HILLS RESIDENTIAL

FIVEWAYS FRUIT FARM SITE, STANWAY, COLCHESTER, ESSEX

DELIVERABILITY APPRAISAL

REPORT REF: F961-01
PROJECT NO: F961
JUNE 2009
FIVEWAYS FRUIT FARM SITE, STANWAY, COLCHESTER, ESSEX

DELIVERABILITY APPRAISAL

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EXECUTIVE SUMMARY

Hills Residential is currently seeking the allocation of land at the Fiveways Fruit Farm site at Stanway, Colchester, for residential development in the Core Strategy currently being prepared as part of the emerging Local Development Framework by the local planning authority, Colchester Borough Council.

This Deliverability Assessment has been prepared for submission in support of the proposed LDF allocation. It has been based on the service enquiries made by MDA Searchflow Ltd in April 2009 and incorporates the highways and access section of the Transport Assessment produced.

It demonstrates that the site can be served by all mains services of which some will require reinforcement of the existing network accordingly.

Although there are no public surface water sewers present, the underlying ground conditions should make the use of Sustainable Urban Drainage Systems (SUDS) viable via infiltration techniques or similar.
1.0 INTRODUCTION

1.1 Hills Residential is currently seeking the allocation of land at the Fiveways Fruit Farm site at Stanway, Colchester, for residential development in the Core Strategy (CS) currently being prepared as part of the emerging Local Development Framework (LDF) by the local planning authority, Colchester Borough Council (CBC).

1.2 Ardent Consulting Engineers (ACE) has been appointed by Hills Residential to assess the deliverability issues of the infrastructure aspects of the proposed allocation. This Deliverability Assessment has been prepared for submission in support of the proposed LDF allocation.

1.3 The application site has a total area of some 17 ha and is greenfield with the exception of farm buildings in the northern most area of the site.

1.4 An allocation for up to around 600 residential units on the Fruit Farm site is being sought, to be developed in two phases of 400 and 200 units on the north (11.2ha) and south (6.3ha) areas respectively.

1.5 Enquiries were previously made in April 2009 by MDA Searchflow Ltd. This report is based upon this information.

1.6 Utility provider correspondence, including service location plans is located in Appendix C.

1.7 To ascertain the potential for the site to be serviced with respect to utilities, the following relevant Statutory Undertakers have been contacted

- EDF
• Openreach British Telecom
• National Grid
• Anglian Water (Potable Water and Foul & Surface Water discharge)
2.0 HIGHWAYS AND ACCESS

2.1 An allocation for up to 600 residential units on the Fruit Farm site is being sought, to be developed in two phases of up to 400 on the north (10.9ha) and 200 units on the south (6.4ha) areas respectively.

2.2 A detailed Transport Assessment (TA) report ref F960-01 has been completed. The TA provides a detailed assessment of all the transport and highways issue for this site.

Access

2.2 Two accesses are proposed, both on Dyers Road. The form and layout of these has not been fully determined at this stage as agreed with ECC, and would be decided following submission of an application. The accesses could be either priority T-junctions or mini roundabouts located at appropriate spacings from existing junctions and designed to accommodate the size of refuse vehicles used in Colchester including pantechnicons and buses.

2.3 It is proposed that Heath Road would be stopped-up at its junction with Blackberry Road/Peartree Road, so that the existing crossroads becomes a T-junction, with a new link road from the north end of the former, through the site to join Dyers Road as the minor arm of another priority T-junction. This will provide a highway safety benefit by removing a priority crossroads, the least safe form of junction.

2.4 In addition, it is proposed that the Dyers Road would be widened to provide two lanes on its approach to its junction with Blackberry Road. A short length of right turn lane is also proposed on Peartree Road at its junction with Winstree Road to be achieved through
minor carriageway widening, which would also provide a highway safety benefit. There is no scope to provide such a facility on Blackberry Road at its junction with Dyers Road without carriageway widening, which could only occur on the south side of the road and would result in the loss of a number of mature trees within the verge.

2.5 It is proposed that a new footway would be provided on the south side of Dyers Road along the frontage of the site to be developed. There is also scope for the existing 30mph limit to be extended to the south west, possibly as far as the Warren Lane junction.
3.0 DRAINAGE AND FLOOD RISK

3.1 On reviewing the Environment Agency’s indicative Flood Map, it can be seen that the site lies within Flood Zone 1, being defined as low probability with less than a 1 in 1000 chance of river and sea flooding in any one year.

3.2 In accordance with Planning Policy Statement 25 (PPS 25), any planning application would still require a Flood Risk Assessment (FRA) to be submitted, due to the site being considered being greater than 1 hectare. This FRA would need to assess the proposed foul and surface water strategy for the site and recommend how the site should be drained to ensure that the flood risk to property had been addressed.

Foul Water

3.3 Assessing the Anglian Water Asset Mapping it can be seen that foul water sewers exist in Dyers Road, to the north of the site and Heath Road to the east. These sewers fall by gravity to a main sewer in Blackberry Road/Peartree Road and generally fall eastwards.

3.4 There are a number of potential points of discharge into the adopted system along Dyers Road or Heath Road and the exact point of discharge will need to be agreed with Anglian Water at the detailed design stage.

3.5 Due to the general topography of the site, it is likely that the site will need to drain by gravity to the south and a pumping station will be required to then pump the foul water sewerage back up to either Dyers Road or Heath Road.
3.6 The potential flows from the site are such that a new sewer from the site to the nearest adopted strategic sewer will be required.

**Surface Water**

3.7 The Anglian Water Asset Maps show that there are no public surface water sewers in the vicinity of the site.

3.8 In accordance with paragraph F6 of PPS25, surface water flows should, as far as practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, whilst reducing the flood risk to the site itself and elsewhere, taking climate change into account.

3.9 Geological maps indicate that the site overlies an area of variable till, clay, sand and gravels.

3.10 As the site is generally greenfield in nature (previously undeveloped), it is anticipated that the proposed flows from most of the development will be limited to commensurate greenfield rates.

3.11 Due to the topography of the site and the absence of any watercourses within the site environs, infiltration drainage is considered the most appropriate means of surface water disposal.

3.12 Where infiltration is available within the upper soil horizons (circa 3 metres) traditional ring soakaways and trench soakaways will be employed for the disposal of roof water and permeable paving for the disposal of private parking areas.

3.13 At locations where surface soakage rates are poor, deep bore soakaways could be employed for the disposal of roof water. The storage function is provided by a traditional manhole, sized accordingly to the prevailing infiltration rates. The upper length of the bore will
protrude through the manhole base to trap any sediment etc washed into the chamber.

3.14 Following a review of the above, it has been determined that a surface water strategy for the development would involve the incorporation of the SUDS features identified above.

3.15 Therefore, the proposed surface water strategy will consist of the surface water run-off discharging into infiltration basins and soakaways as appropriate, dependant on the ground conditions.
4.0 ELECTRICITY

4.1 From the information provided by EDF it can be seen that there are High Voltage (HV) and Low Voltage (LV) cables present in Dyers Road.

4.2 It can also be seen that there are HV and LV cables present on the site linking to an existing transformer sub-station serving a phone mast, which is also present within the boundary of the site. This is likely to require diverting, depending on the proposed development masterplan.

4.3 Following brief consultation with EDF, a minimum of 2 sub-stations are likely to be required subject to detailed design of the site and the requisite demand.

4.4 Notwithstanding this, there are sufficient mains (HV and LV) present to enable the site to be served accordingly. It is anticipated that there will be a requirement to carry out modest reinforcement of the existing network due to the quantum of proposed development.
5.0 GAS

5.1 From the services plan provided by National Grid, it can be seen that there are Low Pressure Mains present in Dyers Road and Heath Road.

5.2 These mains maybe affected by the proposed layout of the development masterplan and highway access points and therefore may require localised diversion.

5.3 The presence of LP mains only at this location, would suggest that mains reinforcement of the network will be required to serve this site due to the quantum of development.
6.0 POTABLE WATER

6.1 From the Anglian Water Asset Mapping, it can be seen that there are low pressure mains present in Dyer Road and Heath Road.

6.2 These mains are unlikely to be sufficient to serve the quantum of development proposed and therefore reinforcement of the existing mains will be required.

6.3 Assessing the water mains records, it is unlikely that any diversion of the mains in Dyer Road will be required as part of the development. However, any access taken from Heath Road will require diversion at the proposed access points accordingly.
7.0 TELECOMMUNICATIONS

7.1 From the information provided by BT Openreach, it can be seen that there are both underground and overhead apparatus present in Dyers Road.

7.2 Part of the overhead network lies within the boundary of the site and could require diverting, depending on the proposed layout of the development masterplan and access points.

7.3 The presence of these services would indicate that the proposed development could be served with no reinforcement of the existing network.
8.0 PIPELINES

8.1 To ensure that there were no oil or gas pipelines traversing the site, a review of the Linewatch website has been undertaken. This website shows the indicative route of all major pipelines for Shell, Esso, BPA and the like.

8.2 From this, there does not appear to any pipeline crossing or in the vicinity of the site.
9.0 SUMMARY AND CONCLUSIONS

9.1 Hills Residential is currently seeking the allocation of land at the Fiveways Fruit Farm site at Stanway, Colchester, for residential development in the Core Strategy currently being prepared as part of the emerging LDF by CBC.

9.2 A detailed Transport Assessment has been produced and indicates that the site is sustainable in transport terms and that with appropriate highways improvements the site can be served.

9.3 A public Foul Water Sewer is present in Dyers Road and Heath Road and due to the topography of the site, a pumping station and rising main will be required to connect the site to the adopted system.

9.4 The surface water strategy for the site will be to discharge the surface water generated back into the ground via infiltration basins and soakaways subject to the prevailing ground conditions.

9.5 A review of the relevant utility companies’ asset plans, it can be seen that all mains services are present in the locality of the site. Therefore, the site can be served and localised reinforcement of some of these services maybe required accordingly.
Appendix A

Site Location
Appendix B

Utility Companies’ Plans