



# Soils Sustainability and Options Appraisal

## Proposed Residential Development (HELAA – 46)

Land East of Billsham Road, Adjacent to Little Meadow  
(Grid Ref. 497724 – 101828)

On Behalf of: Ms A.Taylor

August 2020

**Critchley Architecture And Design Ltd,**  
The Old Brewery,  
15E South Street,

## **0.0 Contents**

---

- 1.0 Generally
- 2.0 Soils Policy
- 3.0 Soils Assessment
- 4.0 Drainage Considerations
- 5.0 Sustainability
- 6.0 Summary & Recommendations

## 1.0 Generally

---

- 1.1 This Soils Sustainability and Options Appraisal forms part of an Outline Planning Application (Some Matters Reserved) to Arun District Council for Residential and Commercial developments at 'Little Meadow' , Bilsham Corner, Yapton, BN18 0JY.
- 1.2 No other purpose is anticipated or accepted. Copyright of this report remains with Critchley Architecture And Design (CAAD) Ltd.
- 1.3 Reference should be made to the planning submission drawings for details of the proposals, re:

|         |      |                             |
|---------|------|-----------------------------|
| 18064 - | 101  | Location Plan               |
|         | 102  | Existing Site Plan/Analysis |
|         | 110A | Proposed Site Plan          |

- 1.4 The subject proposals were prepared under the objectives of the **National Planning Policy Framework** of February 2019. Of the policies, we were mindful of the following:

**Section 11:**

*Plans and decisions should apply a presumption in favour of sustainable development.*

**Section 117:**

*Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.*

## 2.0 Soils Policy SO DM1

---

### 2.1 The Arun District Council Local Plan, describes the District as the following:

*Unless designated by this Plan or a Neighbourhood Development Plan, the use of Grades 1, 2 and 3a of the Agricultural Land Classification for any form of development not associated with agriculture, horticulture or forestry will not be permitted unless need for the development outweighs the need to protect such land in the long term. The requirement to protect the best and most versatile land can be outweighed if it is demonstrated through sustainability and options appraisals that:*

*a. Preservation of land of lower agricultural quality has greater benefits in terms of ecosystem services (for example carbon storage, flood water retention, support of biodiversity);*

*b. That any site preferred for development is demonstrated to be the best and most sustainable option, including but not limited to the terms of land quality, ecosystem services, infrastructure and proven need; and*

*c. The proposed development meets the requirements of the countryside policy and/or equine development policy.*

*Where development is permitted it should, as far as possible, use the lowest grade of land suitable for that development. Development will not be permitted unless:*

*d. The applicant has submitted sustainability and options appraisals, mitigation measures, and a soil resources plan for the development site;*

*e. Site appraisal documents submitted by the applicant must demonstrate that consideration has been given to DEFRA's Soil Strategy for England (29) ;*

*f. The productivity of the land is demonstrated using a methodology for assessing gross margins as contained in the Arun Soils and Agricultural Land Assessment Report (30) ; and*

*g. The applicant has submitted a comprehensive soil resources plan for the development site which demonstrates that care will be taken to preserve the soil resource, such that it can be incorporated into a Productive Green Environment following development. Developments shall also be consistent with all other Local Plan policies*

### 3.0 Soil Assessment

---

- 3.1 The Arun Local Plan states the following:

*“Proposals for development on sites of open field horticulture shall be subject to the Soils Policy. Proposals for development relating to protected cropping (i.e. glasshouses and polytunnels) shall be subject to the Horticulture policy.”*

None of the application site is currently an ‘open field of horticulture’. However, the below should satisfy any concerns related to the loss of >1Ha of Greenfield land.

- 3.2 The soil within the application site is DEFRA Natural England Grade 2 (very good).
- 3.3 The soil is currently underutilised, and has not been used for agriculture or horticulture for over 12 years. The site is mixed use, which includes light industrial, horse paddocks and residential over 5.56Ha. This means it is not feasible for the land (in its current ownership) to be used for agriculture or horticulture, as there are not enough hectares to make this a viable use class.
- 3.4 Most of the undeveloped coastal plain is Graded between 1 – 3a soil quality, meaning there is an abundance of high quality soil for farming opportunities in the local area.
- 3.5 The application site is in a **future flood zone** in the year 2111 (see accompanying FRA) which could cause grave damage to agricultural/horticultural land. It is estimated that the costs of the 2007 and 2013/14 floods on agricultural businesses were £50m and £19m respectively. The final costs of the 2015 floods are still unknown. Given the above, it is deemed that there is no opportunity for the application site to ever be intensively farmed now or in the future.
- 3.6 Given that part of site is Brownfield and residential use is already established on site, it is deemed this site is a highly sustainable location in comparison to other HELAA sites around the Yapton area. The HELAA 46 has recommended this site is deliverable for housing.
- The site is included within the Arun Local Plan Deliverable HELAA sites, and therefore important that an Approval is sought to ensure that Arun D.C. meet the 20,000 new dwellings district requirement (500 of which are required to be in Yapton).
- 3.7 The adjacent site, Y/103/19/PL also had a soil analysis assessment, where it was also deemed that there were no alternative sites available of lower agricultural quality concluding that the test has been met.

## 4.0 Drainage Considerations

---

- 4.1 British Geological Survey (BGS) mapping indicates the underlying superficial geology consists of River Terrace Deposits (undifferentiated) - Sand, Silt And Clay. (BGS, 2020) and is classified as a Secondary (A) Aquifer (EA, 2020). BGS mapping indicates the underlying bedrock geology consists of the Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation And Portsdown Chalk Formation (undifferentiated) (BGS, 2020) and is classified as a Principal Aquifer (EA, 2020).
- 4.2 The Site is at risk from groundwater flooding therefore it is recommended to raise the finished floor levels of residential dwellings by 0.3 m above the existing ground levels with the consideration of additional specific groundwater measures. It is not feasible to raise land levels as mitigation with agricultural/horticultural land and therefore it is deemed that the site is not appropriate for farming use.

## 5.0 Sustainability

---

- 5.1 DEFRA's Soil Strategy for England refers to the DEFRA Construction of Code Practice for the Sustainable Use of Soils on Construction Sites (CoP).
- 5.2 The proposals are also in line with the COP's core recommendations, including:
- Consideration of sustainable drainage systems
  - Soil management during construction.
  - Landscape, habitat and garden creation.
  - Roads will be constructed of porous materials to ensure the soil is not 'sealed'.
  - Any potentially reusable soils will be reused on site for use within landscaping and the allotments.
- 5.3 The CoP aims to improve the use and management of soils through all stages of the construction process, including re-using or recycling topsoil where appropriate (see 5.4 below). The **requirement of a detailed Soil Resource Plan is proposed to be reserved as a condition**, which will show the areas and type of topsoil/subsoil to be stripped, haul routes, methods to be used, and the location, type and management of each soil stockpile.
- 5.4 Any soil to be moved will be done so using the CoP advised 'Loose Tipping Method':

## Loose-tipping method

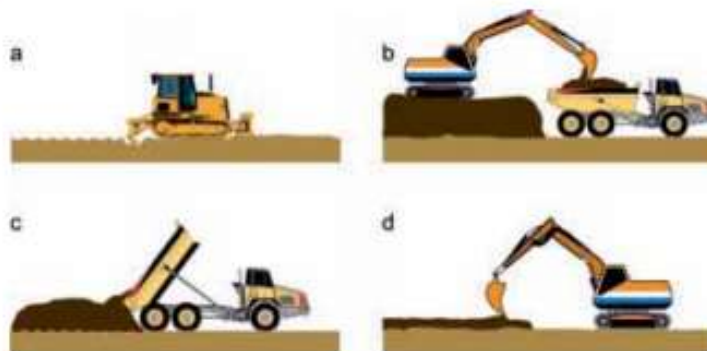
This method entails working to a strip system (the width of the strip determined by the reach of the excavator), and replacing soil sequentially across the soiling area. The receiving ground, whether a basal layer or compacted subsoil is first loosened with a wing-tine ripper.

A hydraulic excavator, fitted with a toothed-bucket to avoid excessive smearing, should be used to load the soil materials from the source area or stockpile into a dump truck which then discharges them onto the receiving surface. An excavator stands next to the newly dropped soil and spreads this to the required thickness. If there is to be more than one soil layer (i.e. if both topsoil and subsoil are being replaced) then the whole length of the strip is restored with subsoil before the process is repeated with topsoil. The topsoil is lifted onto the subsoil without the excavator travelling on the newly placed subsoil. Only when the strip has been completed is the next one started.

If soil is cloddy in structure, the excavator bucket can be used to break up the clods. Large stones can be removed during the operation.

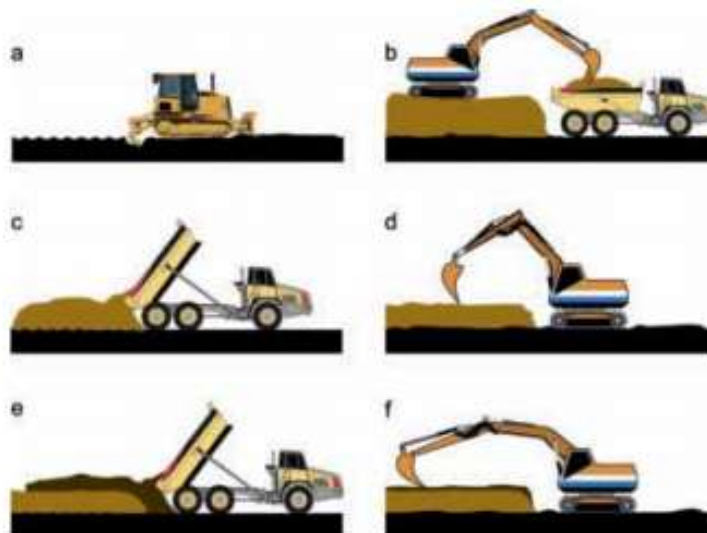
Modified versions of the loose-tipping method, for use when both subsoil and topsoil are to be placed, include spreading the subsoil as described above but then spreading the topsoil layer out using a low ground pressure dozer. Providing that soil conditions are suitably dry and dozer movements are minimised, this can gently consolidate the placed soil without causing over-compaction:

### The loose-tipping method (topsoil spreading only)



- a) loosening the subsoil of the receiving ground
- b) loading of topsoil from stockpile
- c) backtipping topsoil onto loosened subsoil
- d) levelling topsoil

### The loose-tipping method (topsoil and subsoil spreading)



- a) loosening the substrate of the receiving ground
- b) loading of subsoil from stockpile
- c) backtipping subsoil onto loosened substrate
- d) levelling subsoil
- e) backtipping topsoil
- f) spreading topsoil over subsoil using excavator working on substrate

## **6.0 Summary & Recommendations**

---

- 6.1 The conditions of policy SO DM1 are deemed to have been met by the information provided above, which show that the benefits included within the proposals will outweigh any 'harm' caused due to the loss of potential Grade 2 agricultural/horticultural land.
- 6.2 We propose that allotments are provided on the southern part of the site for the community to make the most of the very good soil. This is in line with Policy HWB SP1 'Health and Wellbeing', which is increasingly important given the current pandemic and additional pressures for healthy outdoor activities, as well as Policies GI SP1 'Green Infrastructure and Development' and OSR SP1 'Allotments'. Given this, we deem the benefit of providing the allotments and meeting the above policies outweighs the loss of land that has been vacant and underutilised for over 12 years. This has been proposed on drawing 18064\_110A.

**Critchley Architecture And Design (CAAD) Ltd**

20<sup>th</sup> August 2020