1.0 THE PROPOSAL

1.1 At the time the outline permission was considered by Planning and Development Committee, officers confirmed that they intended to report the information submitted in order to seek the discharge (or approval) of a number of conditions. These were Condition 7 (Surface Water Drainage Strategy) and Condition 47 (Design Code). It is intended that the Design Code will be reported to the August meeting.

1.2 Condition 7 requires the submission of a Surface Water Drainage Strategy (SWDS), based on sustainable drainage principles, and states that no approval of reserved matters will be granted until the SWDS had been approved by the Local Planning Authority.

1.3 The document that has been submitted is simply entitled ‘Surface Water Strategy’ (SWS) and is based on the various pieces of work undertaken during the application’s processing, with scrutiny primarily from the Environment Agency, the Muston and Yedingham Internal Drainage Board, and the Council’s Drainage Engineers, with input also from Yorkshire Water. It effectively brings together the report writing and information gathered throughout the life of the outline application and puts it into a concise form, in order to provide a definitive document on which the design of the future drainage proposals for each of the two allocated sites (Ha1 and Ha2) will be based.

1.4 Members will recall that at the outline stage various documents were produced and amended, following a series of meetings and discussions involving all the surface water drainage parties. The documents submitted out outline stage comprised:
• Flood Risk Assessment, dated October 2010
• Controlled Water Risk Assessment, dated October 2010
• Controlled Waters Risk Assessment Addendum, dated March 2012
• Flood Risk Assessment Addendum, dated April 2012
• Water Framework Assessment, dated May 2012

1.5 Whilst Yorkshire Water were involved in the process, their primary interest is with foul drainage, as they made it clear that their piped infrastructure could not deal with additional surface water from the development. The surface water drainage scheme has been designed with this in mind, with surface water draining to the existing watercourse in Deep Dale valley, through a system of storage and attenuation.

1.6 The SWS document is not overly-prescriptive, but seeks to provide a clear framework for design teams dealing with drainage for all phases of the development. It takes account of local conditions, in particular the need to protect the underlying aquifer, from which Scarborough’s drinking water supply is abstracted, the lack of capacity in the existing piped drainage system, and the fact that only one watercourse is available to receive flows from the site. The document also takes account of the Eastfield Flood Alleviation Scheme (EFAS) installed along the northern edge of Eastfield with funding from the Environment Agency in 2011, which protects existing dwellings from overland flows that had previously impacted on gardens and properties.

1.7 The SWS covers a variety of issues, including:

• An overview of the surface water strategy for the development
• A review of requirement for the central attenuation facility in Deep Dale valley and the allowable surface water discharges from Ha1 and Ha2
• Setting out the general surface water and flood risk management design requirements
• The application of ‘Sustainable Urban Drainage’ principles to the site and the requirements for infiltration based solutions
• Application of the strategy to Ha1 and Ha2 respectively
• The future operation and maintenance of the surface water and flood risk management infrastructure
• A number of other miscellaneous issues, including temporary arrangements and applications to deviate from the approved SWS.

1.8 The SWS includes a series of Appendices which include the modelling undertaken to arrive at the figures for use in prescribing the level of discharges from Ha1 and Ha2 into the central attenuation facility.

2.0 PRE-APPLICATION COMMUNITY ENGAGEMENT

2.1 None.
3.0 CONSULTATIONS AND COMMENTS

3.1 The following is a summary of the key and relevant comments received from consultees and interested parties. Their full comments and any accompanying documentation are available to view on the Council's website.

3.2 Drainage Engineers (SBC) – Comments awaited.

3.3 Environment Agency – We are satisfied that sufficient information has been provided within the Surface Water Strategy document for Condition 7. As such we are content to recommend that Condition 7 can be discharged.

3.4 Muston and Yedingham Internal Drainage Board – Comments awaited.

3.5 Yorkshire Water – With regard to Conditions 7 and 8, I understand that it is still the developer’s intention that surface water shall drain to a watercourse via attenuation/storage and that there is ongoing dialogue with the Environment Agency (EA) with regard to the discharge of the Condition. We therefore have no comment to make with regard to these conditions.

4.0 RELEVANT SITE HISTORY

4.1 2013 – Outline planning permission granted for up to 1,350 dwellings together with ancillary facilities including primary school, extra care and retail development, including detailed design for a link road and bridge to provide a connection between the A64 and the A165 under reference 11/01914/OL.

5.0 ASSESSMENT

5.1 The SWS document sets out a number of factors in terms of the design of the surface water system required in support of the development of the two sites (Ha1 and Ha2). Key elements of the Strategy to draw to members attention are as follows:

- The provision of a central attenuation facility (pond) within Deep Dale valley, with an outfall designed to restrict flows to agreed rates, as set out in Condition 7, for different storm events. This facility will be formed by the construction of an embankment.
- The central facility is required to ensure the current rate of discharge downstream remains as at present in different storm events, with some betterment factored in for climate change. It would do this by reducing current flows along the watercourse from upstream by half, and thereby providing capacity for additional surface water from the development of Ha1 and Ha2, which would otherwise not have entered the watercourse.
- Various models have previously been put forward for surface water flows into the watercourse, but the SWS makes clear that the agreed approach is for all water from the development to discharge into the central attenuation facility, i.e. upstream of the embankment, which will incorporate the necessary flow control mechanism.
5.2 The document makes clear that the central attenuation pond and any associated surface depressions/ponds within Ha1 and Ha2 should be designed to provide other benefits including:

- Ecological benefits (as required by Conditions 11 and 45 of the outline permission)
- Water quality improvements (Condition 11 of the outline permission)
- Aesthetic opportunities (Conditions 11, 51-54 of the outline permission).

5.3 The rates of discharge for different storm events from the central attenuation facility to the watercourse were agreed at outline stage and for clarity were set out in Condition 7. The rates are as follows:

<table>
<thead>
<tr>
<th>Return period</th>
<th>Peak Flow (m$^3$/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in 2.33</td>
<td>0.40</td>
</tr>
<tr>
<td>1 in 30</td>
<td>0.77</td>
</tr>
<tr>
<td>1 in 100</td>
<td>1.02</td>
</tr>
</tbody>
</table>

5.4 The rates of discharge from Ha1 and Ha2 respectively to the central attenuation facility are as follows:

<table>
<thead>
<tr>
<th>Return period</th>
<th>Max permitted flow rate from Ha1 (l/s)</th>
<th>Max permitted flow rate from Ha2 (l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in 30</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>1 in 100</td>
<td>230</td>
<td>345</td>
</tr>
<tr>
<td>1 in 100 plus CC</td>
<td>240</td>
<td>360</td>
</tr>
</tbody>
</table>

5.5 In terms of the central attenuation facility’s embankment, the document confirms that its future operation and maintenance could be either by a development management company or, preferably, by future adoption as a sustainable urban drainage system (SUDS). In the event that future adoption as a SUDS is to be pursued, the civil design requirements of the adopting
authority, which it is anticipated will be NYCC acting as Lead Flood Authority, should be incorporated.

**Sustainable Urban Drainage**

5.6 Condition 7 requires that the surface water strategy should be based on ‘sustainable principles’ and therefore, wherever possible, SUDS solutions should be considered. The document states that a SUDS approach is central to the overall Strategy. However, it also points out that the Environment Agency (EA) has been clear that any infiltration systems will need to demonstrate that there is no risk to the underlying Corallian Limestone Aquifer. The document makes clear this major constraint, and advises on the need to refer to the EA’s policy GP3, which provides guidance on the use of infiltration techniques in Source Protection Zones (SPZ). As a good proportion of the overall site (Ha1 and Ha2) lies within SPZ 1, the document advises that any infiltration systems will have to take into account the following:

- Clean roof water can discharge directly to the ground in SPZ1, provided that the downpipes are sealed against pollutant entry, where ground conditions allow for such discharge
- Where infiltration is proposed in SPZ 1 for anything other than clean roof water a risk assessment will be required to demonstrate that pollution of groundwater will not occur
- Infiltration systems will not be permitted to serve certain developments, i.e. lorry, bus and coach parking and turning areas
- National guidance (draft) on SUDS which includes guidance on the necessary level of treatment for surface water for disposal by infiltration.

**Application of Strategy to HA1 and Ha2**

5.7 The document sets out the various issues to be considered in detailed design terms when schemes are drawn up for the drainage systems on the respective sites. This includes information on the likely nature of the design of the drainage systems flagging up the issues that need to be taken into account by design engineers. This includes advice on the necessary flood defence measures to be incorporated into the overall system along the northern boundary of the overall site, and the fact that the EFAS needs to be maintained, until other agreed measures are in place.

**6.0 CONCLUSION**

6.1 The submitted Surface Water Strategy produced by WYG Engineering, dated April 2013 is recommended for approval, in order to discharge Condition 7 of the Outline planning permission reference 11/01914/OL. This Strategy sets out a clear framework with regard to the approach to surface water drainage on the site with which subsequent surface water drainage schemes, for the various phases of development, will have to comply.
7.0  RECOMMENDATION

7.1  That the provisions of Condition 7 of Outline Planning Permission 11/01914/OL be discharged.

Reason: The criteria outlined in Condition 7 have been met by the submission of the Surface Water Strategy document prepared by WYG Engineering dated April 2013.

[Signature]

Planning Services Manager

Background Papers:

Those documents referred to in this report.

IF YOU HAVE ANY QUERIES ABOUT THIS REPORT OR WISH TO INSPECT ANY OF THE BACKGROUND PAPERS, PLEASE CONTACT Marcus Whitmore ON 01723 232475 e-mail marcus.whitmore@SCARBOROUGH.GOV.UK