Cheshire West and Chester Local Plan Part 2 Examination

Statement in relation to Matter 8

Area Specific Policies: Chester

Prepared by Nexus Planning on behalf of The University of Chester (Representor ID: 718682)

August 2018

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Issue 4 - University of Chester Policy CH4

Policy CH4

Q1) How have the sites been defined? Are they justified and effective? Should they include any others land?

1.1 These comments build on those made in representations to the Cheshire West and Chester Local Plan Part Two Land Allocations and Detailed Policies ('LPP2') Preferred Approach in September 2016, and most recently the Local Plan (Part Two) Publication Draft in January 2018.

1.2 The University has two primary concerns in respect of the LPP2 as it relates to Policy CH4 and the associated Land Allocations:

a. The Glenesk site is proposed for de-allocation through Map Change 38; and
b. The Kingsway site is only partly allocated under Policy CH4 in Map Change 126.

1.3 The University has comprehensively reviewed the evidence base documents pertinent to Policy CH4 and these sites and it is clear that some inconsistencies (and possibly oversights) have occurred which have resulted in what can only be described as a flawed and unsound outcome. The following provides the specific details of these concerns and a robust justification for the continued identification of the Glenesk site as an allocation for educational use and an expansion of the Kingsway allocation to include all land within the University's ownership.

How have the sites been defined?

1.4 Policy CH4 allocates sites for the future development of the University of Chester. It states that *'Proposals relating to the Parkgate Road campus should be brought forward in a comprehensive manner in the context of a strategy for the campus as a whole.'*

1.5 The explanatory text to the policy states:

> *'The University's Parkgate campus will continue to be a focus for development which may include additional student, teaching, research and enterprise accommodation, infrastructure and services, and sports and leisure facilities in suitable locations.'*

1.6 The Parkgate Campus has therefore been allocated on the basis that the Council recognise its significance in facilitating the University's long term strategy for the development of additional teaching accommodation and services, and that the future expansion of the University is likely to take place at the Parkgate Road Campus.

1.7 The Local Plan Part Two Preferred Approach (2016) also included reference to the Glenesk site in the draft Policy CH4 University of Chester, reflecting its current status as a potential location for the expansion of the Parkgate Road Campus under Chester District Local Plan ('CDLP') Policy CF2:

> *'The "Glenesk" site, as identified on the policies map, is allocated for potential expansion of the teaching facilities on the Parkgate Campus. The site should be brought forward in a comprehensive manner in the context of a development brief for the site and a strategy for the Parkgate campus as a whole.'*

1.8 The University were supportive of the continued inclusion of the Glenesk site as an allocation under Policy CH4, on the basis that it is their key asset in unlocking the future expansion of the Parkgate Road Campus and representations were submitted to that effect. Despite this, and despite the wealth of strategy policy at a local and government level that supports the continued expansion and support of higher education facilities (as per the University's response to Matter 2), the Local Plan Part 2 Publication Draft has now proposed the de-allocation of Glenesk through Map Change 38.

1.9 With reference to the evidence base, this decision appears to have been based on the findings of the Local Plan Working Group (LPWG) committee whose report of June 2017 concluded that the site should be de-allocated.

1.10 It can therefore be reasonably concluded that the basis of the decision to de-allocate the Glenesk site has only been made on flood risk grounds. The evidence available in this regard is found in the Strategic Flood Risk Assessment Level 1 Report (2016) produced by JBA Consulting (Doc Ref: EB087), which is a very high level assessment.

1.11 The response to the following question demonstrates that the decision to de-allocate the Glenesk site on this basis is simply not justified.

Are they justified and effective?

1.12 As already established, Map Change 38 proposes to de-allocate the Glenesk site (currently allocated under CDLP Policy CF2) purely on flood risk grounds. Map Change 126 intends to allocate only the Parkgate (existing campus), Kingsway (excluding the site's playing fields, which in the University's view should also be included), Riverside and Queens Park sites. The University are highly concerned by the de-allocation of the Glenesk site on the basis that this approach is neither justified nor effective, for reasons set out below.

Not justified

1.13 The Glenesk site is identified within the Level 1 SFRA (Doc: EB087) as 'Land at Parkgate Road, South-east of Finchetts Gutter, Blacon' with the site reference JBA1267. Erroneously, the 'Proposed Use' is described as Residential (it is for Education purposes) and the conclusion reached is that it is a 'Recommendation B' site. Paragraph 6.5.1.2 confirms the status of such sites :

> *'Recommendation B applies to sites where it is likely the Exception Test would be required. This does not include any recommendation on the likelihood of a site passing the Exception Test. These sites would need to be examined as part of a more in-depth Level 2 SFRA. The developer / LPA should attempt to avoid the risk area where possible.*
>
> *This recommendation DOES NOT take account of local circumstances, only that part of a site area falls within a Flood Zone.'*

1.14 By contrast, 'Recommendation A' sites are those that fall within the functional floodplain and that the Council should consider the withdrawal of the site. Recommendation B clearly adopts an alternative stance and simply requires an Exception Test to be undertaken or for the site to be examined further through a more detailed Level 2 SFRA. The distinction that the site is being promoted for educational purposes is an important distinction, particularly in respect of the application of the Sequential and Exception Tests. As set out above, JBA's clear conclusion in respect of sites such as this is that: *'This recommendation DOES NOT take account of local circumstances, only that part of a site area falls within a Flood Zone.'*

1.15 With this in mind, it is our understanding that the Council has not undertaken a Level 2 SFRA, a Sequential Test or Exception Test in relation to the Glenesk site. As raised by the University previously, it is thus considered that the Council's proposed approach to the Glenesk allocation is unsound.

1.16 In order to assist the Examination process, the University would draw the Inspector's attention to the flood risk work prepared in response to the Local Plan Part Two Publication Draft consultation. The University has commissioned Betts Hydro to prepare a Flood Risk Statement (Betts Hydro, August 2018) which is appended to this Matter Statement at Appendix 1 for ease of reference.

1.17 The Level 1 SFRA states at paragraph 6.5.1 that:

> *'It is CWaC's responsibility to carry out sequential testing of each site using the information provided in this SFRA and more specifically using their local, site specific knowledge and advice from the EA / NRW. These sections should be read alongside the Development Site Spreadsheet in Appendix B.'*

1.18 Appendix B of the SFRA clearly identifies that none of the development parcel lies within Flood Zone 3b. Furthermore, the flood risk evidence produced by Betts Hydro concurs that the SFRA assesses the site as falling within Flood Zone 3a and not within 3b.

1.19 Paragraph 157 of the National Planning Policy Framework (July 2018) and the National Planning Policy Guidance (NPPG) on flood risk requires the application of the Sequential Test for all development proposed within Flood Zones 2 and 3, and states that 'more vulnerable' development (which includes educational use) in Flood Zone 3a is acceptable, provided it passes the Exception Test.

Application of the Sequential Test in relation to the Glenesk site

1.20 To address the absence of evidence to justify de-allocation of the Glenesk site, both a flood risk Sequential Test and Exception Test have been undertaken by Nexus Planning (August 2018) on behalf of the University of Chester. These assessments are also submitted as supplementary evidence to this Matter Statement (see Appendix 2).

1.21 The application of the Sequential Test is centred on the site's ability to facilitate the expansion of the Parkgate Road Campus by presenting a development opportunity for a new educational faculty, of a certain scale. This scale of development can be accommodated on the Glenesk site (as demonstrated by the Potential Zoning Plan produced by Betts Hydro, at Appendix 3). Importantly, the Sequential Test only applies to the consideration of educational uses associated with the University and not 'Residential' use, which is considered to be the proposed use with reference to the Council's Level 1 SFRA and as such is factually incorrect.

1.22 In considering the appropriate area of search for a site suitable for the expansion of the Parkgate Road Campus it is acknowledged that the University has incorporated a number of sites since the original allocation of the Glenesk site in 2006, alongside the extensive development and refurbishment of the Parkgate Road campus itself.

1.23 These developments have been to a significant degree opportunistic, in the sense that there was scope for the University to expand its offer in line with Government policy for Higher Education whilst taking advantage of the planned disposal of sites by supportive, often public sector, partners at viable costs – costs in each case defined in large part by the particular constraints of the site.

1.24 This has, however, resulted in the Parkgate Road Campus site being at capacity, with very limited scope for additional development.

1.25 As expressed in CDLP Policy CF2 (Note: The site was removed from the Green Belt and allocated based on very special circumstances), the role of the Glenesk site has always been to facilitate the long term expansion of the Parkgate Road Campus. This role clearly has certain locational drivers, namely its close proximity to the existing Parkgate Road campus so that it can provide for its expansion as a single site and consolidate its City Centre status. This therefore clearly limits the reasonable scope of a sequential approach. Given the developed, urban nature of much of the surrounding area at Parkgate, with other areas to the north being in the Green Belt there are no sites of a similar scale, or indeed larger than 1.5ha, which are located immediately adjacent to the Parkgate Road campus other than the Glenesk site and it is therefore considered that the site passes the Sequential Test.

1.26 Notwithstanding that and for the sake of completeness we have undertaken a flooding Sequential Test that includes an assessment of sites within a reasonable walking and

commuting distance of the Parkgate Road campus (defined as a 2 kilometre walk or a 20 minute bus ride) in line with best practice. The report concludes that there are no sequentially preferable, available sites in areas at a lower risk of flooding which could accommodate an extension to the Parkgate Road campus. The Exception Test is therefore engaged.

Application of the Exception Test in relation to the Glenesk site

1.27 The Flood Risk Statement (August 2018) prepared by Betts Hydro confirms that there are no technical flood risk issues which would prevent the development of a proportion of the Glenesk site and that development of the site would create an opportunity to achieve a betterment in terms of overall flood risk. This is explained in more detail below and in the submitted Exception Test (Nexus Planning, August 2018). In this respect, the development of the site by the University would pass the Exception Test for more vulnerable development in Flood Zone 3a and is acceptable from a flood risk planning perspective.

1.28 A basic modelling exercise has been undertaken by Betts Hydro and confirms that it is possible for approximately 9,676 sq m (32%) of the site to be built on and remain completely flood free for the design event (the 1 in 100 year), and this could form the platform for the future development of the site. In addition to this, an area measuring approximately 5,616 sq m could provide a surfaced car park as part of the flood mitigation strategy.

1.29 A key mitigation measure would be to ensure that Finished Floor Levels to buildings addressed flood risk, and an intra-site sequential approach to flood risk would also be applied and this would steer development to Flood Zone 1 and other areas of the site that are already elevated, to minimise the necessary uplift in levels required and the impact in terms of displacement of the existing floodplain.

1.30 The basic hydraulic modelling outputs confirm that by also reducing the levels in some areas of the site it is possible to provide a reduction in flood risk to others even with the proposed development on site. Though actual benefits cannot be quantified without detailed hydraulic modelling, it has been shown through initial modelling that the following benefits could be potentially achieved through the development of the site:

- Re-alignment of Finchetts Gutter to potentially provide increased channel capacity and general improvements including ecology, amenity value and biodiversity;
- Potential for an ecological zone and wildlife habitat that could serve a dual purpose, in terms of being designed to flood during an extreme storm event, potentially providing a reduction in the existing flood risk, both upstream and downstream;
- There is scope to design bunding and levels alterations across the site that could result in an increase in the potential volume of the floodplain storage being achieved, which could reduce the burden on other parts of this sensitive river network.

1.31 The Glenesk site passes the flood risk Exception Test on this basis. The future development of the site will create a betterment in the existing flood risk scenario as it will provide an opportunity to attenuate and mitigate through the development of design.

1.32 The decision to de-allocate Glenesk is therefore not justified in the sense that in removing any portion of the existing allocation, the opportunity to mitigate for any future development proposals on the site is greatly reduced. This includes those within Flood Zone 1 that would likely require mitigation measures due to the design life of any development and the impacts of Climate Change.

1.33 In summary, the University wishes to highlight the following:

There is no area defined to be within Flood Zone 3b within the SFRA site assessment for the Glenesk allocation.

No technical flood risk issues have been identified that would prohibit development of a proportion of the site.

The Sequential and Exception Tests produced by Nexus Planning (August 2018) demonstrate that the site can be shown to be sequentially preferable from a flood risk perspective.

1.34 The University therefore consider that the de-allocation of the site on grounds of flood risk is unjustified, with reference to the evidence presented by both the Council, and by the University, and in the context of relevant national flood risk planning policy guidance.

Not effective

1.35 The approach taken to the allocation of sites under Policy CH4 is, in the University's view, not effective. The University's response to Matter 2 sets out in great detail the strategic importance of the University and that preventing the future expansion of the Parkgate Road Campus fundamentally undermines the University's key strategic location, which has a functional role that encompasses all campuses.

1.36 We summarise below the key factors that have been highlighted in this regard in the Matter 2 response:

- The University of Chester is a key economic driver in the District and regionally in its institutional status and contribution to the economy, as recognised in LPP1 Policy ECON1.
- The LLP1 and LPP2 and the national Government policy are all highly supportive of the growth of Higher Education and enabling universities to continue to expand and increase their teaching offer.
- The nature of Higher Education funding and legislation in the UK means that Universities require the ability to take advantage of capital funding opportunities to increase their teaching offer and attract new students and in order to do this they require available expansion land.
- The Parkgate Road Campus is the key site for the University's expansion, with reference to the 2015-2025 Estates Strategy and the University's Development Framework.
- Since its allocation in 2006, the University has expanded significantly on a number of sites, including extensive development of the Parkgate Road Campus site, however these sites have been largely opportunistic in nature.
- There is no existing capacity for the University to expand at the Parkgate Road Campus site, as acknowledged within the LPP2 evidence base and Policy CH4.
- The site was removed from the Green Belt for allocation in the CDLP specifically to enable the Parkgate Road Campus to expand.
- Glenesk remains the only definitely deliverable site for the University to expand in the future. It is not reasonable that the Council should rely on opportunity sites for the University to be able to expand in the future, and they should take

reasonable steps to allocate appropriate sites for this purpose, as was the case via the CDLP.

Summary

1.37 The de-allocation of the Glenesk site (Map Change 38) and Map Change 126 (which amends CDLP Policy CF2 to allocate the Kingsway site, but not the associated playing fields) are not justified nor do they represent an effective approach to Site Allocations with reference to the following considerations:

- The Council's SFRA confirms that the site is located in Flood Zones 1, 2 and 3a and as such an Exception Test is recommended. It is confirmed there are no sequentially preferable sites in areas at a lower risk of flooding which could reasonably or practically accommodate a meaningful extension to the teaching facilities at the main Parkgate Road Campus in the future. It has then been demonstrated that more vulnerable development in Zone 3a can be accommodated at the site within the accompanying Exception Test.

- There is no capacity to expand within the existing Parkgate Road Campus, and the other proposed site allocations equally do not offer the potential for expansion (notwithstanding the fact that they are not suitably located to provide this).

- Given the current requirements of Higher Education institutions in the UK as a whole, and the economic, legislative and funding context within which universities operate, the University requires the ability to retain sufficient land to adopt a flexible approach to expanding at the Parkgate Road Campus in line with the future requirements of its students and staff.

- The evidence produced by Betts Hydro goes a step further than the Level 1 SFRA produced by JBA on behalf of the Council and confirms that a large part of the site can be developed without giving rise to flood risk concerns and that the development of the Glenesk site will in fact result in a flood risk betterment when compared with the existing situation.

1.38 For these reasons, the approach taken to Site Allocations in respect of Policy CH4 and the decision to de-allocate the Glenesk site is not justified or effective in terms of the Council's overriding strategic aim to continue to support the expansion of the Parkgate Road Campus.

1.39 The University finds that the approach taken to the allocation of the Kingway site under Policy CH4 is therefore unsound, with reference to the reasons set out above.

Should they include any others land?

1.40 The University of Chester strongly recommend that the Council review their assessment of the Glenesk site in respect of Policy CH4 on the basis that they cannot reasonably conclude with reference to their own evidence base that the site should be deleted from the Policy allocation.

1.41 As stated in the response to Matter 2, Issue 3, Q2 and Q3, and in the University's representations to the previous stage of the Local Plan, for the sake of completeness and clarity the open area to the rear of the main building at Kingsway should also be included within the CH4 allocation.

Appendix 1 – Flood Risk Statement of Case

23rd August 2018

BETTS HYDRO
CONSULTING ENGINEERS

Nexus Planning
Eastgate
Castle Street
Castlefield
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GLENESK FARM, PARKGATE ROAD, CHESTER
UNIVERSITY OF CHESTER
FLOOD RISK STATEMENT

Introduction

I was instructed by the University of Chester to undertake a review of flood risk in relation to a proposal in the Cheshire West and Chester Local Plan to 'de-allocate' the 'Glenesk' site at Parkgate Campus, Chester.

This statement supports the retention of Glenesk as a site for the expansion of the Parkgate Campus within the emerging Local Plan.

The Glenesk site lies within Flood Zones 1, 2 and 3 as designated on the Environment Agency's Flood Maps for Planning (2018). Flood Zone 3 is land assessed as having a 1 in 100 or greater probability of fluvial flooding in any year (>1%).

The Cheshire West and Chester report to the Local Plan Working Group (LPWG) dated 26th June 2017 specifically assesses this parcel of land. Within this report to the LPWG, appendix A, pg.133 provides a summary of key evidence in relation to flood risk. The report states, *'that the site is within flood zones 3a and 3b as shown on the map below (Site ref JBA1267)'*. The map in question is an extract of the Strategic Flood Risk Assessment (JBA, 2016) Flood Map and does not provide any distinction between Flood Zone 3a and 3b on this small extract. An extract of this report and the mapping referred to are included in our **Appendix E**.

The statement in the LPWG report that the SFRA mapping identifies the site to be within Flood Zone 3b is incorrect and misleading. The development parcel JBA1267 is in fact not within Flood Zone 3b and this is evidenced within the SFRA on the Mapping and in Appendix B which is a site specific assessment for the majority of the Glenesk site that clearly identifies that none of this development parcel lies within Flood Zone 3b. The SFRA Appendix B also recommends that the development viability should be informed by the Exception Test; I concur with the Strategic Flood Risk Assessment.

Existing Situation

The development area is situated immediately to the north of the main Parkgate Road campus; a location plan is included in **Appendix A**. The development area fronts Parkgate Road to the east, with the Deva Link to the west and the disused railway line to the south (part of the National Cycle Network), with the existing campus beyond.

The proposed development area is approximately 3 hectares and lies within Flood Zones 1, 2 and 3 as designated on both the Flood Maps for Planning (2018) and the flood mapping within the Cheshire West and Chester Strategic Flood Risk Assessment (2016).

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The flood zoning indicates a varying degree of flood risk resulting from Finchetts Gutter, which bisects the site; the flood zone extents and vulnerability correspond with the levels identified on the topographic survey and site observations.

Site levels are generally lower than Parkgate Road and fall towards Finchetts Gutter. Ground levels rise towards the northern and southeast corners of the site. A full topographic survey is included in **Appendix B**.

Allocation

The proposed development area is at present allocated within the 2006 Local Plan; the extract below in **Figure 1** shows the extent of the Glenesk allocation (the red-edge indicates the University's ownership extents). The site is dealt with in Policy CF2 of the Chester Local Plan. Policy CF2 states: *'The land bounded by Parkgate Road, the Chester Western Bypass and the former Mickle Trafford/Shotton railway line and as shown on the Proposals Map, is removed from the Green Belt to cater for the expansion of the educational facilities at the University of Chester.'*

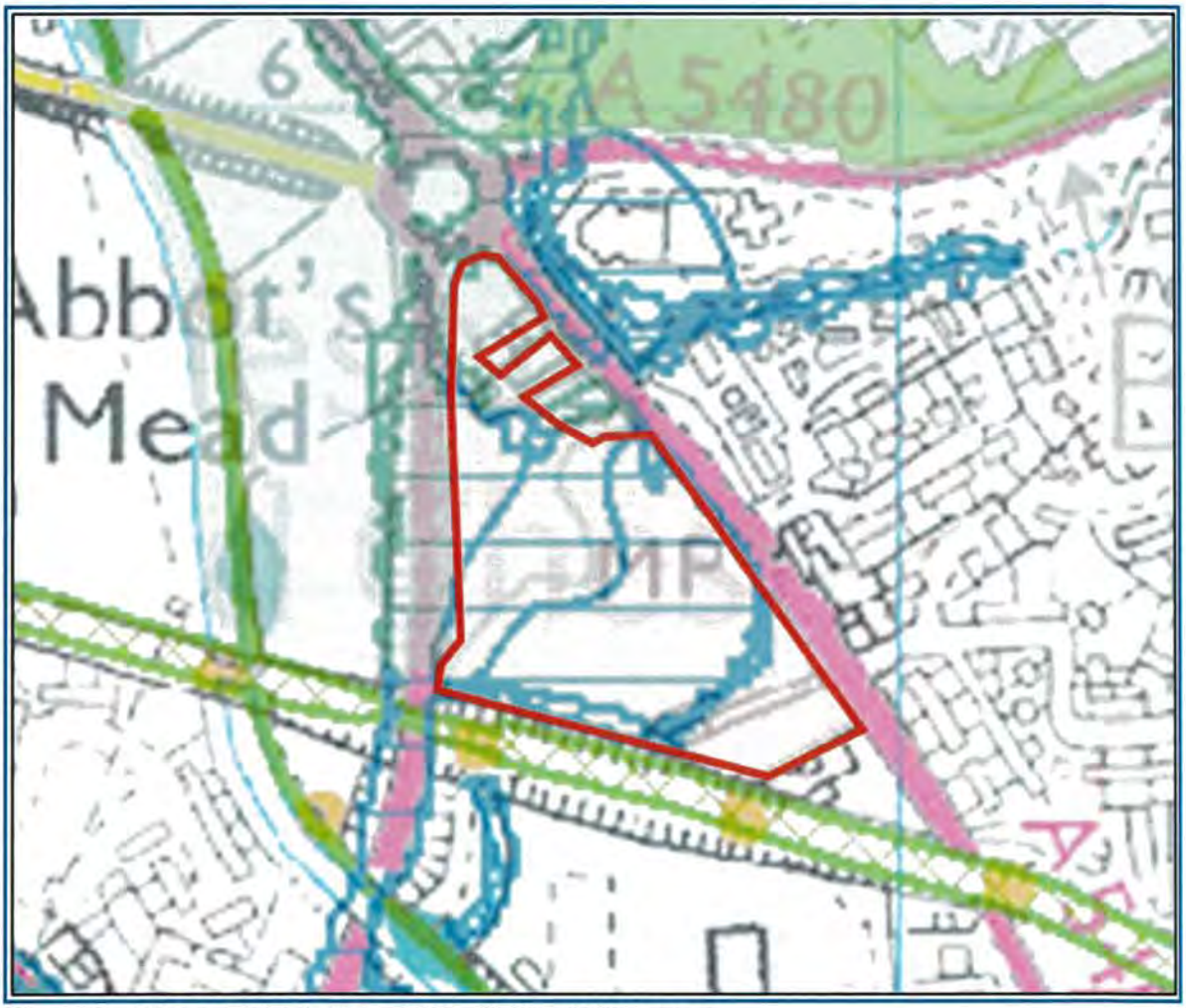

Figure 1 – Chester District Local Plan Policy CF2 extract

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The new emerging Local Plan is proposing a map change (no.38) and the removal of CF2 from the Policies Map. **Figure 2** below shows an extract of the proposed map change.

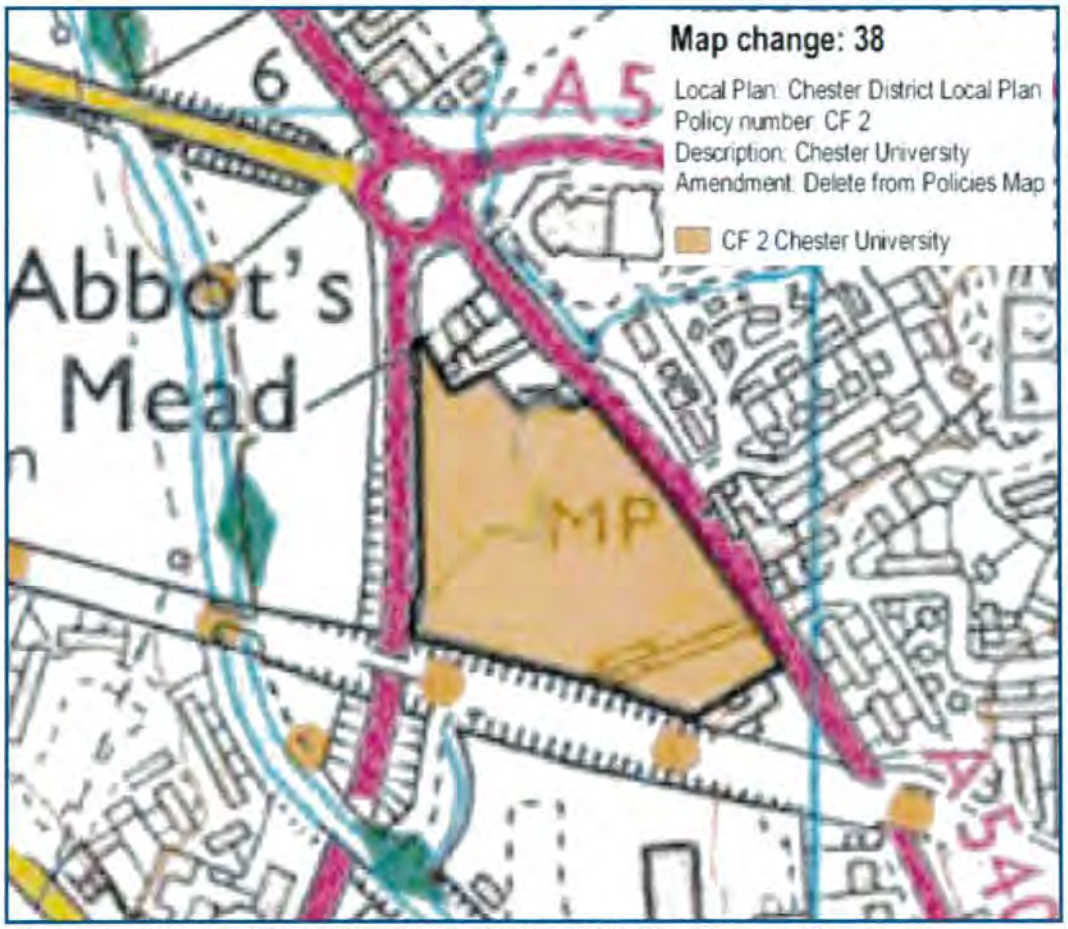

Figure 2 – Chester District Local Plan Policy CF2 Map Change 38 extract

Flood Zoning

Figure 3 on the subsequent page shows an extract of the Flood Map for Planning. **Figure 4** on the subsequent page is an overlay of the current Flood Zone Extents from the Environment Agency's national dataset, overlaid on the site specific topographic survey; this provides a greater degree of clarity due to the low resolution of the information available on the Flood Map for Planning.

It is understood that the Environment Agency's modelling outputs utilise LiDAR data, for the determination of the extents of the flood zones within the 2-D model domain. There is scope to improve the level of accuracy of this information, based on the site specific topographic survey levels.

The flood zoning is a tool for planning purposes to steer development away from the areas of highest flood risk through adopting a sequential approach. The extents of Flood Zones 2 and 3 are defined based on the removal of raised flood defences; that is to say that where land benefits from flood defence the zoning omits this, however in reality the defence offers a degree of protection.

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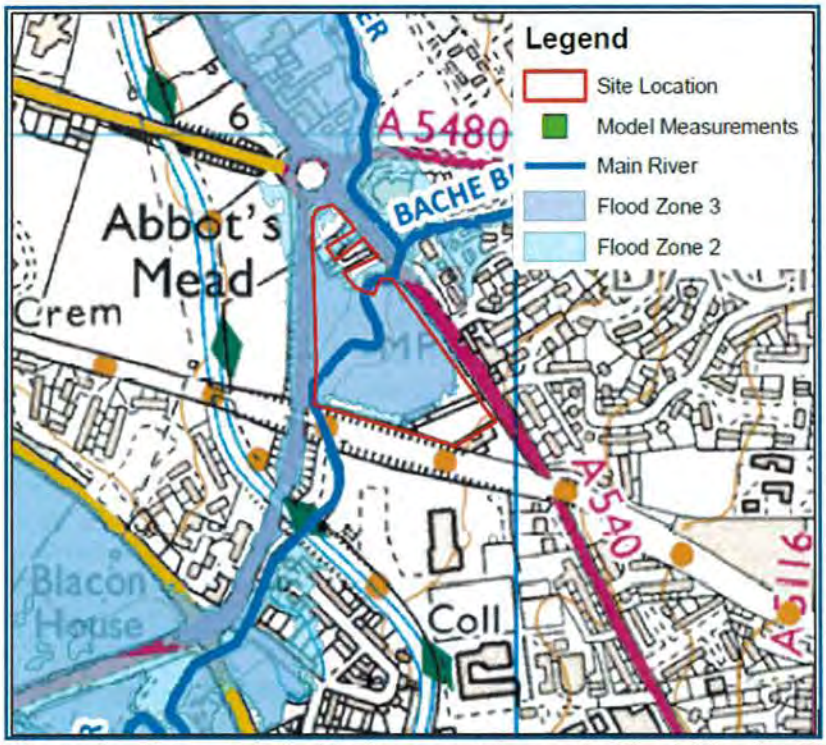

Figure 3 – Extract of the Environment Agency's Flood Map for Planning

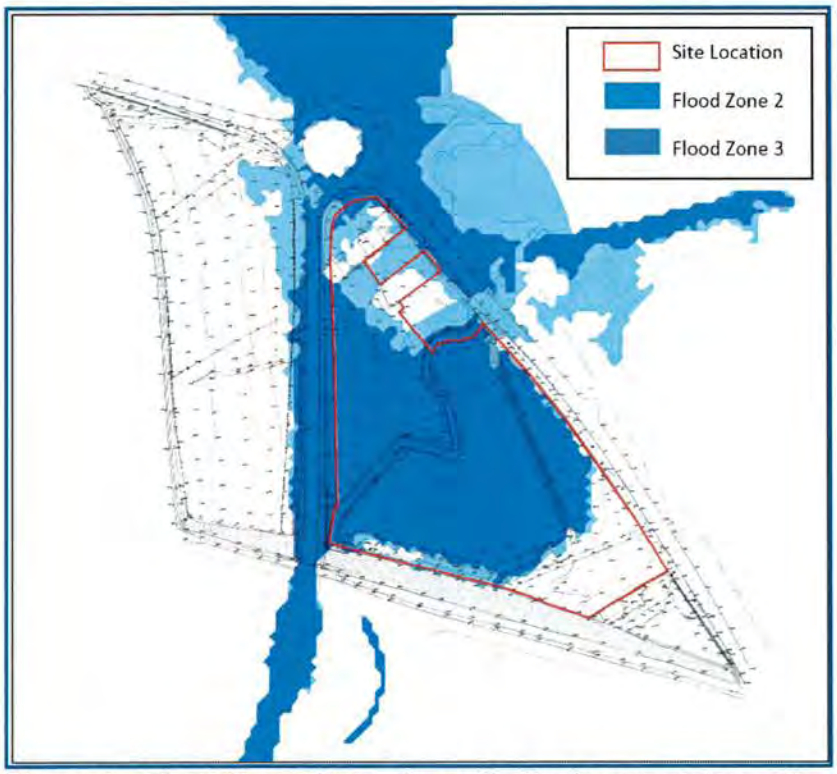

Figure 4 – Flood Zone Extents from the Environment Agency's national dataset overlaid on the site specific topographic survey

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The proposed development area is not identified to benefit from flood defence, however this point is highlighted as it is important to appreciate that although the 1 in 100yr and 1 in 1000yr return period storm events define the extent of the flood zones for the purposes of planning, it is the 1 in 100 year return period fluvial event with an allowance for Climate Change (1%+CC AEP event) that determines the required mitigation measures. Mitigation measures are discussed further in a later section within this letter; however mitigation can be required for development within areas of lower flood risk such as Flood Zone 1 when the impacts of Climate Change are fully considered for the design life of the proposals. For example development within Flood Zone 1 may still require flood mitigation such as the raising of Finished Floor Levels to reflect the need for freeboard to be provided for the design lifetime of the proposed development.

Strategic Flood Risk Assessment (SFRA)

Review of the now superseded West Cheshire SFRA (2008) shows that the site was located partially within Flood Zones 1, 2 and 3; with a similar extent outline to that currently observed on the Environment Agency's Flood Map for Planning. **Figure 5** on the subsequent page shows an extract of the mapping data indicating the Flood Zones from the 2008 SFRA.

Review of the Cheshire West and Chester SFRA (2016) shows similar Flood Zone outlines to the 2008 SFRA, with some areas of reduced flood risk and some of increased flood risk, but fundamentally no significant difference. **Figure 6** on the subsequent page shows an extract of the mapping data indicating the Flood Zones from the 2016 SFRA.

A portion of the proposed site area is assessed within the 2016 SFRA and is referred to as parcel JBA1267. This parcel is 1.98ha of the 3ha owned by the University and is indicated by the green cross-hatched area in **Figure 6** on the subsequent page. Of the 1.98ha, the SFRA defines 21%, 8% and 71% to be within Flood Zones 1, 2 and 3 respectively; this can be refined with the site specific topographic survey.

The SFRA Mapping clearly identifies that none of this development parcel lies within Flood Zone 3b as shown in **Figure 6**.

The SFRA Appendix B site assessment clearly identifies that none of this development parcel lies within Flood Zone 3b. An extract of this is included in **Appendix D**.

If the wider area within University ownership is considered rather than just the allocation parcel within the 2016 SFRA then it is clear that there is a further reduction in the percentage of site within floodplain (both zones 2 and 3) although this has not been quantified.

There is **no area defined to be within Flood Zone 3b within the SFRA site assessment for the Glenesk allocation**; which is either, an area defined as functional floodplain and/or land assessed as having a 1 in 20 or greater probability of flooding in any year (>5%).

Although the total site area covers Flood Zones 1, 2 and 3; there would be an intra-site sequential approach required as part of any planning application. Development with more vulnerable uses would be steered to areas of lower risk, whereas more flood compatible development could be undertaken in areas of higher risk.

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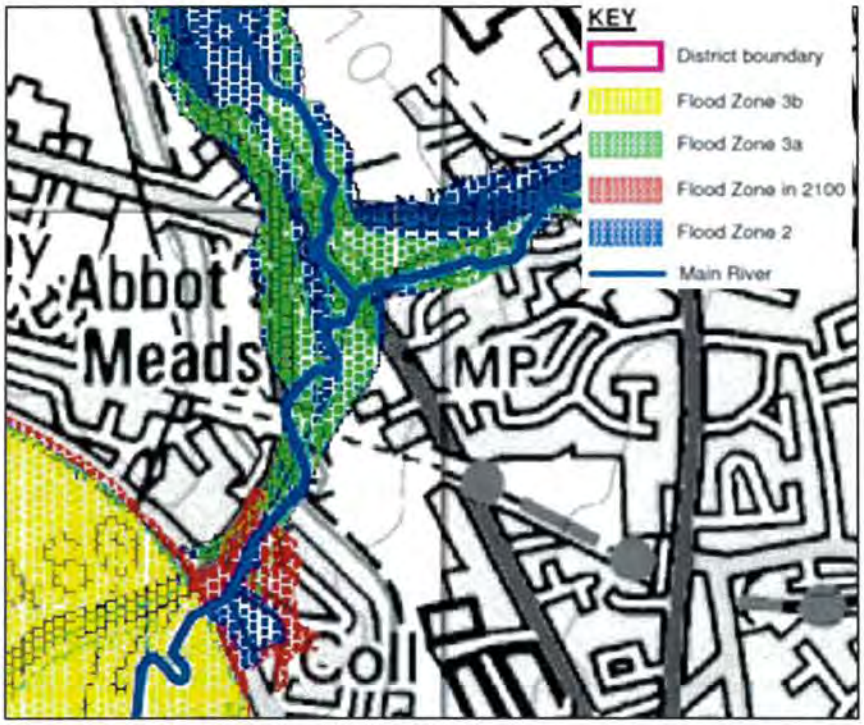

Figure 5 – Extract of the 2008 SFRA Flood Zone outlines

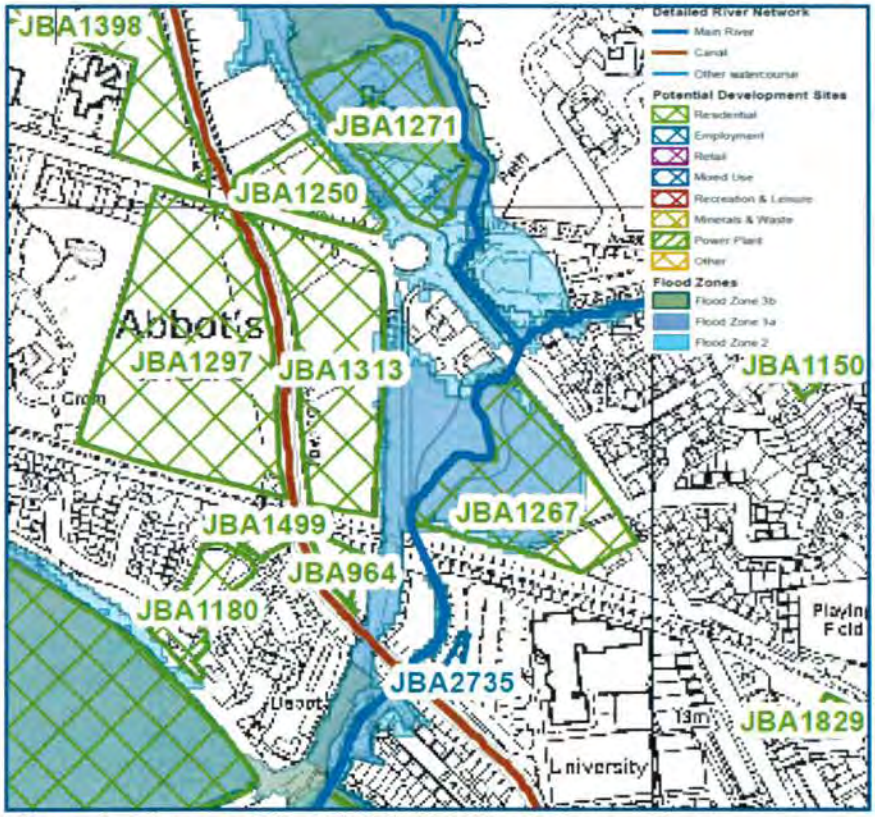

Figure 6 – Extract of the 2016 SFRA Flood Zone outlines

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The SFRA does outline within its appendix C that a precautionary approach to function floodplain derivation should be considered. It states *'The NPPF and the Flood Risk and Coastal Change Planning Practice Guidance define functional floodplain as Flood Zone 3b which is described as land where water has to flow or be stored in times of flood and includes water conveyance routes and designated flood storage areas. CWaC have agreed the areas defined as functional floodplain with the Environment Agency, taking localised circumstances into account.'* The appendix concludes with *'It is recommended that further anaylsis is carried out during site-specific FRAs to improve the understanding and assessment of the actual risk and extent of any functional floodplain.'*

The 2016 SFRA clearly confirms that Appendix B (development site assessment spreadsheet) is an *'Excel spreadsheet containing an assessment of flood risk to potential sites based on the Environment Agency's Flood Map for Planning Flood Zones 2 and 3 and the functional floodplain delineated from this SFRA'*. Appendix C is simply a *'Technical note explaining the methodology behind the delineation of the functional floodplain (Flood Zone 3b) for this SFRA.* The site assessment by the SFRA in Appendix B based on the EA's Flood Map for Planning is clear the site is not within Flood Zone 3b as shown in **Appendix D**.

In terms of development viability the 2016 SFRA recommended that development parcel JBA1267 should refer to Section 6.5.1.2 Recommendation B – Exception Test. Recommendation B applies to sites where it is likely the Exception Test would be required. This does not include any recommendation on the likelihood of a site passing the Exception Test. These sites would need to be examined as part of a more in-depth assessment and it is clear any Flood Risk Assessment supporting a planning application would require detailed hydraulic modelling to provide a suitable evidence base.

The 2016 SFRA identifies that:
'Recommendation B applies to sites where the following criteria is true:

- *10% or greater of any residential site or essential infrastructure that is within Flood Zone 3a. Only water-compatible and less vulnerable uses of land are appropriate in this zone.*
- *10% or greater of any mixed use site that may entail residential use that is within Flood Zone 3a.*

All development proposals in Flood Zone 3a must be accompanied by a Flood Risk Assessment.'

The 2016 SFRA confirms that *'the 10% threshold is not included within any policy; it is merely considered that it would be very difficult for developers to avoid Flood Zone 3a when 10% or more of the site area is within it. This 10% threshold does not account for local circumstances therefore it may be possible to avoid Flood Zone 3a altogether for some of the sites included with Recommendation B'*.

Parcel JBA1267 was assessed as a 'more vulnerable' classification within the 2016 SFRA, which is how an educational establishment would be assessed.

Historic Flooding

The Environment Agency have provided details of recorded flooding events, only one recorded event has been identified to have affected the proposed development area (event code 300084) in 1997 when Finchetts Gutter exceeded its channel capacity. **Figure 7** on the subsequent page is an

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extract of the EA's recorded flooding events data. The flooding extent identified to impact on the proposed development area is less than the extent of Flood Zone 3.

Finchetts Gutter Re-alignment and Improvement

Future development proposals on the Glenesk site offer an opportunity to re-align Finchetts Gutter to potentially provide increased channel capacity and general improvements including ecology, amenity value and biodiversity. There would also be potential for an ecological zone and wildlife habitat that could serve a dual purpose, in terms of being designed to flood during extreme storm event, potentially providing a reduction in the existing flood risk, both upstream and downstream. The potential benefit cannot be quantified without detailed hydraulic modelling.

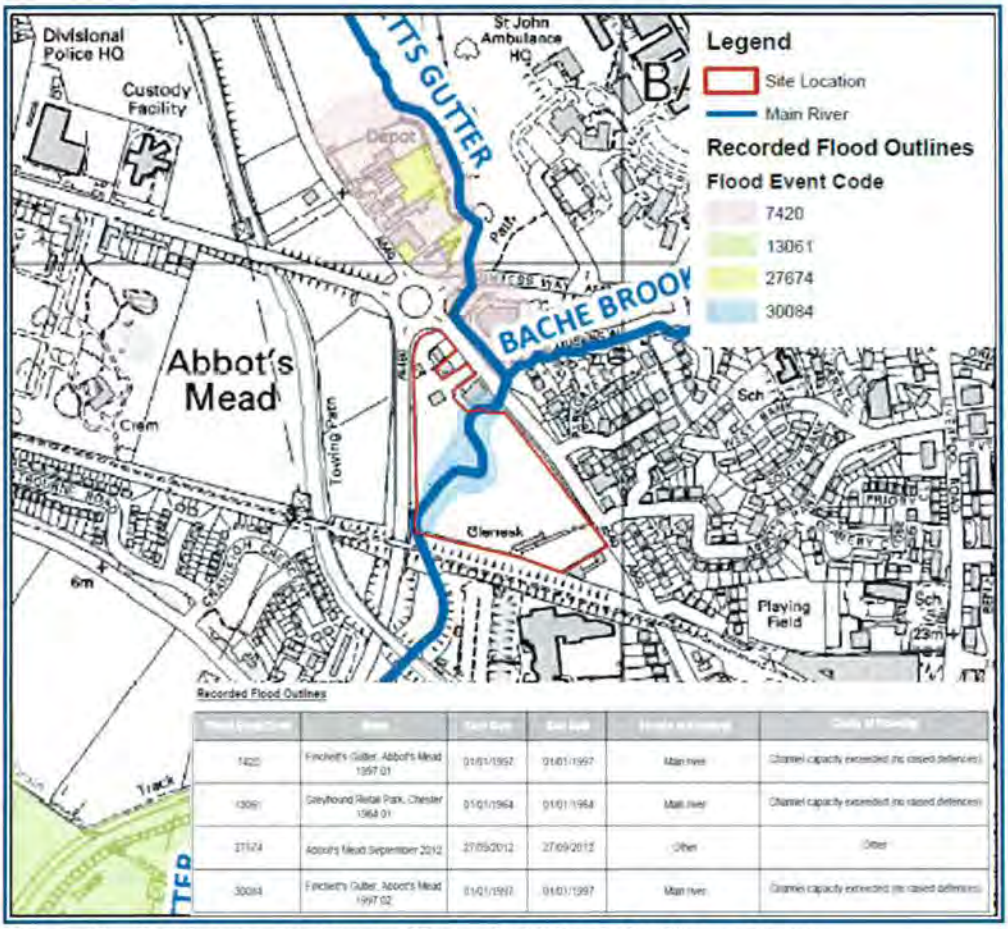

Figure 7 – Environment Agency Recorded Flood Outlines extract

Mitigation Measures

The key mitigation measure for the any development would be to ensure that Finished Floor Levels to buildings were set 600mm above the 1 in 100 year return period storm event with an allowance for Climate Change and access road levels and egress routes would typically be at least 300mm above the same event levels. This could take the form of a suitable development parcel of the site being identified for levels raising where the buildings are located, at a quantum that can be mitigated for using the remaining development area. An intra-site sequential approach to flood risk

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would be applied and this would steer development to Flood Zone 1 and other areas of the site that are already elevated, this would minimise the necessary uplift in levels required and would also minimise the impact in terms of displacement of the existing floodplain.

Initial Hydraulic Modelling

A basic modelling exercise has been undertaken to ascertain whether raising a proportion of the site to a suitable 'safe' level can be achieved with no adverse impact on the wider floodplain and also to determine a very rough quantum.

By reducing levels adjacent to the brook to create controlled flood basin areas and providing a car parking area that can be allowed to flood during the most extreme storm events it is possible to raise approximately 32% of the total site area to a level that would remain completely flood free for the design event and could be the development platform. A drawing indicating the potential zones for raising and lowering is included in **Appendix F** and an extract is shown below in **Figure 8**.

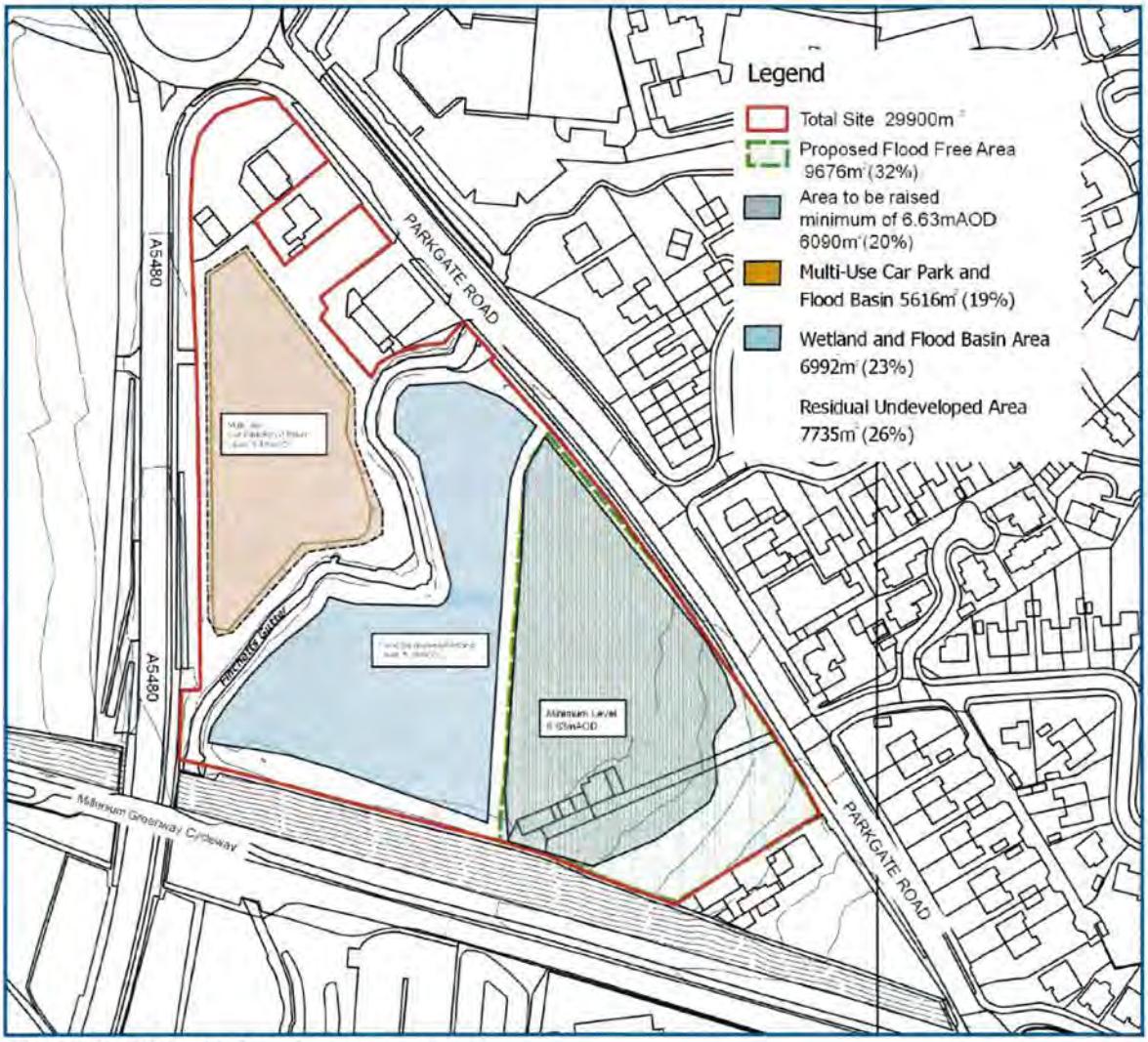

Figure 8 – Potential zoning plan extract

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In addition to the 32% of the site area that remains flood-free there is an additional 19% that could be used for car parking with only occasional flooding in the most extreme storm events utilising this area for storage. This area has been modelled at a higher level than the primary flood basin/wetland and flooding of this area can be controlled using weirs and telemetry if required. The total area that could be utilised for the building(s) and car parking is approximately 50% based on our initial hydraulic modelling however this could be increased with more detailed and comprehensive analysis.

The modelling also confirms it is possible to reduce the existing flood risk based on these proposals with a nett reduction in flood depths in the existing floodplain including a reduction in flood depth to existing residential dwellings within the floodplain; basic hydraulic modelling outputs indicating such are included in **Appendix G** with an extract below in **Figure 9**. This cannot be achieved without the allocated land being utilised to offset the levels raising to optimise the development parcel.

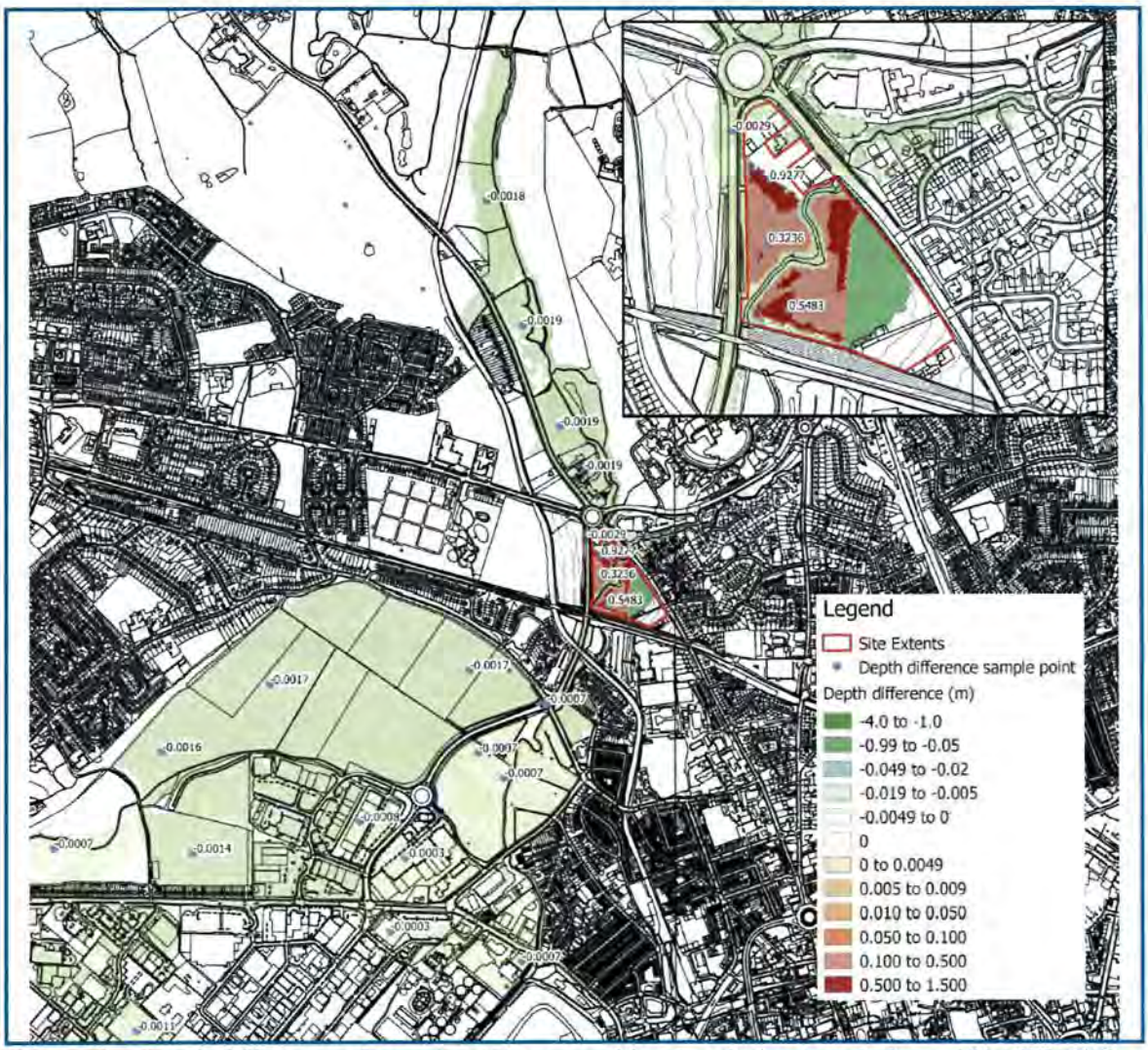

Figure 9 – Depth difference plan extract (proposed levels relative to existing – 1%AEP+CC)

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It may be possible that rather than elevate the proposed buildings and external levels surrounding them that the buildings are simply designed to minimise displacement; this can be achieved in various ways but principally the building or development parcel could have voids beneath so that flood water displacement is minimised.

The basic hydraulic modelling outputs confirm that by reducing the levels in some areas of the site it is possible to provide a reduction in flood risk to others even with the proposed development on site.

There is scope to design bunding and levels alterations across the site that could result in an increase in the potential volume of the floodplain storage being achieved, which could reduce the burden on other parts of this sensitive river network.

Whether a proportion of the site is raised as a development parcel or whether just the buildings and roads are elevated to minimise displacement, it is key and fundamental that no increased flood risk to others occurs.

Summary

The Cheshire West and Chester report to the Local Plan Working Group has incorrectly identified the site to be within Flood Zone 3b. The development parcel JBA1267 is in fact not within Flood Zone 3b and this is evidenced within the SFRA on both the Mapping and within Appendix B, with the site assessment clearly identifying this.

Although the total site area covers Flood Zones 1, 2 and 3; there would be an intra-site sequential approach required as part of any planning application. Development with more vulnerable uses would be steered to areas of lower risk, whereas more flood compatible development could be undertaken in areas of higher risk.

It is important to note that by removing any portion of the existing allocation this greatly reduces the opportunity to mitigate for any future development proposals including those within Flood Zone 1 that would likely require mitigation measures due to the design life of any development and the impacts of Climate Change.

Any reduction in the allocation would reduce the opportunity to provide betterment in terms of existing flood risk that could be facilitated through development of a portion of the site.

There are numerous options that could be explored across the existing allocation that would provide opportunity to enhance the Finchetts Gutter corridor bisecting site, in terms of the channel capacity, ecology, biodiversity and amenity value.

No technical flood risk issues have been identified that would prohibit development of a proportion of the site; more detailed hydraulic modelling and analysis will be required to ascertain an appropriate development quantum and in turn mitigation measures and opportunities to reduce existing flood risk.

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Any future planning application would require a Flood Risk Assessment supported by detailed hydraulic modelling and would offer a suitable control mechanism to establish the scale and extent of development considered appropriate.

The basic modelling confirms it is possible to reduce the existing flood risk with a nett reduction in flood depths in the existing floodplain including a reduction in flood depth to existing residential dwellings within the floodplain. This cannot be achieved without the allocated land being utilised to offset the levels raising to optimise the development parcel.

I trust you will find the above of assistance, however, if you have any queries or require further information please do not hesitate to contact me.

Yours sincerely,

[redacted]

Richard Nicholas BEng (Hons) MBA
Director
BETTS HYDRO

Appendix A – Location Plan
Appendix B – Topographic Survey
Appendix C – Environment Agency data
Appendix D – Strategic Flood Risk Assessment (appendix B extract)
Appendix E – CWAC report to the Local Plan Working Group dated 26th June 2017 (appendix A extract pg.133)
Appendix F – Potential Development Zoning Plan (Betts Hydro, Aug 2018)
Appendix G – Flood Depth Difference Plan (Betts Hydro, Aug 2018)
Appendix H – Flood Extent Difference Plan (Betts Hydro, Aug 2018)

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Appendix 2 – Flooding Sequential and Exception Tests

Cheshire West and Chester Local Plan Part 2 Examination

Glenesk, Parkgate Road

Flood Risk Sequential Test and Exception Tests

Prepared by Nexus Planning on behalf of The University of Chester (Representor ID: 718682)

August 2018

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Contents

1.0 Introduction

1.1 These Flood Risk Sequential and Exception Tests have been prepared by Nexus Planning on behalf of the University of Chester in support of representations submitted to the Cheshire West and Chester ('CWAC') Local Plan Part Two Land Allocations and Detailed Policies ('LPP2') Examination in Public. The subject site is the Glenesk site on Parkgate Road, within the Parkgate Road Campus of the University of Chester ('UoC'). The University require the Glenesk site to facilitate the future expansion of the Parkgate Road Campus and the development of a new faculty.

1.2 The Council's published Strategic Flood Risk Assessment (JBA, March 2016) which forms part of its Evidence Base for the LPP2 confirms that the site is located in Flood Zones 1, 2 and 3a.

1.3 The National Planning Policy Framework ('NPPF') and National Planning Policy Guidance ('NPPG') provide clear guidance on the approach to considering and managing flood risk through the development plan process. Paragraph 157 of the NPPF states:

> *"All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:*
>
> *a) applying the sequential test and then, if necessary, the exception test…"*

1.4 Accordingly, and with reference to the Environment Agency's Flood Map for Planning and defined in Table 1 of sub-section 25 within the Flood and Coastal Change section of the NPPG, the Flood Risk Sequential Test and Exceptions apply. The role of the Sequential Test as set out in the NPPF is to direct development to areas at a lower risk of flooding. Paragraph 101 states: *'Development should not be permitted if there are 'reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding.'*

1.5 Cheshire West and Chester's Strategic Flood Risk Assessment ('SFRA') assesses the site as a 'Recommendation B' site, where it is likely the Exception Test would be required. However, *'it is CWaC's responsibility to carry out sequential testing of each site using the information provided in this SFRA and more specifically using their local, site specific knowledge and advice from the EA / NRW.'*

1.6 The Council have not carried out the Sequential Test in respect of Glenesk as part of the SFRA. It is therefore reasonable to apply the Sequential Test to understand whether there are any sequentially preferable sites which could accommodate the development of a new University faculty at the Parkgate Road Campus.

1.7 This report provides a Sequential Test to assess alternative sites to Glenesk which could accommodate an extension to the Parkgate Road Campus. In view of the requirements of the Framework, the application site is assessed against other available alternative sites in Flood Zone 1 and 2 within a defined area of search, which would be appropriate and capable of accommodating the proposed development. The report concludes that there are no sequentially preferable, available sites in areas at a lower risk of flooding which could accommodate the proposed development, and the Exception Test is therefore engaged.

1.8 The Exception Test confirms through the flood risk evidence prepared by Betts Hydro that part of the site can be developed by the University to create a more favourable flood risk scenario than exists currently, and the benefits outweigh any consideration of flood risk. In this respect the proposed development passes the test for more vulnerable development in Zone 3a.

2.0 The Site

Site Description

2.1 The application site is the Glenesk site located at Parkgate Road, which forms part of the UoC's Parkgate Road Campus. The approximate site area is 3 hectares.

2.2 The site is located within the City of Chester and lies to the north of the existing Parkgate Road Campus site. The site is broadly triangular in shape and is bounded by the Chester Millenium Greenway recreational route to the south, and Parkgate Road to the east. The A5480 runs along the western site boundary and connects to the main arterial route into Chester (the A5116 Liverpool Road) to the west. At the northern part of the site, the eastern site boundary wraps around an Esso petrol station and SPAR, and a residential bungalow located on Parkgate Road.

2.3 The site comprises predominantly vacant grassland. A second residential bungalow and a two-storey detached residential dwelling accessed via a long unmade track are under the ownership of the UoC are located within the site. A watercourse known as 'Finchett's Gutter' bisects the site.

2.4 The site has been under the ownership of the UoC since April 2008 and has been allocated for educational use since its allocation in the Chester District Local Plan Plan. The site is a key asset within the University's estate for the development of an extension to the Parkgate Road Campus.

Floorspace Requirements

2.5 Clearly, the total floorspace requirement for a new build Faculty depends on the number of rooms required and the nature of the teaching space to be provided. No plans have been produced at this stage for the new faculty, and therefore the development specifications arising from the site are a feature of the space which would be realistically required to accommodate such a facility.

2.6 Evidence published by the Association of University Directors of Estates (AUDE)[1] shows that the current overall floorspace occupied by each Full Time Equivalent (staff and students) at the UoC is approximately 7.5 sq m. This is roughly 25% below the national average.

[1] *Higher Education Estates Statistics Report (AUDE, November 2015)*

2.7 Future uncertainties around student intake[2] makes projecting the required capacity for a new faculty at the UoC extremely difficult in the short term. However, at a high level, and in a national regard, we can get an idea of the general teaching space requirements per student, which according to the latest available data[3] is approximately 2.2 sq m. The requirements for research teaching space are much higher, and evidence shows that this is currently approximately 20 sq m per FTE (staff and students).

2.8 At 2017/18, the University's largest faculty, Health and Social Care, currently has 3,450 students enrolled. Recent changes in Higher Education legislation means that the numbers of students is predicted to increase, and the University needs to future-proof its estate. It is therefore envisioned that this would be the minimum size of faculty which will be required in the future. Applying the current national standard for general teaching floorspace requirements (AUDE), a faculty of this size generates a need for 7,590 sq m (or 0.75ha) of teaching floorspace. A faculty requiring more extensive research or laboratory facilities, such as medicine or other sciences, would need a much larger floorspace area than a classroom-based subject.

2.9 The above indicates a possible scenario for the amount of teaching space which would be needed. Ancillary space within the faculty buildings and shared external spaces (car parking, for example), would be additional to this and require a considerable amount of space in themselves. The actual requirements associated with creating a new faculty as an extension to the Parkgate Road Campus would obviously be significant, and could not be accommodated elsewhere on the existing Parkgate Road Campus site. Therefore it is estimated that such a site would need to be at least 1.5ha in size to accommodate a development of this scale.

2.10 The following section outlines the relevant planning policy for the consideration of the suitability of alternative sites at a lower risk of flooding, which may be able to accommodate the new faculty.

[2] *Demand for Higher Education to 2030, Bahram Bekhradnia and Diana Beech (HEPI, Report 105)*
[3] *AUDE 2015*

3.0 Relevant Planning Policy

3.1 This section summarises the planning policy requirements relevant to the preparation of the Flood Risk Sequential Test.

National Flood Risk Policy

3.2 In accordance with the Framework, new development should be steered towards the lowest probability of flooding through the application of a sequential test (paragraph 157). Development should not be permitted if there are 'reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding'.

The Sequential Test

3.3 NPPG states the following in relation to determining the scope of Sequential Test:

> *"Where there are no reasonably available sites in Flood Zone 1, local planning authorities allocating land in local plans or determining planning applications for development at any particular location should take into account the flood risk vulnerability of land uses (see table 2) and consider reasonably available sites in Flood Zone 2, applying the Exception Test if required (see table 3). Only where there are no reasonably available sites in Flood Zones 1 and 2 should the suitability of sites in Flood Zone 3 be considered, taking into account the flood risk vulnerability of land uses applying the Exception Test if required."*

The Exception Test

3.4 The application proposal is for the development of a new faculty as an extension to the UoC Parkgate Road Campus, a use which is classified in Table 2 of NPPG as being a 'more vulnerable' use. Therefore the Exception Test is applicable in this instance. The development of more vulnerable uses (such as the proposed educational use) in Flood Zone 3a is appropriate subject to passing the Sequential and Exception Tests in accordance with NPPG.

Table 3.1 – Flood risk vulnerability and flood zone 'compatibility' (NPPG)

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	✓	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓*

Local Planning Policy

The Development Plan

3.5 For the purposes of this Sequential Test, the adopted development plan in this instance comprises the adopted Cheshire West and Chester Local Plan (Part One) Strategic Policies (adopted January 2015) and the saved policies of the Chester District Local Plan (saved in 2015).

3.6 Other material considerations relevant to this Sequential Test are:

- The Emerging Cheshire West and Chester LPP2; and
- The CWAC SFRA (JBA, March 2016).

CWAC Local Plan (Part One) Strategic Policies (January 2015)

3.7 The CWAC Local Plan Part One ('LPP1') was adopted on 29th January 2015. The document identifies the UoC as a successful Further Education establishment and as a strategic location for economic growth, employment and enterprise under Policy ECON1. Policy ECON1 states that the Council will support

initiatives and accessibility to further/higher education facilities in the borough including the University of Chester.

3.8 Policy ENV1 (Flood Risk and Water Management) states that all development must follow the sequential approach to determining the suitability of land for development, directing new development to areas at the lowest risk of flooding and where necessary apply the Exception test, as outlined in national planning policy.

Chester District Local Plan Saved Policies (2015)

3.9 Policy CF2 of the Chester District Local Plan was 'saved' on 29th January 2015 and allocates the Glenesk site for future redevelopment by the UoC.

3.10 The policies of the Chester District Plan clearly pre-date the publication of the NPPF and are not supported by an up-to-date evidence base from a flood risk perspective. Notwithstanding this, there are no 'saved' policies of the Chester District Local Plan which are deemed relevant to the application of the Sequential and Exception Tests.

The Emerging CWAC Local Plan (Part Two) Land Allocations and Detailed Policies

3.11 The LPP2 Preferred Approach (published in 2016) included reference to the Glenesk site as part of the draft Policy CH4 University of Chester:

> *'The "Glenesk" site, as identified on the policies map, is allocated for potential expansion of the teaching facilities on the Parkgate Campus. The site should be brought forward in a comprehensive manner in the context of a development brief for the site and a strategy for the Parkgate campus as a whole.'*

3.12 The Cheshire West and Chester LPP2 Publication Draft was published in November 2017. Consultation on the document ran from 11th December 2017 to 29th January 2018 and the Council approved the Plan for submission to the Secretary of State at its meeting on 1st March 2018, with the Plan submitted on 12th March.

3.13 The Publication Draft Plan proposes the de-allocation of the Glenesk Site and its deletion from Draft Policy CH4 ('The University of Chester') on the basis of flood risk, with reference to the SFRA.

3.14 Draft Policy DM40 states that: 'In line with Local Plan (Part One) policy ENV 1, flood risk must be avoided or reduced by:

1. locating development within areas of lower flood risk through the application of a borough-wide sequential test and then, where required, applying the exception test in line with the National Planning Policy Framework; and
2. ensuring development proposals in flood risk areas are actively managed and reduce flood risk by applying the sequential approach at site level.'

'Development proposals for sites that are at risk will only be supported where the site-specific Flood Risk Assessment shows that:

3. the effects of climate change have been taken into account;
4. there is no loss in floodplain storage resulting from the development;
5. the development will not increase flood risk elsewhere;
6. there is no adverse effect on the operational functions of any existing flood defence infrastructure;
7. proposed resistance / resilience measures designed to deal with current and future risks are appropriate;
8. where applicable, appropriate Sustainable Drainage System (SuDS) techniques have been considered and are to be incorporated into the design of the site, in line with Local Plan (Part Two) policy DM 41; and
9. the development will be safe and pass the exceptions test, if applicable.'

CWAC Level 1 Strategic Flood Risk Assessment (JBA, March 2016)

3.15 The Council's Level 1 SFRA dated March 2016 states that the Glenesk site is located partly in Flood Zone 3a (parcel JBA1267). The site assessment for parcel JBA1267 in the SFRA recommends that, in accordance with 'Recommendation B', the viability of development on such sites should be informed by the Exception Test in accordance with national policy guidance for more vulnerable development in Zone 3a.

3.16 The SFRA also recommends: *'it is CWaC's responsibility to carry out sequential testing of each site using the information provided in this SFRA and more specifically using their local, site specific knowledge and advice from the EA / NRW.'*

3.17 Sequential testing of the site has not been carried out by the Council as part of the SFRA. It is therefore reasonable to apply the Sequential Test to understand whether there are any sequentially preferable sites which could accommodate the development of a new University faculty at the Parkgate Road Campus.

4.0 The Sequential Test

4.1 This section of the report applies the Flood Risk Sequential Test to alternative sites to Glenesk for the development of a new University faculty at the Parkgate Road Campus in Chester.

4.2 In carrying out this test, evidence published by the Council as part of the evidence base for the adopted and emerging Local Plan has been considered, as detailed in the previous section of this report.

4.3 A search of suitable sites being marketed for sale has also been undertaken using Estates Gazette's online search function, Propertylink (August 2018).

Establishing the Area of Search

4.4 The aim of the Sequential Test, according to Paragraph 019 of NPPG, is:

> *"To steer new development to Flood Zone 1 (areas with a low probability of river or sea flooding). Where there are no reasonably available sites in Flood Zone 1, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2 (areas with a medium probability of river or sea flooding), applying the Exception Test if required."*

4.5 In identifying sequentially preferable alternatives, it is therefore necessary to establish what available alternative sites there are in Flood Zone 1, before considering reasonably available sites in Flood Zone 2. Only if there are no available suitable sites in Flood Zone 2, should sites in Zone 3 be considered. The NPPG therefore tells us that in order to be sequentially preferable, a site must be available and be located in an area at lower risk of flooding than the proposed application site.

4.6 NPPG goes on to advise at Paragraph: 020:

> *"As some areas at lower flood risk may not be suitable for development for various reasons and therefore out of consideration, the Sequential Test should be applied to the whole local planning authority area to increase the possibilities of accommodating development which is not exposed to flood risk."*

4.7 In the representations to the Draft Publication LPP2 made on behalf of the University, as set out in Section 2 of this report, it is established that any sequential alternative must be able to accommodate

the creation of a new University faculty. Given recent national policy changes which will create an 'open market' for the recruitment of students into Higher Education by removing caps on student numbers and a demographic rise projected in the number of student-age individuals, it must also afford some degree of flexibility to the University.

4.8 The Glenesk site measures approximately 3 ha. Flood risk evidence prepared by Betts Hydro in August 2018 (Appendix 1 to the Matter 8 Statement) indicates that the 'flood free' developable area of the site would be approximately 9,676 s qm (32%). Incorporating a multi-use car park of approximately 5,616 sq m (which could provide flood basin storage at a lower level), this would give a total development area of approximately 15,292 sq m or 1.53ha.

4.9 As discussed in Section 2, when the current requirements of teaching floorspace in UK Universities are taken into consideration, the amount of teaching space needed in a new faculty building is likely to be at least 1.5ha. A suitable site would therefore need to provide at least 1.5 ha land to accommodate such a development. Accordingly, it is not considered that sites below this size can reasonably form part of this Sequential Test.

4.10 Paragraph 033 of the Flood Risk Guidance (NPPG) acknowledges that:

> *"When applying the Sequential Test, a pragmatic approach on the availability of alternatives should be taken. For example, in considering planning applications for extensions to existing business premises it might be impractical to suggest that there are more suitable alternative locations for that development elsewhere."*

4.11 It is a reasonable assumption that the UoC should be able to continue to grow and expand, particularly given the uncertainty of the economic climate and increasing competition between Higher Education institutions in the UK to have to compete for student numbers and funding. Notwithstanding which, the local planning policy context and strategic documents at a local level are fully supportive of the expansion of the University, and have been for decades.

4.12 In this case, the University's interest in the Glenesk site is directly related to the site's unique location and its ability to serve as an extension to the Parkgate Road Campus. The site is directly adjacent to the existing main Parkgate Road Campus site and would therefore serve as a natural extension.

4.13 Support services (including sports and recreational facilities, the main library, the foodhall and administration for the University) are all located at the Parkgate Road Campus, which serves as a hub

within the University's estate. Other existing faculties at the Kingsway, Queens Park and Riverside sites access these support services centrally, and an extension to the University will only be possible if it can also access and utilise these essential services at Parkgate. It is important that future development of the University's estate maximises estates efficiency and takes advantage of opportunities to co-locate teaching and services.

4.14 On this basis, the only practical location for the expansion of the Parkgate Road Campus is adjoining the existing main site at Parkgate Road. It is reasonable to assume that an extension to the main campus would logically and necessarily be located next to the main campus, and for this reason Glenesk offers a unique location for development. The appropriate and suitable area of search for sequentially preferable sites would therefore not reasonably and practically consider sites other than Glenesk, as these could not functionally provide an extension to the main campus.

4.15 Notwithstanding this, and in the interest of thoroughness, an assessment of other sites which may be able to accommodate a new UoC faculty has been undertaken and is appended to this report.

4.16 The desirable acceptable walking distance for uses of this nature (defined as commuting/school) as recognised by the Chartered Institution of Highways & Transportation's (CIHT)[4] is 500 metres. A walking distance of a kilometre is acceptable; whilst the preferred maximum is 2 kilometres.

4.17 The majority of existing UoC sites are located within this recommended 2 kilometre walking distance and provide direct connections to the Parkgate Road Campus via public transport in 20 minutes or less, as set out in Table 4.1:

Table 4.1 - Travelling Distance and Time to Parkgate Campus from Existing UoC Sites

Site Name	Walking	By Bus
Kingsway	1.8 kilometres (23 mins)	17 minutes
Queens Park	2.3 kilometres (29 mins)	20 minutes
Riverside	1.9 kilometres (25 mins)	17 minutes
Bache Hall	1.3 kilometres (16 mins)	10 minutes

[4] *'Providing for Journeys on Foot' (2000)*

4.18 It is therefore reasonable to require that suitable alternatives for the future expansion of the University are able to meet this criteria.

Summary

4.19 In accordance with Paragraphs 019 and 020 of NPPG we have therefore assessed alternative available sites in Flood Zones 1 and 2 (sequentially) within the administrative boundaries of Chester District which could accommodate the application proposals as submitted, bearing in mind the size and locational requirements of the development.

4.20 NPPG requires that in applying the Sequential Test, a pragmatic approach to the availability of alternatives should be taken and as such, for the purposes of this Sequential Test, sequentially preferable sites should, as a matter of necessity:

- Be available;
- Be located in Flood Zone 1 (or, where no sequentially preferable sites are available in Zone 1, then they should be located in Zone 2);
- Be capable of accommodating the proposed development, and therefore be at least 1.5ha in size.
- Be located within an accessible distance of the Parkgate Campus, including by walking (maximum 2 kilometres) and via a direct public transport connection.

Application of the Sequential Test

4.21 Appended are details of the sites that have been identified in the context of the above criteria. As set out above, this includes: availability for development, the proposed development potential of the site based on its identification in relevant evidence base documents/ sources and Flood Zone status with reference to the Environment Agency Flood Map.

4.22 It includes a list of alternative sites having undertaken a review of the Local Plan evidence base, and a search of available sites being marketed at August 2018 on Zoopla and Estates Gazette Propertylink.

4.23 A total of 11 sites are included in Stage 1. Of these, only 5 sites which meet the initial size and locational criteria are within Flood Zone 1. One site is within Flood Zone 2.

4.24 In order to understand whether these sites can be considered suitable for development, it is necessary to understand the following:

- Whether the site is capable of accommodating the proposed development;
- Whether the site has a realistic prospect of coming forward for a D1 education use;
- Whether there are any planning policy restrictions that would prevent development from coming forward at the site; and
- Other constraints to delivery including availability, physical problems or limitations, potential impacts of the development, and future environmental conditions that would be experienced by the inhabitants of the development.

4.25 As detailed in the sites table, alternative sites in Flood Zone 1 and Flood Zone 2 have been eliminated based on planning and site specific considerations which confirm that they are not available and not suitable for the proposed development.

4.26 The Kingsway and Queens Park sites do not have sufficient capacity to accommodate the development of a new facility of the scale required. Existing faculties (namely, Arts and Business) are located at these sites and each of the sites has developed its own specialism, and operates as a satellite site to the main Parkgate Road Campus. The Parkgate site itself houses a number of different faculties in addition to University support facilities and student accommodation. It cannot accommodate any additional development of this scale. These sites may be developed in the future to create improvements to the existing estate, but no development is currently possible on a large scale.

4.27 Other sequentially preferable sites identified in the Employment Land Study Update (2013) have been eliminated on the basis that they already benefit from planning permission for other uses and therefore do not have a realistic prospect of coming forward for D1 use in the future.

Summary

4.28 The locational requirements of an extension to the Parkgate Road Campus and the unique ability of Glenesk to provide this in terms of location, scale and deliverability means that there are no sequentially alternative sites where an extension to the Parkgate Road Campus could be developed.

4.29 However, in the preparation of this report an assessment of the Council's adopted and emerging evidence base and available suitable sites being marketed for sale has been undertaken. It takes into consideration specific size requirements of the proposed development, in this case, its locational and size requirements, in accordance with national policy guidance on flood risk. The area of search is defined as being within an accessible distance of the existing Parkgate Road Campus.

4.30 No sequentially alternative sites have been identified in the Draft Local Plan (Part Two) Site Allocations, the SHELAA report, or from a desktop search of property websites including Estates Gazette.

4.31 The Sequential Test has concluded that there are no sequentially preferable sites which could suitably accommodate the proposed development. Accordingly, the Exception Test applies.

5.0 The Exception Test

5.1 The Exception Test is required for more vulnerable development in Flood Zone 3a. As set out at Paragraph 023 of NPPG:

> *'The 2 parts to the Test require proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.'*

5.2 A basic modelling exercise has been undertaken by Betts Hydro (Matter 8, Appendix 3) and confirms that it is possible for approximately 32% of the site (approximately 9,676 sq m) to remain completely flood free for the design event (the 1 in 100 year) and that this could form the platform for the future development of the site. This would entail the raising of approximately 20% of the site.

5.3 An area which could be lowered and used for car parking and flood basin measures approximately 5616 sq m. Therefore, in total, the development area which could be achieved through a mitigation strategy is approximately 1.5ha.

5.4 This is only indicative of a potential flood risk mitigation strategy for the site, however it confirms that a proportion of the site could be developed for the University's needs. A key mitigation measure would be to ensure that Finished Floor Levels to buildings addressed flood risk, and an intra-site sequential approach to flood risk would also be applied and this would steer development to Flood Zone 1 and other areas of the site that are already elevated, to minimise the necessary uplift in levels required and the impact in terms of displacement of the existing floodplain.

5.5 The basic hydraulic modelling outputs confirm that by also reducing the levels in some areas of the site it is possible to provide a reduction in flood risk to others even with the proposed development on site. Though actual benefits cannot be quantified without detailed hydraulic modelling, it has been shown through initial modelling that the following benefits could be potentially achieved through the development of the site:

- Re-alignment of Finchetts Gutter to potentially provide increased channel capacity and general improvements including ecology, amenity value and biodiversity;

- Potential for an ecological zone and wildlife habitat that could serve a dual purpose, in terms of being designed to flood during an extreme storm event, potentially providing a reduction in the existing flood risk, both upstream and downstream;

- There is scope to design bunding and levels alterations across the site that could result in an increase in the potential volume of the floodplain storage being achieved, which could reduce the burden on other parts of this sensitive river network.

5.6 The future development of the site will create a betterment in the existing flood risk scenario, as it will provide an opportunity to attenuate and mitigate through the development of design. Therefore, it is considered that the sustainability benefits of development, in this case would significantly outweigh the flood risk.

5.7 The Flood Risk Statement produced by Betts Hydro at Appendix 1 to the Matter 8 Statement confirms that there are no flood risk constraints on the site which would prevent development and could not be addressed through the planning process.

5.8 Therefore the requirements of the Exception Test have been addressed, and it can be demonstrated with reference to the relevant national flood risk policy guidance that the proposed development is acceptable in Flood Zone 3a.

Appendix – Alternative sites considered in the Sequential Test

Address	Size (ha)	Flood Zone	Within 2km	Public transport	Planning/ Site Specific Considerations	Available	Suitable
Stage 1 Sites							
Parkgate Road Campus, CH1 4BJ (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development	No	No
Kingsway, CH2 2LB (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development	No	No
Riverside, Castle Drive CH1 1SL (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development. Site is in conservation area	No	No
Queens Park Road, CH4 7AD (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development. Site is in conservation area	No	No
Saltney Ferry Road, Ferry Point, Saltney, CH4 (https://www.rightmove.co.uk/commercial-property-for-sale/property-59242544.html)	11.2	1	No	No	Already has outline consent for B1, B2 and B8 use	Yes	No
Land at Collinge Farm, Rake Lane, Chester, CH2 (https://www.rightmove.co.uk/commercial-property-for-sale/property-64056683.html)	24.0	1	No	Yes	All planning history relevant to agricultural uses. Site is in the Green Belt	Yes	No
Land at Premier House, Charterhall Drive, Chester (Employment Land Study Update 2013, ref: BOU/0003/E/02)	2.54	1	Yes	Yes	Application for office building, restaurants, shops, car parking approved April 2014 (ref: 12/04895/FUL)	No	No
Boughton Retail Centre, Boughton, Chester (Employment Land Study Update 2013, ref: BOU/0005/E)	1.80	1	Yes	Yes	Application for foodstore, retail and hotel approved October 2012	No	No

					(ref: 12/01985/FUL) and application for hotel and commercial units approved April 2018 (ref: 17/05197/FUL)		
Wrexham Road Farm (Employment Land Study Update 2013, ref: DOH/0001/E)	1.96	1	No	Yes	Allocated for employment uses. Site is Green Belt	No	No
Bumpers Lane (Employment Land Study Update 2013, ref: BLA/0001/E)	25.0	Part 3	Yes	No	Allocated for Employment (B2/B8) uses, known to be contaminated	No	No
Old Port (Southern Trail, Crane Street frontage) (Employment Land Study Update 2013, ref: GAQ/0001/E)	1.50	2	Yes	No	Outline application for redevelopment of racecourse land submitted July 2018 (ref: 18/02677/OUT)	No	No
Stage 2 Sites							
Parkgate Road Campus, CH1 4BJ (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development	No	No
Kingsway, CH2 2LB (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development	No	No
Queens Park Road, CH4 7AD (Local Plan Part 2 Site Allocations)		1	Yes	Yes	Site does not have capacity to accommodate development. Site is in conservation area	No	No
Land at Premier House, Charterhall Drive, Chester (Employment Land Study Update 2013, ref: BOU/0003/E/02)	2.54	1	Yes	Yes	Application for office building, restaurants, shops, car parking approved April 2014 (ref: 12/04895/FUL)	No	No
Boughton Retail Centre, Boughton, Chester (Employment Land Study Update 2013, ref: BOU/0005/E)	1.80	1	Yes	Yes	Application for foodstore, retail and hotel approved October 2012	No	No

					(ref: 12/01985/FUL) and application for hotel and commercial units approved April 2018 (ref: 17/05197/FUL)		
Old Port (Southern Trail, Crane Street frontage) (Employment Land Study Update 2013, ref: GAQ/0001/E)	1.50	2	Yes	Yes	Outline application for redevelopment of racecourse land submitted July 2018 (ref: 18/02677/OUT)	No	No

Appendix 3 – Potential Development Zoning Plan

DO NOT SCALE

Legend

- Total Site 29900m²
- Proposed Flood Free Area 9676m² (32%)
- Area to be raised minimum of 6.63mAOD 6090m² (20%)
- Multi-Use Car Park and Flood Basin 5616m² (19%)
- Wetland and Flood Basin Area 6992m² (23%)
- Residual Undeveloped Area 7735m² (26%)

REV	DATE	BY	DESCRIPTION	CHK
B	22/08/18	PT	UPDATED	DK
A	14/08/18	PT	PRELIMINARY FOR REVIEW	DK

DRAWING STATUS: PRELIMINARY

BETTS HYDRO
CONSULTING ENGINEERS
Unit 6, Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire CH5 2LY
Tel: 01244 288178 enquiries@betts-associates.co.uk

University of Chester

PROJECT:

LAND AT GLENESK FARM CHESTER

TITLE:

POTENTIAL DEVELOPMENT ZONING

DATE:	SCALE @ SIZE:	DRAWN:	CHECKED:
AUG 18	1:2000 @ A3	P.T.	D.K.

PROJECT No:	DRAWING No:	REV:
HYD307	417	B