

# Dunster

Consulting

civil & structural engineering

DEVELOPMENT CONTROL SECTION

13 SEP 2013

DATE RECEIVED

Referred to

for

**Mr and Mrs Thompson**

**Clampitt Creek**

**Off Blackmore Lane**

**Haxey, North Lincolnshire**

**Site Development**

**Clampitt Creek, Haxey**

**Drainage Assessment for the**

**Site**

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Issued by David Dunster

Rev -

Date 02 February 2013

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## **1.0 Introduction and Clients Brief**

Dunster Consulting Limited has been instructed by Carl Thompson of Clampitt Creek Haxey to carry out a Surface Water Drainage Runoff Impact Assessment for the site. The site is marked on the location plan 10-002/A3/200 and its relationship to the adjacent Walkabout Farm site on drawing number 10-002/A1/201, both of which are included in the Appendix Section 8.0.

This report provides and comments upon the records obtained from the Local Authority/Site Owners. We have then applied this information to carry out a Surface Water Drainage Runoff Impact Assessment to determine any constraints to the development and then any drainage control measures which would have to be applied to the development proposals.

This drainage assessment has been prepared in support of a planning application made Mr and Mrs Thompson for the development of the site as a high quality sustainable farm which incorporates the current caravan/camping site. Please refer to the Business Plan outlining Mr and Mrs Thompson's plans for the future and the type of activities currently being proposed.

## **2.0 The Site**

The site is located off Blackmore Lane, approximately 0.5km east of the A161 Epworth Road at the north edge of the village of Haxey. The National Grid Reference is SE 78143 00531. The site is an approximately rectangular shaped plot of land and occupies an overall area of approximately 2.6 hectares.

The site is located in open countryside with various hedgerows and fields. Access to the site is via an unmade road.

The site is relatively flat and is at a high point in the surrounding area.

The proposed development of the site comprises the retention of one existing log cabin, existing campsite toilets and the retention/extension of the existing timber verandah inclusive of storage.

A proposed site layout is attached in Appendix Section 8.0. as shown on drawing number 10-002/A1/203.

This report should be read in conjunction with the Flood Risk Assessment prepared for the site.

## **3.0 Site Inspection**

A site inspection was carried out on 01.11.12. A Site Walkover Report Form was completed as per our standard procedure.

Pertinent items relating to flood/drainage issues can be summarised as follows :

- The site is primarily occupied by an existing log cabin, campsite toilets and timber verandah inclusive of storage plus a restricted campsite. The site is almost entirely a soft landscaped area.
- Ground levels are generally flat/marginally inclining across the site.
- Surface water drainage outfalls to the drainage ditch adjacent to the north and west site boundaries for discharge off site as indicated on drawing number 10-002/A1/201. Foul drainage is by Septic Tank. The ditch is currently functional and easily flowing but will require to be cleaned out as part of the maintenance regime to operate more efficiently.
- There are no indications of any previous or recent flooding/flood issues on or adjacent to the site.
- There is a gravelled hardstanding area adjacent to the site access for vehicular parking.

## **4.0 Surface Water Drainage Runoff Impact Assessment**

The local drainage authority, Severn Trent Water Authority, has provided

a response to a predevelopment enquiry. They have advised that the public sewer network is located adjacent to the A161 and within Haxey. There is no public sewer network in the vicinity of Walkabout Farm or the adjacent property at Clampitt Creek.

There is a drainage ditch adjacent to the north and west site boundaries for outfall of surface water drainage off site ie the current roof drainage from the existing log cabin and verandah, and from a previous large industrial farm building destroyed by fire damage. The foul is drained through a septic tank to the same ditch. It was confirmed whilst on site that the septic tank is regularly emptied. Observations from site are referred to in Section 3.0 above.

The only new building within the planning application will be the extension to the verandah which will also shed rainwater/surface water drainage to the abovementioned ditch, however the roof area of which is considerably less than the previous industrial farm building.

The following summarises the proposals for the discharge of surface and foul water from the development.

- **Surface Water Drainage :**

The current impermeable surface area is limited to the roofs of the timber log cabin and existing verandah building. This will be increased with the construction of the extension to the verandah. No other impermeable areas are currently envisaged. The Environment Agency and the local drainage board will require the discharge of surface water to comply with Building Regulations Part H, according to the following hierarchy:

1. to ground by infiltration
2. to a watercourse
3. to a sewer, if option (1) and (2) are not reasonably practicable.

We have carried out infiltration tests on site and due to the ground conditions comprising clay to sandy/silty clay, the infiltration into the ground is insufficient to accommodate surface water drainage and hence Item (1) is not appropriate. The drainage as existing is discharged to a watercourse as Item (2). It is the intention to maintain this arrangement along with a new outfall to accommodate the roof drainage from the extension to the verandah. As referred to above, Item (3) is not possible as there are no public sewers in the immediate vicinity.

The current buildings are positively drained, via high level gutters, into vertical rainwater drainpipes, discharging directly into the outfall to the drainage ditch. The design of the extension to the verandah will also adopt the same drainage principles. As the roof area is considerably less than that of the previous industrial farm building demolished some years ago after fire damage, no additional measures are considered necessary.

- **Foul Water**

The existing drainage accommodating kitchen waste/toilet/sink exists within the existing timber log cabin drains directly into a belowground septic tank which is emptied regularly throughout the year

Other than the septic tank to both Clampitt Creek and the adjacent property at Walkabout Farm, there are no external drains or manholes.

On site CCTV survey investigations will be undertaken to identify any potential defects in the discharge pipe from the existing accommodation.

Foul drainage is not required in the verandah extension.

## **5.0 Drainage Constraints**

On the basis of the above assessments and our experience in similar projects, we would suggest that there are a few constraints which require to be addressed within the development proposals, and would summarise as follows :

- As referred to in the Flood Risk Assessment Report there are no constraints and a very low probability of flooding from sea or rivers. Similarly from ground water.
- The existing accommodation and overall site have been unaffected by flooding and drainage implications during recent memory.
- There are potential restrictions to the capacity of the existing drainage system as a result of blockages/debris, however this can be addressed by an appropriate maintenance regime which is standard for any such development or for existing properties

- There is marginal uplift in drainage discharge from the current site to accommodate the increase from the extended verandah roof, together with the increase for climate change required by the Government. However as referred to previously, the roof area is considerably less than that of the previous industrial farm building demolished some years ago after fire damage, hence no additional measures are considered necessary.
- It is not proposed to regulate the flow of surface water by the introduction of a below ground attenuation tank.
- The proposed extension to the verandah will as a result not flood itself or flood any other part of the site or any other ground downstream.
- There is no intention to alter the existing gravel hardstanding area for vehicular parking.

## **6.0 Drainage Control Measures**

With reference to the above, we would recommend the following

- The marginal increase in surface water drainage discharge off site along with the climate change requirement can be accommodated by the existing drainage system as it is considerably less than that generated by the previous industrial farm building demolished some years ago after fire damage.
- There are potential restrictions to the capacity of the existing drainage as a result of blockages/debris, however this can be addressed by an appropriate maintenance regime. Previously such maintenance has been undertaken by owners of both Clampitt Creek and the adjacent Walkabout Farm site.
- The ground floor level of the proposed extension to the verandah is to be set up at 150mm above the adjacent external ground level.

## **7.0 Conclusion**

This assessment has looked at the drainage implications in support of the planning application for Clampitt Creek Haxey.

The site lies within Flood Zone 1 and is therefore at very low risk of flooding from river or Sea, and hence has little bearing on drainage discharge from site.

Surface water proposals for this site have been based on Environment Agency recommendations and have recognised the drainage capacity of the much larger industrial farm building located on the site previously.

The existing drainage ditch requires to be cleaned out and maintained so as to achieve the maximum available flow rate.

## **8.0 Appendix**

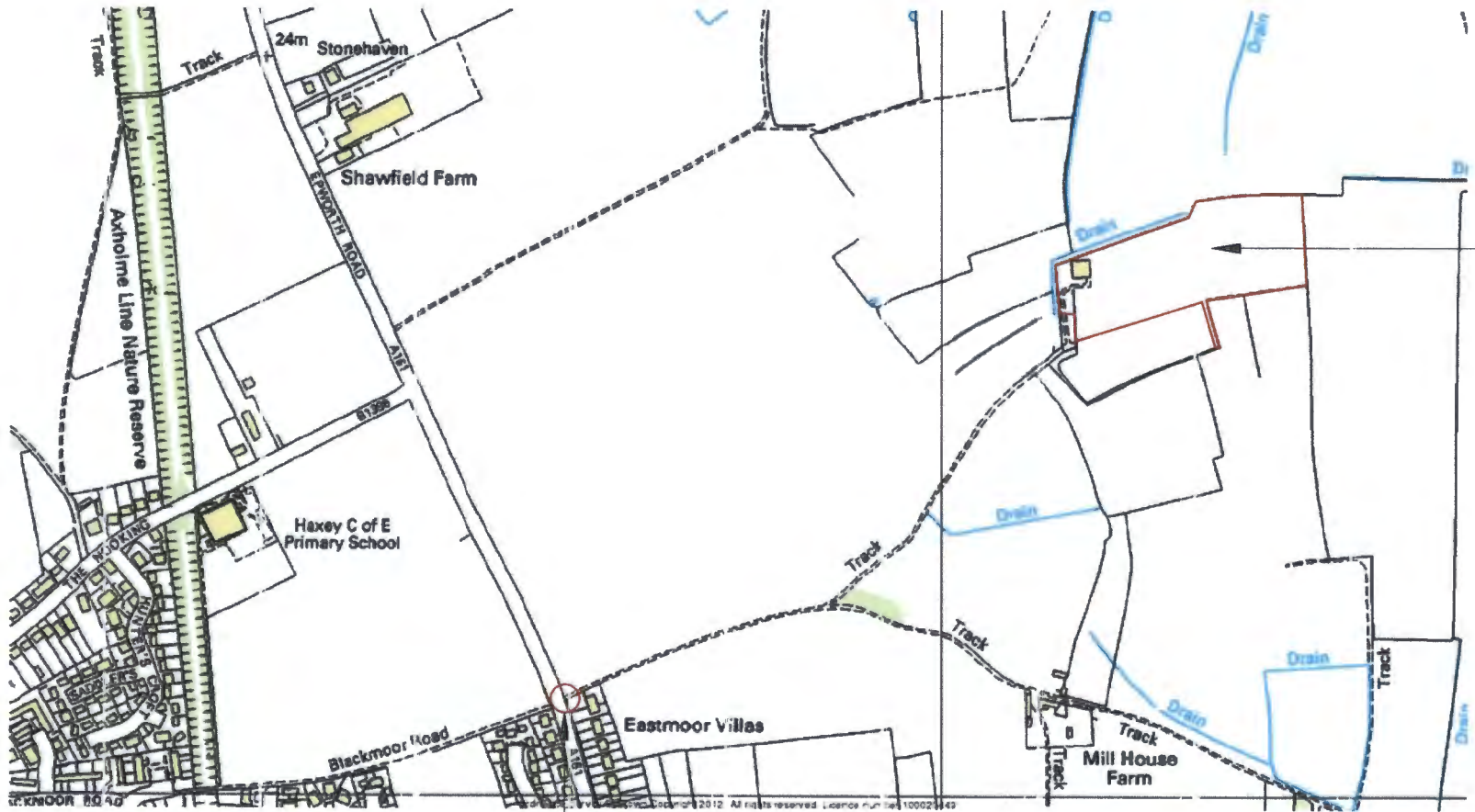
### **Location and site plans.**

For and on behalf of Dunster Consulting Limited

Name : David Dunster  
Qualifications : BSc , CEng , MICE

notes :

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Site Access. Refer to drawing n.o. 202.

rev	amendments	by	date
<h1>Dunster</h1> <p>Consulting</p> <p>civil &amp; structural engineering</p>			

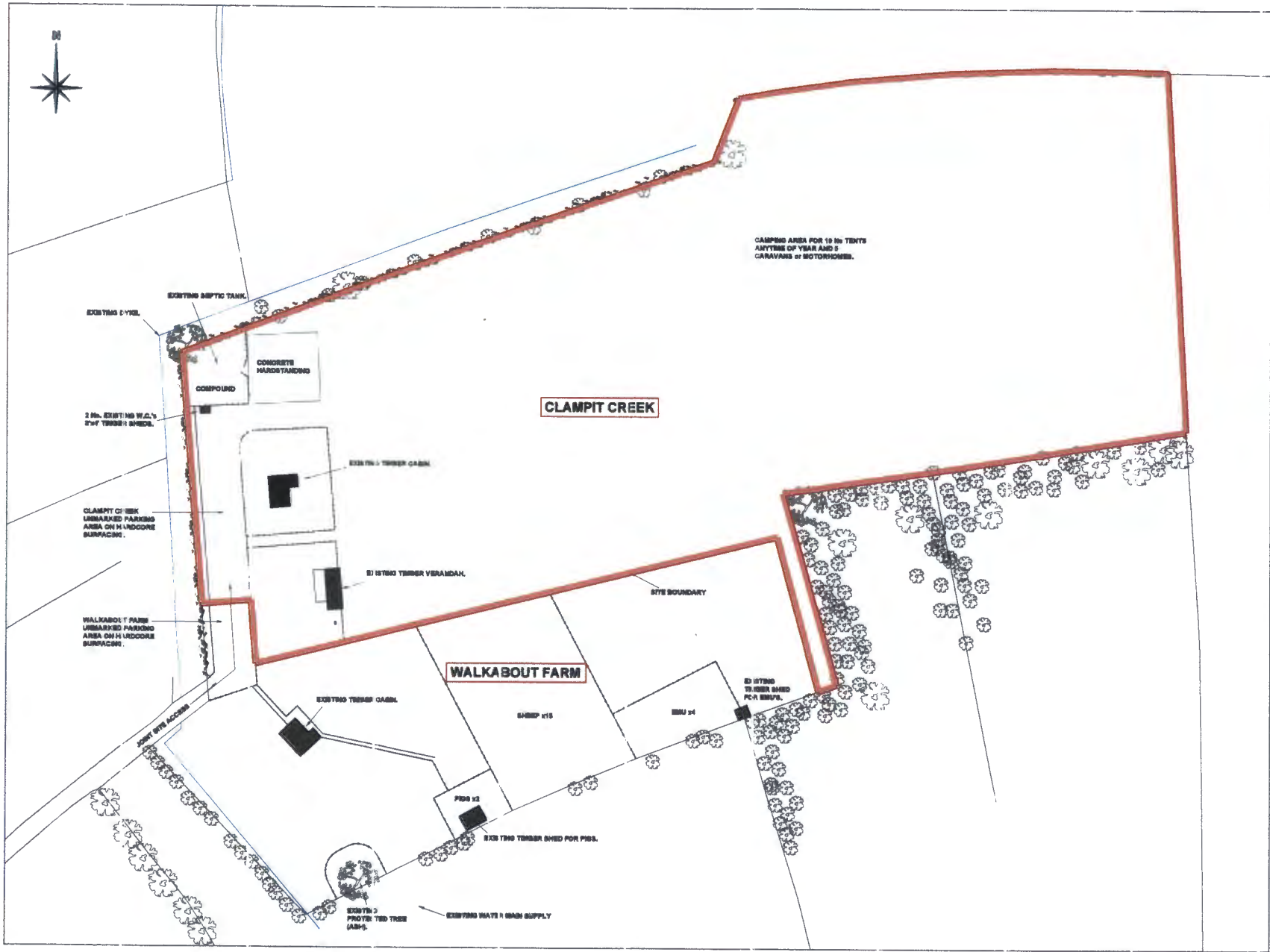
Client: **Mr Carl Thomson**

Project: **Clampit Creek Haxey**

Title: **Site Location Plan**

Drawing Status: <b>Planning</b>	Date Created: <b>June 2013</b>	Drawing Scale: <b>1 : 5000</b>
Drawing Number: <b>10-002 / A3 / 200</b>		
Project Leader: <b>DJD</b>	Drawn By: <b>DJC</b>	Initial Reviewer: <b>DJD</b>

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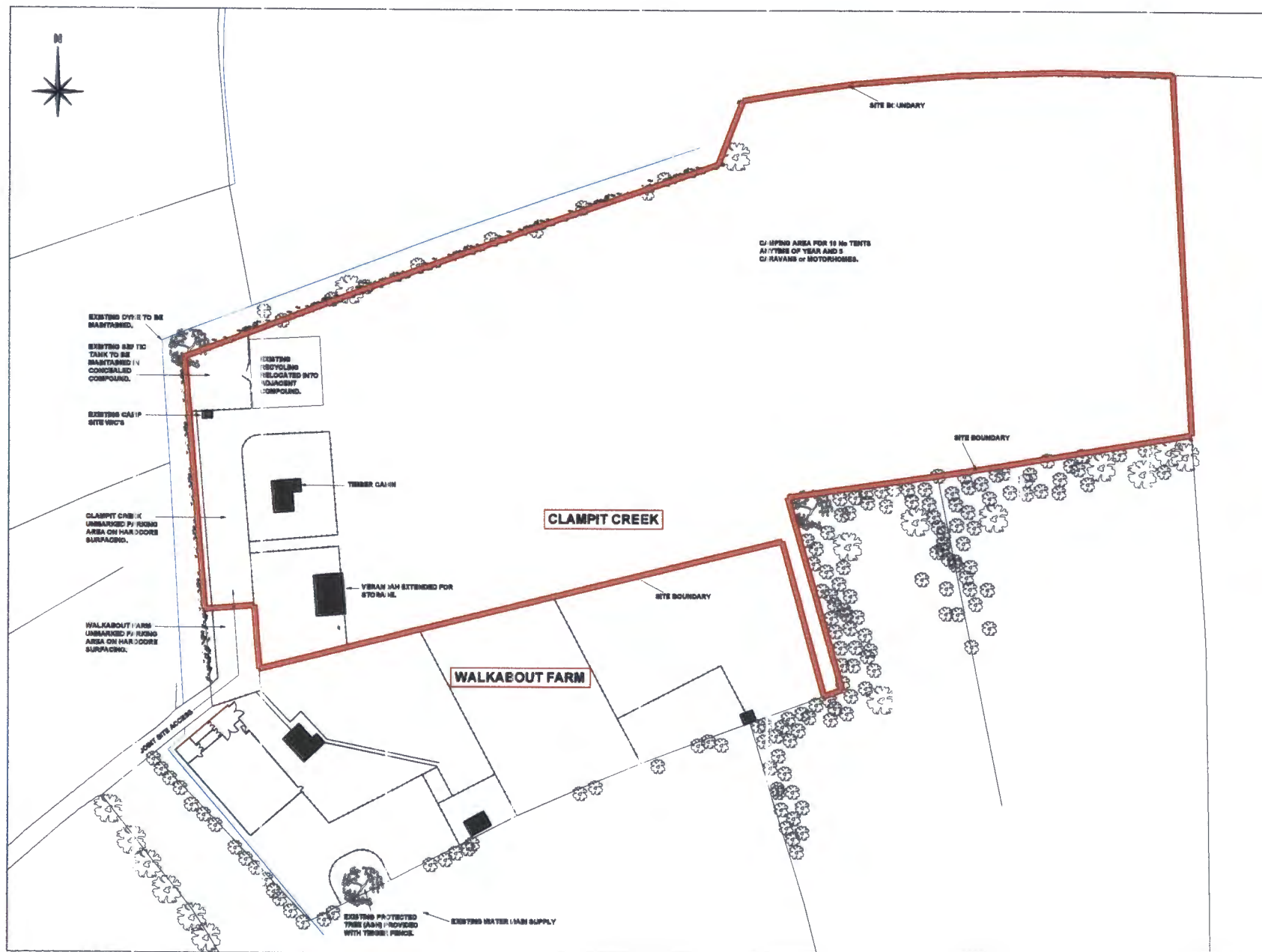
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DATE	ISSUE	BY	CHK
<b>Dunster</b> Engineering civil & structural engineering			
Client: Mr Carl Thomson			
Project: Old Mill Creek Main y			
Title: Siteing & No Layout			
Drawing Status: Planning	Site Number: A101	Drawing Date: 1 / 2010	
Project Lead: DJD	Designer: DJC	Issue/Rev: GJB	

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**REFER TO THE FOLLOWING DRAWINGS:**  
 S04 - LDI CABIN  
 S05 - VERANDA



Existing FENCE



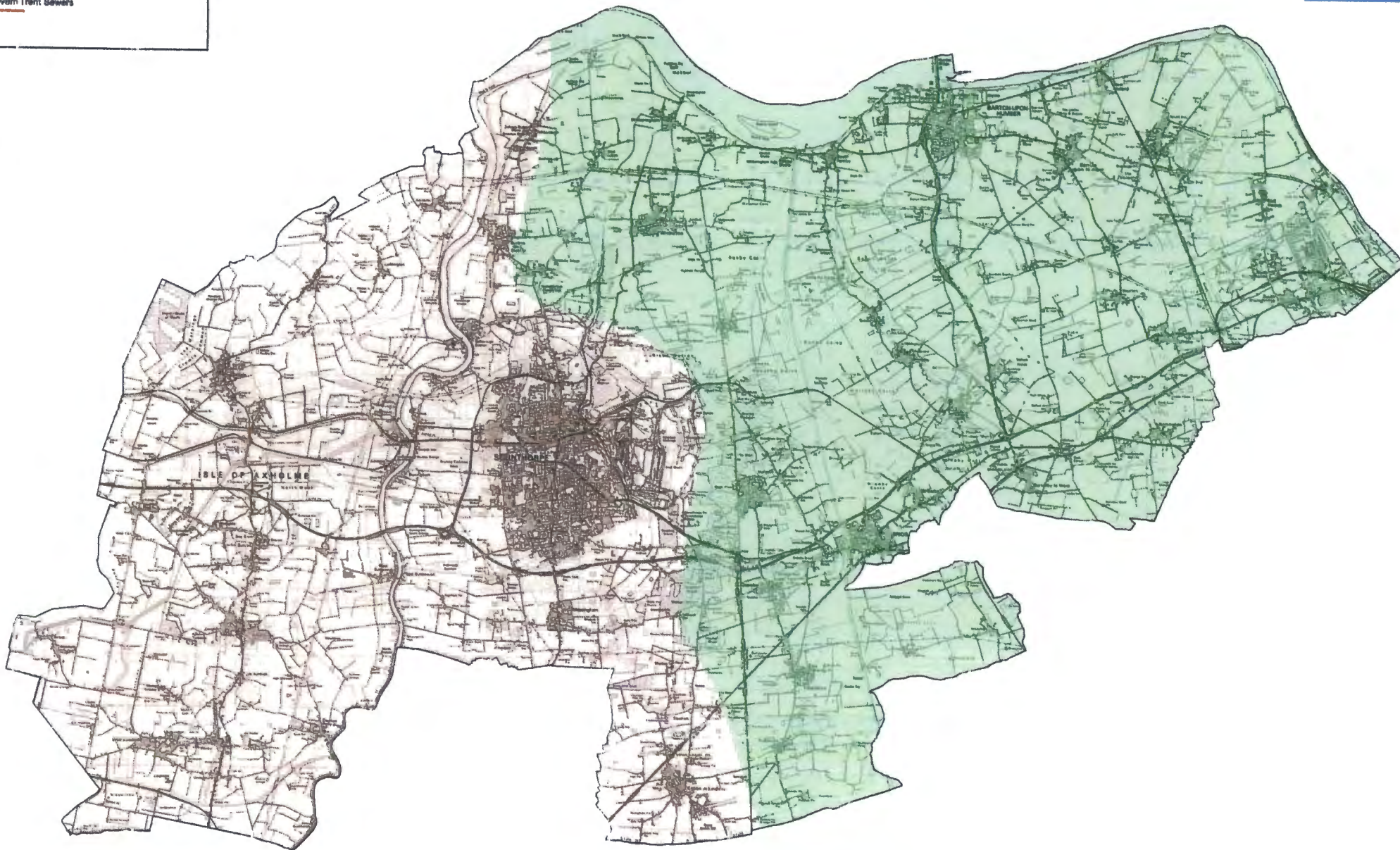
Existing Yard & Recycling Area



Existing Yard & Recycling Area

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<b>Dunster</b> Civil & structural engineering	
Client: Mr Carl Thomson	
Project: Clonilla Creek Holiday	
Title: Proposed Site Arrangement	
Drawing Date: Planning	Drawn Date: June 2018
Drawing Scale: 1:500	Sheet No: A1/700
Project Leader: DJD	Drawn By: DJD
	Initial Name: DJD



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	<p>Drawn by: Dave Atkinson</p> <p>Scale @A2 1:90729</p> <p>Date: 12/09/2011</p>	
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