

---

**CONSTRUCTION OF GREEN HOUSES  
AT WICKS FARM LANE FORD ARUNDEL  
WEST SUSSEX BN18 0DF**

---

***LANDSCAPE AND VISUAL IMPACT ASSESSMENT.***

---

**PREPARED FOR AGRICULTURAL INVESTMENTS LTD**

---

David Hares Landscape Architecture  
4 Northgate Chichester PO19 1BA

---

Document reference P 331/01/01. Status: final

## CONTENTS

|                                                    |           |
|----------------------------------------------------|-----------|
| <b>1. INTRODUCTION</b>                             | <b>3</b>  |
| 1.1. THE PROJECT .....                             | 3         |
| 1.2. LOCATION.....                                 | 3         |
| 1.3. THE SITE.....                                 | 4         |
| 1.4. THE PROPOSED GREEN HOUSE DEVELOPMENT .....    | 5         |
| 1.5. RELEVANT LANDSCAPE POLICY CONTEXT .....       | 5         |
| 1.6. METHODOLOGY.....                              | 5         |
| <b>2. BASELINE ANALYSIS</b>                        | <b>7</b>  |
| 2.1. LANDSCAPE DESIGNATIONS.....                   | 7         |
| 2.2. LANDSCAPE CHARACTER .....                     | 7         |
| 2.3. TOPOGRAPHICAL ANALYSIS .....                  | 8         |
| 2.4. HISTORICAL PATTERNS AND FIELD BOUNDARIES..... | 8         |
| 2.5. CURRENT EXTENT OF SITE VISIBILITY .....       | 9         |
| 2.6. NATURE OF VIEWS AND RECEPTORS.....            | 9         |
| <b>3. ASSESSMENT OF DEVELOPMENT EFFECTS</b>        | <b>11</b> |
| 3.1. NATURE AND SCALE OF DEVELOPMENT.....          | 11        |
| 3.2. CONSTRUCTION EFFECTS ON THE SITE.....         | 12        |
| 3.3. LANDSCAPE CHARACTER EFFECTS .....             | 12        |
| 3.4. POTENTIAL CHANGE IN CHARACTER OF VIEWS .....  | 12        |
| 3.5. VISUAL IMPACTS ON VIEWS AND RECEPTORS .....   | 13        |
| <b>4. CONCLUSIONS</b>                              | <b>14</b> |
| 4.1. SENSITIVITY OF RECEPTORS .....                | 14        |
| 4.2. SCALE AND SIGNIFICANCE OF EFFECTS.....        | 14        |
| 4.3. MITIGATION MEASURES .....                     | 14        |
| 4.4. CONCLUSIONS.....                              | 14        |

## APPENDICES IN SEPARATE DOCUMENT

APPENDIX 1: GREENHOUSE PROPOSALS

APPENDIX 2: RELEVANT PLANNING POLICY EXTRACTS FROM LOCAL PLAN

APPENDIX 3: TERMINOLOGY.

APPENDIX 4: METHODOLOGY

APPENDIX 5: PHOTOGRAPHIC LOCATIONS AND PHOTOGRAPHS:

APPENDIX 6: CONSENTED DIGESTATE LAGOON AND APPROVED PLANTING PROPOSALS

APPENDIX 7: LANDSCAPE CHARACTER EFFECTS: ASSESSMENT TABLE

APPENDIX 8:VISUAL EFFECTS: ASSESSMENT TABLE

APPENDIX 9: PROPOSED MITIGATION PLANTING.



### 1.3. THE SITE

The site is agricultural land, currently within an arable cropping rotation. The surrounding area is predominantly rural in character with several scattered properties including Wicks Farm cottages situated to the south of the proposed development. The main group of existing farm buildings lie to the south of the site and are accessed from Ford Lane. To the east lies the relatively new Ford industrial estate. The field is bordered by a railway line in the north, a well-established hedge and farm track to the west and a field boundary with scattered trees and scrub to the east. The southern boundary is adjacent to the existing farm buildings and AD plant. The site will be accessed by the existing farm track running north south from Ford Lane. The site is broadly flat at between 5 and 6 M AOD but slopes gently northwards from Ford Lane to the railway line. The position of the proposed green houses and reservoir are shown on the aerial photo at figure 2 below, and oblique view from google earth at figure 3. This also shows the position of a consented digestate reservoir, which has not yet been constructed.

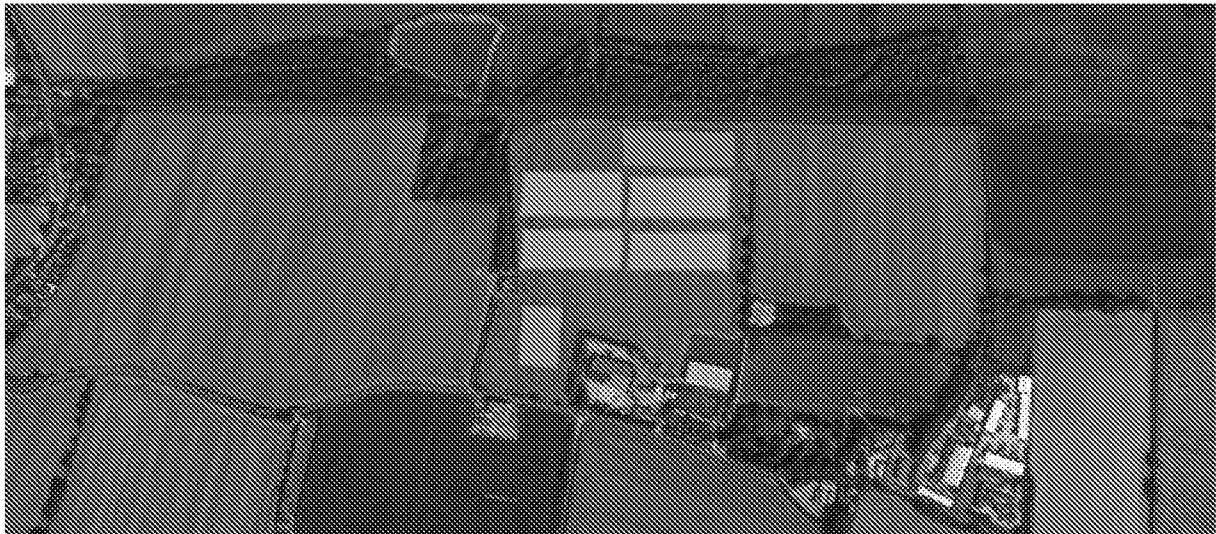


Figure 2: Aerial Photograph. The location of the proposed glasshouses are toned green, and the reservoir is toned blue. The consented digestate reservoir is toned orange



Figure 3 Oblique aerial view from the south, site for glasshouses is dashed red. Proposed reservoir dashed blue

#### 1.4. THE PROPOSED GREEN HOUSE DEVELOPMENT

The proposed development will cover an area of some 8.6 ha and include some 6 Ha of high specification framed tunnels with a long life polythene covering, they are similar to glasshouses but with a polythene covering. We have therefore referred to them as 'greenhouses' rather than poly-tunnels. The green houses will consist of 4 adjacent units, a reservoir with a capacity for 30m litres, an operations office, boiler house, irrigation tanks, packing and storage areas and parking. The proposed green houses will need to be suitable for a range of crops. This means that the height needs to be sufficient to enable crops to be grown on benching meaning that the height will be a maximum of 7.5 metres to the ridge. The new green houses will be rectangular in plan form, with an east - west width of 148 metres, and a north-south width of 75 metres. There will be a 6 metre margin between and around each house, meaning that the overall growing area will be 302 metres by 156 metres. The greenhouses use plastic rather than glass as a covering in order to provide diffuse sunlight, which is more suited to the growth of certain crops. A new access road and plant area will be situated to the south of the new green houses. In addition precipitation which falls on the greenhouses will be pumped to the irrigation storage reservoir situated to the north east of the site which is arranged parallel to the railway line. A detailed site layout plan is included at Appendix 1 of the separate appendices document.

#### 1.5. RELEVANT LANDSCAPE POLICY CONTEXT

The proposed development will need to comply with the requirements of the current adopted 2018 Arun Local plan

The key policy being that relating to horticulture: HOR DM1, which is copied in full at Appendix 2, with the elements of that policy which relate to the landscape being the following:

1. New glasshouse, polytunnel and associated packhouse development will be permitted provided that:

It is of a height and bulk which would not significantly damage the character or appearance of the surrounding landscape, unless it can be demonstrated that the need for a larger scale development is outweighed by the economic benefit of the scheme to the rural economy; It relates sympathetically to the natural, built and historic environment;

Long public views across substantially open land are retained where the landscape value is defined as major or substantial for the corresponding Landscape Character Area in the Arun Landscape Study

There is minimal impact on health or general amenity resulting from internal artificial lighting after 6.00 pm on the occupants of nearby residential properties and minimal impact on the appearance of the site in the landscape by the minimisation of light spillage and glare to keep the natural environment intrinsically dark at night

Proposals include full details of new landscaping, screening and of any trees or vegetation to be retained on the site; and

This report seeks to independently assess the scale of the landscape character effects, and whether there are significant effects on the appearance of the surrounding landscape ( visual effects), in accordance with the above policies, and seeks to address the other elements underlined above. .

The report explores the relevant effects in two strands by firstly seeking to analyse the potential effects of the development on the landscape character of the area, and secondly by assessing whether the development will cause significant visual harm. These are two subtly different issues. Landscape character is a quality which is of significance in its own right, whether it is visible from the public domain or not, whereas visual impacts relate primarily to public views and viewpoints. Further explanation of these and other relevant terminology are included in Appendix 3.

#### 1.6. METHODOLOGY

The analysis of the effects of the development, have been undertaken in accordance with national guidance produced jointly by the Landscape Institute and the Institute of Environmental Management and Assessment. The approach described needs to be adapted

to suit the nature of the development and the character of the countryside within which the development is to be sited. This is explained further in Appendix 4.

This report is structured as follows:

**Section 2** describes the site and location as it currently stands. This baseline analysis sets out the existing landscape character, the landform and associated extent of visibility of the site. It includes views of the site from a number of key viewpoints and describes the nature of the views, their context and the potential viewers, or receptors.

**Section 3** assesses the potential effects of the development on the character of the landscape, and the views into the site.

**Section 4** considers the scale and significance of the effects, and whether it is possible to mitigate the effects.

The conclusions confirm the scale and significance of the effects of the development on the landscape after mitigation measures are included in the assessment. It finally confirms whether the proposals meet the criteria of the local plan policies described above.

## 2. BASELINE ANALYSIS

### 2.1. LANDSCAPE DESIGNATIONS

The site is located within an area which is not subject to any landscape designations, the nearest nationally designated landscape is the South Downs National Park which is located approximately 1.3KM to the north of the site at Binsted Park. Elevated areas of the National Park to the north are well screened from the site by intervening woodland and trees which lie immediately to the north of the railway.

### 2.2. LANDSCAPE CHARACTER

The process of Landscape Character Assessment (LCA) has been developed over a period of some thirty or more years by landscape professionals as a way of classifying and analysing landscape.

Current government planning practice guidance refers to and supports the LCA approach. This was originally developed and supported by the Countryside Commission, and its successor organisations, the Countryside Agency and Natural England, which have funded the application of this process on a national and regional scale.

Landscape Character assessments are designed to 'nest' one above the other such that more detailed description and analysis is provided at the regional county and local scales.

At a national level this part of West Sussex has been included within the *South Coast Plain* Character area. Certain *Key Characteristics* of the area which are listed and described (and are relevant to the site) include:

Major urban development's including Portsmouth, Worthing and Brighton linked by the A27/M27 corridor dominate much of the open, intensively farmed, flat, coastal plain. Trees are not a dominant feature - there are some small woods and a few windswept individual trees in the farmland or the occasional poplar shelter belt. A pattern of large arable fields, defined by low hedgerows, are often interspersed by horticultural glasshouse 'estates' and isolated remnants of coastal heath.

West Sussex County Council commissioned the production of a landscape character assessment of the county in 2003 and this identified the area around the site as being part of the *Chichester to Yapton Coastal plain* character area. This was followed by *A Strategy for the West Sussex Landscape* which listed a landscape vision for the South Coast Plain area which included the following relevant aims:

A strong network of woodlands and hedgerows forms green corridors within the gaps between the coastal towns, providing informal recreational opportunities and helping to connect the towns and their residents with the wider landscape. Productive farmland and permitted horticultural uses are set within a strong landscape framework of woodlands, shelterbelts and hedgerows. Agriculture adopts sympathetic farming and land management methods, contributing to landscape renewal and biodiversity, including conserving wetlands and pastureland.

A further relevant document which was produced as part of this series, and supplements the character assessment work is a set of county wide landscape management guidelines which provide advice on ways to achieve the vision in relation to landscape change. These guidelines for the Chichester to Yapton coastal plain character area include the following relevant recommendations with the authors underlining of particularly relevant text:

Create a new, large scale tree and hedgerow framework which complements the open intensively farmed landscape, whilst maintaining significant views of Chichester Cathedral, the South Downs and local features

Maintain and strengthen field boundaries such as hedgerows and shelterbelts

- Link up existing remnant hedgerows and tree lines to re-establish coherent field boundaries and wildlife corridors
- Restore and strengthen the landscape of the gaps between settlements
- Encourage landscape enhancements around villages and on their approaches, especially those approaching settlements.

These guidelines are relevant to the next section of the report, which addresses the proposed development.

Finally at the district level the area was included in the Arun Landscape study 2006, which considered the capacity of the District to accommodate development. The site is situated within the *North of Yapton (also called North of Burndell) Coastal Plain (LCA 29)* character area which was judged to have a low to medium capacity to accommodate development and a **slight** landscape value. The key characteristics of the character type are described as :

- Intensive arable farmland
- Relatively large fields across relatively flat or gently undulating landform
- Well developed structure of hedges, shaws, copses and woodland which break up views across it and give a sense of large-scale enclosure
- Typically found on upper coastal plain, at the foot of the downlands
- This specific character area is described as :
  - Predominately arable fields of varying size and enclosure, with parkland and recreation adjacent to Yapton.
  - Bounded by woodland and railway line to the north.
  - Abuts Ford to the east.
  - Urban influence along Ford Lane which runs through the middle of the character area.

It should be recognised that the descriptions above are for a more extensive and variable area, and that there are tendencies for certain characteristics to be absent from some local areas, whilst others may be present, particularly where the land parcel concerned abuts an adjoining character area. Never the less this seems to accurately describe the site area in broad terms.

A more local character assessment of the immediate area has been undertaken as part of the assessment process and in accordance with the methodology described earlier. This found the following key characteristics:

- A broadly level area of arable land which is partially hidden from the adjoining road network by a combination of established tree planting and highway hedging. Views are possible from an open section of Ford lane where the roadside hedge is missing
- A broadly rectilinear pattern of field boundaries formed by hedgerows tree lines and the open boundary to the railway line , parts of which are in poor condition.
- The adjoining road, industrial buildings, digester tanks, and assorted buildings associated with the farm detract from the rural character; adding to the human influences affecting the locality of the site area

In addition the proximity to the railway, the local road network, and presence of the existing various industrial sites on the former Ford airfield have tended to reduce the existing rural character locally, and therefore at a local level the site area would be considered to be less sensitive than other more rural parts of the character area.

## 2.3. TOPOGRAPHICAL ANALYSIS

The site is underlain by brick earth deposits overlaying chalk. Local variations in the depths and nature of these deposits have contributed to minor variations in height and landform in this part of the coastal plain with a maximum variation of the order of 1 to 2 metres. The land around the site slopes gently north east wards towards the railway line and drains east towards the River Arun via a network of slow moving agricultural ditches.

## 2.4. HISTORICAL PATTERNS AND FIELD BOUNDARIES.

Research in to the history of the local landscape has shown how the landscape of the area has evolved over the last century. Figure 4 below is an extract from 1913 Ordnance survey mapping which shows the prevailing pattern of field boundaries at that time.

©David Hares Landscape Architecture 2019

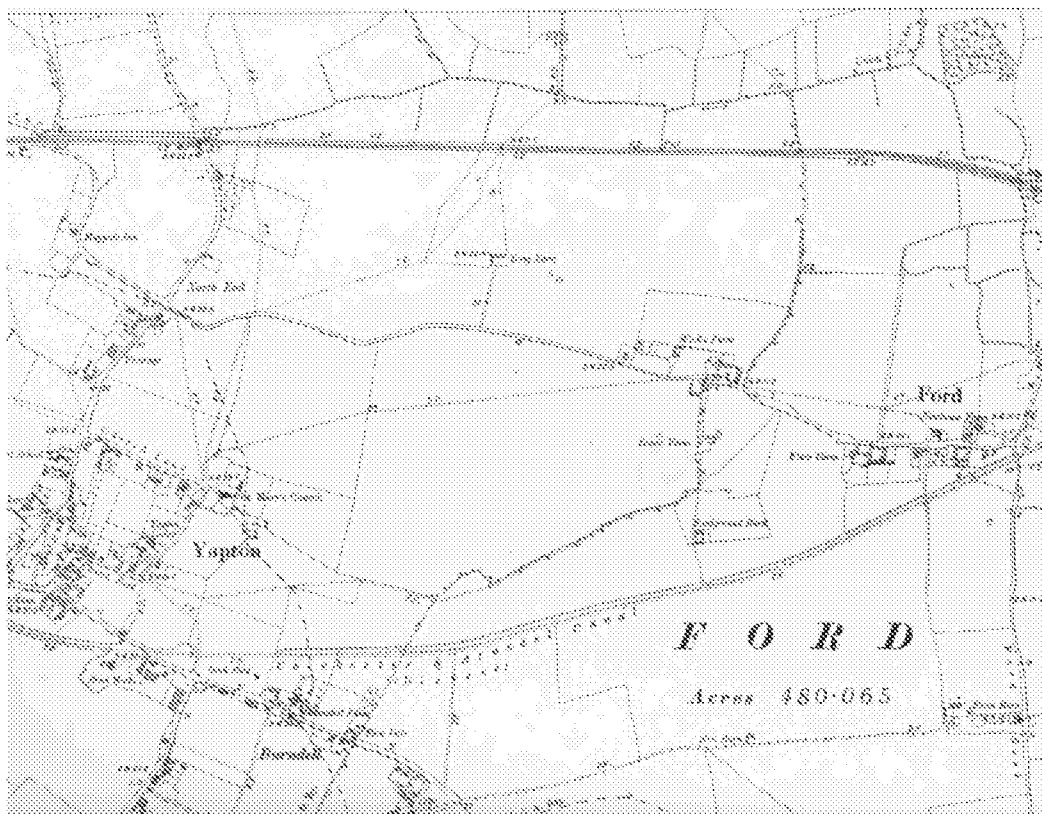


Figure 4: 1913 OS mapping of the site, which shows the pattern of agricultural field boundary ditches and hedges at that time. The area was more open than it is now.

## 2.5. CURRENT EXTENT OF SITE VISIBILITY

The proposed green houses are to be located to the north of a number of existing buildings, glasshouses and the site of the anaerobic digestion plant, and consented digestate reservoir. The photographs at Appendix 5 illustrate views into the site from the various areas from which the complex is likely to be visible. Given that the green houses are to be located in a situation where it will be screened by a substantial hedge line from the west, these are largely restricted to the south, east and north of the site.

The various areas affected are shown on the plan at Figure 5 indicating whether there is likely to be a significant view of the proposed site. A radius of 1 kilometre is shown from the edges of the proposed green houses. This broadly indicates the extent from which a complex of this size could be clearly visible. Beyond this distance it is considered that views of a building complex of this size are not likely to be significant in a flat landscape of this nature.

Figure 5: showing the potential visibility of the site from the adjoining public realm

## 2.6. NATURE OF VIEWS AND RECEPTORS

The views into the site in its current form from the public domain are restricted by a combination of the existing buildings, AD plant, trees and hedges. Views from the Ford Road are partially restricted by existing roadside trees and hedging, although there are views of the site from a distance of approximately 120 metres from the one main open gap; opposite the entrance to

©David Hares Landscape Architecture 2019

Peregrine House. This will however be partially mitigated by the construction of the consented digestate lagoon, and then fully screened by proposed planting associated with this consent which will gap up the roadside hedge. There are also views of the site looking south from trains passing along the railway. There are more distant and partially screened views from footpath 365, which lies to the east of the site with one intervening field. Finally there are views from 2 gaps in the hedge to the east of footpath 355 which leads from Ford Road to a railway crossing along the west side of the site. All of these locations will have some views of the new green house complex. The areas with potential views are marked with purple tone on Figure 5 and key viewpoints, where it is likely that significant views of the glasshouse would be visible from the public realm, have been identified. The photographs at Appendix 5 and the likely receptors are described at Table 1 in Appendix 8.

The majority of potential visual receptors of the newly constructed green house complex are likely to be drivers and cyclists using Ford Road to the south and west of the site, which will see the green houses at a distance of some 120 metres between the existing occasional trees and scrub along the north side of Ford lane, although the screening effects which would be provided by the consented digestate lagoon and associated planting need to be taken into account. Details of the consented proposals & approved planting are included at Appendix 6. Views from local residential properties at Wicks Farm have also been considered and, whilst it has not been possible to visit these properties as part of this study, it is not considered to be likely that there would be any significant visual impact on ground floor views from most of these properties, due to intervening existing buildings and because the properties all appear to have significant hedging or shrub planting to screen the sides of their gardens which face the site. The visual impacts on areas where people are enjoying the countryside or their residential properties are normally considered to be more significant than those affecting people who are driving along a road or riding in a railway carriage. It is therefore likely that the most significant visual impacts will affect views from footpath 355.

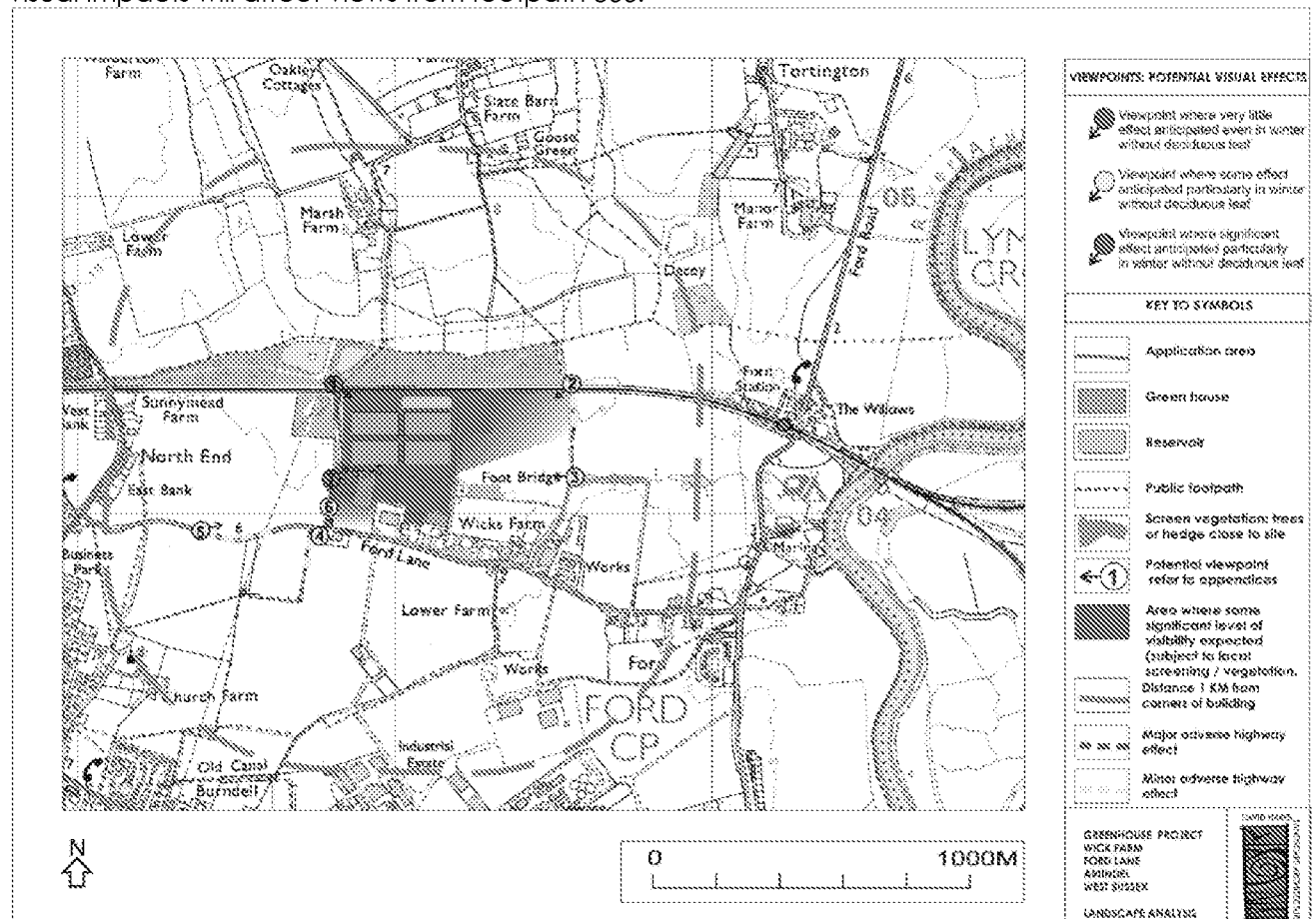


Figure 5: showing analysis of potential adverse effects

### 3.ASSESSMENT OF DEVELOPMENT EFFECTS

#### 3.1. NATURE AND SCALE OF DEVELOPMENT

The plan and elevations of the green houses are shown on the illustrations below at figure 6 and 7 as well as on the larger scale drawings in Appendix 1.

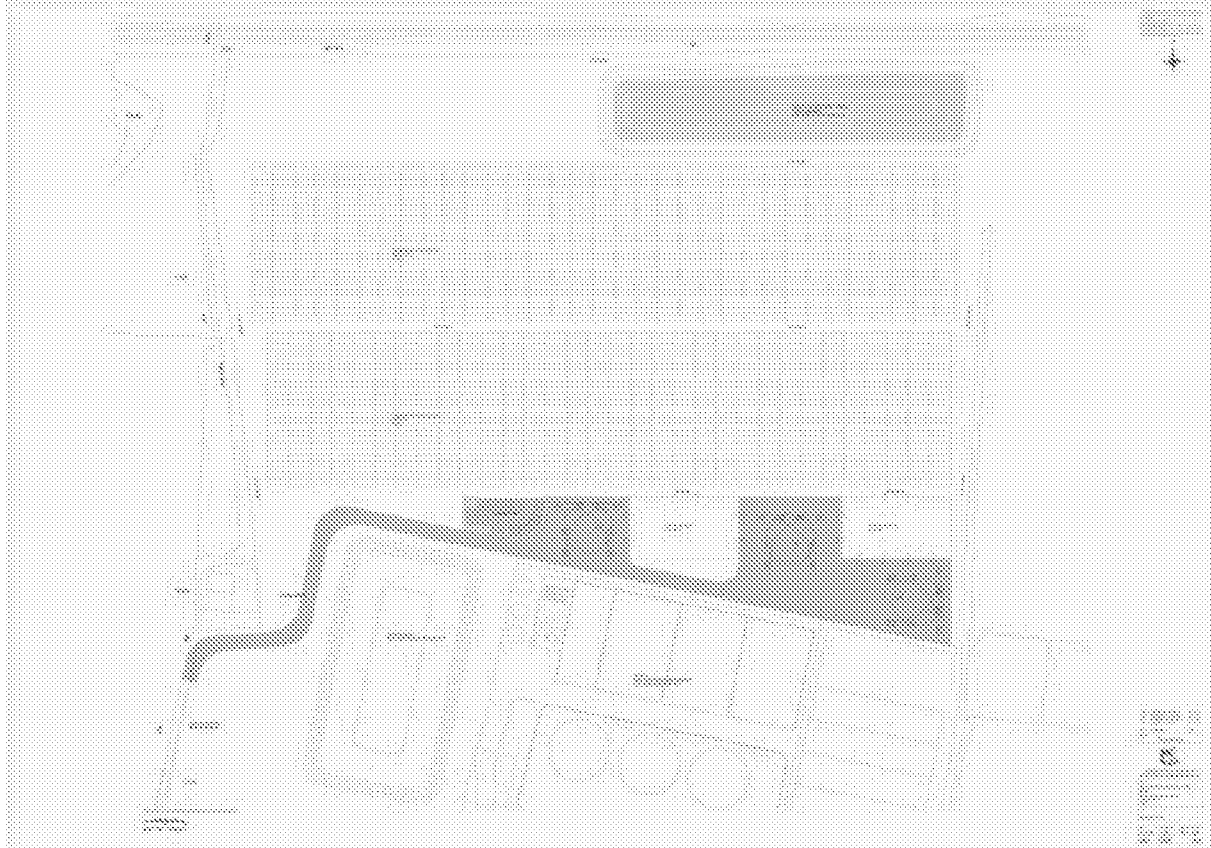


Figure 6: showing plan of the proposed green houses. There is an irrigation water storage reservoir to the north of the green houses, and a plant and personnel building in the south east corner.

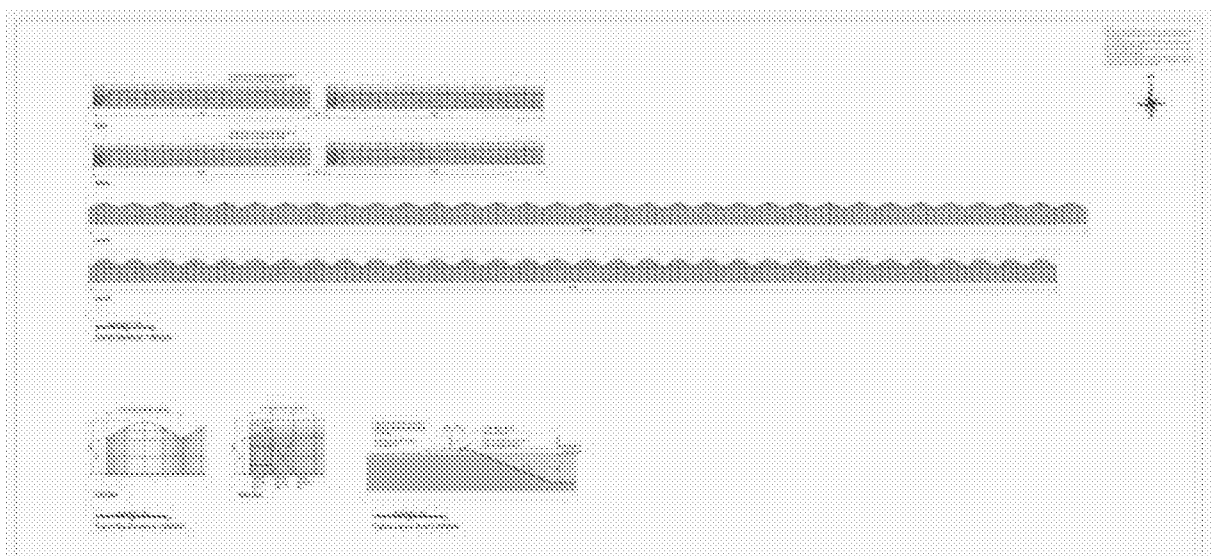


Figure 7: showing elevations of the proposed green house,

The drawings show how the ridges of the proposed new glasshouse will be 6.7 metres high, which is a standard height for modern structures..

©David Hares Landscape Architecture 2019

### 3.2. CONSTRUCTION EFFECTS ON THE SITE.

Construction access to the site would be via the existing entrance from Ford Road. There are no plans to remove existing trees or hedging as part of the construction of the green house complex. Care should be taken to avoid damage to the hedges along the access road , and use a suitable finish to any upgrading of the road.

### 3.3. LANDSCAPE CHARACTER EFFECTS

The construction of the green house complex will place a large new area of structures in the countryside and extend the existing group of buildings. There is inevitably an adverse landscape character effect resulting from the construction of the complex, with the height and the area adding to the scale of effect. Judgement of the scale and significance of the effect is considered within the table in Appendix 7, and takes account of the sensitivity and value of the area based on the Arun landscape study. Based on table A at appendix 4, the magnitude of change is considered to be of a high to medium level, and the sensitivity has been judged to be of a low level locally. Therefore the scale of significance of the effect is considered to be of a moderate to minor level.

### 3.4. POTENTIAL CHANGE IN CHARACTER OF VIEWS

The views into the site which have been mentioned earlier and are illustrated in Figure 5 will change as a result of the construction of the green house complex. Figure 8 shows the lengths of the public highways affected, with red indicating a high level effects and purple indicating a medium level effect ( both prior to mitigation). The table at Appendix 8 analyses the current nature of the view and suggests the level of effect, following the lettering system used in Figure 5. Judgement of the level of effect is based on a combination of distance, proportion of the view which will be affected and the extent that the target will be screened by existing vegetation. The terminology is described further in Appendix 3.

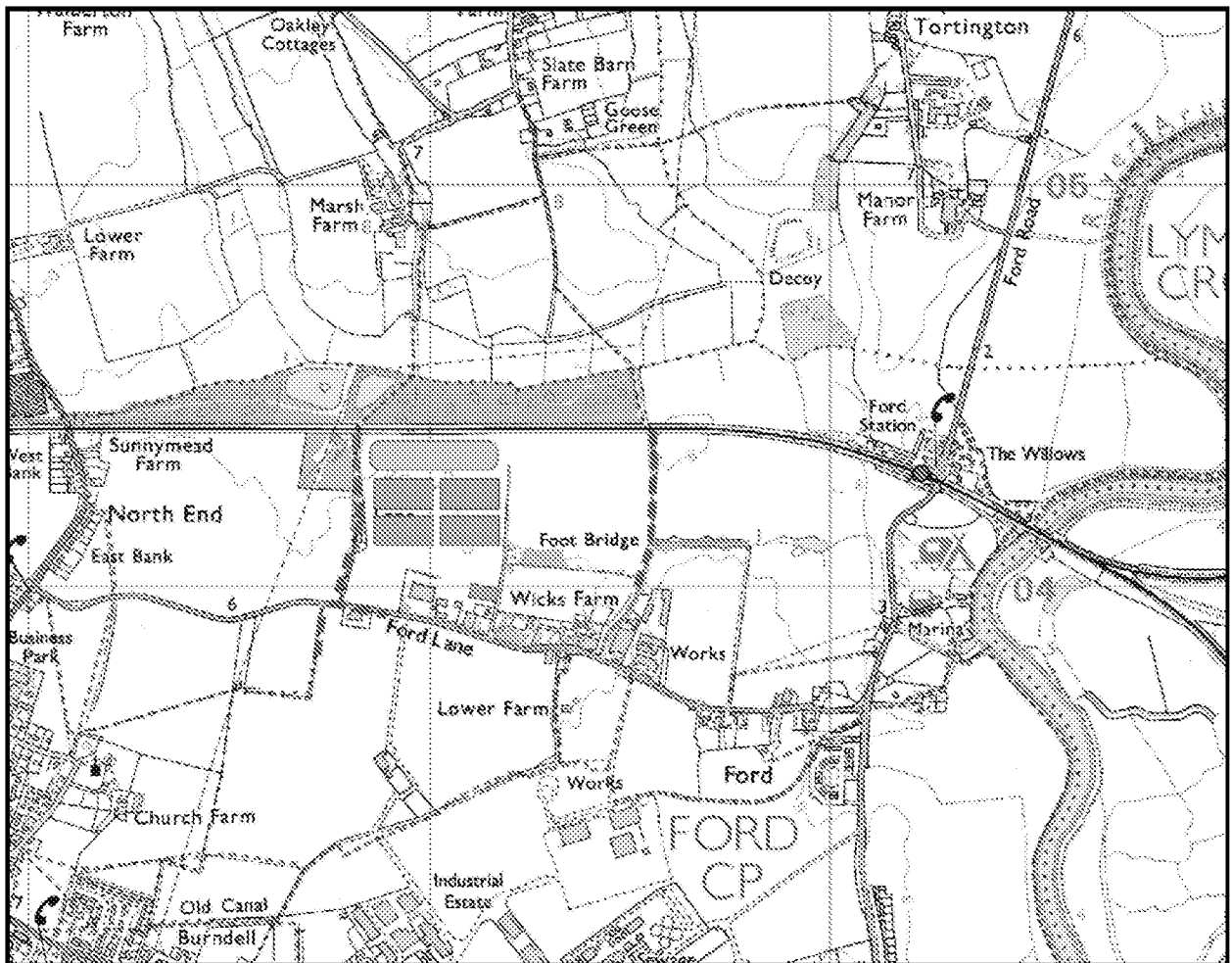


Figure 8: Showing adjoining roads and footpaths subject to high (red) or medium (purple) level effects prior to mitigation works becoming established.

### 3.5. VISUAL IMPACTS ON VIEWS AND RECEPTORS

The site is relatively well screened from the west. The viewpoints which have been identified are relatively localised but some, particularly the gaps in hedging along footpath 355 to the west are subject to a higher level of visual impact, due to the size of the proposed glass house. This is also the case in the south west corner of Ford Lane. It will be possible to mitigate many of these visual impacts through the establishment of screen planting on the south and west sides of the proposed green house complex. It will also be possible to provide some visual mitigation to drivers by planting a new roadside hedge to the Ford Lane opening, as is proposed within the consented digestate lagoon scheme. The visual mitigation works will also include planting to the northern western and eastern reservoir embankments, but subject to compliance with the network rail tree planting guidelines. This will also help to mitigate visual effects resulting from the proposals which might affect views from the railway and northern sections of footpaths 355 and 365.

## 4.CONCLUSIONS

### 4.1. SENSITIVITY OF RECEPTORS

In assessing the visual effect of the proposals, the extent of areas from which they are visible, and the sensitivity of the receptors also need to be considered. The receptors of the views include:

A moderate number of drivers on Ford lane ,although these are only via glimpsed views, Limited numbers of residents who may be able to see the glasshouse from the upper window of their properties at Wick farm, above existing buildings.

Limited numbers of walkers who use footpaths 355 and 365, with the latter being less seriously affected.

As explained earlier a higher weighting would be given to 'active receptors' such as walkers, riders or cyclists who are more able to appreciate views and the environment than motorists . They are also more likely to be walking or cycling for recreational purposes and more aware of views and the countryside, from a slightly higher viewpoint. Whilst residents of neighbouring properties would also normally receive a higher rating, impacts on ground level rooms and gardens are considered most significant, and it is considered that existing buildings hedges and trees would prevent most views from this level.

In summary therefore whilst there are some significant visual impacts in certain areas, the number of active receptors is restricted, and most views are at least partially screened by existing vegetation.

### 4.2. SCALE AND SIGNIFICANCE OF EFFECTS

The overall scale of the visual and landscape effects of the proposal which have been identified are considered to have a low to medium overall level of significance, after mitigation measures are included within the overall package of proposals.

### 4.3. MITIGATION MEASURES

The scheme was reviewed in the light of the landscape and visual impacts identified and proposals for mitigation measures have been developed. These consist of :

Gapping up of hedgerows along the western and eastern boundaries to reduce the visual permeability of the hedging which allows some winter views through the hedges.

Addition of new screen planting to the northern ,western and eastern reservoir embankments  
Planting to the gaps in the section abutting Ford lane

These proposals are shown at Appendix 8, and would help to reduce visual impacts from both footpaths and Ford Lane. There would also be some longer term mitigation of the current views towards the farm complex and digesters as hedges and trees become established.

### 4.4. CONCLUSIONS

The proposed new greenhouse complex has been assessed in the light of planning policy requirements to address potential concerns regarding landscape and visual impacts. The extent and scale of both landscape and visual impacts are considered to be relatively localised and proposed mitigation measures will help to reduce these impacts within a period of between 4 and 7 years. The construction of the complex will be of marginally wider benefit as proposed mitigation planting will also provide additional screening effects to the existing glasshouse and other buildings and AD plant which are currently visible, from the railway and footpaths particularly in the winter.

Considering the proposals in relation to the landscape policy context criteria listed earlier at section 1.5, with the most relevant being draft policy HOR DM1 that the development will be permitted provided that:

a. It is of a height and bulk which would not significantly damage the character or appearance of the surrounding landscape, unless it can be demonstrated that the need for a

larger scale development is outweighed by the economic benefit of the scheme to the rural economy;

b. It relates sympathetically to the natural, built and historic environment;

d. Long public views across substantially open land are retained where the landscape value is defined as major or substantial for the corresponding Landscape Character Area in the Arun Landscape Study

k. Proposals include full details of new landscaping, screening and of any trees or vegetation to be retained on the site; and

Addressing each of these policy requirements in order as follows:

a: Firstly it is our view that the proposed green house complex is of a significant height and bulk, however it is of a standard modern height and size, which fits the current needs of the industry. The team has therefore sought to mitigate the potential impacts through judicious siting, which makes use of the relatively contained existing nature of the setting, situated between the existing pack house complex, road and AD plant. The level of adverse effects on the character and appearance are of an overall level of low to moderate after the proposed levels of mitigation measures are taken into account

The visual containment of the proposals and the setting which is already affected by pack houses reservoirs and AD plant mean that we don't consider that the proposals will significantly damage the character or appearance of the surrounding (wider) landscape.

b In a similar manner, through the mitigation measures we have described, we believe that the **scheme can relate sympathetically to the natural environment**, through the proposed provision of additional planting which will provide enhancement of the natural habitat of the site.

d The landscape value of the area is described as slight within the Arun landscape capacity study 2006. Long views are currently already constrained by the existing hedgerows and woodland to the north of the railway. Consequently **the scheme as proposed meets this particular policy requirement.**

k The details of the proposed mitigation measures are shown on the separate planting proposals drawing. These use appropriate native species including a mixture of fast growing tree species such as willow and poplar to provide an initial effect, with slower tree species such as Oak to provide a longer term future tree structure. Shrubs and smaller tree species would include holly to provide some winter screening effect, as well as a diverse shrub mix including dogwood hazel etc.

In summary therefore whilst the construction of the proposed green house complex would have some adverse landscape character and visual effects, these have been minimised through judicious and appropriate siting and mitigation planting, which seeks to provide landscape benefits to compensate for the adverse landscape effects of the proposed green houses and reservoir. Our judgement is that the proposals as submitted comply with the requirements of Policy Hort DM1.

David Hares Dip LA CMLI  
02 January 2019