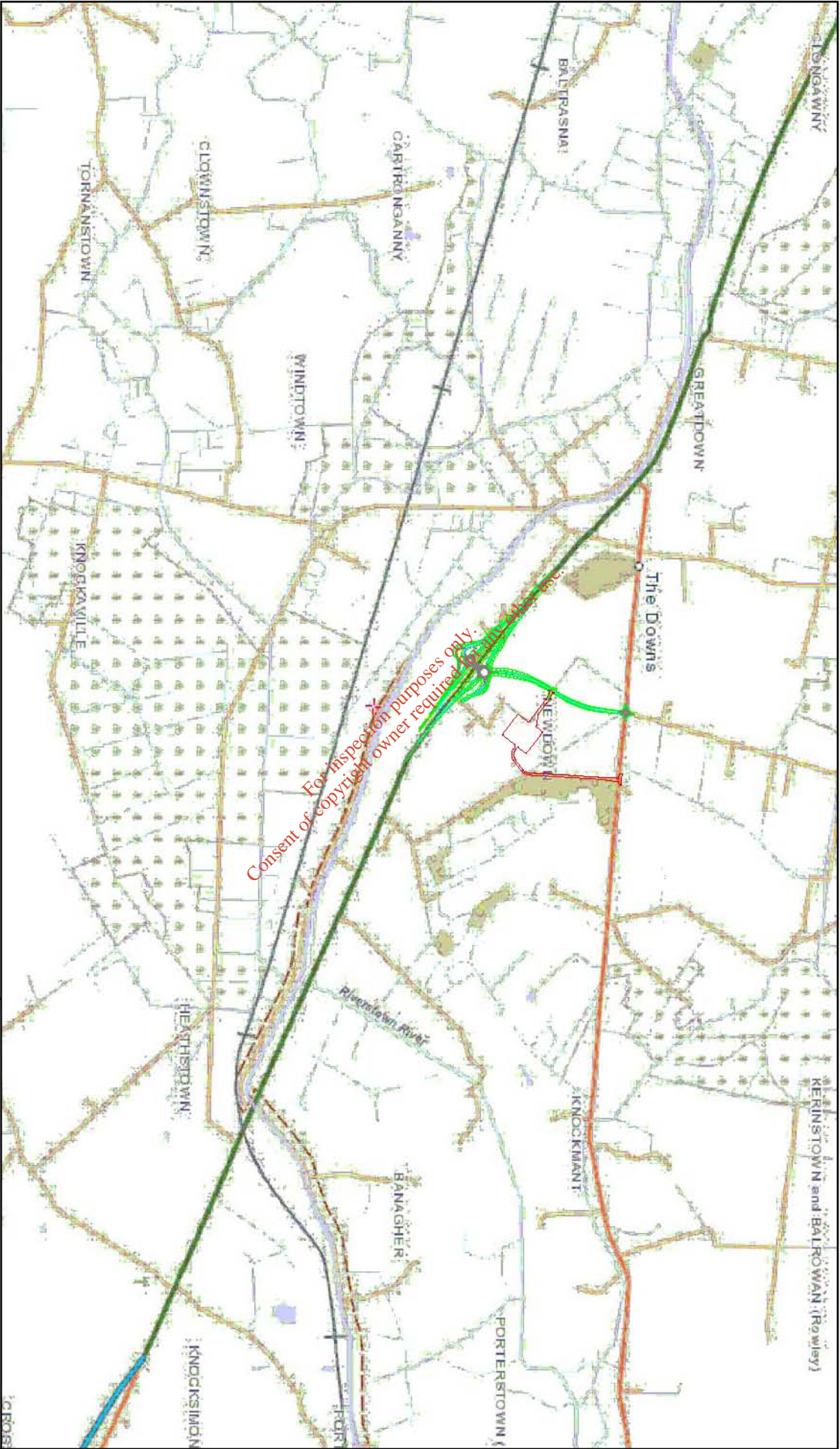


## PLATES

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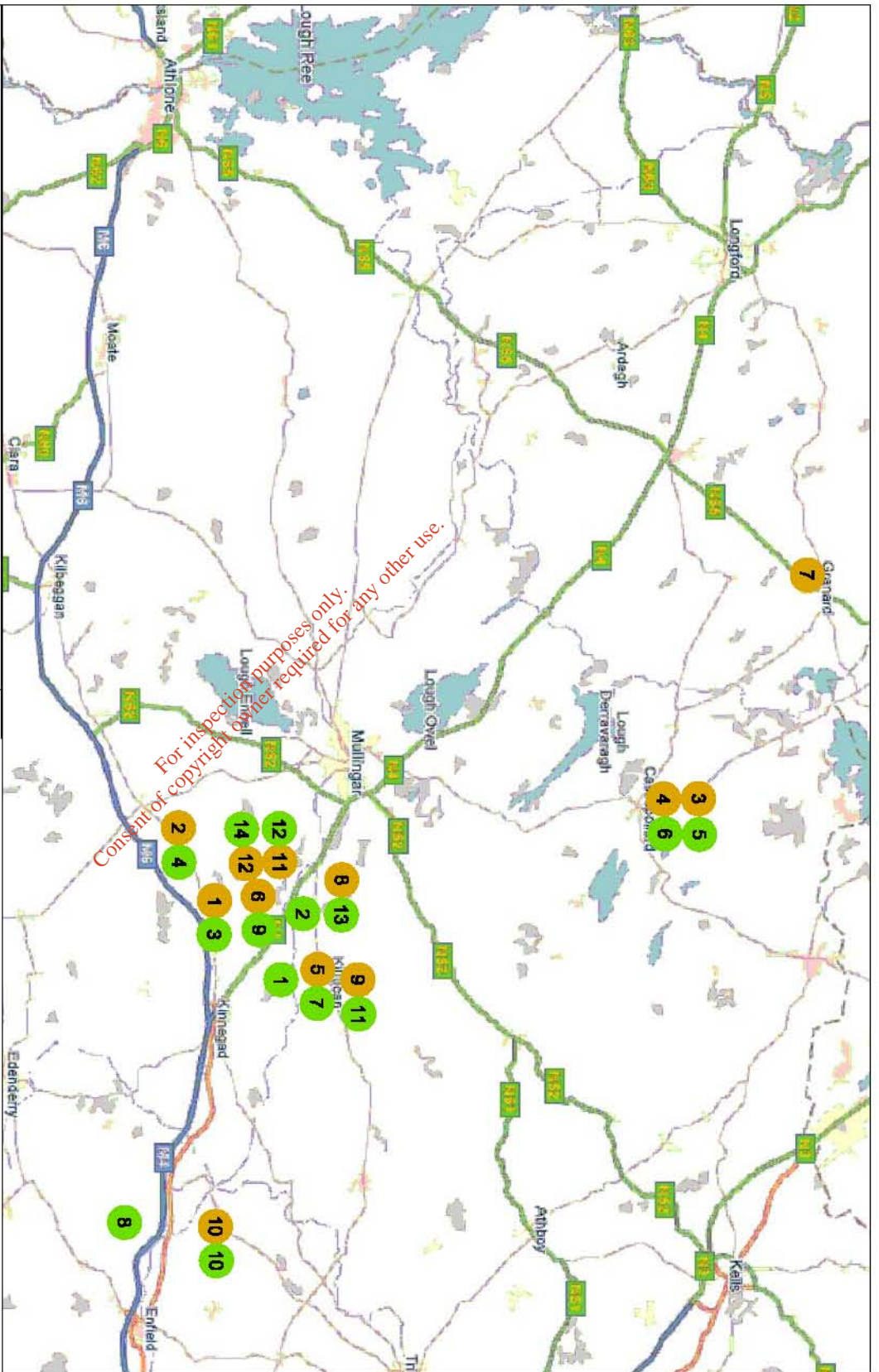
- Site Location
- Supplier / Receiver Locations
- Bio energy Process
  - Trial Pit 1
  - Trial Pit 2
  - Trial Pit 3
- Field 1, facing north
- Field 1, clearance cairn, facing northeast
- Field 2, facing north
- Field 2, slight rise in the ground (APP 1) facing northeast
- Track way located within proposed development area, facing northwest



**PLATE 1 SITE LOCATION**

OSI MAP LICENCE NO. EN0045811





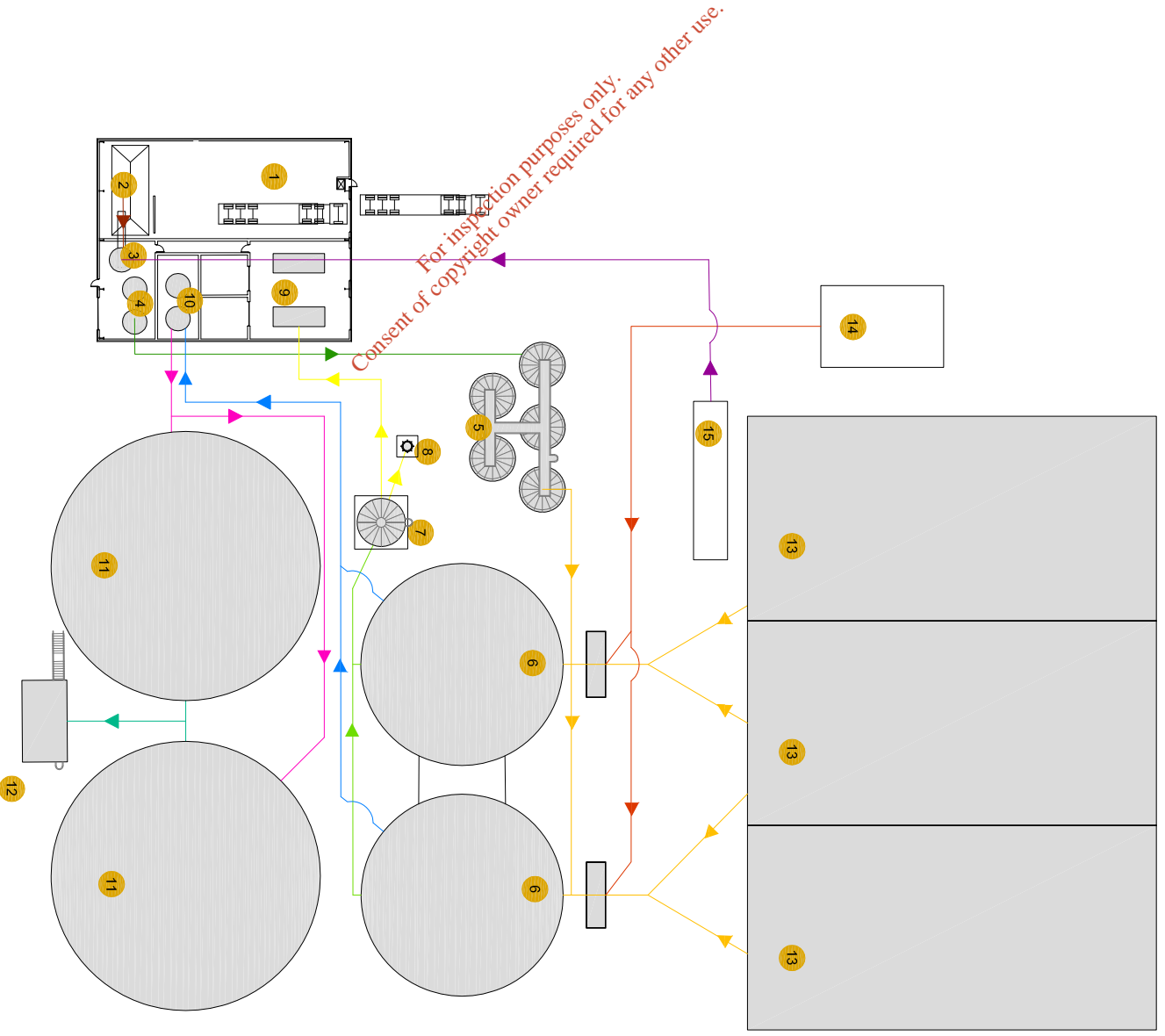
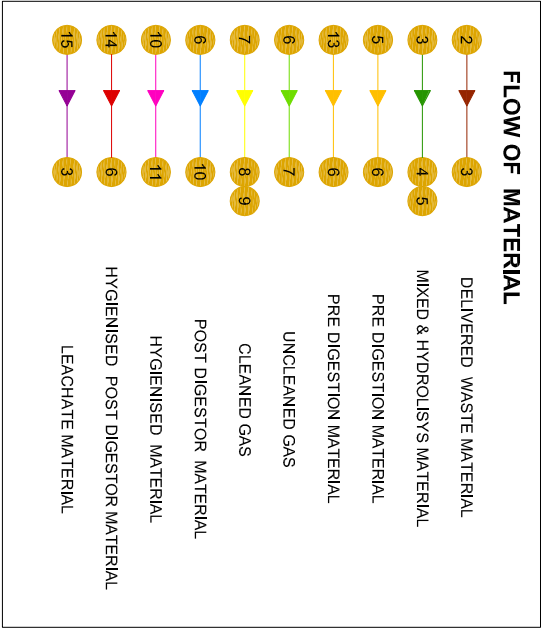
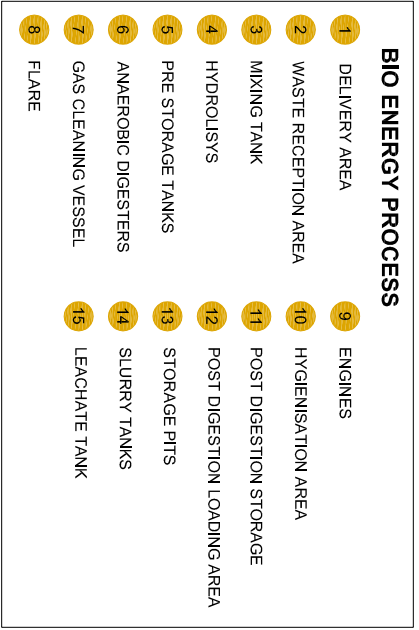
**SUPPLIERS OF FEED STOCK**

- 1 PATRICK A DARDIS- CLONFAD, KINNEGAD
- 2 LEO WRIGHT- GORTUAMON MILLTOWNPASS
- 3 MICHAEL FAY- FREIGHMORE, CASTLEROLLARD
- 4 WILLIAM FAY- FREIGHMORE, CASTLEROLLARD
- 5 PAT LYNAM- PORTERSTOWN, KILLICAN
- 6 JOHN FLYNN- LOWTOWN, CORALSTOWN
- 7 BAKERY WASTE
- 8 PAUL FLYNN- NEWDOWN, THE DOWNS
- 9 PAUL CONNOR- BALROWAN, KILLICAN
- 10 W. BUTTMER & SONS- DALYSTOWN, LONGWOOD
- 11 FRANCES FLYNN- LOWTOWN, CORALSTOWN
- 12 MATTHEW GLENNON- HIGHTOWN CORALSTOWN

**RECEIVERS OF PRODUCT**

- 1 THOMAS CLEARY- BALLINLA, KILLICAN
- 2 THOMAS FLYNN- WOODFORT, THE DOWNS
- 3 PATRICK A DARDIS- CLONFAD, KINNEGAD
- 4 LEO WRIGHT- GORTUAMON MILLTOWNPASS
- 5 MICHAEL FAY- FREIGHMORE, CASTLEROLLARD
- 6 WILLIAM FAY- FREIGHMORE, CASTLEROLLARD
- 7 PAT LYNAM- PORTERSTOWN, KILLICAN
- 8 JOHN SOLLEY- CADWASTOWN, BROADFORD
- 9 JOHN FLYNN- LOWTOWN, CORALSTOWN
- 10 W. BUTTMER & SONS- DALYSTOWN, LONGWOOD
- 11 PAUL CONNOR- BALROWAN, KILLICAN
- 12 FRANCES FLYNN- LOWTOWN, CORALSTOWN
- 13 PAUL FLYNN- NEWDOWN, THE DOWNS
- 14 MATTHEW GLENNON- HIGHTOWN CORALSTOWN

**PLATE 2 FEEDSTOCK SUPPLIER / PRODUCT RECEIVER**



REV. NO.	DESCRIPTION	DATE	BY	CHKD.	DATE	BY	CHKD.
01	ISSUED FOR PERMITS						
02	ISSUED FOR PERMITS						

REV. NO.	DESCRIPTION	DATE	BY	CHKD.
01	ISSUED FOR PERMITS			
02	ISSUED FOR PERMITS			

PROJECT NO.	PROPOSED BIOENERGY FACILITY AT NEWDOWNS, THE DOWNS, MULUNGAR, CO. WESTMEATH
DATE	11/1/2010
SCALE	AS SHOWN
DATE	02/03/2011
PROJECT	PLANNING





PLATE 7.1 TRIAL PIT 1





PLATE 7.2 TRIAL PIT 2





PLATE 7.3 TRIAL PIT 3



**Plates**



Plate 8.1: Field 1, facing north



Plate 8.2: Field 1, clearance cairn, facing northeast





Plate 8.3: Field 2, facing north



Plate 8.4: Field 2, slight rise in the ground (AAP 1), facing northeast



Plate 8.5: Trackway located within proposed development area, facing northwest

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## FIGURES

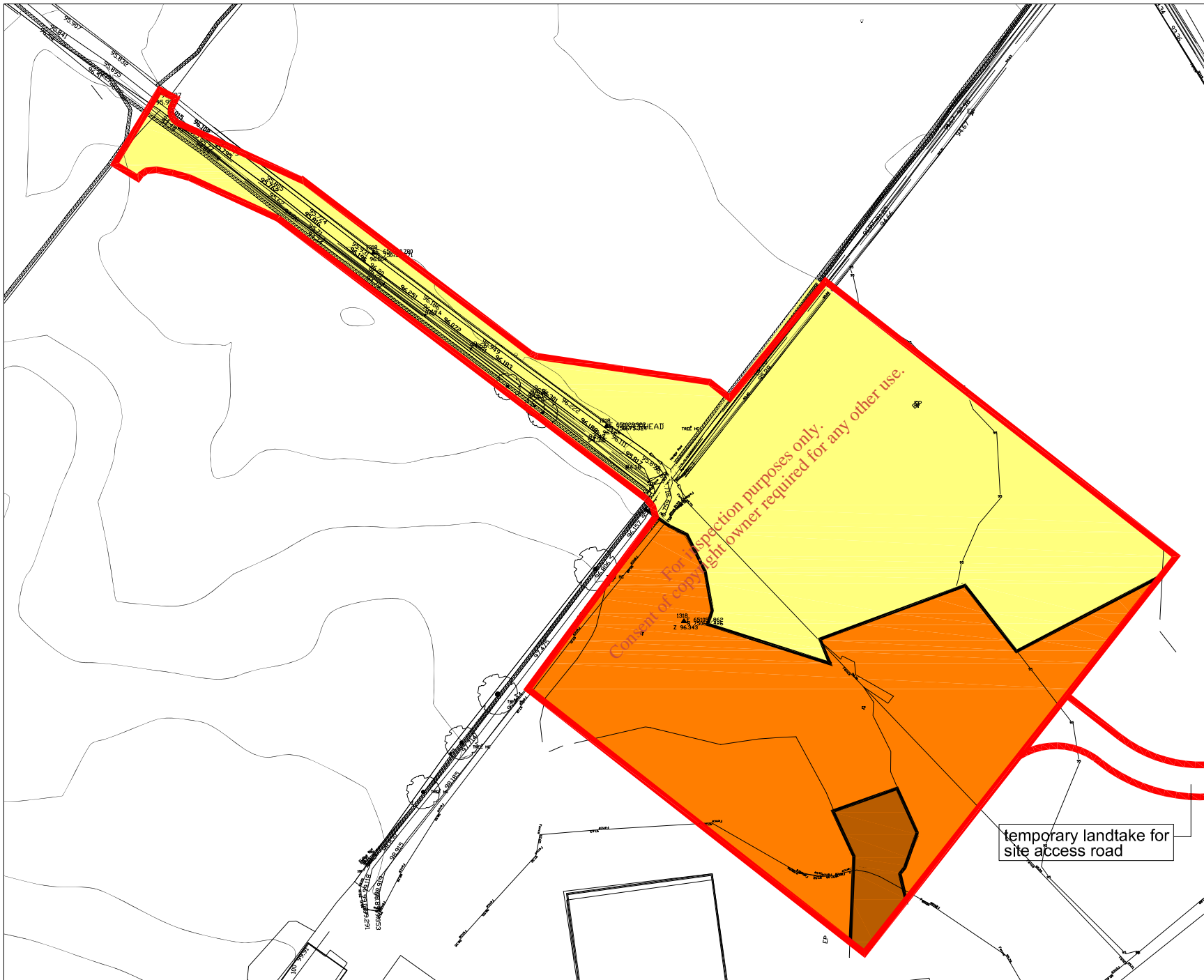
Site location  
Extract from the RMP map  
Proposed site layout  
Area of proposed development showing nearby archaeological site  
Extract from the first edition OS map (1842)  
Extract from the third edition OS map (1914)  
Site context  
Topography map  
Slope map  
Existing vegetation map  
Land use map  
Visual analysis map



FIG. 11.1 SITE CONTEXT











Legend:

-  tree planting
-  hedgerow
-  site boundary

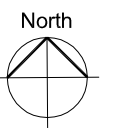
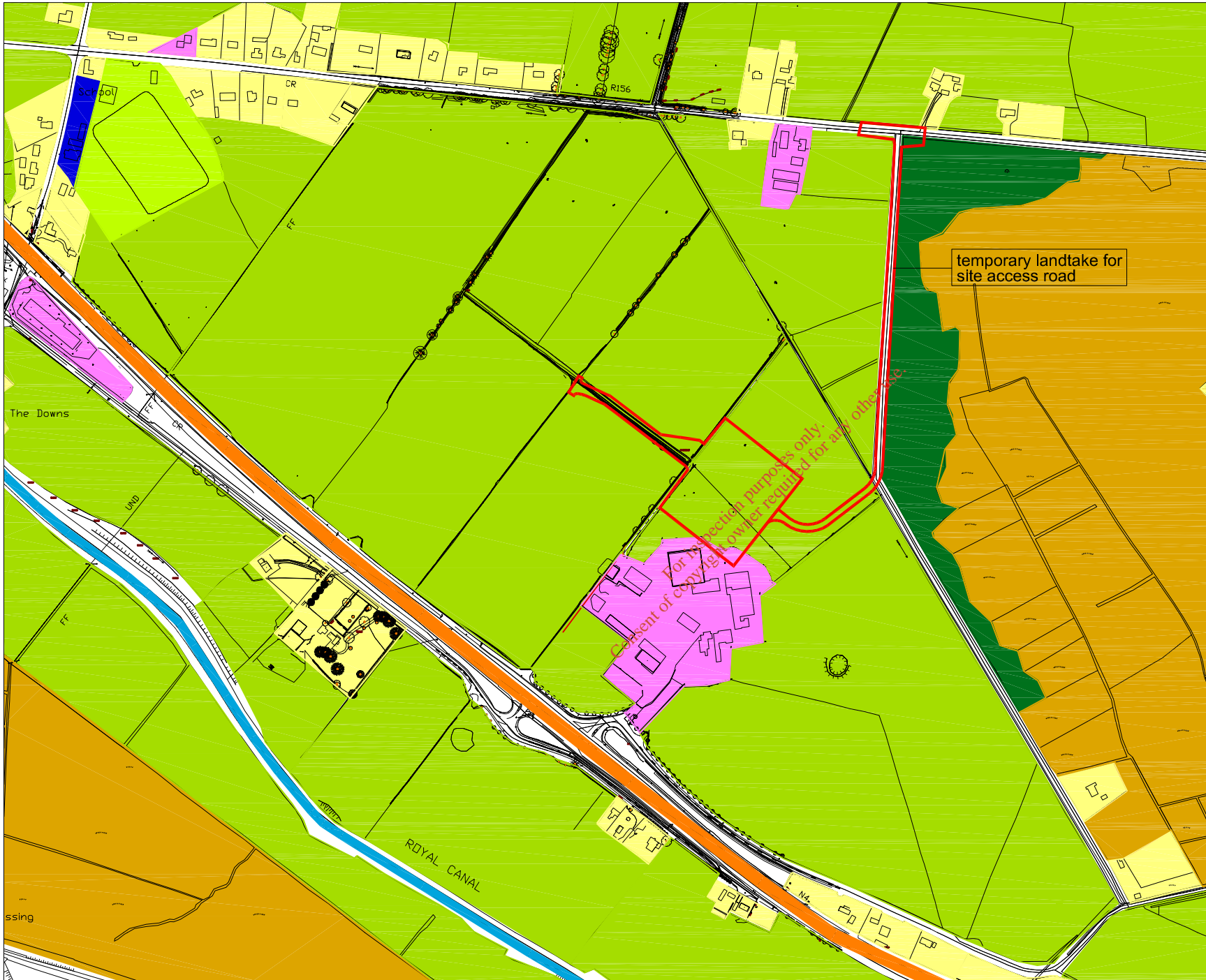


FIG. 11.4 EXISTING VEGETATION MAP



Legend:

- residential
- agriculture
- institutional
- sports related
- scrub woodland
- poor quality agriculture / marsh land
- Royal Canal
- N4 dual carriageway
- site boundary

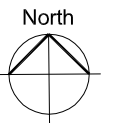
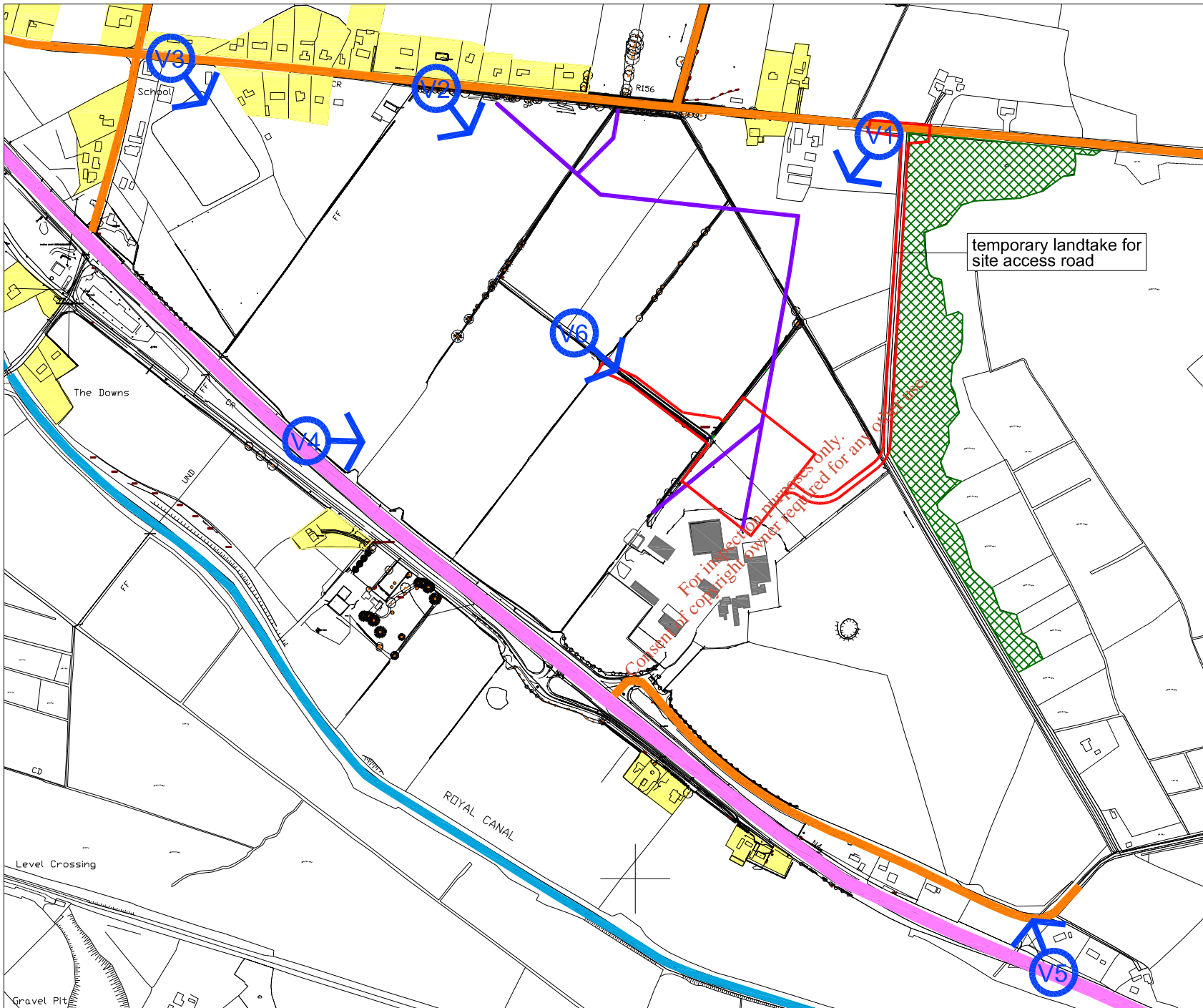











FIG. 11.5 LAND USE MAP





- Legend:
-  views in
  -  overhead powerlines
  -  primary vehicular movement ( N4 dual carriageway )
  -  secondary vehicular movement
  -  structures adjacent to site
  -  ribbon development
  -  visual buffer
  -  Royal Canal
  -  site boundary

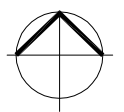
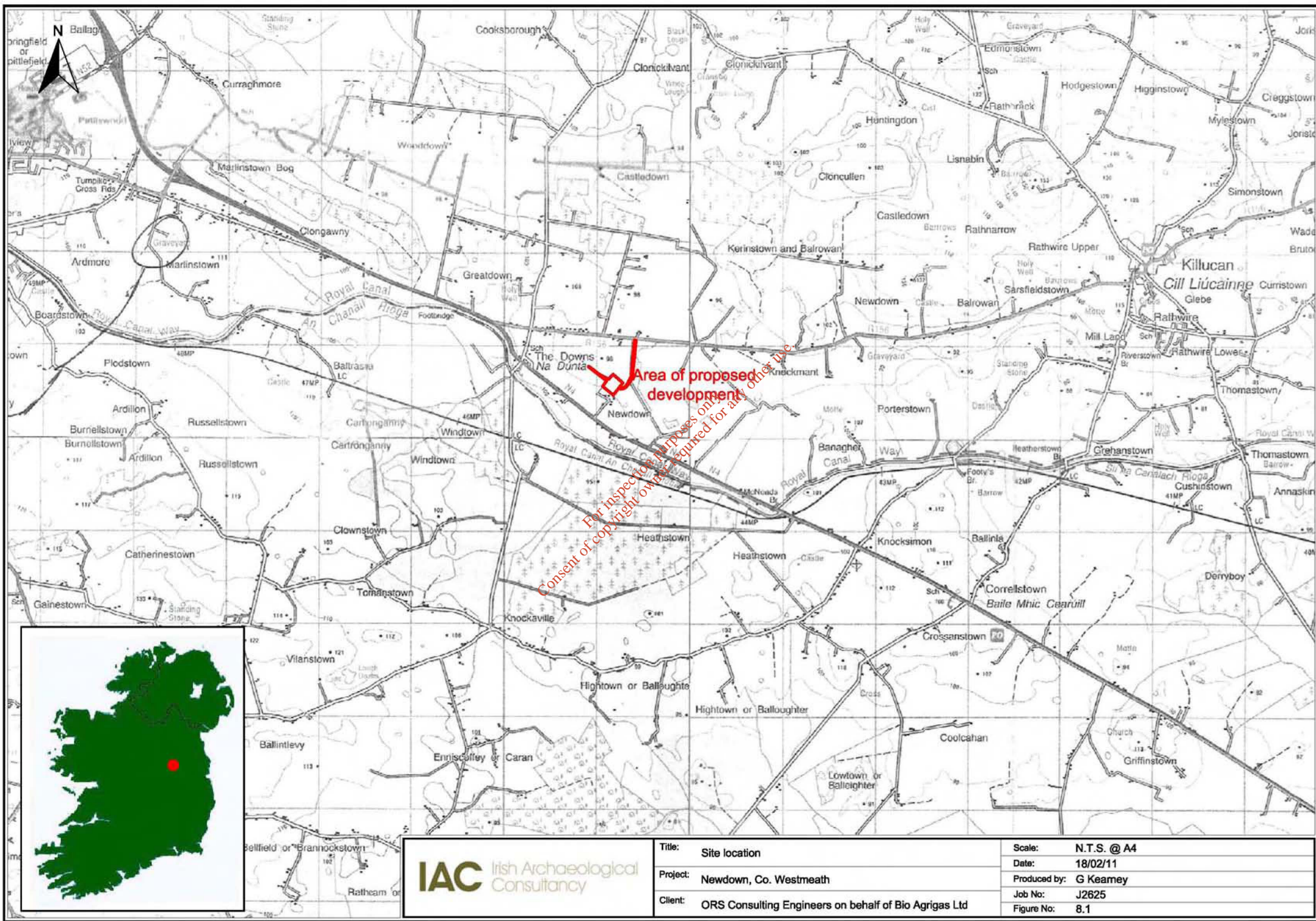


FIG. 11.6 VISUAL ANALYSIS MAP



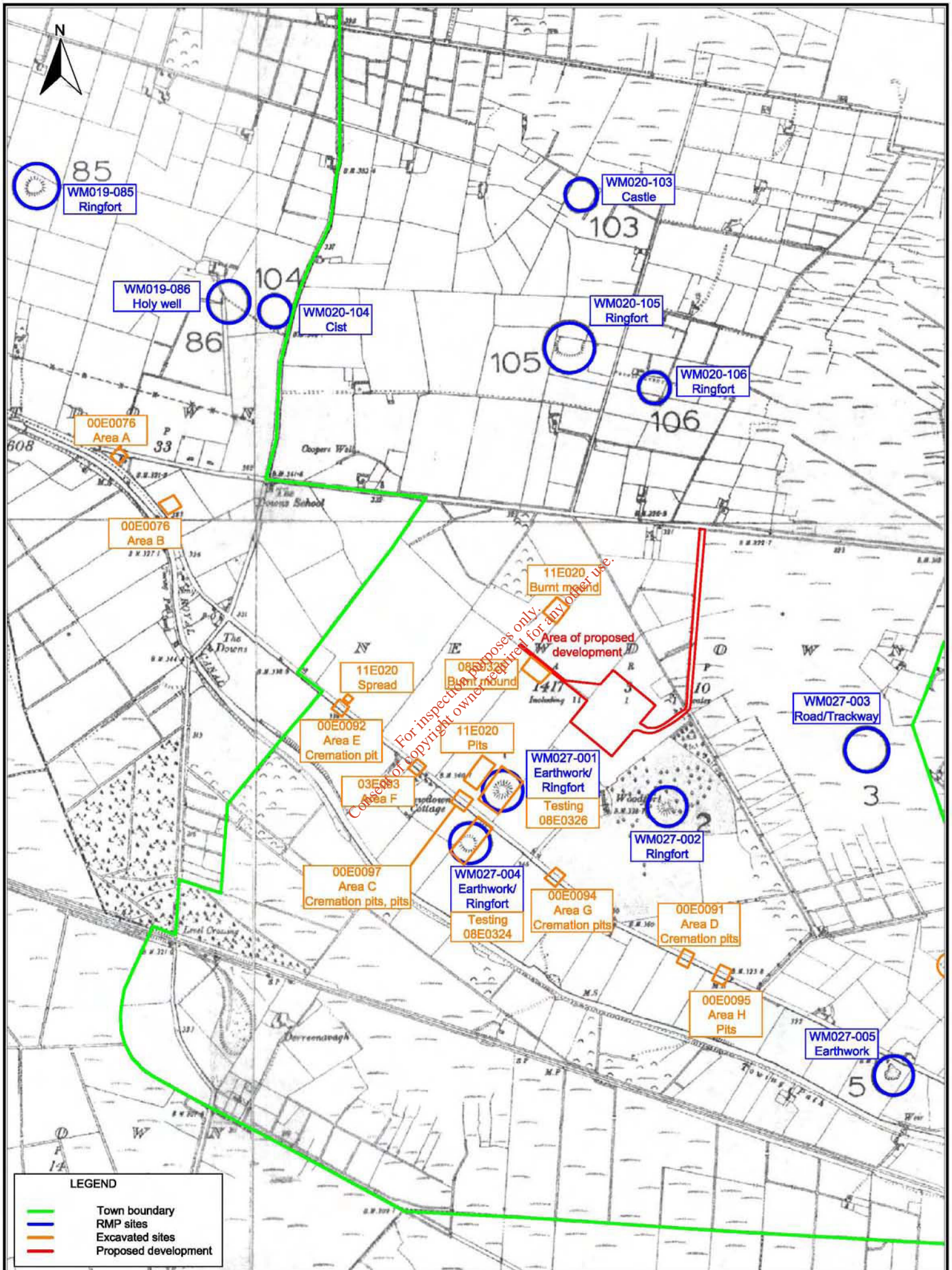
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**IAC** Irish Archaeological Consultancy

Title: Site location  
 Project: Newdown, Co. Westmeath  
 Client: ORS Consulting Engineers on behalf of Bio Agrigas Ltd

Scale: N.T.S. @ A4  
 Date: 18/02/11  
 Produced by: G Kearney  
 Job No: J2625  
 Figure No: 8.1





LEGEND	
<span style="color: green;">—</span>	Town boundary
<span style="color: blue;">○</span>	RMP sites
<span style="color: orange;">□</span>	Excavated sites
<span style="color: red;">—</span>	Proposed development

Title: Extract from the RMP map (based on the third edition OS map) showing the area of proposed development

Project: Newdown, Co. Westmeath

Client: ORS Consulting Engineers on behalf of Bio Agrigas Ltd

Scale: N.T.S. @ A4

Date: 18/02/11

Produced by: G Kearney

Job No: J2625

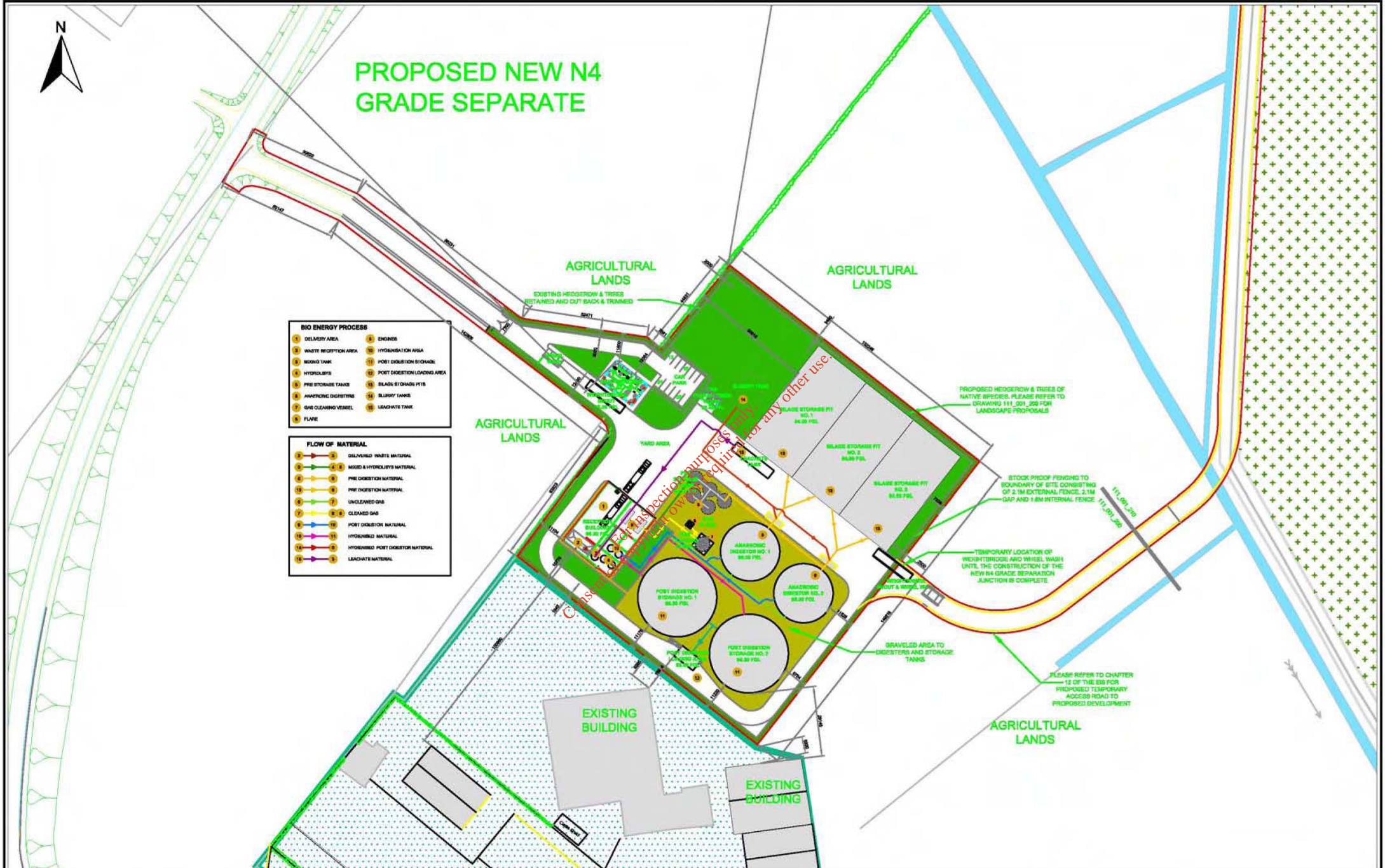
Figure No: 8.2





# PROPOSED NEW N4 GRADE SEPARATE

- BIO ENERGY PROCESS**
- |                        |                                |
|------------------------|--------------------------------|
| 1 DELIVERY AREA        | 4 ENGINE                       |
| 2 WASTE RECEPTION AREA | 5 HYDROLYSIS AREA              |
| 3 MIXING TANK          | 11 PORT DIGESTION STORAGE      |
| 6 HYDROLYSIS           | 12 PORT DIGESTION LOADING AREA |
| 8 PRE STORAGE TANKS    | 13 SLUDGE STORAGE PIT          |
| 9 ANAEROBIC DIGESTING  | 14 SLURRY TANKS                |
| 10 GAS CLEANING VESSEL | 15 LEACHATE TANK               |
| 16 FLARE               |                                |
- 
- FLOW OF MATERIAL**
- |       |                                    |
|-------|------------------------------------|
| 1-2   | DELIVERED WASTE MATERIAL           |
| 2-3   | MIXED & HYDROLYSIS MATERIAL        |
| 3-4   | PRE DIGESTION MATERIAL             |
| 4-5   | PRE DIGESTION MATERIAL             |
| 5-6   | PRE DIGESTION MATERIAL             |
| 6-7   | UNCLEANED GAS                      |
| 7-8   | CLEANED GAS                        |
| 8-9   | PORT DIGESTION MATERIAL            |
| 9-10  | HYDROLYSIS MATERIAL                |
| 10-11 | HYDROLYSIS PORT DIGESTION MATERIAL |
| 11-12 | HYDROLYSIS PORT DIGESTION MATERIAL |
| 12-13 | LEACHATE MATERIAL                  |

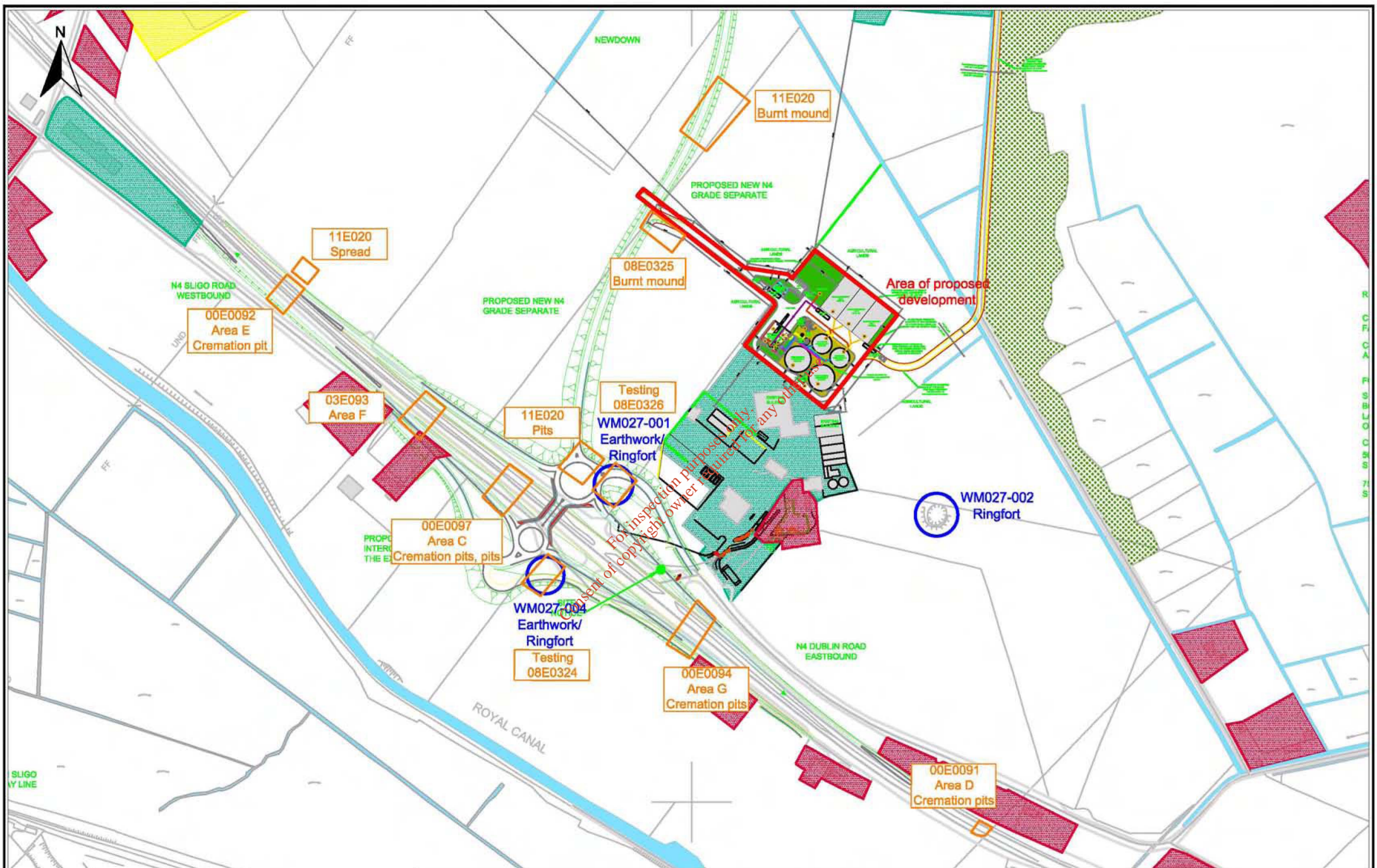


**IAC** Irish Archaeological Consultancy

Title:	Proposed site layout
Project:	Newdown, Co. Westmeath
Client:	ORS Consulting Engineers on behalf of Bio Agrigas Ltd

Scale:	1:2000 @ A4
Date:	18/02/11
Produced by:	G Kearney
Job No:	J2625
Figure No:	8.3

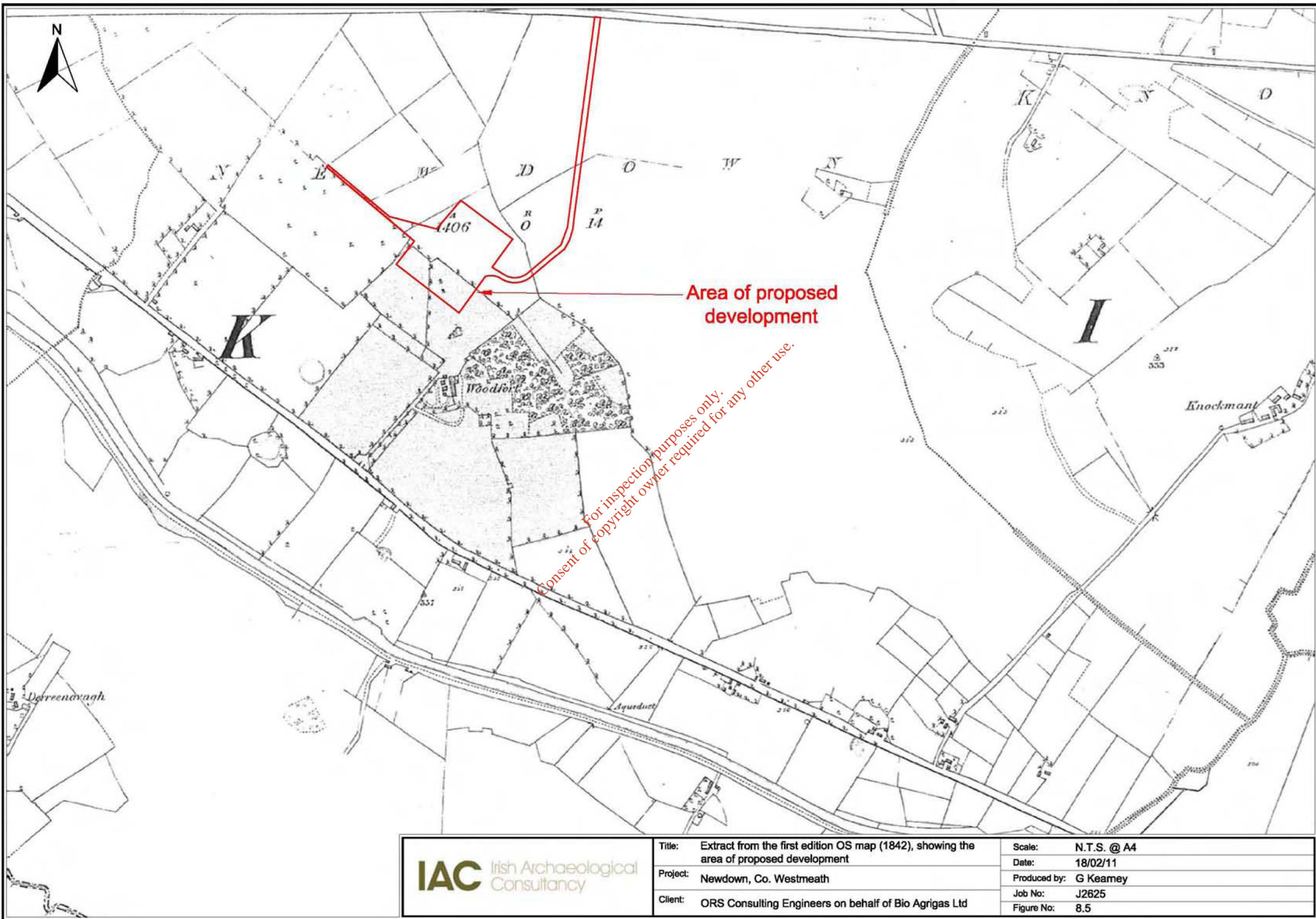




**IAC** Irish Archaeological Consultancy

Title:	Area of proposed development showing nearby archaeological sites	Scale:	1:6000 @ A4
Project:	Newdown, Co. Westmeath	Date:	18/02/11
Client:	ORS Consulting Engineers on behalf of Bio Agrigas Ltd	Produced by:	G Kearney
		Job No:	J2625
		Figure No:	8.4



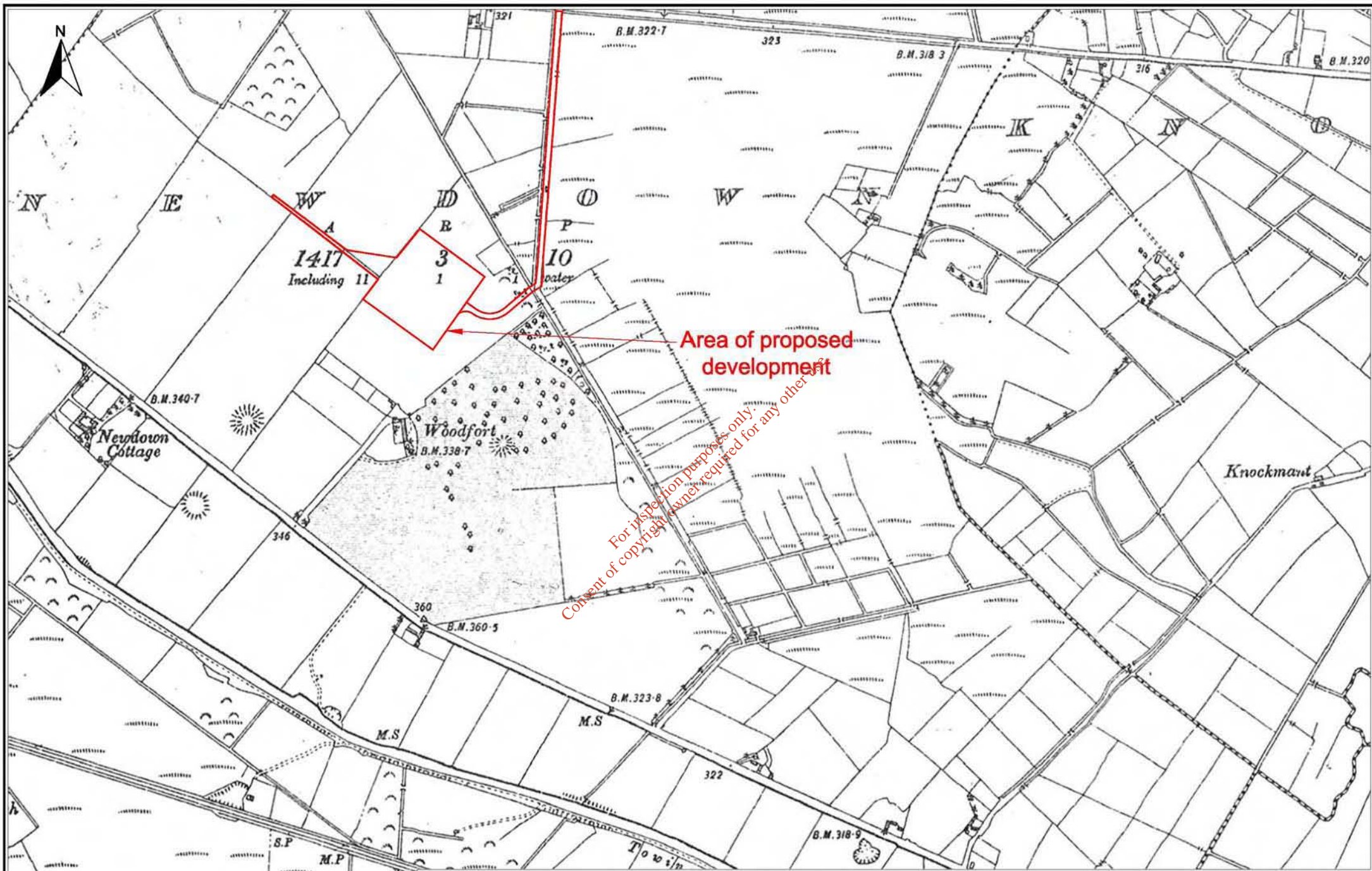


**IAC** Irish Archaeological Consultancy

Title: Extract from the first edition OS map (1842), showing the area of proposed development  
 Project: Newdown, Co. Westmeath  
 Client: ORS Consulting Engineers on behalf of Bio Agrigas Ltd

Scale: N.T.S. @ A4  
 Date: 18/02/11  
 Produced by: G Kearney  
 Job No: J2625  
 Figure No: 8.5





**IAC** Irish Archaeological Consultancy

Title: Extract from the third edition OS map (1914), showing the area of proposed development  
 Project: Newdown, Co. Westmeath  
 Client: ORS Consulting Engineers on behalf of Bio Agrigas Ltd

Scale: N.T.S. @ A4  
 Date: 18/02/11  
 Produced by: G Kearney  
 Job No: J2625  
 Figure No: 8.6