RURAL PARTNERS LIMITED
F I N E · P L A N S

Parkhouse Farm, Harbottle, Morpeth, Northumberland, NE65 7BD
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DESIGN AND ACCESS STATEMENT

Land to East of Durhams Road
Wiles Farm, Dawsmere
Spalding, Lincolnshire

Proposed
Irrigation Reservoir

Ref No. FP/007/DS October 2017

Loveden Estates (Dawsmere) Ltd
Wiles Farm
Durhams Road
Dawsmere
Spalding
Lincolnshire
PE12 9NJ

1. BACKGROUND

Wiles Farm extends to some 385 hectares, farming the normal South Lincolnshire crops including 65 hectares of potatoes and some brassicas and lettuces beside the normal arable crops for the area.

Prior Approval for an Irrigation Reservoir on land east of Durhams Road, Wiles Farm, Dawsmere was first was granted on 2nd November 2016 ref: H06-1007-16. Subsequently the applicant decided to increase the capacity of the proposed irrigation reservoir and a revised application was submitted and Prior Approval for this application was granted on 11th July 2017 (H06-0566-17).

Work commenced on the Irrigation Reservoir on 21st July 2018 and it was found that ground conditions indicated together with related practical farming considerations to revise the layout of the reservoir.

As work had already started it would not have been possible to deal with the proposed changes under the Prior Approval Procedure so it was decided to continue with the construction of the Irrigation Reservoir and submit a retrospective planning application prior to completion to regularise the situation.

2. RESERVOIR DESIGN CRITERIA

The reservoir has been designed with reference to the following:-

> Small Embankment Reservoirs; Report 161; CIRIA (Construction Industry Research and Information Association)
> Floods and Reservoir Safety: an Engineering Guide; The Institution of Civil Engineers. *(F&RS)*

Freeboard Height
Design Freeboard when full is 0.75m

Fetch	0.3 km	
Average Hourly annual max wind speed	18 - 20 m/s	*Fig 3 F&RS*
Once in Ten Yearly maximum wind speed	24 - 26 m/s	*Fig 4 F&RS*
Design Wind Speed assumed	25 m /s	

Using *Fig 9. F&FS* Relationship between effective fetch, wind speed and significant wave height by interpolation

Significant Wave Height 0.35 m

Design Wave Height

Using *Table 2 F & FS* Design Wave Heights

Dam Type		Earth Fill
Crest		Road
Downstream slope		Random grass
Design wave height factor		1.2
Design wave height	=	0.35 m x 1.2
	=	0.42 m

Wave Run Up

Using *Fig 10 F&FS* Ratio of run-up height to design wave height

Dam Slope		1 : 4
Slope characteristic		Smooth
By interpolation Run-up Ratio		1.7
Minimum Freeboard Allowance	=	0.42 m x 1.7
	=	0.714 m
	=	0.75 m

3. ARCHAEOLOGY

No evidence of archaeology was uncovered during the site strip and subsequent excavation to construct the reservoir.

4. FLOOD RISK ASSESSMENT

The proposed Irrigation reservoir is within an area designated as a Flood Zone 3.

The land in question benefits from an existing Flood Bank which protects the surrounding area from flooding from the Sea.

The whole farm lies within the Flood Zone and the needs is for an Irrigation Reservoir, the proposal will not increase the risk of flooding elsewhere.

In the event of a flood the structural integrity of the Reservoir is unlikely to be affected.

5. CONCLUSION

Prior Approval has been previously granted on this site

Work commenced on the Irrigation Reservoir on 21st July 2018 and it was found that ground conditions indicated together with related practical farming considerations to revise the layout of the reservoir.

This application has been submitted so as to regularise the situation.

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PLANS

FP/007/250	Site Plan
FP/007/02	Plan
FP/007/03	Typical Section of reservoir