Proposed Solar Farm at Chamber House Farm, Rochdale

Briefing Document

ROCHDALE BOROUGH COUNCIL

May 2015

Introduction

A planning application for a 5.0 MWp solar farm on land at Chamber House Farm, Rochdale, OL10 1RL, is shortly to be submitted to Rochdale Borough Council by OST Energy Ltd (OST Energy) on behalf of the Council. The purpose of this document is to provide a summary of the key aspects associated with the proposed development; these are presented below under the following sections:

- Site Location
- Outline Project Description
- Consultation
- Potential Visual Impact
- Ecological benefits
- Land Quality
- Cultural Heritage and Archaeology
- Flood Risk
- Access and Transport
- Benefits to the Borough

The following maps, plans and images are provided at the end of this document:

- Site Location Plan
- Map showing Sensitive Sites (within 2 km radius)
- Solar Project Layout plan
- Photomontages
- Habitat Plan
- Agricultural Land Classification (ALC) Map
- Construction Traffic Route Plan.

Site Location

The site of the proposed installation comprises one 10.4 Ha field within Chamber House Farm, around 3 km southwest of the centre of Rochdale and 1.5km east of Heywood town centre. The site lies within the boundary of the town of Heywood in the metropolitan borough of Rochdale. The site location is shown in the attached site location plan.

The site is not the subject of any significant designations: there are no Areas of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSIs), National Parks, World Heritage Sites or Scheduled Ancient Monuments (SAMs) within or directly adjacent to the proposed development area. Please see the plan showing the location of Sensitive Sites (as described within the EIA Regulations) in the vicinity of the proposed project.

The proposed project would occupy 10.4ha (25.7 acres) of the farm, currently in use as pasture for grazing horses and for hay cropping; the project will allow the site to continue to be used for sheep grazing. The land is classified as Grade 3b / 4 (moderate to poor quality agricultural land) and therefore it is particularly suitable for a temporary mixed use of grazing and energy production.

The site is directly bordered on all sides by pasture and areas of woodland. Residential areas of Heywood and Rochdale lie beyond to the west and east. The site receives screening from the majority of residential properties in the surrounding area due to local topography and vegetation;

the nearest unconnected residential property is Francil Farm, around 50 metres to the south (see 'Visual Impact' section below).

Two Public Rights of Way (PRoW) run adjacent to the site; Rochdale Way PRoW runs along Carriage Drive close to the northern boundary of the site, before becoming part of a restricted byway that runs near the eastern boundary and a public footpath runs along the southern boundary of the site and links to the Rochdale Way at the south-eastern corner. The latter footpath and its stiles are poorly maintained and the proposed development will include provision for reinstatement and enhancement of this PRoW. Planting of native species hedgerows along the northern edge of the Rochdale Way will provide screening of views of the site from this receptor.

Outline Project Description

The proposed development is a photovoltaic (PV) solar farm capable of generating a minimum of 5.0 Megawatts peak (MWp) of electricity, sufficient to provide the power needs of 1,364 average UK households[1], which is 1.6% of all households within the Metropolitan Borough of Rochdale[2].

The proposed project involves the installation of PV panels arranged in rows covering a total site area of 10.4 Ha, although less than 30% of the site would be covered with panels, leaving over 70% as open green space which will be planted as a wildflower meadow to support local biodiversity; the proposed layout for the project is provided.

Panels would be mounted on a steel framework supporting structure which would be driven directly into the ground, with no concrete foundations and a minimal impact on the existing ground conditions.

The structure would follow the terrain and would not rise above 2.3m above ground level. The solar panels would be inclined to 25 degrees from the horizontal and orientated due south; the image shows a typical arrangement for PV panels within a solar farm.

There are no moving mechanical parts associated with the panels and no significant noise generating equipment or machinery, thus minimising the potential for noise from the development; therefore no impact on even the closest local residents is anticipated. There would be no on site office or permanent staffing of the site.

[1] The Department of Energy and Climate Change have published that the average annual household electricity consumption is 4,266kWh in the UK. DECC "Sub-National electricity sales and numbers of customers 2005-2011" Publication URN: 12D/468, revised December 2012

[2] Total number of households in the Rochdale Borough is 87,552 (2011 Census data, Office of National Statistics)

Consultation

As this planning application is for a major development, Rochdale Borough Council is publicising the proposals prior to submitting the application. This includes the following elements:

- A dedicated project webpage will be created on Rochdale Borough Council's website, setting out details of the proposal, location plans and layout plans. The website will also include details of the proposed biodiversity enhancement and site screening measures.
- The website will feature a link to a dedicated email address, set up for consultation responses. This will be checked on a regular basis and responses sent to consultees.
- Letters describing the proposed development have been sent to all Borough Councillors as well as Members of the Heywood Township Committee.
- A notice will be placed in the local press advising that the application for the proposed development is to be submitted
- A public exhibition will be held on Thursday 21st May from 1:00pm – 7:00pm and on Friday 22nd May from 9:00am-1:00pm at Crimble Croft Community Centre, Heywood OL10 4HW.
- Pre-application discussions have been undertaken with:
  - Rochdale Borough Council Planning Officer
  - English Heritage
  - County Archaeologist
  - The Highways Authority.

Potential Visual Impact

An independent Landscape and Visual Impact Assessment (LVIA) of the proposed solar farm has been undertaken.

One of the main considerations when selecting this site was that it is not located within or adjacent to any environmentally sensitive areas and that it is screened from the majority of the dwellings in the surrounding residential areas of Heywood and Rochdale by local topography and vegetation. Furthermore, it is proposed that additional planting will be provided to further mitigate potential visibility, as well as existing hedgerows being allowed to grow to a winter height of 3m.

The nearest unconnected residential properties having potential views of the site are Francil Farm, around 50 metres to the south, Ryecroft Farm, around 110 metres to the northwest and a low number of houses to the north and south of the A58 Rochdale Road East to the north of the site. Some existing screening is offered by intervening trees and hedgerows, and for most of these receptors visibility will be further reduced by implementation of screening measures to the north and northwest of the site. Considering the elevated location of Francil Farm however, it is judged that screening planting will not significantly reduce the visibility of the western section of the site from this property, although the visual impact is considered to be mitigated by the proposals being medium term in duration and reversible.

The visual impact of low lying solar equipment would not result in a material change to the character of the area, particularly when considering the surrounding vegetation and tree-scape that would be retained, and the presence of residential and industrial areas nearby. There would be an opportunity to implement additional planting along the boundaries to supplement existing hedgerows and the creation of new ecological habitats using native species. We have provided copies of the photomontages from the LVIA to show how the project will appear from the viewpoints identified.

Although 'glint and glare' from the panels is a common initial concern, it should be noted that solar panels are designed to absorb sunlight to maximise energy generation, so reflection of sunlight is minimal and no glare effect will be observed from surrounding receptors.

Ecological benefits

The installation has been designed so as to have a net benefit on the local ecology and improve local biodiversity through the selective planting of wildflowers between the panels and in undeveloped areas. Planting will also be undertaken to fill in gaps within surrounding hedges, using local plant species.

Wildflower-rich meadows are now among the rarest and one of the most important of our native wildlife habitats in Britain. Since 1945 the UK has had a catastrophic loss of an estimated 97% of these meadows. The importance of wildflower meadows extends far beyond their floral diversity; such meadow food webs can be highly complex. The reduction in wildflower meadows has resulted in a steep decline in our bee and bumblebee populations, which have reduced by a massive 70% over the past 30 years. As well as providing pollen and nectar, the foliage and grasses supplies sources of food for birds, bats, mice and voles. Furthermore, leaving hay-cuts until late in the season maintains cover for hares and provides habitat for ground-nesting birds.

To help reverse this decline, a wild flower and grass meadow will be planted. Over 70% of the solar farm will be open space, and the whole site will be free from pesticide and fertiliser usage. The site will be left undisturbed by human activity for the majority of the time, which is ideal for wildlife, providing it with a safe haven, and also providing an important habitat corridor between local woodland areas.

This nectar rich environment will benefit the honey bee, and it is proposed to introduce a number of beehives around the site to further support the local bee population and pollination in the area.

In addition to the wildflower meadow, the following additional ecological enhancements and benefits will be provided as part of the project development (please also see Habitat Plan):

- Hedge planting and management for biodiversity – providing an important food source for local wildlife.
- Areas of long grass/rough verges along the boundaries – ideal habitat for beneficial insects and spiders, as well as for voles, and ground nesting birds.
- Installation of bat boxes, owl chalets, bird boxes, hedgehog shelters and hibernacula (habitat for reptiles, amphibians and invertebrates).
- Wildlife friendly fencing that will allow the free passage of wildlife across the site.
- Programme and ongoing ecological monitoring.

Land Quality

The Ministry of Agriculture Fisheries and Food (MAFF, now DEFRA) has prepared an indicative plan for the UK that provides Agricultural Land Classification (ALC) and classifies land as Grade 1, 2, 3, 4 or 5. The grades represent the quality of the land for agricultural use with Grade 1 being the most productive and Grade 5 being the least productive. Grades 1, 2 and 3a are collectively termed as 'Best and Most Versatile agricultural land'.

Existing ALC maps indicate the area to be a mixture of Grade 3 and 4 agricultural land and an independent ALC survey has confirmed the site as Grade 3b and 4. The site is currently used for grazing horses and hay cropping, a common practice for lower grade 3 and grade 4 land. The proposed development will have little or no impact on the agricultural use of the land as the site will continue to be periodically grazed by sheep throughout the operation of project.

Anecdotally, landlord farmers on many existing solar projects advise that the sheep enjoy the shade from the sun in the summer and the protection from wind and rain in the winter.

Cultural Heritage and Archaeology

An independent assessment of the potential impact of the project on archaeology and cultural heritage has been conducted. The study has identified the site as having low potential for the presence of any unrecorded significant undesignated buried heritage assets.

There are no designated or undesignated heritage assets within the site boundary and no recorded archaeological features.

Two Conservation Areas sit within 2km of the proposed site, at Castleton South, approximately 1.1km to the east and at Heywood Station approximately 1km to the southwest; neither offer views of the site.

The only Scheduled Ancient Monument within 2km of the site is March Barn Bridge, which lies 1.3km to the east and is blocked from views of the site by the ridge of higher land to the east of the proposed development.

Two Registered Parks and Gardens lie within 2 km of the proposed site, Queen's Park (Grade II) 950m to the northwest and Rochdale Cemetery (Grade II) 1.7km to the north; neither offers views of the site. No Registered Battlefields lie within 2km of the site.

The two closest listed buildings are the Church of All Souls (Grade II), approximately 360m to the west and Crimble Mill, approximately 750m to the northwest. The impact on these listed buildings is judged to be negligible as only their roofs and tower/chimneys are visible from the proposed

site and no views of the site from the buildings themselves are possible. There are no views of the site from any other listed buildings.

Flood Risk

The site is in the lowest risk area Flood Zone 1 and the proposed development will not introduce any significant areas of hard standing. The Flood Risk Assessment undertaken on the site concluded that runoff will continue to infiltrate into the ground as per the existing situation and no additional runoff will leave the site as a result of the development.

Access and Transport

Vehicles would approach the site via the A58 Rochdale Road East and a section of the Rochdale Way known as Carriage Drive. These roads are currently used for farm and other traffic and the Construction Traffic Management Plan (CTMP) prepared for the project demonstrates that the largest vehicle required for construction of the development can access the site using this route.

The CTMP, prepared in consultation with the Highways Authority, has assessed the likely impact of construction and operational traffic on the local highway system. It proposes mitigation measures that include the provision of banksmen at the junction of the A58 and Carriage Drive to facilitate access for construction vehicles and on-site wheel washing facilities during construction to reduce the spread of mud and dirt onto the local highway network.

It is anticipated that there will be a maximum of around three large vehicles per day accessing the site over a six week period, as well as daily arrival of construction workers to the site. The level of traffic during the temporary three month construction phase is not considered to be material and it is considered that this will not have an impact on the safety or operation of the local highway network.

After commissioning there are anticipated to be around 10 to 20 visits to the site a year for equipment maintenance. These would typically be made by light van or 4x4 type vehicles.

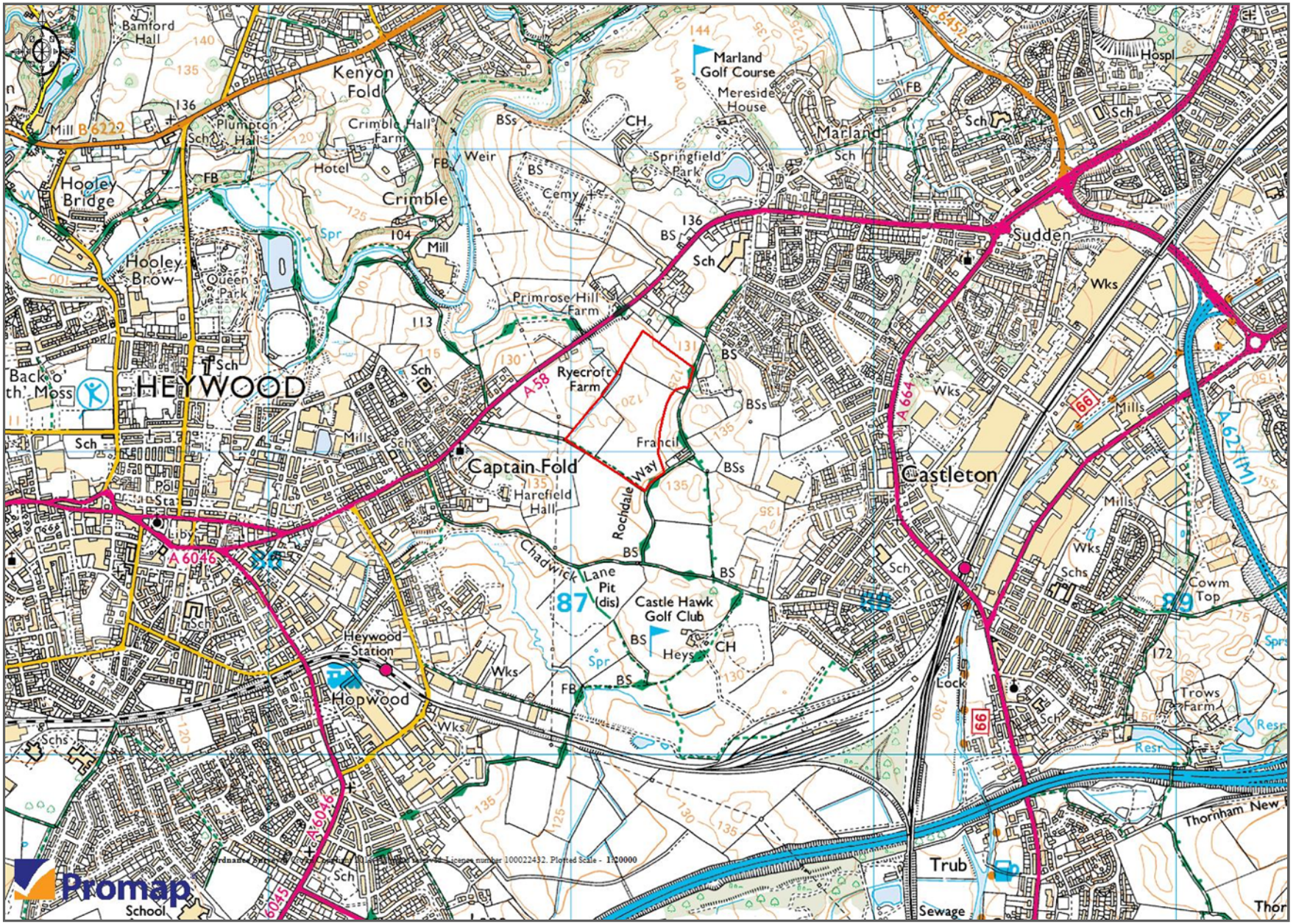
Benefits to the Borough

This project is part of Rochdale Borough Council's aim to become the greenest authority in the country whilst bringing in revenue and helping the borough to become more energy self-sufficient; the solar farm will generate electricity for over 1,250 households and save over 2,350 tonnes of carbon dioxide per year from entering the atmosphere.

Since the year 2000 we have had the four wettest years since records began; the previous wettest year being 1954. These and other changes in weather are attributed to global warming due to increased consumption of fossil fuel. A solar farm provides diversification of land use for lower quality agricultural land and provides a large carbon saving to contribute in our efforts to reduce global warming.

As part of the Greater Manchester Climate Change Strategy, the Council has agreed to cut its CO_2 emission by 48%, by 2020. The Council intends to invest in renewables in order to generate "new multi-million-pound revenue streams, fund municipal services, put land assets to work, underwrite energy security and offset energy prices". The Chamber House Farm solar

project is one way in which the Council can make savings, bringing in revenue for the authority and helping the Council to become more energy self-sufficient.



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1 : 20000 @ A4

0 1km

Project:	Chamber House Farm
Address:	Rochdale, OL10 1RL
Client:	ROCHDALE BOROUGH COUNCIL

Key

- Proposed Site Location
- Public Rights of Way
- Parish Boundaries
- Other Routes with Public Access
- National Trail/ Recreational/ Long Distance Route

Drawing Title: **Site Location Plan**

Rev	Date	Description	Draw	Check	App'd
00	17/02/15	Site Location Plan	RR	MG	MG
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00					
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Drawing number: **00060-100**

00060-105 - Sensitive Sites - Chamber House

Legend

- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Parks (England)
- National Parks: Lake District and Yorkshire Dales Variation Orders 2012 - subject to confirmation (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)
- Biosphere Reserves (England)
- Buffer Zone
- World Heritage Site
- Listed Buildings (England)
- Registered Battlefields
- Registered Parks and Gardens (England)
- Catchment Sensitive Farming Capital Grant Scheme Target Areas (England)
- Catchment Partnership
- Priority Catchment
- Community Forests (England)
- Heritage Coasts (England)
- Land Management Initiatives (England)
- National Forest (England)
- RSPB Reserves (GB)
- Upland Experiment Areas (England)

Projection = OSGB36
xmin = 382600
ymin = 408900
xmax = 391300
ymax = 413300

Map produced by MAGIC on 19 February, 2015.

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NB: Please note; this design is based on the assumption that 250W PV Panels will be used.

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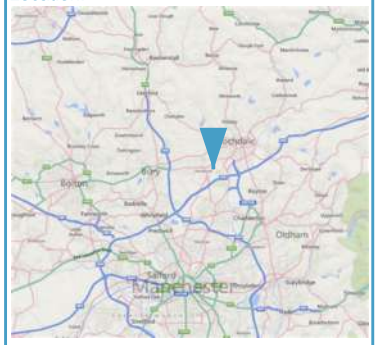
Location:



Property Boundary
Application Boundary
Security Fence
Approximate PRoW Location

System Details:

System size DC:	5MWp
System size AC:	4MVA
Total Planning Application Area:	10.7ha
Fenced area:	10.3ha
No of panels:	19,998
Array Tilt:	25

Drawing Title:	Rev	Date	Description	Draw	Check	App'd
	00					
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	00					
	02	05/05/15	Laydown Area Update	RR	MM	MG
	01	13/02/15	Amended Draft Layout	RR	MM	MG
PV Layout	00	05/02/15	Draft Layout (25 tilt)	RR	MM	MG

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Scale (metres):	1:2250 @ A3
Drawing Number:	00060-101

Viewpoint A from Rochdale Way along Carriage Drive north-northeast of site

Existing view

Predicted view - before screening effects

Viewpoint A from Rochdale Way along Carriage Drive north-northeast of site

Existing view

Predicted view - screening effects after 7 years assuming 300mm growth pa.

Viewpoint B from Rochdale Way along Carriage Drive east of site

Existing view

Predicted view - before screening effects

Viewpoint B from Rochdale Way along Carriage Drive east of site

Existing view

Predicted view - screening effects after 7 years assuming 300mm growth pa.

Viewpoint C from PRoW to west of site

Existing view

Predicted view - before screening effects

Viewpoint C from PRoW to west of site

Existing view

Predicted view - screening effects after 7 to 10 years assuming 300mm growth pa.

Viewpoint D from PRoW along Chadwick Lane south of site

Existing view

Predicted view - before and after screening effects

Viewpoint E from Rochdale Road East (A58) to northwest of site

Existing view

Predicted view - before screening effects

Viewpoint E from Rochdale Road East (A58) to northwest of site

Existing view

Predicted view - screening effects after 7 years assuming 300mm growth pa.

Viewpoint F from Rochdale Road East (A58) to the west of the site

Existing view

Predicted view - before screening effects

Viewpoint F from Rochdale Road East (A58) to the west of the site

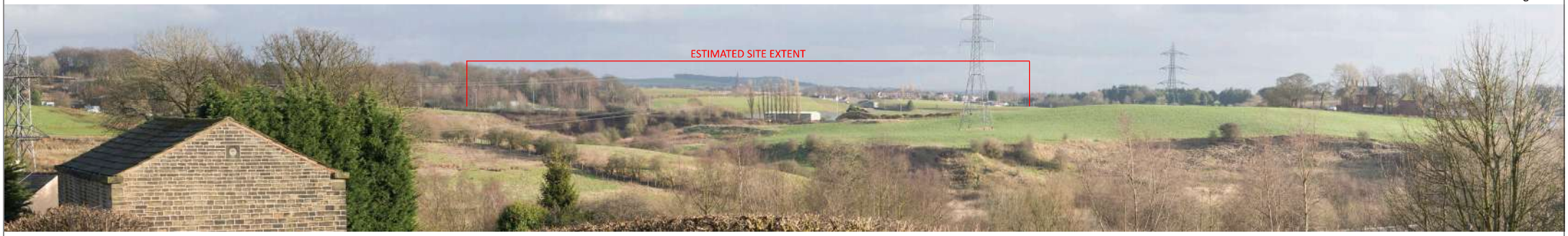
Existing view

Predicted view - screening effects after 7 to 10 years assuming 300mm growth pa.

Viewpoint G from PRoW along Crimble Lane to northwest of site

Existing view

Predicted view - before screening effects



Viewpoint G from PRoW along Crimble Lane to northwest of site

Existing view

Predicted view - screening effects after 7 years assuming 300mm growth pa.

Bat Boxes

Hedgehog Shelters
Image Source: Wildlife World

Hibernaculas

A Flowering Species (e.g. Honeysuckle (*Lonicera periclymenum*)) planted along Southern fence to provide Additional Screening
Source: © Davis Landscape Architecture Ltd, London, UK

Bank of 6 Bee Hives

Wildflower Mix/ Pasture for Grazing

Longer Growing Tussock Grass Mix

Bird Boxes

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Location:

- Longer Growing Tussock Grass Mix
- New and Supplemented Hedgerow/ Tree Planting with Native Species
- Existing Hedgerow/ Trees
- Wildflower Mix/ Pasture for Grazing
- Existing Mature Trees
- Flowering climbing Species to be planted along Southern and Eastern Fence
- Ponds/ Watercourses

System Details:

System size DC:	5MWp
System size AC:	4MVA
Total Planning Application Area:	10.7ha
Fenced area:	10.3ha
No of panels:	19,998
Array Tilt:	25

Rev	Date	Description	Draw	Check	App'd
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00	19/02/15	For Planning	RR	MG	MG

Drawing Title: **Habitat Plan**

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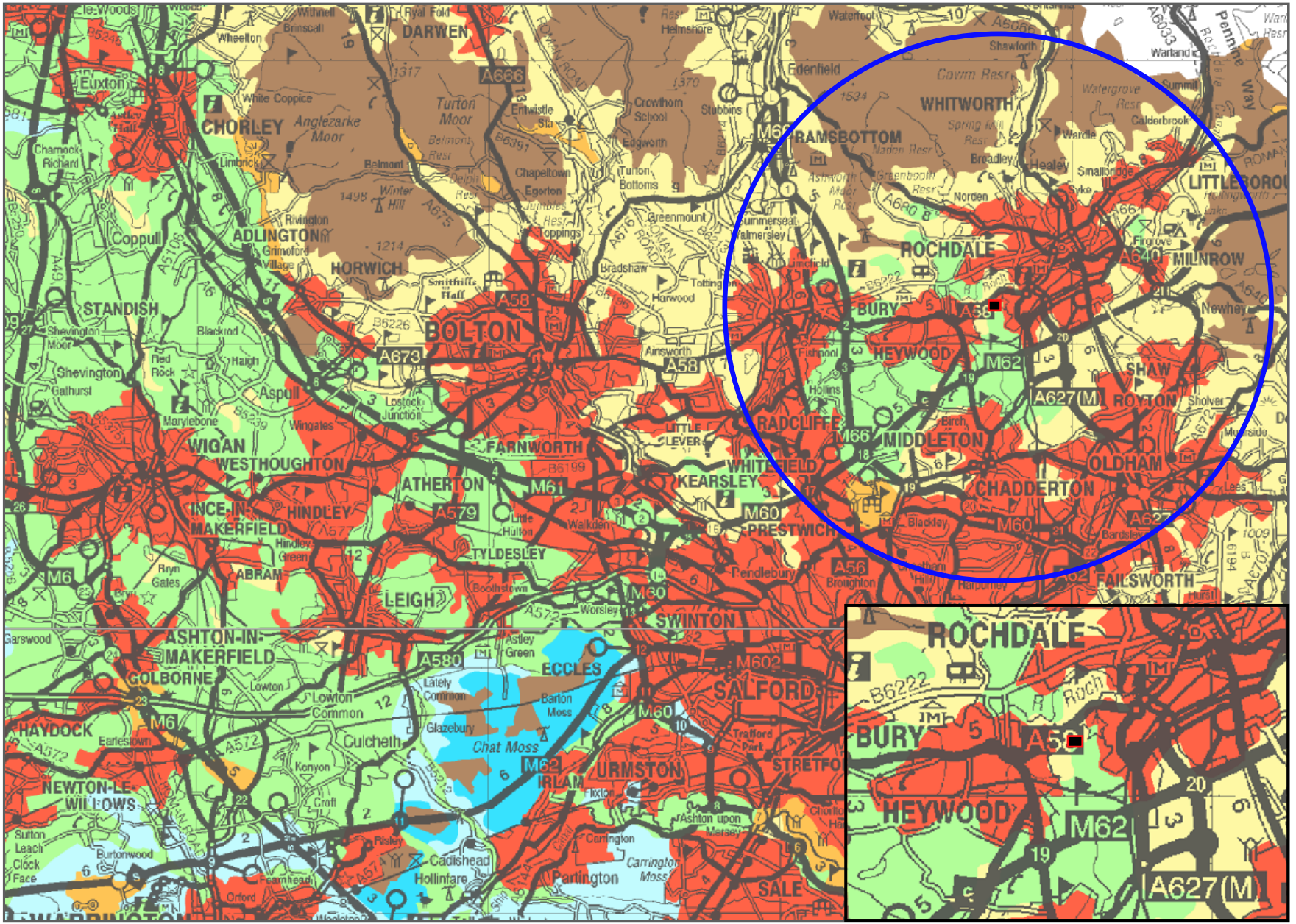
Scale (metres):	1:2250 @ A3
Drawing Number:	00060-103



Not to Scale

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Project:	Chamber House Farm
Address:	Rochdale, OL10 1RL
Client:	ROCHDALE BOROUGH COUNCIL

Key

Proposed Site Location

10 Km Radius around site

Grade	Description
1	Excellent
2	Very Good
3	Good to Moderate
4	Poor
5	Very Poor

Non-Agricultural Land

Other land primarily in non-agricultural use

Land predominantly in urban use

Drawing Title:

ALC Map

Rev	Date	Description	Draw	Check	App'd
00	19/02/15	For Planning	RR	MG	MG
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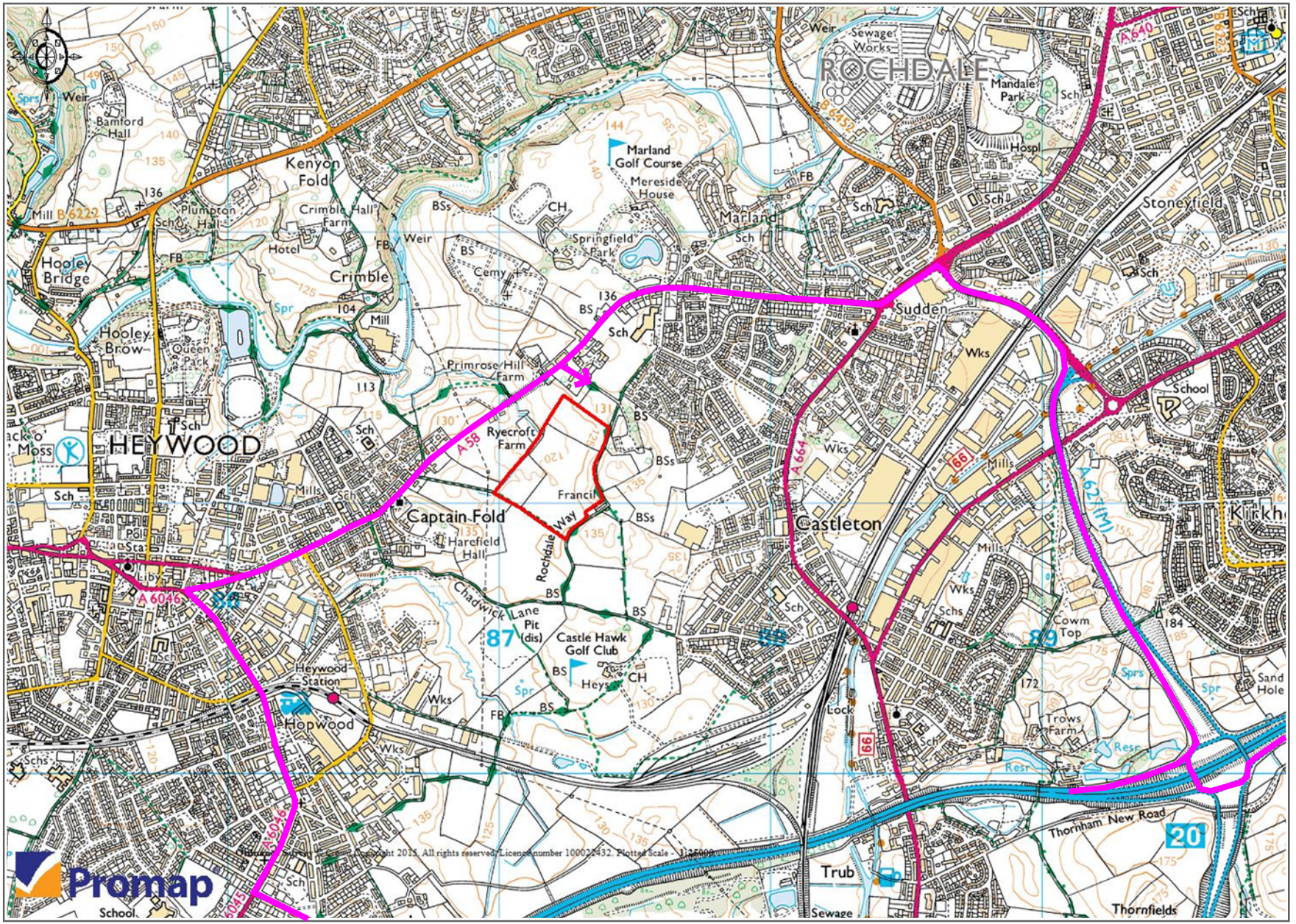
Drawing number:
00060-104



Project:	Chamber House Farm
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Key

- Proposed Site Location
- Proposed Access Routes

Drawing Title:

Figure 13: Road Access Map

Rev	Date	Description	Draw	Check	App'd
00	11/03/15	Road Access Route	RR	MG	MG
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1 : 25000 @ A4

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Drawing number: **00060-108**

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