

Figure 6.4: Natural Satellite Image

Boundary of Biomass CHP plant

Roads

Towns and villages

Project: CHP Biomass Plant
 Client: Renewtech Ltd.
 Date: December 2001
 Prepared by: KOTD
 Approved by: SHDW



0 1 2 3 Kilometers



South Western Energy

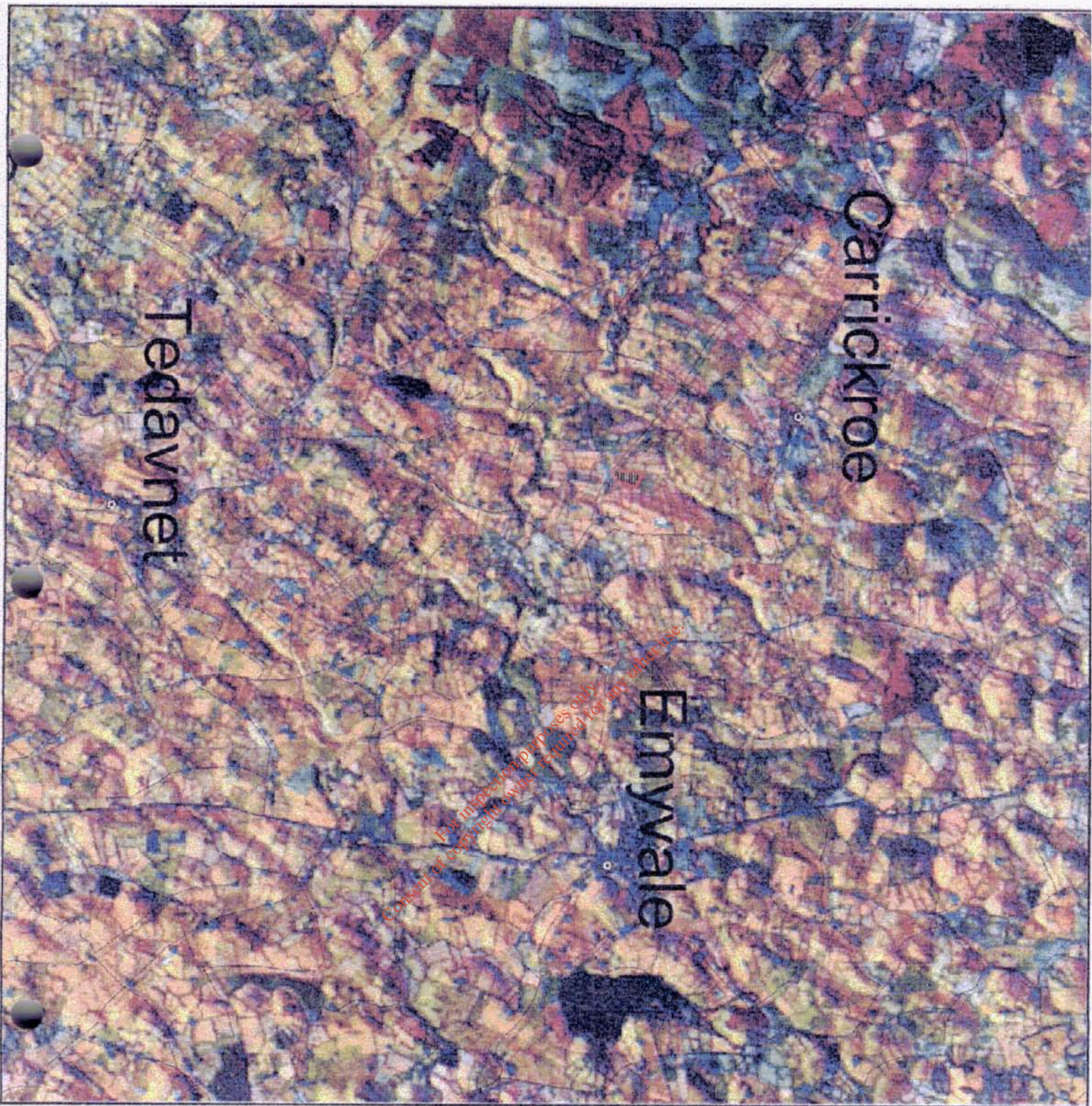


Figure 6.5: Infra Red Satellite Image

Boundary of Biomass CHP Plant
 Roads
 Towns and villages

Colour	Description
Dark Brown	Mature Coniferous Forest
Chestnut - Brick Red	Middle Age Forest
Purple Brown	Mature Deciduous Forest
Bright Lime Green	New Growth
Pale Mint Green	Semi-natural Vegetation
Pale Blue	Bare Soil
Turquoise	Clear Fall
Lilac Blue	Ploughed Ground
Dominant Blue	Artic al Surface
Black	Water
Dark Red	Arable Crops/Improved Pasture/ Grassland
Orange - Red	

Project: CHP Biomass Plant
 Client: RENEWtech Ltd.
 Date: December 2001
 Prepared by: K'OD
 Approved by: SHDM



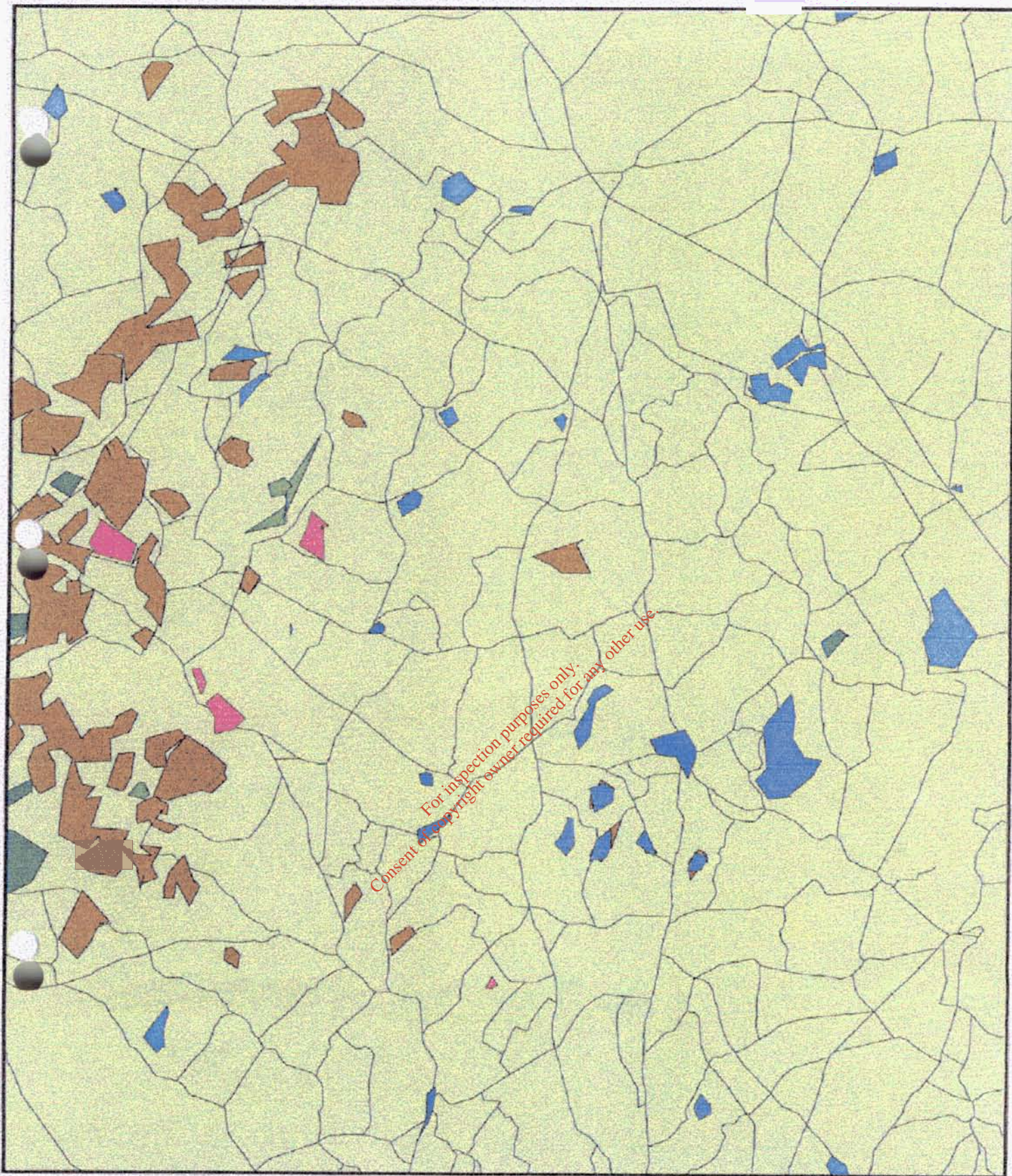
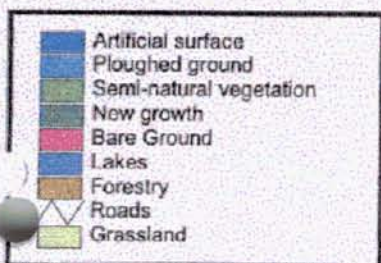
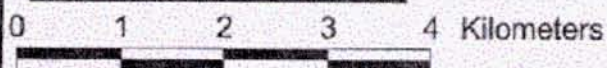


Figure 6.6: Landcover Map



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Approved by: SH/DW



South Western Environmental Services

6.3 Landscape Value

Within this area of North Co. Monaghan the only area designated as an area of primary amenity value is the Slieve Beagh and Bragan Mountains area approximately 5 km west of the site. The Mountain Water River Valley and the Emu Lough and Environs are classified as areas of secondary amenity value in the Monaghan County Development Plan 1999.

There are no environmentally designated areas (Special Areas of Conservation, Special Protection Areas etc.) within 5km of the site in any direction.

In summary, the proposed development is located in an area that has no aesthetic, ecological, historical or other important landscape value associated with it.

6.4 Sensitivity

Visually the site has no significant features. Views of the site from distances greater than 0.5 km are generally obscured by the hills surrounding the site and by the high hedgerows located on the majority of the roads near the site. The landscape of the immediate area around the site is already influenced by the presence of the large poultry farm beside the site and the 38kV station west of the site.

The site and surrounding area are not of national, regional or local importance in terms of landscape. The integrity and aesthetic quality of this area is not high and can be classified as low sensitivity agricultural landscape.

Visual Description of the Proposed Development

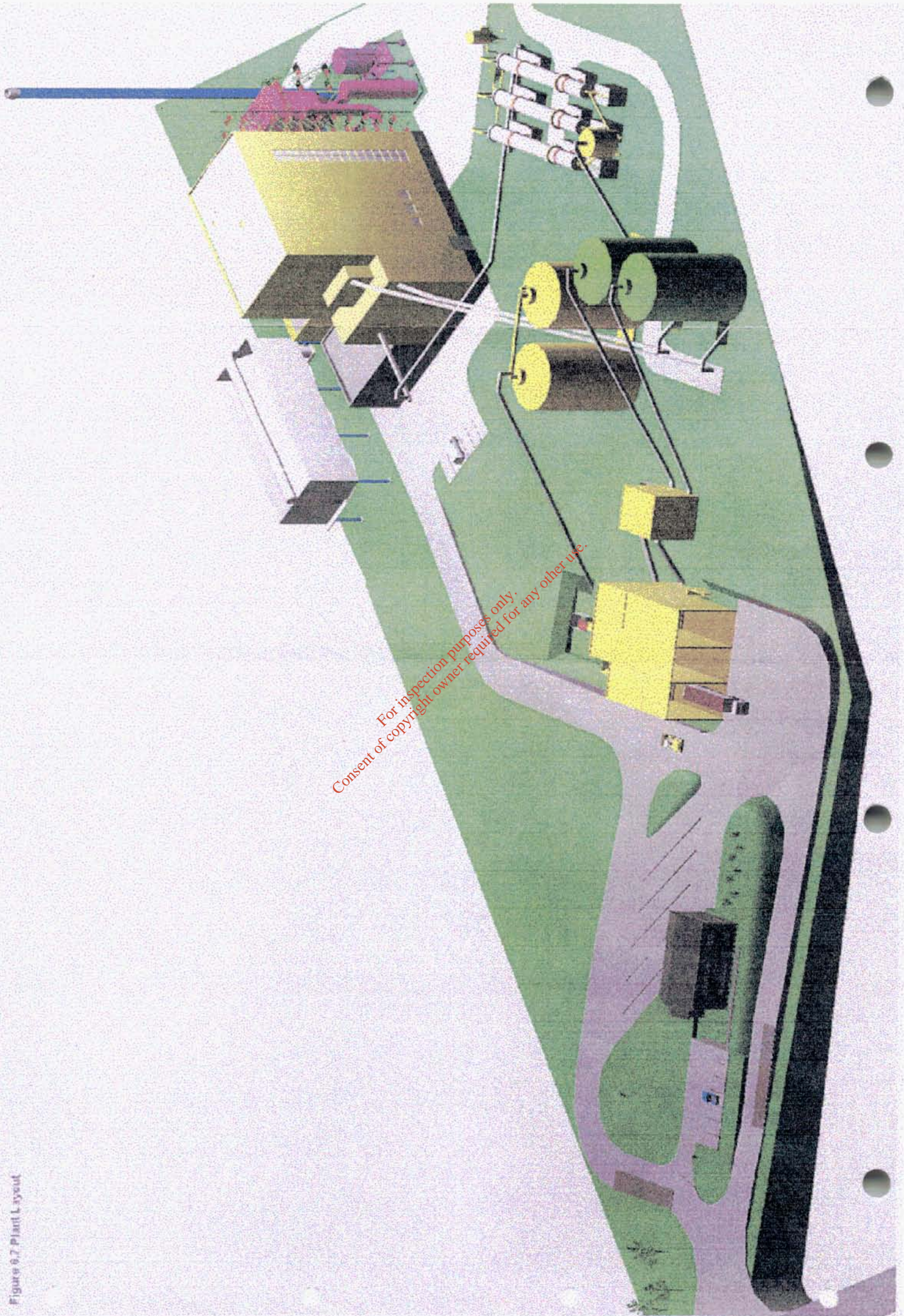
The power plant includes the following buildings:

- Administration Building with Gate Office
- Fuel Unloading Building
- Boiler building
- turbine building
- service building
- Foundations for Fuel Silos, Dryers, Fitter, Stack, Air Cooling Condenser, Oil Tank, Weighbridges, etc.

Most of the ancillary developments are of relatively small scale which will have little significant visual impact from outside the site boundary. Figure 6.7 shows a site layout plan of the proposed development. The Architectural drawings accompanying this EIS show the comparative site and height of the proposed development.

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Figure 9.7 Plant Layout



A description of the elements of the power plant that are relevant from a visual impact point of view are described below:

6.5.1 Paved Areas

Internal primary roads and hardstanding areas will be paved with asphalt. Areas for handling of containers etc. will be paved with reinforced concrete. Secondary roads for service access will only be paved with gravel.

6.5.2 Administration Building with Gate Office

The building is a two-storey office building of total 300m² fit into sloping ground. The building is constructed of concrete and plastered blockwork. External walls and roof are insulated with thermal insulation.

6.5.3 Fuel Unloading Building

The ground floor slab and unloading pits are constructed of reinforced concrete. A structural steel frame supports the roof and external walls. The external walls are non-insulated single skin metal profile dadding, fixed to horizontal galvanised cladding rails. The lowest 2.5m are plastered blockwork walls. The roofing is self supporting galvanised profiled steel sheets externally insulated with 60mm thermal insulation and weather proofed with a Samafil type membrana.

6.5.4 Boiler Building

The ground floor slab and plant foundations are constructed of reinforced concrete. The external walls are non-insulated single skin metal profiled dadding, fixed to horizontal galvanised dadding tails. The lowest 2.5m are plastered blockwork walls. The roofing is self-supported galvanised profiled steel sheets externally insulated with 60mm thermal insulation and weather-proofed with a Samafil type membrane.

All access platforms, galleries and stairs at various levels of the Boiler building are steel gratings and chequer plates supported by structural steel framework. Handrailing is a standard Eurogrid Handrail system.

6.5.5 Turbine Building

The ground floor slab and plant foundations are constructed of reinforced concrete. A structural steel framework supports the roof and external walls. The external walls are non-insulated single skin metal profiled cladding, fixed to horizontal galvanised dadding rails. The lowest 2.5m are plastered blockwork walls.

The roofing is self-supporting galvanised profiled steel sheets externally insulated with 60mm thermal insulation and weather-proofed with a Sarnafil type membrane.

6.5.6 Service Building

The service building, located in front of the Boiler and Turbine building, is a two-storey building constructed of reinforced concrete and plastered blockwork. The roof slab is insulated with 100mm thermal insulation and is weather-proofed with a Sarnafil type membrane.

6.5.7 Steelworks and Metal Cladding, Surface Treatment

All structural steel frame members are blast cleaned to SA 2^{1/2} and painted with Intergard 540, single coat primer/ finish paint system _ DFT 150 microns.

Gallery gratings, handrails, ladders and stairs are of hot dipped galvanised steel.

Cladding to external walls is single skin galvanised metal profiled cladding with standard colour PvF2 or Plastisol coating.

6.5.8 Landscaping and Fencing

A landscaping scheme will be developed which will facilitate an amelioration of the visual impact of the proposed development. Details of this are included in Appendix 6. By providing a scheme of similar scale to the surrounding area, the visual impact of the development will be moderated and integrated into the surrounding landscape.

This will involve, on completion of the construction work, seeding of the site with grass and planting of trees and bushes matching the existing planting in the selected areas.

The entire site will be fenced with a galvanised 2.1m high chain link fence.

6.5.9 Lighting

The plant will be equipped with 30 outdoor lights along road and traffic areas. The lights will be dosed at the upper side so that light can only be seen from below to minimise light spread. Outside the plant the red stack hazard identification lights located at the top of the chimney will be visible for aeronautical safety.

6.6 Visibility and Views

The aim of the visual appraisal is to assess the impact the proposed development will have on views obtained by people within the vicinity of the site. The impact of the proposed development on the landscape character would depend upon the degree of sensitivity of the existing landscape and its ability to accommodate change. The significance of the change will be assessed on the existing landscape character

The methodology adopted to assess the visual impact is in two parts. The first establishes the visual envelope, which is an area within which there is potentially some view of some part of the proposed development. The second part consists of establishing the actual visibility of the proposed development from particular viewpoints.

6.6.1 Establishing the Visual Envelope

The visual envelope is calculated using GIS by incorporating topographical data that is used to plot the zone of visual influence (ZVI) on a map. The ZVI map illustrates where the proposed development may be potentially visible. This method does not take account of the screening provided by buildings, trees and hedgerows. Clearly the proposed development will not be visible from all points within the identified zone of visibility due to screening elements.

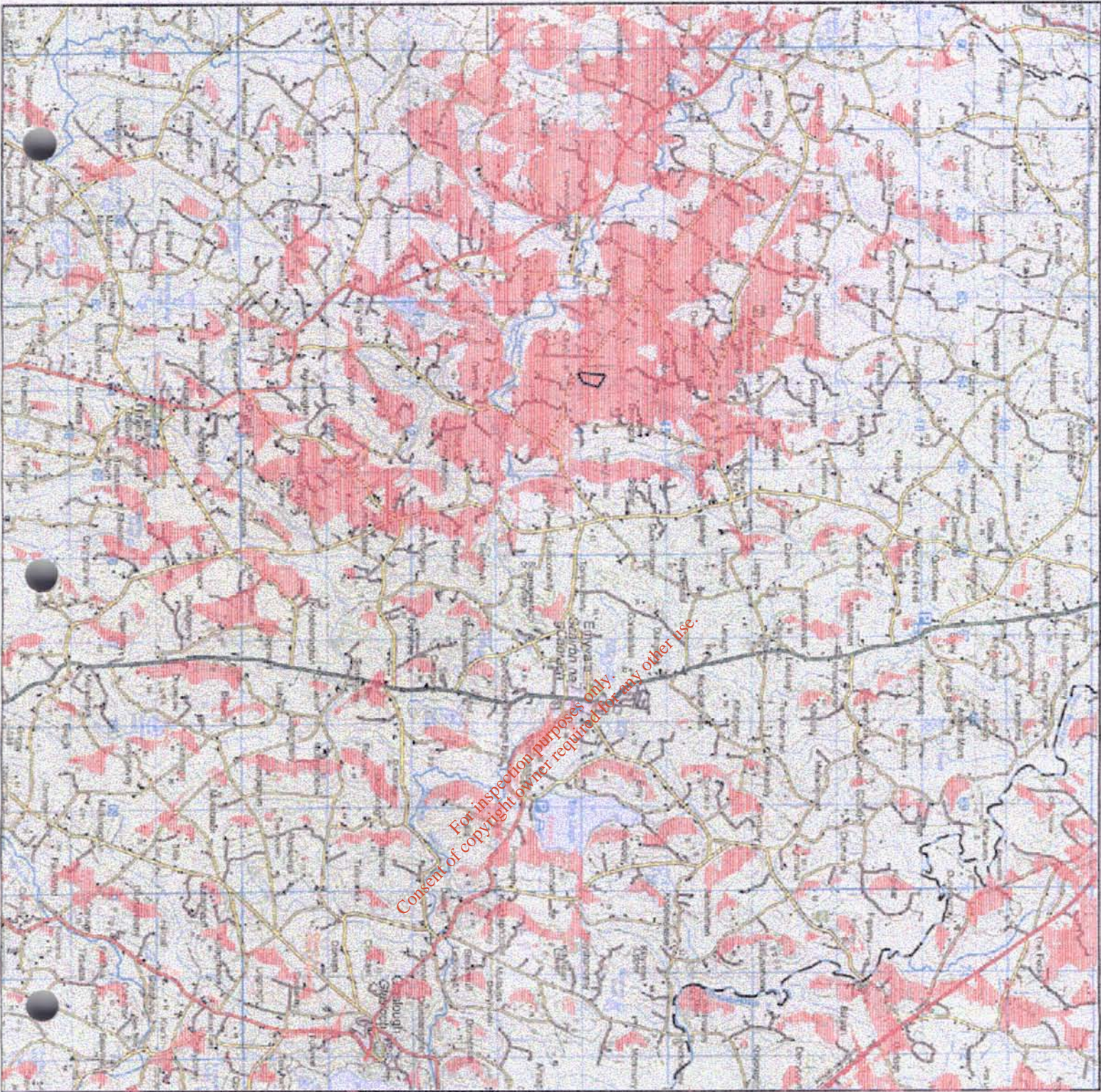
Two ZVIs were undertaken for the visual impact assessment:

- One for the 50m stack
- One for the highest building; the boiler building 40 m height (the boiler building, the turbine hall and silos will all be at the same elevation so the boiler building is representative of the worst case scenario for visibility of the power plant excluding the stack).

The site occurs within a low-lying valley in a drumlin belt landscape. This type of landscape has a semi-enclosed nature by virtue of its topography and vegetation. Thus it has an ability to absorb some new development due to its visual screening properties.

Figure 6.8 & 6.9 show the potential visibility of the proposed development in the surrounding areas. These indicate that visibility of the plant will be generally restricted to an area within 2-3 km of the site and that within these areas there will be no visibility in a significant number of areas particularly to the east and northeast.

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Figure 6.8: Visibility of 50m Stack

□ Boundary of Biomass CHP Plant
 □ Visibility of Boiler Stacking
 □ Visible

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 Client: Removtech Ltd.
 Date: December 2001
 Prepared by: KOD
 Approved by:



0 1 2 3 Kilometers





Figure 6.9: Visibility of Boiler Building

Boundary of Biomass CHP Plant
 Visibility of Boiler Building
 Visible

Project: CHP Biomass Plant
 Client: Renewtech Ltd.
 Date: December 2001
 Prepared by: KIDD
 Approved by: SHIOW



i) Visibility from Major Roads

The major roads within 5km of the site are the National Primary road N2 located approximately 4 km east of the site and the Regional road R186 located 2 km southwest of the site. Both the stack and buildings will not be visible from the N2. The stack will potentially be visible from some sections of the R186 but the presence of hedgerows and tree lines on the roadside will provide considerable screening. It is unlikely that the buildings in the plant will be visible from the R186 when screening is taken into account.

ii) Visibility from Minor Roads

The stack and the boiler building will be visible from a number of the third class roads in the area surrounding the plant particularly to the west, north and south. Hedgerows, tree lines and other vegetation will provide screening of views of the plant from sections of the roads. The other components of the plant will be less visible on the third class roads and will only consist of intermittent views except for in the immediate vicinity of the plant.

iii) Visibility from Towns and Villages

The nearest village Carrickroe is located approximately 1.7 km north west of the plant. Emyvale is located approximately 4 km east of the plant and Tedavnet is located approximately 5 km south of the plant.

The stack and boiler building will be visible from the approach roads to Carrickroe but the rest of the development is unlikely to be visible and in most places will be screened from view by either the landform or landcover. The photograph from the old hall in Carrickroe illustrates the presence of bushes and trees on the skyline looking in the direction of the proposed development.

The plant will not be visible from Emyvale or Tedavnet.

iv) Visibility from Residential Dwellings

The proposed development will be visible from some residential dwellings in the vicinity of the development. The buildings will partially be screened by hedgerows and other forms of vegetation.

v) Visibility from Designated Areas

The closest environmentally designated area is Emy Lough which is at a viewing distance of over 5 km east of the proposed development. The ZVI maps indicate that the top of the stack may be visible from high ground surrounding the Lough. At a viewing distance of 5 km and the possible obstruction of the view in the direction of the stack by trees, hedgerows and

human made structures it is highly unlikely that the stack will be visible. Hence the visual impact of the stack on Emy Lough and environs can be classified as negligible.

6.6.2 Viewpoints

REFERENCE COPY For the purposes of this assessment our viewpoints have been selected as a representative selection of viewpoints from within the visual envelope from which the visual impacts of the proposed development can be assessed. The location of the viewpoints is shown in Figure 6-10 and the photographs for each viewpoint is shown in Figure 6.11.

Assessment Criteria

The effect on each viewpoint of the change in view as a result of the proposed development has been assessed according to the criteria set out below:

- Major – a fundamental change to the environment
- Moderate – a material but non-fundamental change to the environment
- Minor – a detectable but material change to the environment
- Negligible – no detectable change to the environment

The description of the view and features in the landscape has been classified according to their distance from the viewer as follows:

- Foreground up to 1 km
- Middleground 1 – 3 km
- Background more than 3 km

Viewpoint 1: Carrickroe

View from eastern approach road to Carrickroe village looking in the direction of the proposed development. According to the ZVI maps the stack and boiler building is visible from this viewpoint but the photograph shows that there is dense tree-lined hedgerows on the horizon which will obstruct the view of both the buildings and stack.

The visual impact from this viewpoint can be classified as negligible.

Viewpoint 2: Crossroads at Derrykinnigh More

View from the crossroads looking in the direction of the proposed development. The tree-lined third class road in the centre middleground blocks the view in that direction. The combination of the screening provided by the trees on the roadside and wind hedgerow on the skyline in the left background of the photograph. Some of the trees screening the stack and boiler building are deciduous and will not provide a total screening effect during the winter. However, the presence of the warehouse in the right background of the photograph mitigates the visual impact of the proposed development. The signposts and overhead powerlines act as visual detractors for this view.

The visual impact from this viewpoint can be classified as negligible during the summer months and minor when the trees are bare.

Viewpoint 3: Knocknagrave

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View from a third class road at Knocknagrave looking in the direction of the proposed development. The stack will be visible from this viewpoint in the centre of the photograph. The top of the boiler building will only be partially visible. The trees and vegetation in the centre background of the photograph will provide partial screening of the development.

Given the viewing distance of 1.4 km and the partial screening of the stack and boiler building the visual impact for this viewpoint can be classified as moderate.

Viewpoint 4 Crossroads on Eastern Approach Road to the Site

This view is on the eastern approach road to the site looking in the direction of the proposed development. The view of the site is totally obstructed by the high hedgerows on either side of the road. This screening effect is common on a lot of the third class roads in the area. If the hedgerows were trimmed then the stack would be potentially visible but the rest of the development would remain screened from view.

The existing visual impact is negligible due to the screening effect of the high roadside hedgerows.

6.7 Summary of Landscape and Visual Impact

The landscape assessment for the area determined that the landscape is a low sensitivity agricultural landscape with strong anthropogenic influences. The location of the proposed development in a valley significantly reduces the visual impact. The visual impact is predominantly within 2-3 km around the site and is considerably reduced by the screening effect of high roadside hedgerows and other vegetation. The visual impact will be negligible for most area views of the proposed development. The development will only have a minor to moderate impact in areas close to the site.



It is considered that the development of a Biomass CHP plant will result in a long-term minor visual impact (a minor visual impact is classified as a detectable but non-fundamental change to the environment) in some areas which have views of the plant. The visual impact in the immediate area around the site will result in a moderate visual impact (a moderate visual impact is defined as material but non-fundamental). However, this visual impact is within a very restricted area of visibility.

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Figure 6.10: Viewpoint Location Map

-  Boundary of Biomass CHP Plant
-  Viewpoint locations



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0 0.5 1 Kilometers