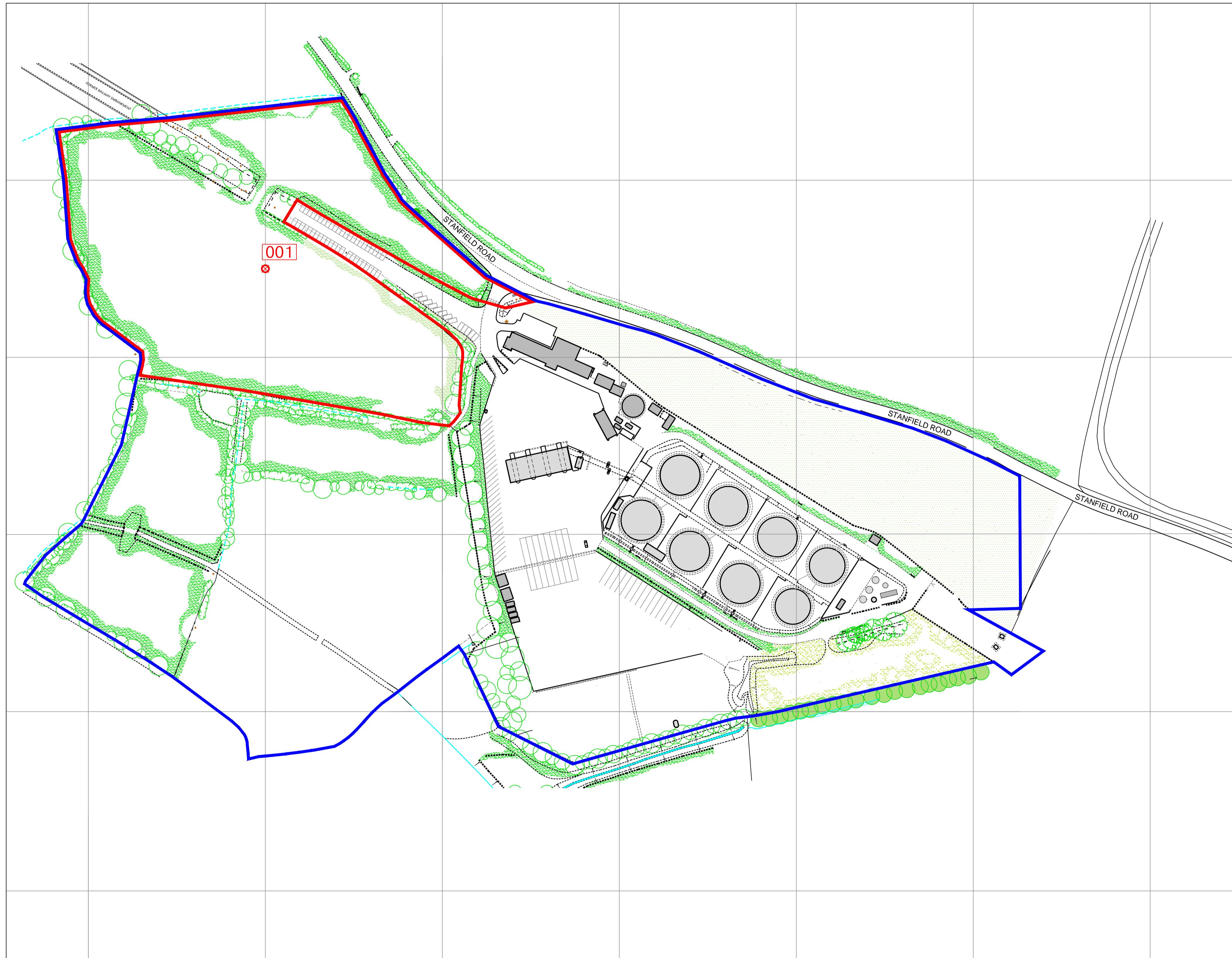


Note:

1. All dimensions noted are in millimetres unless stated otherwise.
2. Do not scale from this drawing, if dimensions are not clear ask.
3. This document has been created in accordance with Plandescil Ltd Terms & Conditions along with the scope of works provided by the client to Plandescil. Any use of this document other than for its original purpose is prohibited, Plandescil accept no liability for any third party uses of this document.
4. Plandescil Ltd to be immediately notified of any suspected omissions or discrepancies.
5. This drawing is to be read in conjunction with all other relevant documents relating to the project.
6. Nearest Postcode: NR18 9QY.
7. Grid Reference: TG131006.
8. Easting: 613153, Northing: 300640.



BOUNDARY KEY	
—	Ownership Boundary (128,293m ²)
—	Development Boundary (29,309m ²)
001	Grid Reference: X = 613000.0 Y = 300750.0
⊗	

APPROVAL & COMMENT

Rev	Date	Chkd	Description
B	30-06-16	RPS	Amended Following Client Comments
A	29-06-16	RPS	Amended Following Client Comments
0	24-06-16	RPS	First Issue

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civil • structural • environmental • surveying

Client

G J Goff Ltd

Project

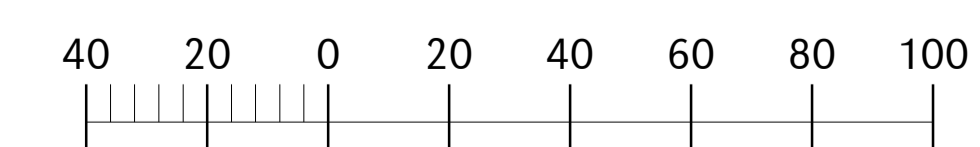
**Greater Norwich
Call for Sites**

Drawing Title

**Goff Petroleum Fuel Depot
Development Boundary Plan**

Scale	U.N.O.	Date	Drawn By
1:1250 (A1)		June 2016	CH
Drawing No.	15581/100		Rev B

1:1250-DRAWING SCALE REFERENCE (m)



FLOOD RISK ASSESSMENT

Job No. 15581

Proposed Industrial Development
Land off Stanfield Road
Wymondham
Norfolk

For George J Goff Ltd.

December 2010

civil • structural • environmental • surveying



cost effective engineering solutions

plandescil
consulting engineers

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Drawing No. 15581/803	-	Environment Agency Flood Map
Drawing No. 15581/804	-	Proposed Impermeable Areas
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Drawing No. 7293D/21/590	-	South Norfolk Council Suitability of Sustainable Drainage across the SNC Area

APPENDIX A

Appendix A.1	-	Photograph Location Plan
Appendix A.2	-	Photographs 1 to 4

APPENDIX B

Micro-Drainage Design Simulations

1.0 INTRODUCTION

This report is to evaluate the flood risk for a proposed industrial development on the land off Stanfield Road, Wymondham, Norfolk. The report was commissioned for George J Goff Ltd. in December 2010 and has been carried out in accordance with Planning Policy Statement (PPS) 25.

The proposed development is part of ongoing development at George J Goff Ltd., which is located to the east of the proposed site. As part of a previous phase of works at George J Goff Ltd. a Flood Risk Assessment was produced in July 2008 for the proposed development of a workshop and impermeable area.

2.0 SITE DESCRIPTION

2.1 Location

The proposed development is located off Stanfield Road in Wymondham, Norfolk and has an OS Pathfinder Grid Reference of TG 130 007, refer to Drawing No. 15581/801 in Drawing Appendix for the Site Location Plan. The proposed site is located in South Norfolk District Council's administration area and is within the Environment Agency's Anglian Eastern district.

2.2 Existing Site

A topographical survey has been carried out of the site to determine the site levels, refer to Drawing No. 15581/802 in Drawing Appendix. The site levels relate to an Ordnance Datum located on Wiffins Farm, Stanfield Road to the west of the site at a height of 41.36m (AOD). Ground levels within the site vary considerably from 37.8m (AOD) in the west to 43.7m (AOD) in the east.

The site is currently classified as Greenfield, with a former railway embankment crossing the northern section of the site. Access to the site is via Stanfield Road to the north of the site.

The site is bound by the existing George J Goff Ltd. site to the east and Stanfield Road to the north whilst the remaining land is undeveloped rural/agricultural land. A drainage ditch follows the north-western and southern boundary of the site.

Photographs of the existing site layout and surrounding area are provided in Appendix A.

2.3 Proposed Development

The development will involve the construction of:

- George J Goff Ltd. Headquarters Office
- Anglia Heating office/workshop
- Workshop
- Oil and lubricants office/workshop
- Bottled gas office
- Associated car park facilities
- Attenuation lagoon

Refer to Drawing No. 002 in Drawing Appendix for the proposed site layout.

2.4 Flood Risk

The Environment Agency flood map indicates that the site is not located in an area of flood risk as the proposed development is located within Flood Zone 1, refer to Drawing 15581/803 in Drawing Appendix. The map shows the site is not located in flood zones 2 or 3, therefore the annual probability of the site being flooded by a fluvial flood event is less than 0.1% (equivalent to a storm event with a greater than 1 in 1000 year annual probability).

As the site's area is greater than 1.0 hectare a Flood Risk Assessment has been required to demonstrate how the proposal will impact on the flood risk on-site and in the surrounding area.

2.5 Geology

The British Geological Survey map for the area indicates River Terrace Deposits in the north and Glacial Sand and Gravels in the southern area of the site, these overlie a chalk aquifer. The aquifer is classified as a major aquifer of intermediate to high leaching potential.

South Norfolk Council Strategic Flood Risk Assessment Drawing No. 7293D/21/590 showing the 'Suitability of sustainable drainage across the greater SNC policy area' illustrates the drainage capabilities for Wymondham. The drawing shows the application of sustainable drainage systems to vary across Wymondham from poor to good suitability based on poor to good infiltration capacity of soils.

2.6 Surface Water Runoff from the Existing Site

The proposed site is currently Greenfield and has a Greenfield run-off rate for an area equal to that which is proposed to be made impermeable (1.64 Hectares), as shown below in Table 1.

	1 in 1 year event	1 in 30 year event	1 in 100 year event
2010	4.3 l/s	11.9 l/s	17.7 l/s

Table 1. Predicted surface water run-off flows from the existing site

The Greenfield runoff rates shown above were calculated using the IH 124 method. Refer to Appendix B for Greenfield Runoff calculations.

2.7 Surface Water Runoff from the Proposed Development

The proposed industrial units will create 1.64 Hectares of impermeable surfacing and will result in an increase in the amount of surface water runoff discharging from the site. Refer to Drawing No. 15581/804 in Drawing Appendix showing the proposed impermeable areas of the site.

Table 2 below details the predicted amount of surface water runoff from the proposed facility. The following values are calculated using the modified rational formula with average rainfall intensities based on the FEH rainfall parameters for the site with a Cv value of 0.75 and a Cr value of 1.30. Storm durations of 15 and 360 minutes were used to show the comparison.

	1 in 1 year event	1 in 30 year event	1 in 100 year event
2010 (15 min)	141.5 l/s	449.4 l/s	680.7 l/s
2185 (15 min)	183.9 l/s	584.2 l/s	884.9 l/s
2010 (360 min)	14.8 l/s	37.2 l/s	51.7 l/s
2185 (360 min)	19.2 l/s	48.3 l/s	67.2 l/s

Table 2. Predicted surface water run-off flows from the proposed development including the effects of climate change.

To allow for an increase in rainfall due to the effects of climate change over the next 75 years the rainfall intensities have been increased by 30 % (as detailed in Table B.2 Annex B of PPS 25). Refer to Appendix B for surface water flows calculations.

3.0 FLOOD RISK

3.1 Source of Flooding

The development could be at possible risk of flooding from on-site surface water flooding.

All development will be located within the site boundary. There will be no off-site influences affecting the proposed drainage system.

3.2 Proposed Surface Water Drainage System

The increase in hardstanding areas will create an increase in the current volume of surface water run-off generated within the proposed development.

Plandescil Ltd. dug trial holes on the existing George J Goff Ltd site to the east of the proposed development and found the geology to consist of mainly Sand and Gravels however due to a high water table within the area Porosity Tests were abandoned and no percolation value was obtained for the site. Based upon the above infiltration drainage will not be a feasible method of surface water disposal and an alternative form of surface water design will be required to drain the site.

PPS 25 and Building Regulations recommend that surface water drainage should discharge into an infiltration drainage system where practical. Should infiltration drainage not be possible the next preferred option is to discharge to a watercourse at a restricted rate dependant on previous site use.

The surface water run-off resulting from the development will discharge into an adjacent ditch to the south of the site via an attenuation lagoon, refer to Drawing No. 15581/805 in the Drawing Appendix, showing the Schematic Drainage Layout.

To prevent surface water flooding the attenuation lagoon has been designed to contain up to the 1 in 100 year storm event plus climate change, refer to Micro-Drainage Design Simulations in Appendix B. The lagoon will incorporate a complex outflow control, releasing the flow into the adjacent ditch at a flow rate equivalent to the Greenfield run-off rate.

The complex outflow control is designed to release discharge into a watercourse during the 1 in 1 year, 1 in 30 year and 1 in 100 year storm event including climate change via two orifice plates set at different heights. The flow control will vary the discharge into the ditch depending on what

3.2 Continued...

storm event occurs i.e. with a 1 in 1 year storm event the volume of run-off discharging into the ditch will be less than the 1 in 30 year event, as the pressure head on the orifice will be reduced therefore discharging at a slower rate than a larger storm event. For the lagoon to contain up to and including the 1 in 100 year storm event plus climate change it is required to have a capacity of 1173.6m³, as shown in the Micro-Drainage Design Simulations in Appendix B. The lagoon will have a depth of 0.8m.

In accordance with PPS25 we have looked to reduce the runoff to the adjacent watercourse. This has been achieved through designing an attenuation system that will contain up to and including the critical 1 in 100 year rainfall event plus climate change whilst only discharging at a maximum rate equivalent to the Greenfield runoff during the 1 in 30 year event (11.9 l/s), refer to Micro Drainage Design Simulation in Appendix B. Therefore the discharge from the site will not increase the risk of on or off-site flooding from surface water.

In order to design for exceedence a freeboard of 300mm will be included on top of the 1 in 100 year plus climate change design level of the lagoon.

The orifice plates and the protection provided to prevent blockage will be designed in accordance with CIRIA C697 (The SUDs Manual).

Consideration has been given to route surface water away from buildings in the event the surface water system fails for example:

- The external landscape and paving levels will fall away from the buildings.
- The access road levels near buildings will be set lower than the finished floor levels of the buildings.

3.3 Proposed Foul Water Drainage System

The foul water create by the proposed industrial development will be treated in a package sewage treatment plant prior to discharge to the ditch.

3.4 Repair & Maintenance

The long term maintenance and repair of the proposed surface water drainage system shall be the responsibility of George J Goff Ltd. The maintenance and repair will be carried out by the grounds men employed to

3.4 Continued...

look after all aspects of the site such as roads, landscaping as well as the surface and foul water drainage systems.

3.5 Downstream Flooding

It is evident that any hydrological change at the catchment will have an effect downstream.

The increase in surface water runoff resulting from the development will not increase the risk of flooding to the surrounding land, as through the incorporation of an attenuation lagoon and flow control, the discharge will mimic the existing runoff rates.

The attenuation lagoon has been design to contain up to and including the 1 in 100 year rainfall event including the effects of climate change therefore no above-ground flooding will occur downstream as a result of the development.

The proposal is located within Flood Zone 1 and therefore will not occupy any critical flood plain storage or cause any obstruction to the natural flow of water.

4.0 SEQUENTIAL TEST

It is the Local Planning Authority's responsibility to apply the Sequential Test to steer proposed new development to areas at the lowest probability of flooding (Flood Zone 1). The Sequential Test is based upon information contained in the Regional and Strategic Flood Risk Assessment, on the basis of the Zones in Table D.1, D.2 and D.3 in PPS 25.

The Flood Risk Assessment has concluded that the proposed development is located within Flood Zone 1 and as this is the preferred Flood Zone for all new development, the Local Planning Authority will not be required to apply the Sequential Test in this instance to the proposed development.

The proposed development complies with the Sequential Test, therefore the Exception Test is not required to be undertaken.

5.0 SUMMARY

The proposal is for an industrial development on the land off Stanfield Road, Wymondham, Norfolk which will result in part of the Greenfield site becoming

5.0 Continued...

impermeable creating an increase in the surface water run-off from the site. Through the creation of an attenuation lagoon however the additional surface water will be contained within a sustainable drainage system.

This assessment demonstrates that with the implementation of the proposed surface water drainage system the proposed development, the site and its occupants will be at minimal risk from surface water flooding.

No existing development adjacent or downstream of the site will be at an increased risk of flooding due to the effects of the proposed development.

6.0 CONDITIONS OF INVESTIGATION AND REPORTING

Plandescil Ltd are only able to work on information available at the time the Flood Risk Assessment is carried out which have been applied to the Flood Risk Assessment in accordance with current best practice. Plandescil Ltd can not be held responsible for any subsequent flooding to the development or surrounding area. The Flood Risk Assessment may indicate that the development requires the local planning authority to carry out a sequential test. Plandescil Ltd has no influence over the decision of the sequential test.

This report was prepared and provided for the sole and specific use of the client. Plandescil Ltd shall not be responsible for any use of the report or its contents for any other purpose. Copies of the report to other parties for information should be copied in full but Plandescil Ltd shall extend no professional liability or warranty to other parties in this connection without written consent. The copyright of this report and other plans and documents prepared by Plandescil Ltd are owned by them.

Report Prepared by:-

Sally Hargrave(Environmental Consultant)

S Hargrave B.Sc (Hons)

Report Authorised by:-

Julian Riley(Director)

Eur Ing J R Riley B.Sc (Hons), C.Eng., MICE., C.WEM MCIWEM

For and on behalf of Plandescil Ltd.

Greater Norwich Call for Sites Submission Form

FOR OFFICIAL USE ONLY	
Response Number:	GNLP0116
Date Received:	

This form is to be filled out by any interested parties who want to promote a site for a specific use or development to be allocated in the Greater Norwich Local Plan.

Only one form should be submitted for each individual site i.e. it is not necessary for a separate form to be completed for each landowner on a single site in multiple ownerships. However, a separate form must be completed for each individual site submitted.

Your completed form should be returned to the Greater Norwich Local Plan team no later than **5pm on Friday 24 June 2016**.

By email: callforsites@gnlp.org.uk

Or, if it is not possible submit the form electronically,

By Post to:

*Greater Norwich Local Plan Team
PO Box 3466
Norwich
NR7 7NX*

The responses received as part of the Greater Norwich Local Plan Call for Sites will be published and made available for public viewing. By submitting this form you are consenting to the details about you and your individual site(s) being stored by Norfolk County Council and shared with Broadland District Council, Norwich City Council and South Norfolk District Council, and that the details of the site will be published for consultation purposes.

Further advice and guidance can be obtained by visiting the Greater Norwich Local Plan website or by contacting the Greater Norwich Local Plan team directly:

Website: www.greaternorwichlocalplan.org.uk

E-mail: callforsites@gnlp.org.uk

Telephone: 01603 306603

1a. Contact Details	
Title	Mr
First Name	Tim
Last Name	Mills
Job Title (where relevant)	
Organisation (where relevant)	
Address	NULL NULL NULL NULL NULL
Post Code	NULL
Telephone Number	NULL NULL
Email Address	NULL

1b. I am...
Owner of the site

1c. Client/Landowner Details (if different from question 1a)	
Title	
First Name	
Last Name	
Job Title (where relevant)	
Organisation (where relevant)	
Address	
Telephone Number	
Email Address	

2. Site Details	
Site location / address and post code (please include as an attachment to this response form a location plan of the site on an scaled OS base with the boundaries of the site clearly shown)	Stanfield Road NULL NULL Wymondham Norfolk
Grid reference (if known)	TG 129007

Site area (hectares)	2.93
Site parish	Wymondham
Site district	South Norfolk

Site Ownership	
3a. I (or my client)...	
Is the sole owner of the site	
3b. Please provide the name, address and contact details of the site's landowner(s) and attach copies of all relevant title plans and deeds (if available).	
3c. If the site is in multiple landownerships do all landowners support your proposal for the site?	NULL
3d. If you answered no to the above question please provide details of why not all of the sites owners support your proposals for the site.	

Current and Historic Land Uses
4a. Current Land Use (Please describe the site's current land use e.g. agriculture, employment, unused/vacant etc.)

Ancillary to large fuel storage depot / Unused and vacant

4b. Has the site been previously developed?

No

4c. Describe any previous uses of the site. (please provide details of any relevant historic planning applications, including application numbers if known)

Agricultural.

Planning Permission No 2010/2232/O was approved for commercial uses. Not implemented.

Proposed Future Uses

5a. Please provide a short description of the development or land use you proposed (if you are proposing a site to be designated as local green space please go directly to question 6)

As set out in planning permission 2010/2232/O

i.e. offices, workshops, warehousing / distribution with associated parking

5b. Which of the following use or uses are you proposing?

Market Housing	No
Affordable Housing	No
Residential Care Home	No
Gypsy and Traveller Pitches	No
Business and offices	Yes
General industrial	Yes
Storage and distribution	Yes
Tourism	No
Recreation & Leisure	No
Community Use	No
Public Open Space	No
Other (Please Specify)	NULL

5c. Please provide further details of your proposal, including details on number of houses and proposed floorspace of commercial buildings etc.

Per expired planning permission 2010/2232/O

5d. Please describe any benefits to the Local Area that the development of the site could provide.

Employment within the A11 Technology Corridor

Local Green Space

If you are proposed a site to be designated as Local Green Space please complete the following questions. These questions do not need to be completed if you are not proposing a site as Local Green Space. Please consult the guidance notes for an explanation of Local Green Space Designations.

6a. Are you proposing a site to be designated as a Local Green Space?

No

6b. Which community would the site serve and how would the designation of the site benefit that community.

NULL

6c. Please describe why you consider the site to be of particular local significance e.g. recreational value, tranquillity or richness in wildlife.

NULL

Site Features and Constraints

Are there any features of the site or limitations that may constrain development on this site (please give details)?

7a. Site Access: Is there a current means of access to the site from the public highway, does this access need to be improved before development can take place and are there any public rights of way that cross or adjoin the site?

There is an existing access from Stanfield Road.

The expired planning permission envisaged a new access to be formed which

included a right turn ghost island.
There are no public rights of way

7b. Topography: Are there any slopes or significant changes of in levels that could affect the development of the site?

There are no topographical constraints to development of this site and no significant changes of level.

7c. Ground Conditions: Are ground conditions on the site stable? Are there potential ground contamination issues?

Ground conditions are stable and there are no potential contamination issues.

7d. Flood Risk: Is the site liable to river, ground water or surface water flooding and if so what is the nature, source and frequency of the flooding?

No liability to flooding.
FRA attached. The (many) appendices for the FRA are not attached and these can be supplied on request.

7e. Legal Issues: Is there land in third party ownership, or access rights, which must be acquired to develop the site, do any restrictive covenants exist, are there any existing tenancies?

There are none

7f. Environmental Issues: Is the site located next to a watercourse or mature woodland, are there any significant trees or hedgerows crossing or bordering the site are there any known features of ecological or geological importance on or adjacent to the site?

There are none

7g. Heritage Issues: Are there any listed buildings, Conservation Areas, Historic Parklands or Schedules Monuments on the site or nearby? If so, how might the site's development affect them?

There are none

7h. Neighbouring Uses: What are the neighbouring uses and will either the proposed use or neighbouring uses have any implications?

Agricultural and large fuel storage depot.
The previous safeguarding zones no longer apply as the licence for petrol storage has been rescinded.

7i. Existing uses and Buildings: are there any existing buildings or uses that need to be relocated before the site can be developed.

No

7j. Other: (please specify):

There are none

Utilities

8a. Which of the following are likely to be readily available to service the site and enable its development? Please provide details where possible.

Mains water supply	Yes
Mains sewerage	No
Electricity supply	Yes
Gas supply	No
Public highway	Yes
Broadband internet	Yes
Other (please specify):	NULL

8b. Please provide any further information on the utilities available on the site:

The existing fuel depot and the previously approved development scheme are designed to treat foul drainage by means of klargesters

Availability

9a. Please indicate when the site could be made available for the land use or development proposed.

1 to 5 years (by April 2021)

9b. Please give reasons for the answer given above.

Design and planning processes

Market Interest

10. Please indicate what level of market interest there is/has been in the site. Please include relevant dates in the comments section.

None

Comments

The site owner has the skills and resources to develop the site either alone or in partnership as appropriate

Delivery

11a. Please indicate when you anticipate the proposed development could be begun.

1 to 5 years (by April 2021)

11b. Once started, how many years do you think it would take to complete the proposed development (if known)?

The market will determine this but for this scale of development, 1-2 years seems appropriate

Viability

12a. You acknowledge that there are likely to be policy requirements and Community Infrastructure Levy (CIL) costs to be met which will be in addition to the other development costs of the site (depending on the type and scale of land use proposed). These requirements are likely to include but are not limited to: Affordable Housing; Sports Pitches & Children's Play Space and Community Infrastructure Levy

Yes

12b. Do you know if there are there any abnormal costs that could affect the viability of the site e.g. infrastructure, demolition or ground conditions?

No

12c. If there are abnormal costs associated with the site please provide details:

NULL

12d. Do you consider that the site is currently viable for its proposed use taking into account any and all current planning policy and CIL considerations and other abnormal development costs associated with the site?

Yes

12e. Please attach any viability assessment or development appraisal you have undertaken for the site, or any other evidence you consider helps demonstrate the viability of the site.

None completed to date

Other Relevant Information

13. Please use the space below to for additional information or further explanations on any of the topics covered in this form

Nothing

Check List	
Your Details	
Site Details (including site location plan)	
Site Ownership	
Current and Historic Land Uses	
Proposed Future Uses	
Local Green Space (Only to be completed for proposed Local Green Space Designations)	
Site Features and Constraints	
Utilities	
Availability	
Market Interest	
Delivery	
Viability	
Other Relevant Information	
Declaration	

14. Declaration
I understand that: Data Protection and Freedom of Information The Data Controller of this information under the Data Protection Act 1998 will be Norfolk County Council, which will hold the data on behalf of Broadland District Council, Norwich City Council and South Norfolk District Council. The purposes of collecting this data are: <ul style="list-style-type: none">• to assist in the preparation of the Greater Norwich Local Plan• to contact you, if necessary, regarding the answers given in your form

- to evaluate the development potential of the submitted site for the uses proposed within the form

Disclaimer

The responses received as part of the Greater Norwich Local Plan "Call for Sites" will be published and made available for public viewing. By submitting this form you are consenting to the details about you and your individual sites being stored by Norfolk County Council, and the details being published for consultation purposes. Any information you consider to be confidential is clearly marked in the submitted response form and you have confirmed with the Council(s) in advance that such information can be kept confidential as instructed in the Greater Norwich Local Plan Call for Sites Response Form Guidance Notes.

I agree that the details within this form can be held by Norfolk County Council and that those details can be shared with Broadland District Council, Norwich City Council and South Norfolk District Council for the purposes specified in this declaration.

Name
Tim Mills

Date
7/6/2016