

PROPOSED ACCESS & HIGHWAYS

Vehicular access for the development shall be taken from Lower Road with a secondary access from Malyons Lane to ensure the proposed development has ready access to existing services and facilities. These access points have been previously agreed within the Outline Planning Permission, subject to technical approval by Essex Highways. Barratt David Wilson (BDW) Homes and their consultant Structa, have liaised with Essex Highways in order to develop designs to meet their approval.

The primary access Highway works consist of a new roundabout on Lower Road with associated bus stop works and improvements to the junction with Watery Lane. There is a planning requirement that the Lower Road works will be constructed prior to commencement of the construction of the housing. BDW Homes have provisionally programmed the works with Essex Highways to commence in June 2018 for a period of 6 months. During these works BDW will be arranging for some existing underground services to be diverted within the roundabout and connections for new services to supply the new homes.

The secondary access at Malyons Lane consists of realigning the road between the junction with Elm Grove and the site boundary to provide a traffic calming 'pinch point' and improving the existing pedestrian footpath on the south of Malyons Lane. All works will be undertaken within the existing Highway boundary or BDW owned land. These works are not expected to be undertaken until 2019 or 2020 as there is a planning requirement that these are complete before the occupation of the 200th dwelling on the site.

In order to mitigate the traffic impact on the existing mini-roundabout at the junction of Hullbridge Road and Rawreth Lane, BDW are obligated to upgrade the junction by providing a new roundabout. This is currently expected to be constructed in 2019, after the Lower Road works are completed.

The existing public footpath which continues from Malyons Lane through the existing farm to the western boundary of the site will be maintained throughout. The accompanying drawing by Grafik Architects shows the unchanged route of the footpath and how our proposals assimilate with it. Any temporary diversions required for safety reasons during the work will be agreed with the Essex Public Rights of Way officer.

The new roads within the development will be constructed to meet the requirements of Essex Highways and will consist of a mixture of traditional roads with footways adjacent and where appropriate 'shared surface' streets.

PROPOSED DRAINAGE STRATEGY

The proposed Sustainable Drainage System (SuDS) or surface water drainage strategy develops the principles set out in the approved outline planning permission (Rochford District Council planning ref. 14/00813/OUT, herein referred to as ‘the planning permission’) to provide a sustainable drainage system.

Surface water run-off from roofs and private areas of hardstanding will drain into the construction of the adjacent ‘permeable paved’ driveways. The specialist construction will facilitate the interception of contaminants, which will in turn enable micro-organisms to break down both hydrocarbons and organic matter providing a suitable level of treatment in respect of water quality. From here the surface water will drain into the main on-site drainage system.

The on-site roads will drain through a traditional system of gullies and pipes before discharging into a variety of swales and attenuation basins across the site that link with the main on-site drainage system. These features serve to slow down the flow of surface water, provide treatment of contaminants, and offer additional volume for storing water in larger rainfall events. Underground storage tanks supply additional storage capacity for extreme storm events, resulting in a robust drainage system.

The drainage network will ultimately discharge to Beeches Brook, south of the site. This meets the requirements of Condition 20 of the planning permission, which specifies a maximum discharge rate to mimic the existing Greenfield Run-off from the site which naturally sheds water to the brook, this rate should not exceed 3.5 litres per second per hectare of land. This rate has been applied only to the 15.7 hectare area of the wider 21.7ha site that naturally drains to Beeches Brook.

At peak times when the run-off rate is greater than the equivalent greenfield run-off, flow control devices will regulate flows and the additional water shall be stored in the basins and underground tanks described above.

The proposed assortment of SuDS features ensures that sufficient treatment is provided to surface water run-off, therefore minimising any impact on the water quality of receiving watercourses. In accordance with Essex County Council recommendations, the treatment of run-off on-site has been assessed using the simple index approach set out in CIRIA publication C753 (The SuDS Manual).

The southernmost part of the site lies within the flood plain of Beeches Brook. Therefore no development or raising of levels is proposed in this area. The finished floor level (FFL) of all dwellings will be set a minimum of 300mm above the 1 in 100 year plus climate change flood level, which is 6.87m above ordnance datum (AOD). FFLs will therefore be set no lower than 7.17m AOD.

Exceedance flow routing across the site ensures that, in the event of the drainage system being exceeded, flood water would be directed to the on-site roads and away from dwellings.

Foul Drainage will be collected through a network of proposed foul sewers and will connect to the existing Anglian Water sewers which cross the site and drain to the foul pumping station at the junction of Watery Lane and Lower Road. Anglian Water Services have confirmed there is sufficient capacity to receive the additional flows with no detriment to their network.