copse link, (which will introduce a culvert) it is because the watercourse is already culverted in sections, with a lengthy section where it runs entirely below ground." Mr West's on site surveys shows that there are existing sections of watercourse that are culverted on the site. Two examples of this are provided here: Approximately 130m south of the new Link road, in between High Wood and Slockett's Copse, there is a section of existing watercourse which is culverted for approximately 60m in length.

	The watercourse between Monks Lane and the northern edge of Crook's Copse is entirely culverted at approximately 95m in length. Therefore, the introduction of a new culverted section of just 15m in length is not seen as detrimental when compared to the existing conditions.
2.20 The Council's position is that construction of the Valley Crossing will cause significant harm to the hydrology and ecology of this valley and surrounding area during the work. There will be some residual harm upon completion when in use;	Whilst this comment is acknowledged, the evidence given by Mr Goddard to the Inspector within the 6th May Inquiry sessions was that the Valley Crossing is "necessary". Furthermore, referring once again to Mr West's Proof (CD10.13), para 4.2.10: "As part of the updated Biodiversity Net Gain Assessment (Appendix B) a Modular River Survey has been conducted on both sections of watercourse where crossings are proposed. This assessment concludes that there will be no impact on the condition of the watercourses as a result of the proposed development. For the central valley crossing, this is principally because the width of the proposed bridge structure is below the threshold for shading impacts to be significant (it is less than 25m wide)." Even so, it is unreasonable to declare a position of "significant harm" when the detailed design and construction management of the Valley Crossing has not yet been carried out.
2.21 There are inconsistencies in evidence over the form the SuDS will take. Mainly dry channels and basins are stated in para 5.35 of the Appellants' Drainage PoE APP/16, whereas para. 10.30 of Mr Cooper's Landscape PoE APP/4 states these will be wet or semi-wet areas;	9.41 of my Proof (CD10.16) states "The SuDS are currently designed as dry features. At the detailed design stage should the need for additional wetland areas arise, permanently wet areas can be designed into the detention ponds." Once again, the final proposal for SuDS will be determined and designed at reserved matters. A dry basin may include a smaller contained element, locally lined, in order to produce a permanently wet feature. This is the genesis of the comments made by Mr Cooper.
2.22 The Council's position is that there will be harmful reduction in infiltration from development areas affecting the AWs. Paragraph 1.13 of Mr Witts' Rebuttal APP/36 refers to a 18.9% reduction of surface water [rainfall] into the ground whereas at para 3.1.8 of Mr West's Proof APP/13, 25.49% is the figure used. These figures are inconsistent, but either figure represents a substantial reduction in potential infiltration that will have a marked effect on groundwater 'downstream' of the developed areas in the AWs and wet valleys;	Mr Bowden's quote of Mr West's proof (CD10.13) has been used out of context. I provide a fuller reference to Mr West's para 3.1.8 and underline & bold the pertinent point of note: "Only Dirty Ground Copse and Waterleaze Copse exhibit areas of wet woodland habitat or groundflora, and there is no potential for changes in hydrology for Waterleaze Copse as it lies within the Country Park. Appendix A includes an assessment of the watershed for each woodland parcel. **This demonstrates that the woodlands are not reliant on surface water runoff** and sets out the potential change in infiltration from rainfall due to an increase in impermeable surfaces. This is a maximum

	of 25.49%, but does not account for groundwater sources (evident in Dirty Ground Copse from the flushes) or watercourses (within Crooks Copse). At the Reserved Matters stage, if necessary, it will be possible to design the SuDS system to allow appropriately treated water to enter the woodlands." Mr Bowden also comments on a substantial reduction in potential infiltration downstream of the developed areas. I would note that the polluted water from the development parcels is proposed to be conveyed and treated within the new SuDS which will discharge back into the watercourses in these downstream locations.
2.23 Natural run-off from adjacent land into the AWs should not be reduced in volume and spread – only polluted run-off should be prevented;	Principle H2 of the Sandleford Park SPD (CD8.14) states: "The drainage system for the site must have regard to the topography of the site; the land uses both developed and public open space and the existing springs and woodland areas. The design of the drains and roads should ensure that the existing springs continue to function: in particular any road crossing of the wet valley should not impact on the local hydrology." The requirement set out by Mr Bowden is not a Principle. There must be an acceptance that natural run-off from land 'upstream' of the AW, where development parcels are to be located, will alter the natural volume and spread of water. Mr West's Appendix A (CD10.14) contains a watershed assessment that shows that each AW is not dependant on surface water run-off from adjacent land. I agree with Mr Bowden that any potentially polluted run-off needs to be managed. Run-off from roofs, pavements, roads and hard standing areas etc will be collected, conveyed and treated via the proposed SuDS. The potential to discharge a proportion of this treated water back into the AW can be reviewed at the detailed design stage.
2.24 The SuDS proposals do not comply with the Sandleford SPD or the SuDS SPD. Inadequate commitment to 'green SuDS' within the development areas is given, contrary to these Policies.	Section B para 8 of the Sandleford Park SPD (CD8.14) states that a Strategic Objective is to "put in place a range of Sustainable Drainage Systems (SuDS) to ensure that surface water discharge from the site is effectively managed and provides wildlife and ecology benefits." This has been achieved. The statement of common ground (CD9.1), para 11.1, states "Policy CS16 requires surface water to be managed in a sustainable manner through the implementation of Sustainable Drainage Methods. The Appellants drainage proposals are based on the implementation of Sustainable Urban Drainage Measures. The Council however has concerns regarding the detailed proposals as set out in RFR 13".

	It is Common Ground that the Appellants drainage proposals are based on the implementation of Sustainable Urban Drainage measures that would accord with Policy CS16 as a matter of principle. This would include SuDS within the areas of built development and the Country Park. Through the various stages of detailed design that would follow the grant of outline planning permission those measures would be designed in further detail, as is normal practice, and especially on a large schemes such as this. The Council's concerns in RFR13 are based on the detailed proposals but all proposals are indicative only at this stage and is not an in principle objection to the Site's development: i.e. the Council does not dispute that the proposed development can be achieved with the use of Sustainable Urban Drainage, rather this requires more detailed consideration at those more detailed stages.

Appendix A – WYG Illustrative Drainage Layout



DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

KEY

- WOODLAND
- PROPOSED RESIDENTIAL DEVELOPMENT
- PROPOSED BUSINESS USE DEVELOPMENT
- PROPOSED STORAGE BASINS AND OPEN WATERCOURSES. FLOW CONTROL WITHIN STORAGE BASINS PROVIDED BY THROTTLE PIPES AND WEIRS.
- GENERAL DIRECTION OF FLOW FOR PROPOSED DRAINAGE NETWORK
- CONTOURS

REV	DESCRIPTION	BY	CHK	APP	DATE

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Project:

SANDLEFORD PARK
FLOOD RISK AND DRAINAGE ASSESSMENT

Drawing Title:

INDICATIVE DRAINAGE LAYOUT

Scale @ A4	Drawn	Date	Checked	Date	Approved	Date
NTS	CD	07.12.09				

Project No.	Office	Type	Drawing No.	Revision
A059486	5201	C	005	