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Document Lead Sheet

Client Project No:

MDM Project No: 20008

Document No: 20008-20-Rp- 002

File No: 20008-20-002



Outline Construction Management Plan Jepco Norfolk House Farm Gedney Marsh Spalding PE 12 9PB, UK

ISSUE	DATE	ORIG	AUTH CHK	REVIEW	APPRVD	DESCRIPTION
					MDM	
A	16/08/2021	AP	MK	MK	MK	Issued for Planning

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1. INTRODUCTION

This report has been prepared in support of a planning application for a new Agri tech development at Jepco Norfolk

JEPKO occupies over 300 hectares of essentially flat and fertile land approximately 2.5km from the Lincolnshire coast and the Wash, an expansive protected area designated as a Special Area of Conservation, Special Protection Area and Site of Special Scientific Interest bordering the site to the North and East.

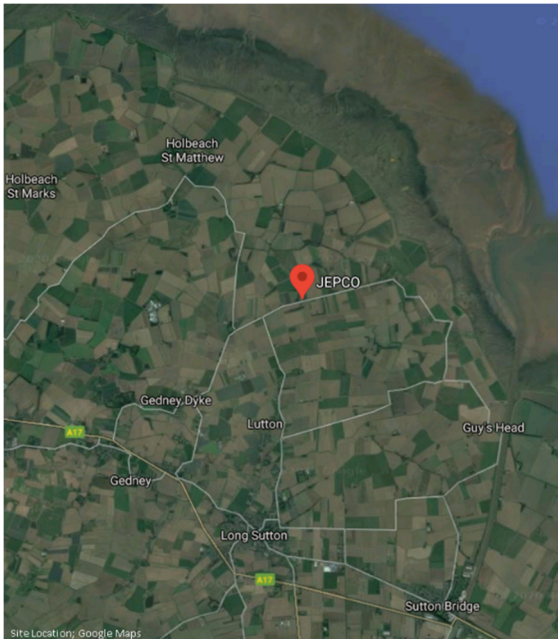


Figure 1 Site Location.

Jepco intend to undertake a state of the art Agri Tech development on circa 15 ha of their land adjacent to Norfolk House Farm on the B1359 to enhance their existing operations and increase yields in an economically and environmentally sustainable manner.

This Outline Construction Management plan identifies an indicative sequence of the works from the initial enabling works through to sub-structure and superstructure construction. It is noted that this can only be considered an outline plan and the final Construction Management Plan would be agreed with South Holland District Council (by the appointed Contractor) prior to the commencement of construction.

This Construction Management Plan defines the physical and legal limitations within which a person or persons can carry out development works that affect the existing nature of public roads, footpaths and the surrounding environment for a duration of time.

2. OUTLINE CONSTRUCTION MANAGEMENT PLAN

2.1 Site location and Description

The subject site of this particular planning permission is located to the east and adjoining the existing Norfolk Farm site and covers approximately 15 ha as per figure 1 above.

The site is currently in agricultural use and houses on its Western side one of a number of lagoons which are utilised as rainwater attenuation for storage in the growing processes.

The site is bounded on the North, East and West by additional Jepco holdings and on its South by the Main Road.

2.2 Proposed Development

The proposed development consists of the covering of 10 hectares of land to enable undercover growing within glasshouses and to support same with an integrated preparation, processing, storage and dispatch facility and the associated required infrastructure. The overall scope can therefore be sub divided into the following components:

- Main Glasshouse Area containing Hydroponic Growing System.
- Glasshouse Annex containing Seeding and Germination processes
- Main Pack Building.
- Administration and Welfare Building
- Main Plant Room
- External Roads & Hardstandings



Figure 2 Proposed Agri Tech Development.

2.3 Extent of Works

The construction works will take in the region of 18 months to complete and will involve an indicative sequence of works as outlined below. The Contractor will clearly outline works which impact public spaces within the Construction Management Plan that shall be submitted and agreed with South Holland District Council

2.3.1 Hoarding, Site Set-up and Formation of Site Access / Egress Points

The site area will be enclosed with hoarding or fencing, details of which are to be agreed with SHCC. Hoarding panels will be maintained and kept clean for the duration of the project.

It is anticipated that this site security fencing will be erected around the development area and recessed from the Main B1539 public roadway.

There is ample space on site for the storage of construction materials, waste and excavated material however the contractor will be discouraged from stockpiling such items in order to maintain the integrity and the security of the site. Given the level nature of the site and minimal excavations for slabs etc, it would generally be the intention to maintain excavated material on site for the construction of berms etc and that the removal of such material off site would be minimal.

A “Just in Time” approach will be required for the delivery of particular building materials such as concrete for bases etc and the extent and route of same shall be highlighted within the final Construction Management Plan. For other building materials, specific lay down areas shall be identified and employed remote from boundaries to minimise impact.

The Contractor will be responsible for the security of the site and will be required to:

- Operate a Site Induction Process for all site staff;
- Ensure all site staff shall have current ‘Safe Pass’ cards;
- Install adequate site hoarding to the site boundary;
- Maintain Site Security staff at all times;
- Install access security in the form of turn-styles and gates for staff;
- Separate public pedestrian access from construction vehicular access;
- Ensure restricted access is maintained to the works.

2.3.2 Site Clearance and Demolition

A percentage of these works must be undertaken as an enabling or pre contract phase to clear the site for the main contract works. These will include the widening of the existing entrance roadway and the creation of internal farm traffic routes to maintain Jepco Operations throughout the scheme development. In addition a main site compound area will be developed at the junction of the entrance of Norfolk house farm from the internal road network.

In addition, as part of this scope of supply those existing site areas which are included within the delineation of the proposed external works package will be levelled and prepared for development. This preparation programme of works will also require the diversion and culverting of an existing surface water drainage ditches

2.3.3 Bulk Excavation

The removal of the existing and formation of new foundations will involve the excavation and removal from site of approximately 10,000m³ of material. A desk-top study of historic information relating to the vicinity notes the ground comprising of the following build-up

- Topsoil
- Sandy Silts

It is not envisaged that rock will be encountered during excavation. The Contractor must prepare a Construction and Demolition Waste Management Plan in accordance with the “*Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects*” and ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

2.3.4 Construction Sequence of Substructure

The nature and type of the proposed development indicates that to prevent any potential risk of groundwater intrusion into foundation excavations that appropriate pumps be available. It is not considered likely that tidal waters will enter in general however the area is prone to flooding so the risk associated will depend on the time of year the construction is undertaken. The concrete works will involve concrete deliveries to site and adequate wash down and wheel wash facilities must be provided for the concrete wagons. Foundations will be of pad bearing type to be confirmed on completion of site investigation which is currently ongoing.

2.3.5 Construction Sequence of Superstructure

The construction of the superstructure will involve complex sequencing of activities and various construction methodologies could be adopted to deliver the Contract. The nature of the building, the scale and economic factors, among other issues, would suggest that the building will be constructed utilising a steelwork or reinforced or post tensioned concrete frame, supporting precast concrete intermediate floors and a structural steel roof structure. The façade may consist of a unitised system to limit the extent of scaffold required.

As noted, the construction methodology and therefore the programme of the construction activities will be dictated by the Contractor.

The following outlines a general construction sequence for the superstructure:

Building Structure:

- Construction of the foundations
- Installation of Frame (Steel or Concrete)
- Installation of intermediate floors
- Casting of Ground floor slab.

Envelope / Cladding:

- Commencement of envelope works when structure has been completed.
- Advancing of Cladding after installation of roof.
- Installation of internal walls

Mechanical & Electrical fit-out:

- First fix will commence at each level behind structure;
- This will be followed by the second fix and the final connections;

Fit out:

- Initial installation of stud work when cladding is completed, and floor is weather tight;
- Installation of equipment and associated connection to services;
- Completion of finishes.

Commissioning:

- The final commissioning period will commence during fit-out.



The above is an indicative construction sequence. The final sequence will be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

It is envisaged that small mobile cranes will be temporarily employed to accommodate the construction works for the distribution of reinforcing steel, concrete skips, concrete formwork elements and structural steelwork.

The Contractor will need to obtain all necessary licences from the Local Authority. A “mast climber” maybe installed at some local areas to facilitate particular façade features. The mast climber is essentially a climbing platform that allows the user safely to access any level without the requirement for a full scaffold tower.

3 ENVIRONMENTAL ISSUES

3.1 Dust

Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall put in place and monitor dust levels in the vicinity using a Bergerhoff gauge instrument. The minimum criteria to be maintained shall be the limit for Environmental Agency (EA) specification for licensed facilities in the UK which is 350mg/m²/day. The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project.

3.2 Dirt

Given the volumes of construction traffic generated by the Site Works it shall be a requirement that the Contractor shall ensure that:

- 3.2.1 A wheel wash facility is provided, given the confined nature of the site A “Full-Body Self Contained” wheel wash will not be possible so the contractor must make alternative and equally effective arrangements
- 3.2.2 All vehicles will be required to pass through the wheel wash before exiting the site to the public road network. The wheel wash must be kept in place and used throughout the construction works. If conditions require it then a manned power washer shall be put in place to assist the wheel wash system;
- 3.2.3 A dedicated road sweeper shall be retained for the duration of the haulage works; and Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the site.
- 3.2.4 The existing Road gullies surrounding the site shall be protected from discharge from the site through the use of silt socks located around same.

3.3 Noise

The Contractor will be required to monitor base noise levels at the site location before commencement of the project. Given that most construction activity can generate noise levels up to 80-90dBA, noise monitoring will be required throughout the project. Variation of noise levels from those experienced as part of everyday life in an area can result in extreme disruption, in particular at this sensitive site in a highly visible area. The Contractor shall implement measures to eliminate where possible and reduce noise levels where not.

The proposed development shall comply with BS 5228 “Noise Control on Construction and open sites Part 1: Code of practice for basic information and procedures for noise control” (or such further limits as imposed by South Holland District Council).

3.4 Vibration

The Contractor shall provide and maintain vibration monitoring equipment for the duration of the works. Condition surveys of adjoining buildings will be required before excavations commence. Vibrations shall be monitored in accordance with BS 7385-1:1990 “Evaluation and Measurement for Vibration in Buildings”, with a limit of 5mm/s ppv.

3.5 Harmful Materials

Harmful materials shall be stored on site for use in connection with the construction works only. These materials shall be stored in a controlled manner. Where on site fuelling facilities are used there shall be a bunded filling area using a double bunded steel tank at a minimum.

4 CONTENTS OF CONTRACTORS CONSTRUCTION MANAGEMENT PLAN

4.0 Temporary Signage

The Contractor is required to provide appropriate signage which must conform to the requirements of Chapter 8 of the Traffic Signs Manual.

4.1 Temporary Road Markings

The Construction Management Plan shall include proposals for any proposed Temporary Road Markings. These markings must conform to the requirements of Chapter 8 of the Traffic Signs Manual.

4.2 Operation of a Contra Flow

There are no proposals to operate a Contra Flow system.

4.3 Temporary Road Closure

At various junctures through the project it will be necessary to introduce temporary road closures. Any proposals should conform to the requirements of Chapter 8 of the Traffic Signs Manual. Any road closure can only be operated under agreement with the Local Authority.

4.4 Temporary Traffic Signals

There are no proposals to operate Temporary Traffic Light Signals. Any proposals should conform to the requirements of Chapter 8 of the Traffic Signs Manual.

4.5 Arrangements for Local Access, Pedestrian and Cyclist Access

There are no proposals to alter the existing local access to the surrounding areas. The temporary hoarding along the site perimeter will necessitate the erection of temporary footways. Covered footways if required shall be built in accordance with Traffic Management Guidelines.

4.6 Proposed Lighting Arrangements

There are no proposals to alter the existing lighting arrangements in the area. Any proposals to alter existing lighting arrangements can only be carried out under agreement with the Local Authority. Adequate lighting should be provided within the temporary hoarded walkway.

4.7 Proposed Use of Flag Man

The use of Flag Men/Banks Men is to be incorporated into the Construction Management Plan to direct vehicles accessing/egressing and shall be agreed with the Local Authority as part of the Contractors construction management plan. There will be a requirement for a Flag man/Banks man at each point of entry and point of exit at all times. This requirement will be on a permanent basis during site opening times regardless of traffic movements. The method of control for access/egress traffic will be by means of a "stop/go" board.

4.8 Proposed Use of Barriers

The use of barriers is to be referred to in the Traffic Management Plan and the details of which are laid out in accordance with Chapter 8 of the Traffic Signs manual.



5 CONSTRUCTION TRAFFIC

5.1 Construction Traffic Impact

It is estimated that the construction of the proposed development would be circa 18 months. The major construction items include demolition, excavation, sub structure and superstructure construction and fit out would be completed in circa 10 months. It is anticipated that the peak of HGV movements to and from the site will be during the excavation foundation and superstructure frame construction. The peak LGV movements to and from the site will be during the basement construction and superstructure construction.

It is anticipated that the construction traffic during the AM and PM peaks will not exceed the turning movements observed at Norfolk House Farm and associated Site Access therefore the construction traffic impact on the surrounding local road network to proposed development site will be minimal.

5.2 Haulage Routes

The Contractor must submit a Construction Traffic Management plan to the South Holland District Council for approval. Haulage vehicle movements should be fully coordinated to comply with the requirements of the Layout and requirements therein.

- At no time should construction associated vehicles be stopped or parked along the route.
- Haulage vehicles should not travel in convoys of greater than two vehicles at any time
- Haulage vehicles should be spaced by a minimum of 250m at all times
- It is envisaged that there will be approx. 20 Articulated trucks used in the delivery of the Glasshouse structure and equipment.
- It envisaged that there will be in excess of 1200 rigid trucks used in the removal of the excavated material and provide hard standing on the site
- It is envisaged that there will be in excess of 900 rigid trucks used to transport Concrete for the Glass house overall structure.
- It is envisaged that there will be a 100 construction workers on the site during the construction phase at peak.
- Strictly at no time should haulage vehicles be parked or stopped at the entrance to the site.
- All loading of excess material will occur within the site boundary.
- All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access.

The routes to and from the site shall depend on where the demolition material and excavated material will be taken to and from where construction material will be brought into the site. The above locations will be identified at a later stage and appropriate routes will be agreed with Offaly City Council as part of the Contractors more detailed construction management plan.



All HGVs travelling to and from the site will use the National and Regional Road network:

- On Leaving Site they shall turn right only towards Gedney Dyke and follow the B1359 as far as Chapelgate where they shall join the A17.
- Travelling Southwards, traffic can pick up the A10 at Kings Lynn and from there pick up the M11 at Cambridge.
- Travelling Northwards traffic can pick up the A1151 and hence A16 at Spalding to gain access to the A1(M)

Exiting HGV traffic will avoid using the nearby B1359 East

The increase in traffic although considerable from an existing road use perspective is relatively minor regarding network capacity and can be accommodated within the existing road network.

5.3 Working Hours

The construction traffic will occur outside of peak background traffic hours within a six-day week with minimal impact on the operation of the existing road network. As part of the Contractors construction management plan the hours of operation are to be agreed with South Holland District Council prior to the start of works.

6.0 CONCLUSION

This Outline Construction Management plan identifies an indicative sequence of the works from the initial enabling works through to sub-structure and superstructure construction. It is noted that this can only be considered an outline plan and the final Construction Management Plan would be agreed with South Holland District Council (by the Main Contractor) prior to construction commencing.