

Homestead off Barker Lane Design and Access
Statement

320110867P

INTRODUCTION

This design and access statement has been prepared in support of the Landowners aspirations for a new build dwelling with ancillary ground work improvements

An existing prefabricated house is currently situated at the south eastern border and an existing application for the demolition of this dwelling replaced by new build house has previously been granted (ref:3/2009/0306/P)

This document is structured in line with guidance documents prepared by CABE: 'Design and Access statements: how to write read and use them' and should be read in conjunction with the submitted drawings

OBJECTIVES

The following statement sets out:

Site Location and analysis

The design principles upon which the proposal is based

How the development will have a positive impact upon its surroundings

Scale, massing, density, orientation and materials

How the development relates to the public realm

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CONSULTATIONS & INVOLVEMENT

PRE-APP REQUEST REF NO RV\2011\ENQ\00286

Dear Mr D J Houghton

I write with regards to the above Pre-Application request received on the 6th of July 2011. Following our site meeting on the 2nd of August 2011, and subsequent discussions with the previous case officer Sarah Westwood I can provide you with the following advice

As discussed on site, the previous approval at this site (3/2009/0306/P) was considered acceptable due to the revisions not being significantly detrimental to visual or residential amenity and also preserving the openness of the Green Belt

- 1 1 1 The proposal submitted with your pre-app shows a slight increase in height from that previously approved, as well as a change in shape (effectively changing from an L shape to a rectangle) involving the widening of the dwelling and the creation of a separate detached garage
- 1 1 2 In doing this, the existing gap on site between the adjacent property known as Sunnyside is reduced significantly and this is considered to have an impact on the openness of the Green Belt at this location
- 1 1 3 As such, I would recommend that the height of your proposed dwelling be no more than that approved (6.6m max.) and the width of the dwelling be reduced by a minimum of 2m, and with regards to the garage, be either removed altogether or significantly reduced in height (perhaps by lowering the ground level?). The reason for this being to protect the open aspect through the site that is currently provided on site.
- 1 1 4 With regards to the impact of the proposed dwelling on the residential amenity of the surrounding ill be a perception of overlooking from the velux windows within the front facing elevation, however a more detailed section through could be provided with any subsequent application to clarify this concern if you consider the scheme to be acceptable
- 1 1 5 With regards to the revised access track. I have no specific objections. However, please note this land IS outside the residential curtilage of Homestead and the Council would not support the formal inclusion of it within the residential curtilage

I have attached a copy of a couple of your plans submitted and have amended them accordingly

Kind regards

Graeme Thorpe BA (Hons) Dip TP MRTPI |

Senior Planning Officer |

Ribble Valley Borough Council, Council Offices, Church Walk, Clitheroe, Lancashire BB7 2RA

T 01200 414520 |

F 01200 414487 |

E graeme.thorpe@ribblevalley.gov.uk |

W www.ribblevalley.gov.uk |

MEETINGS & DISCUSSIONS

A number of informal discussions have taken place between the applicant and case officers Sarah Westwood and Senior Planning Officer Graeme Thorpe. A formal pre application meeting was also held on site on the 02 08 11 which was attended by Mr Thorpe

On the 25 08 11 the applicant received the following email (fig 1 to the left) which has been itemised and responded to below:

- 1 1 1 The plans tabled at the meeting on 02 08 11 showed a ridge height that extended to +100 946, this was exactly the same height as the current approved design. After receiving Mr Thorpes email and further design analysis this has now been reduced by a further 200mm (see fig 11 page 14)
- 1 1 2 The applicant agrees that the house has changed shape this design amendment has been carried out to make the building function better specific to its users needs. The plans have been discussed with all neighbouring properties who are in support of the application. The garage sits outside of the land noted as green belt, (see fig 4 NOTE 1 on page 8) and the upkeep/ improvement of vegetation and landscaping within the green belt will have a positive impact on the surrounding area
- 1 1 3 Mr Thorpes email has been noted drawing PA03 Rev C shows the height of the eastern facade at 6.6, it should be noted that this is 166mm lower than the approved scheme. As the land falls away toward the western facade an overall building height of 6.6m cannot be achieved in the area however the comments made in item 1 1 1 should be reiterated

Fig 2 page 6 show that further to Local Authority comment the footprint has been reduced in width by 1.3m (see fig 1 overleaf); the design, water harvesting system and efficiency of photovoltaic's would be severely compromised if the footprint was reduced further

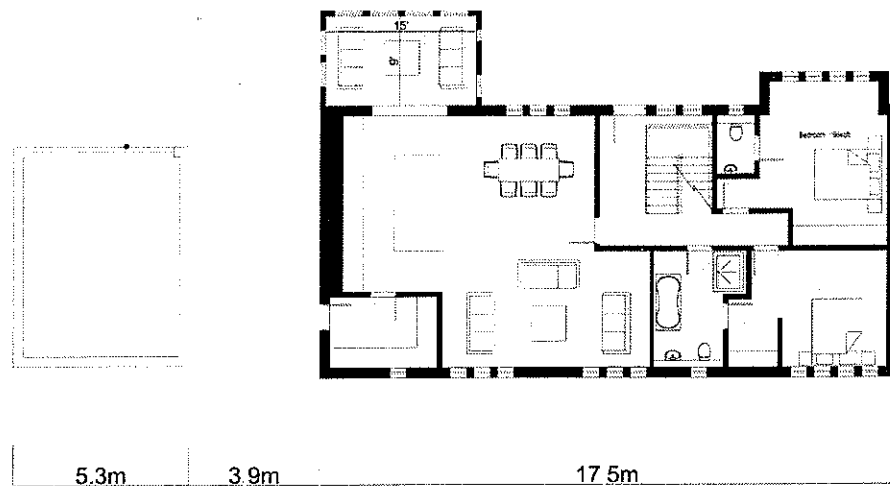
The garage has been moved away from the adjacent 'Sunnyside' property and reduced in height and size further more it now sits at the existing site level

- 1 1 4 Please see section on PA05 rev A showing that it is impossible to view the property from the velux windows. It should also be noted that views from the proposal are mainly due north overlooking the Landowners green belt- there are no views to the east or west and southerly views are minimal. Therefore there are no overlooking issues and privacy for all is maintained
- 1 1 5 The revised access track, shown on fig 4 page 8, reduces light spillage from cars disturbing the neighbouring property and also enables a more desirable access route in terms of Approved Document M of the Building Regulations

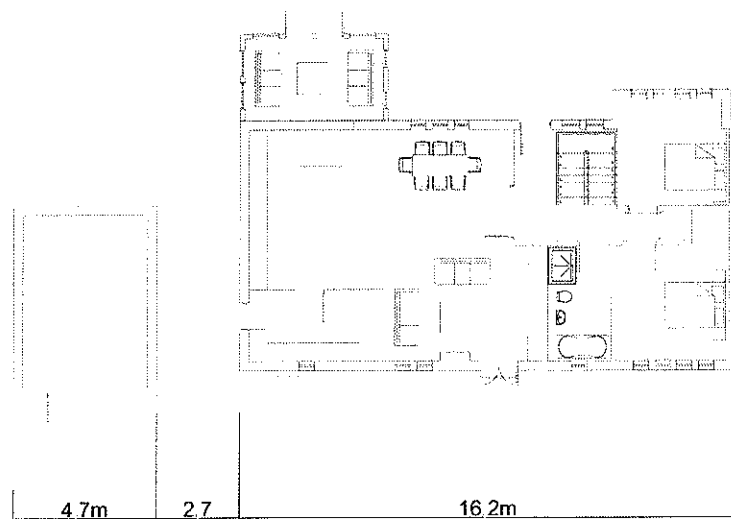
PUBLIC CONSULTATION

A Public consultation was not required

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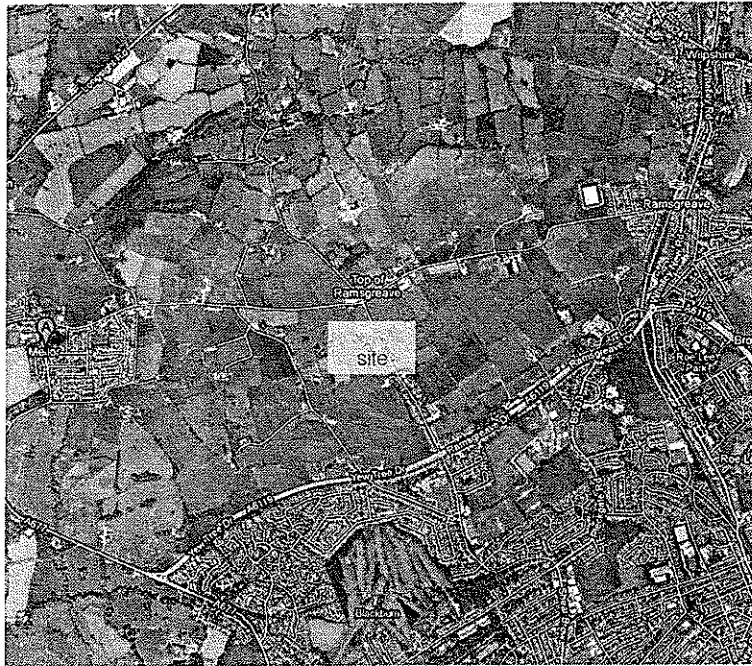
PA02 rev B Tabled on 25.08.11



PA02 rev C Updated further to Local Authority comments made on 25.08.11

CONTEXT

Figure 2- showing reduction in floor plate further to L.A. comment



LOCATION

The site is called known as 'Homestead' and is situated off Barker Lane in Mellor and is 3.3 miles from Blackburn. The address is as follows **Homestead Barker Lane Mellor Blackburn Lancashire BB2 7EE**



Left - Figure 3a - Aerial view of wider area showing local areas (by google)

Below Left - Figure 3b - Aerial view of immediate local area with the site outlined in red (by google)

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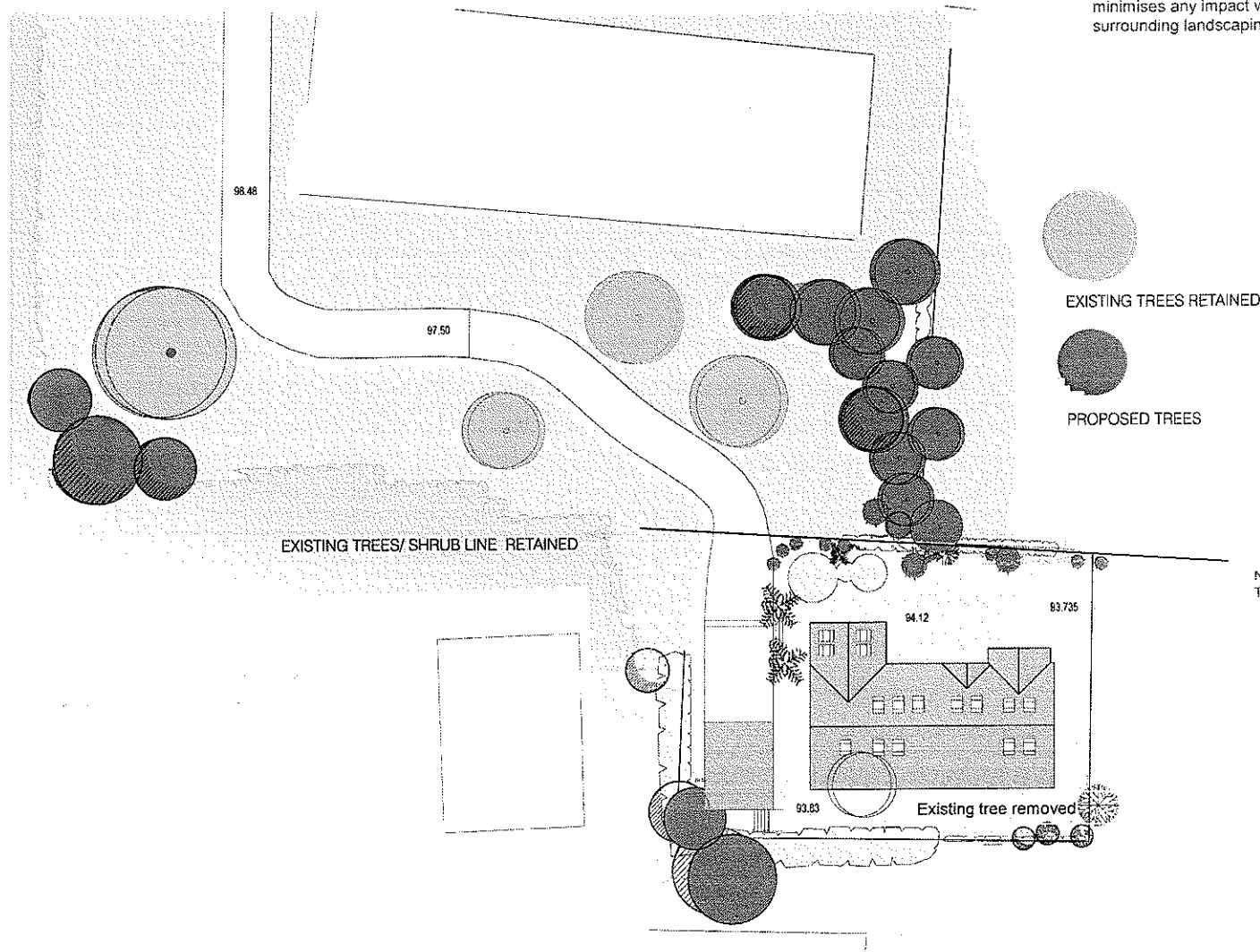
THE SITE

The site is associated with but does not sit within an area designated as greenbelt. The access road dissects through the greenbelt to provide access to the dwelling. The house sits at the south eastern boundary of the site and overlooks the Ribble Valley. The use class attached to the site is C3 there is no proposal to change the use of the site.

TREES

Although there are no Tree Preservation Orders on any of the existing trees the proposal minimises any impact with only one being removed. Extra planting will enhance the surrounding landscaping.

Figure 4 – Proposed Site Layout



NOTE 1. Development to the south of this line is outside The greenbelt curtilage



Figure 5 -



Figure 6 -



Figure 7 -

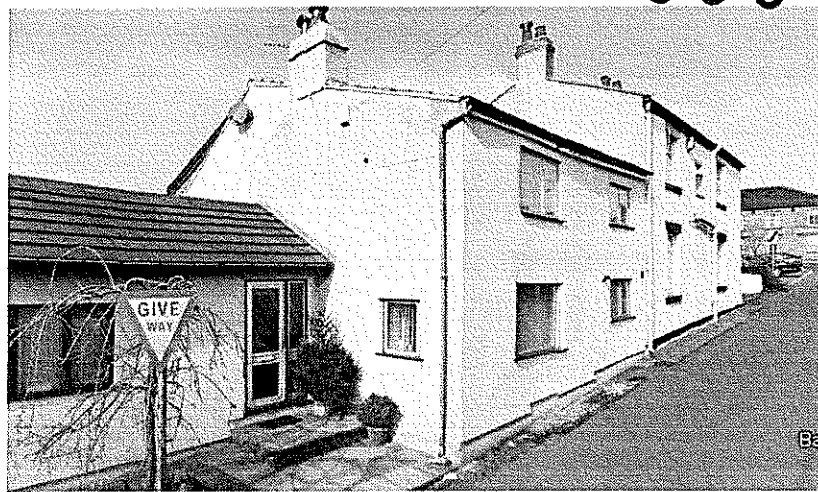


Figure 8 -

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ADJACENT USES

All surrounding buildings are private residential dwellings of individual character

CHARACTER OF SURROUNDING AREA

The surrounding area is a low density residential area made up of houses of individual character shape and size

All close buildings are constructed in brick with either diminishing stone roof slates or natural grey roof slates. Typical materials used in the adjacent buildings are red brick, white render treated timber fascias black rainwater goods and painted timber doors and windows

The boundary to the roadside of the adjacent houses is defined with both bushes and a selection of high quality timber fences

The sizes of each plot of land on Long Row and Barker Lane offer individual dwellings privacy from neighbouring plots. Large mature trees offer extra screening



Figure 9.10 -

POLICY

PPG 2 – Green Belts

The proposal takes in to consideration both the size of the plot and the size of the original house; the proposal extends the house by approximately 11% above the previous approval

The proposal has given due consideration to PPG 2 and has been carefully designed and planned not to have any adverse affect on the local area. The following is the most relevant extract taken from PPG 2 – Green belts:

3. Control over development
Presumption against inappropriate development

3.4 The construction of new buildings inside a Green belt is inappropriate unless it is for the following purposes:

Limited extension, alteration or replacement of existing dwelling

PPS 22 Renewable Energies

This scheme takes in to considerations the need for sustainable developments through the planning system. Renewable energies are proposed to be implemented, in brief, the installation of solar panel water heating systems and rainwater harvesting and solar photovoltaic's

There will also be a survey to assess the feasibility of a ground source heat pump/ air source heat pump

PPS 25 Development and Flood Risk

The proposed scheme and its surrounding area are not within a flood risk zone, this has been checked out on the Environment Agencies website

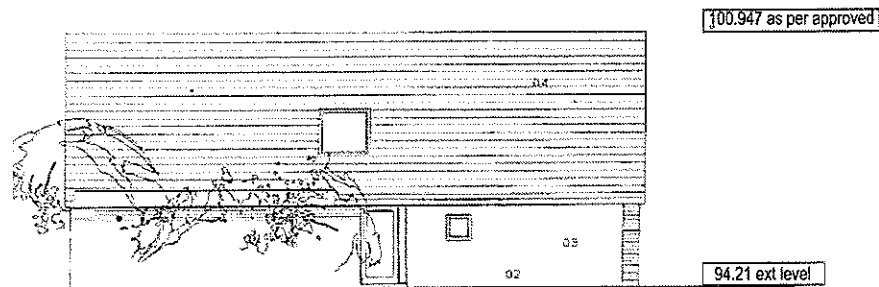
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PLANNING HISTORY

Application number	Type	Description	Date of consent	Status
3/2009/0306/P	Full Planning Application	Change of House type	17/07/09 Approved	Not implemented

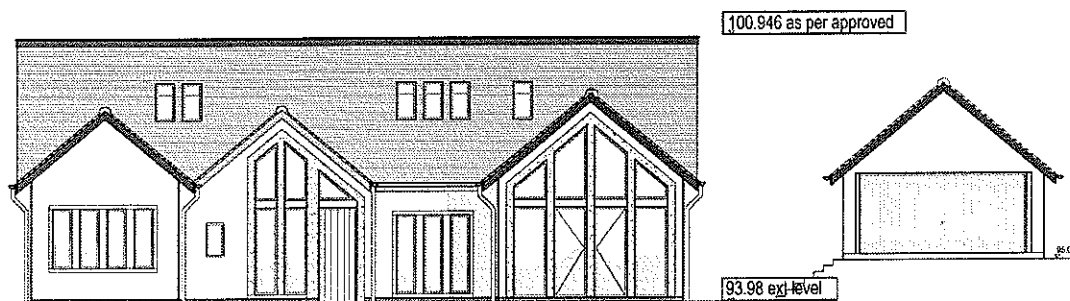
EVALUATION & DESIGN DEVELOPMENT

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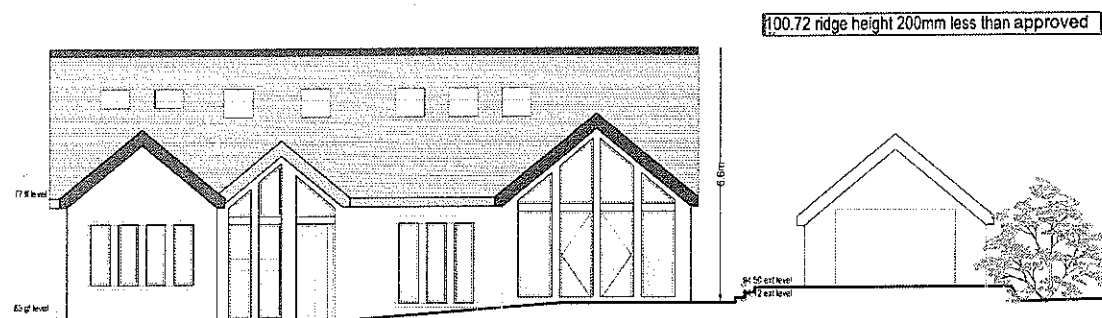
AS APPROVED 17 07 2009

15m



AS TABLED AT MEETING 02 08 11

17.5m



AS REVISED FURTHER TO MEETING ON 02 08 11

16.2m

DESIGN CONCEPT & PRINCIPLES

The principles of design can be summarised as follows:

Maintaining the amenity of the surrounding neighbourhood and improving the green belt.
The proposal sits mainly within an existing concrete base at the southern boundary of the site therefore safeguarding the openness of the existing land

Building Regulations Part M-Access for all:

The scheme has been revised so that access both to and into the dwelling is more suitable. The previous approval shows an access to the principal point of entry sloping at a gradient of 1:3 which is unsuitable under these regulations

Building Regulations Part L2A- conservation of fuel and power:

The scheme presented now has substantial provision for the conservation of fuel and power sufficient to satisfy the above regulation.

Heat gains have been limited; Floor slabs have been thickened, thermal mass increased. Energy efficiency improved: roof construction can now support a multitude of photovoltaic's. Wall construction will be of a sustainable timber frame

Maintain the planning approved height of ridges and roof line

Residents of Long Row will have a clear view over and above the proposed ridge height which sits lower than the level at the top of the drive (see section PA 05 rev A)

Maintain existing site entrance in order not to disrupt traffic flow.

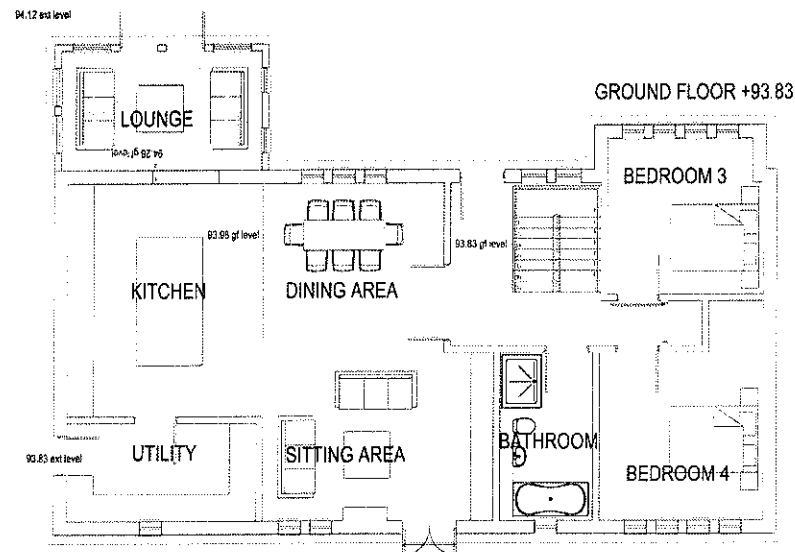
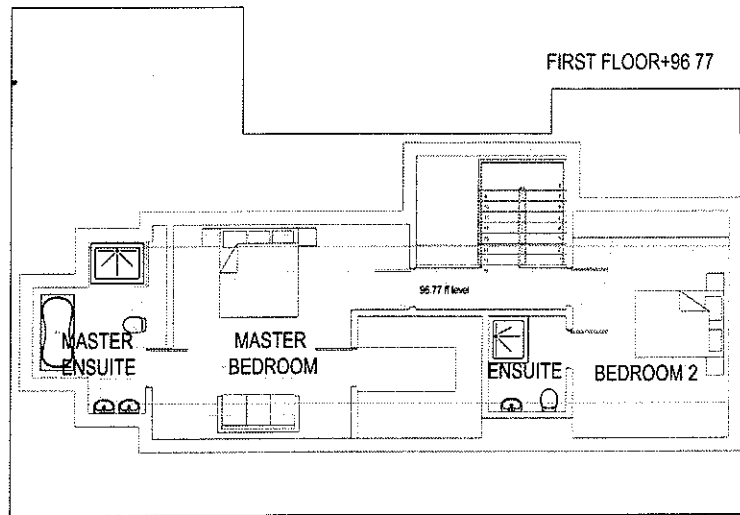
The access road has been remodelled/ repositioned to prevent light from vehicles interrupting the privacy of the immediate neighbours on the eastern boundary. The drive has been lowered and moved away from this neighbouring property further to discussions with the resident

It is important to highlight that the site as existing is in a state of unmanaged disrepair and that the planning approved scheme has significant flaws

The submitted proposal takes into account the suggestions of the local residents and does not push boundaries in terms of size or impact on the previously approved scheme

The solution is sensitive, modern, and sustainable, designed to suit a modern day family. Approval of this scheme will have no negative impact on the area but will ensure the ongoing maintenance of green belt that is so precious to the neighbourhood

Figure 11 - North Elevation Comparison



USE

The final use class will remain as C3 – a single residential dwelling

AMOUNT

Plot Name	No of bedrooms	Parking
Homestead	4	Garage

LAYOUT

The ground floor is devised into two halves with a centrally located double height stairwell. One half is dedicated to a modern open space living area and the second half is made up of bedrooms and a bathroom.

The upstairs accommodation sits in the eaves of the roof and is made up of two bedrooms, one of which is the master bedroom with walk-in wardrobe and en suite.

The ground floor is made up of a family sitting area, sun lounge, dining room, kitchen, utility room, bedrooms and a bathroom.

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Figure 12 – Proposed Floor Plans

SCALE & APPEARANCE

The local vernacular is a pick and mix of architectural styles mimicking a multitude of architectural periods

The proposal is a high performance, eco friendly building and it is important that the appearance emphasises this 'green' approach

A bespoke wooden frame will deliver a high performance building that is economic as well as sustainable. Wrapping around the frame will be a high performance render painted white giving the building a sleek modern feeling which will be emphasised by dark window frames. The tiling on the roof will be enhanced by photovoltaic's that will adorn the southern pitch

The height of the building is lower than the previous approval and has been constrained to 6.6m as much as possible further to local authority input

LANDSCAPING

Much of the existing landscape is retained as part of the proposal. One tree is proposed to be felled (as identified on fig 4) and unmaintained shrubs will be lopped in order to enhance and define the area of green belt

Part of the existing driveway will be remodelled in order to reduce light pollution into the nearby houses and to prevent root damage to existing trees

IMPLEMENTATION & DELIVERY

The buildings will be built to Good practice guidelines

SUSTAINABILITY

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RENEWABLE ENERGY

We are currently reviewing the following renewable energy sources as part of the development:

Rain water harvesting
Solar panels and photovoltaic panels
Ground Source/ Air Source heat pump
Wood Burning Stove
Heat recovery ventilation system
"supawall" insulation

ACCESS

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GUIDANCE & CONSULTATIONS

The following guidance documents have and will be referred to in the development of the scheme:

- Approved Document M of the Building Regulations www.planningportal.gov.uk
- BS 8300:2001 (incorporating Amendment no 1) Design of buildings and their approaches to meet the needs of disabled people – Code of practice British Standards Institution 2001
- Building Sight Peter Barker Jon Barrick and Rod Wilson RNIB/HMSO 1995
- Design and access statements How to write, read and use them The Commission for Architecture and the Built Environment (CABE) 2006
- Disability Discrimination Acts 1995 and 2005 including the relevant Codes of Practice

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TOPOGRAPHY & LOCATION

The existing site entrance location will be retained as part of the proposed scheme

PUBLIC TRANSPORT

No public transport is affected by this development

VEHICULAR ACCESS & PARKING

A small garage forms part of the proposal access has been remodelled so a more shallow gradient to the building can be achieved

PEDESTRIAN, CYCLE ACCESS & FACILITIES

Access is suitable for wheelchair use and ramped access to the side entrance has been proposed as part of the scheme-

SERVICING & REFUSE STRATEGY

The existing refuse management operation will remain as existing

PRINCIPAL ENTRANCE

Flush access is provided to the principal entrance and secondary entrance

INTERNAL CIRCULATION: HORIZONTAL

All entrance and internal doors offer an effective clear width of 800mm

INTERNAL CIRCULATION: VERTICAL

All new stair cases will have a minimum clear width of 900mm Risers and goings for all steps will be in accordance with Approved Document Part K

SANITARY ACCOMMODATION & PROVISION

Accessible sanitary accommodation will be provided at the entry level of the dwelling These provisions have been designed to comply with Approved Document Part M and the recommendations of BS 8300:2001

SWITCHES AND SOCKET OUTLETS

All switches and sockets will be positioned between 450mm and 1200mm from finished floor level

DESIGN SUMMARY

DESIGN SUMMARY

The Proposed scheme will:

- Make a positive contribution to the quality of design in the local area
- Enhance the area in terms of architectural quality
- It will keep within the vertical and horizontal building lines of the neighbouring houses
- Make use of the existing site entrance in order to maintain the street scene along Long Row
- Provide parking space for domestic use

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APPENDIX A PLANNING DRAWINGS

APPENDIX B SUSTAINABILITY OPTIONS

NOTES

- 1. All dimensions are to be taken from the centre of the road.
- 2. All dimensions are to be taken from the centre of the road.

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DATE	BY	REVISION	DESCRIPTION
10/10/11	...	...	...

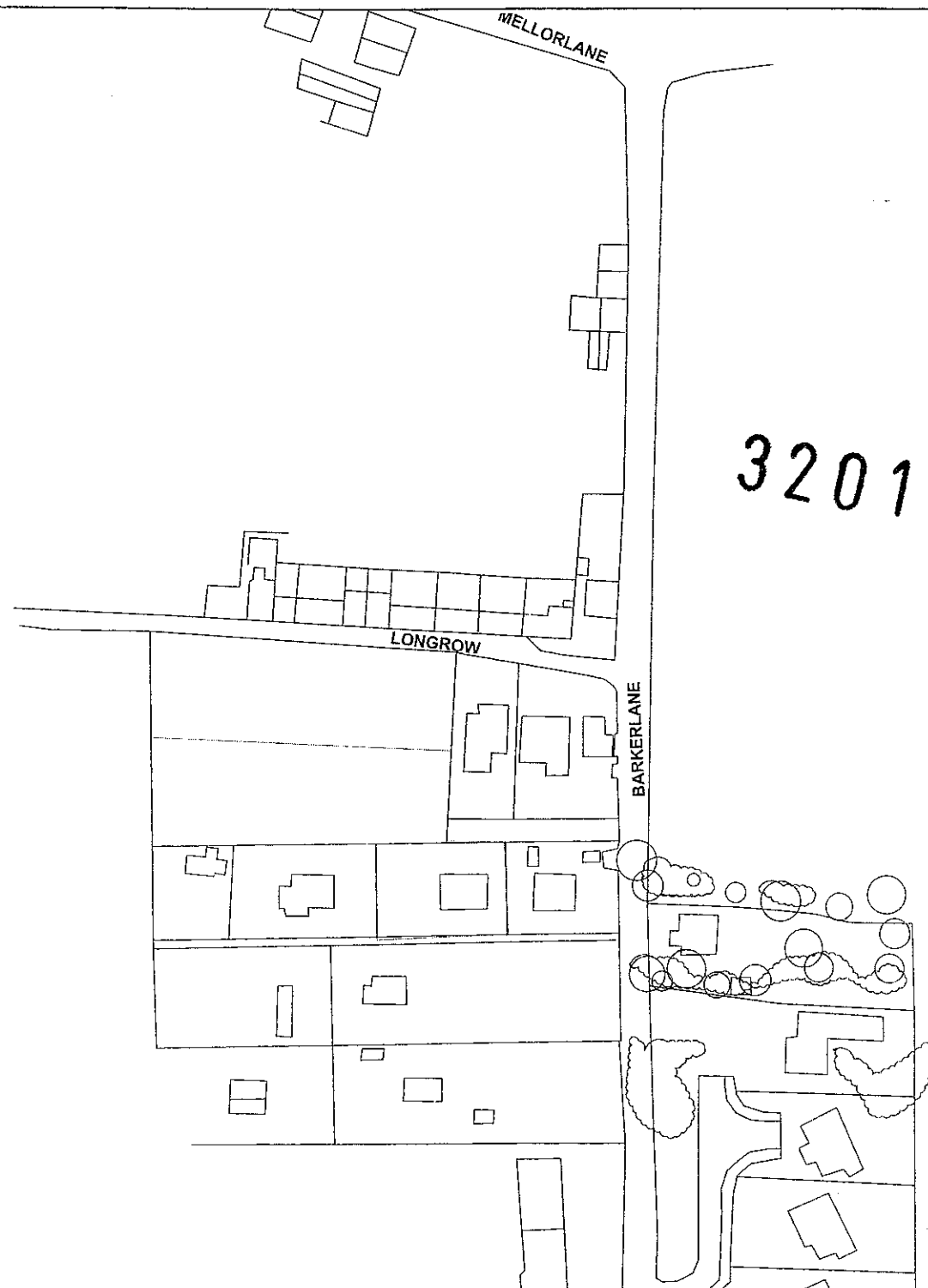
PLANNING
FOR APPROVAL
RESIDENTIAL HOUSEHOLD

10/10/11
10/10/11
10/10/11

EXISTING
LOCATION PLAN

DATE	BY	REVISION	DESCRIPTION
10/10/11	...	...	...

0 10 20 30 40 50m
Scale 1:1000 @ A3



PA100 REVA

NOTES

All dimensions and setbacks are to be shown on the site plan.
All drawings are to be made in accordance with the relevant standards.

3201108670

FOOTPRINT OF
DEMOLISHED BUILDING



APPROXIMATE
BOUNDARY LINE

NO.	DATE	BY	CHKD BY
1	27/01/11	MD	RH

Drawing title: PLANNING
Drawing status: FOR APPROVAL
Drawing author: MRS MRS D HOUGHTON

Project: HOMESTEAD
AMENDED
R VALLEY
Drawing title: EXISTING
SITE PLAN

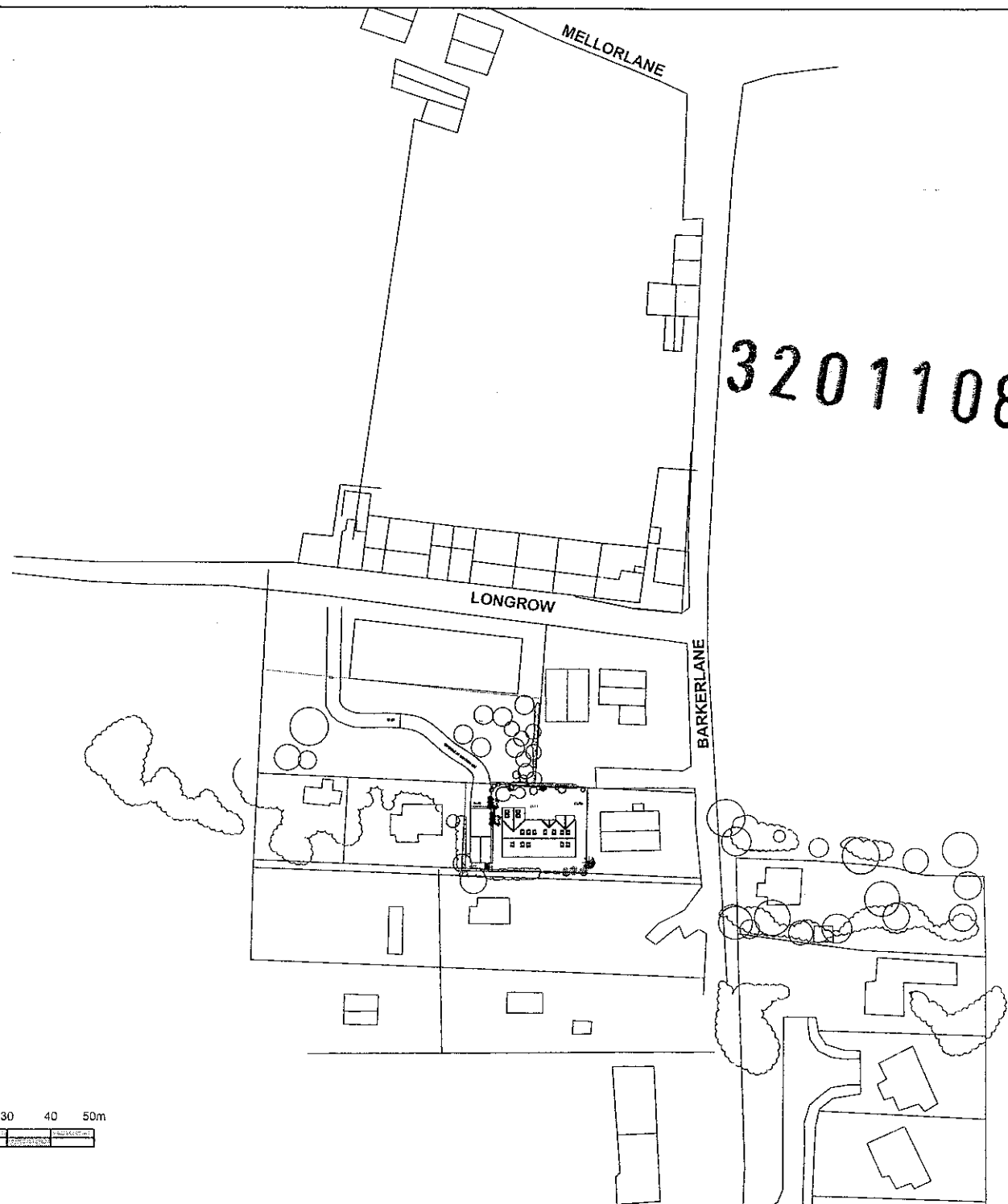
DATE	27/01/11	PROJECT	RH
SCALE	1:200	STATUS	RH

0 2 4 6 8 10m



Scale 1:200 @ A3

PA101 REVA



320110867P

0 10 20 30 40 50m
Scale 1:1000 @ A3

NOTES
All dimensions are in metres unless otherwise stated.
All areas are in square metres unless otherwise stated.



LEGEND

Symbol	Description
(Solid line)	Boundary
(Dashed line)	Proposed boundary
(Circle)	Tree
(Square)	Building
(Triangle)	Well
(Star)	Water feature

PLANNING
FOR APPROVAL
MRS MARGO HOUGHTON

HOMESTEAD
AMENDED
R VALLEY
LOCATION PLAN

Drawn: J. J. 11/11/11
Scale: 1:1000 @ A3

PA00 REVD

NOTES

All dimensions shall be taken to the centre line of the road.
All dimensions shall be taken to the centre line of the road.
All dimensions shall be taken to the centre line of the road.

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98.48

97.50

GRADIENT AT 1:10 OVER 30M

94.50

94.12

93.735



EXISTING FGS P-10

NO	DATE	REVISION	BY
1	22/09/11	1	MR
2	16/02/12	2	MR
3	16/02/12	3	MR
4	16/02/12	4	MR
5	16/02/12	5	MR
6	16/02/12	6	MR
7	16/02/12	7	MR
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9	16/02/12	9	MR
10	16/02/12	10	MR

PLANNING

FOR APPROVAL

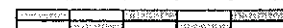
MIRIAM HOUGHTON

HOMESTEAD
REVISED
REVALLEY

SITEPLAN

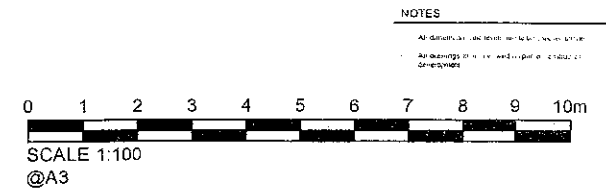
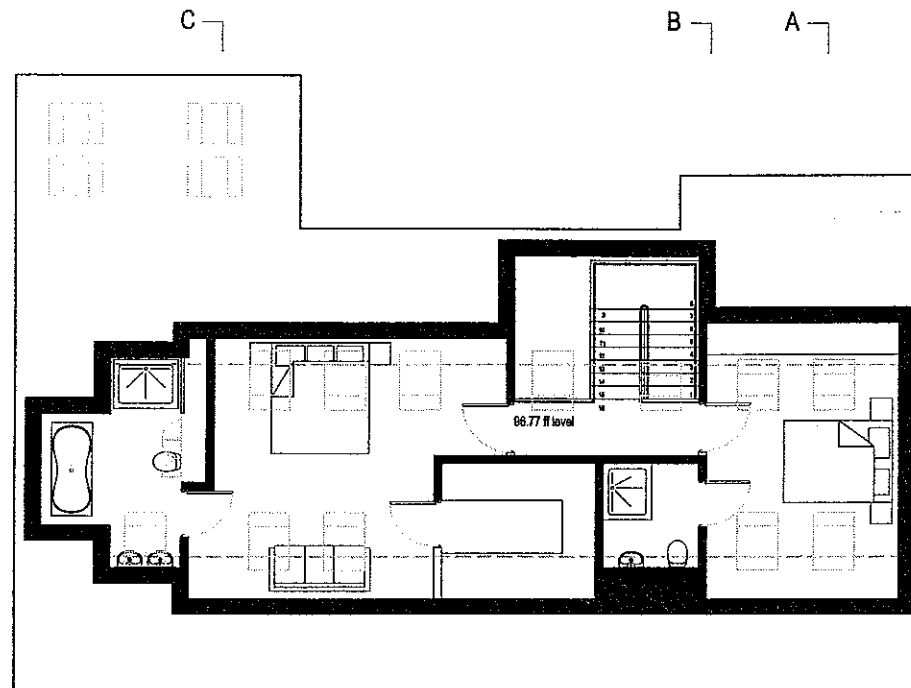
DATE: 27/09/11
DRAWN: 11/09/11
CHECKED: 11/09/11
APPROVED: 11/09/11

0 2 4 6 8 10m

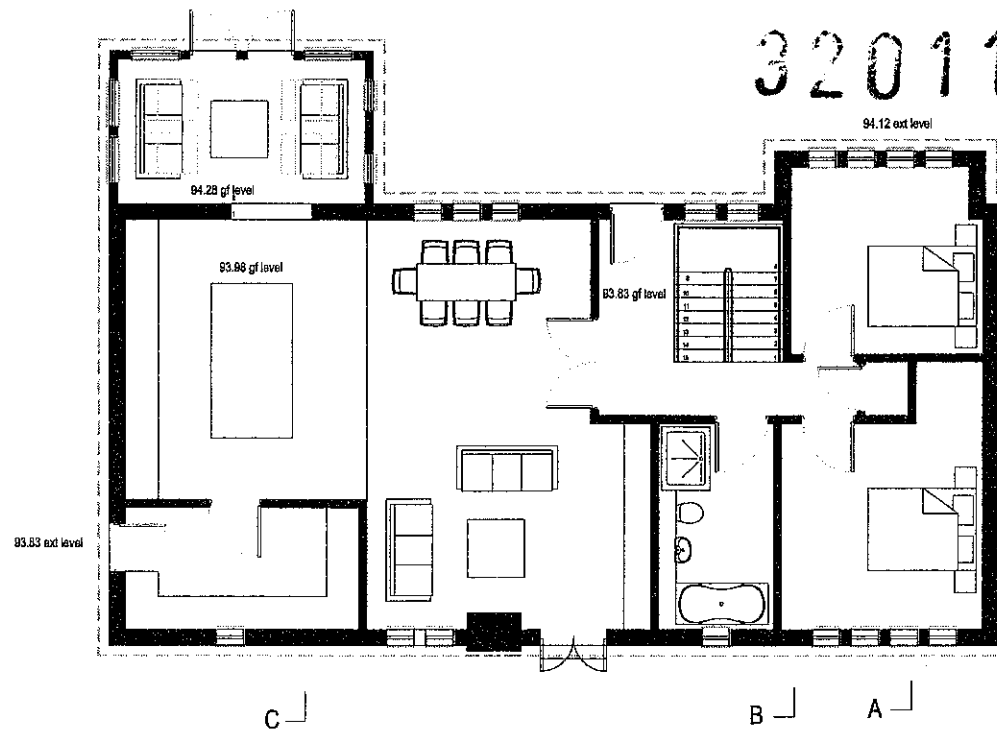


Scale 1:200 @ A3

FIRST



GROUND



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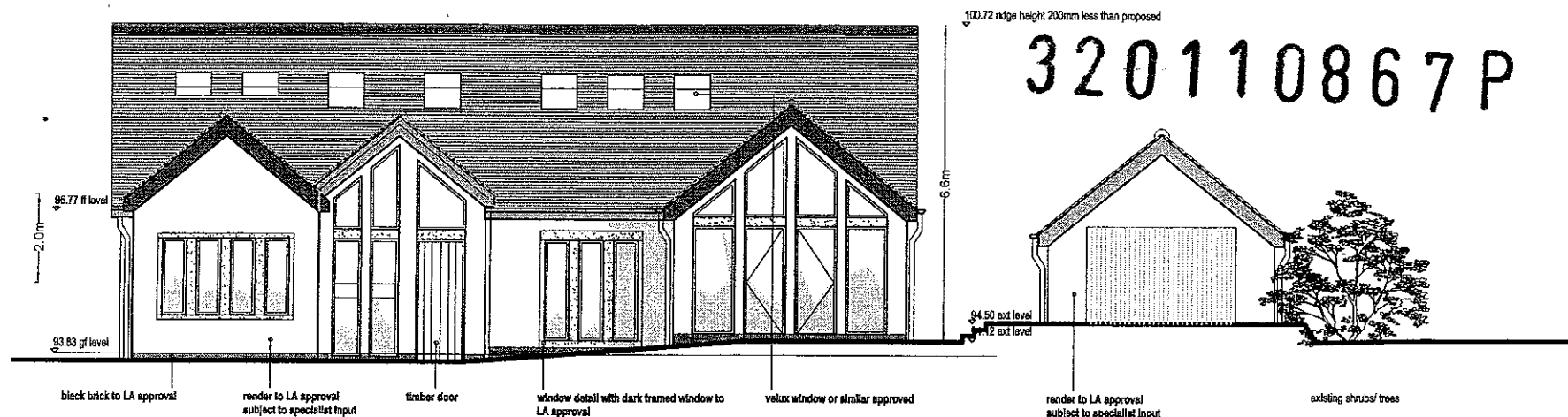
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C	06/07/11	PLAN	...	...
B	06/07/11	...	...	...
A	06/07/11	...	...	...
1	06/07/11	...	...	...

PLANNING	FOR APPROVAL
MANSFIELD HOUSING	
HOMESTEAD	
AMENDED	
R VALLEY	
FLOORPLAN	
GROUND/FIRST	

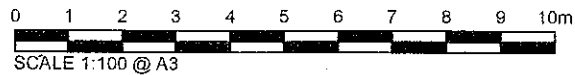
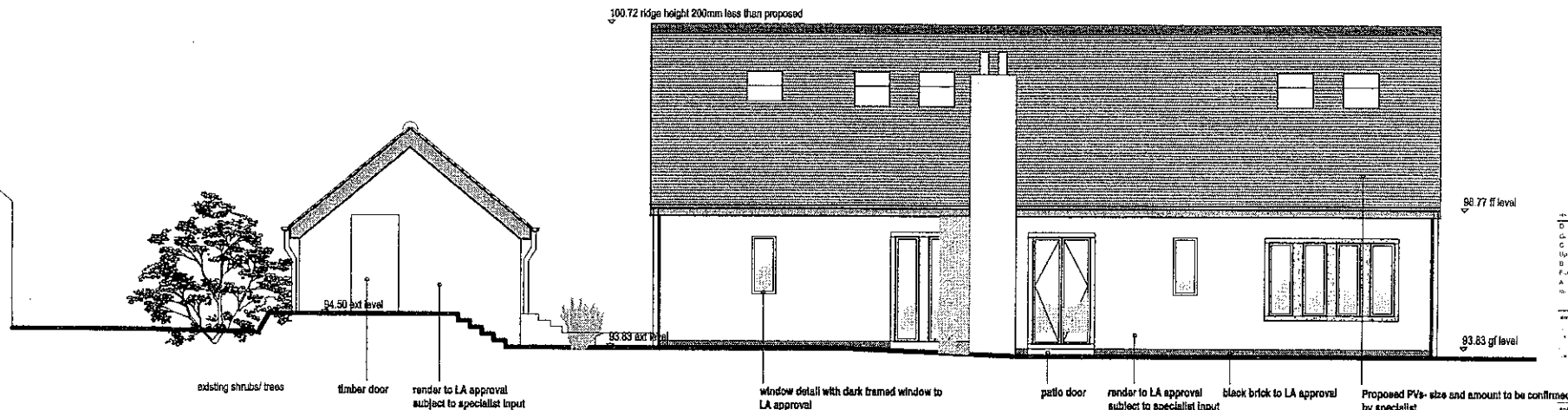
DATE	21/09/11	SCALE	1:100
DRAWN	17/09/11	DATE	01/11

PA02 REV C

FRONT



REAR



NOTES

- All construction shall be in accordance with the Building Regulations.
- All materials shall be of a quality and standard suitable for the purpose.

REV	DATE	REVISION	BY
1	20/09/11	Initial Design	BM
2	05/10/11	As per client requirements	BM
3	06/11/11	As per client requirements	BM
4	16/02/11	As per client requirements	BM
5	16/02/11	As per client requirements	BM
6	16/02/11	As per client requirements	BM

PLANNING
FOR APPROVAL

MIRIAMSD HUGHTON

HOMESTEAD
AMENDED
R VALLEY

ELEVATIONS

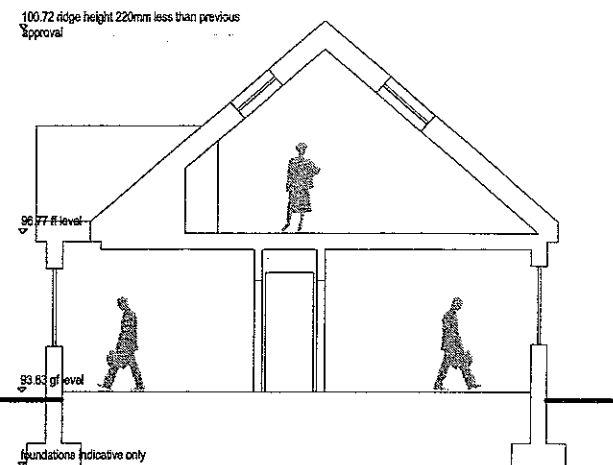
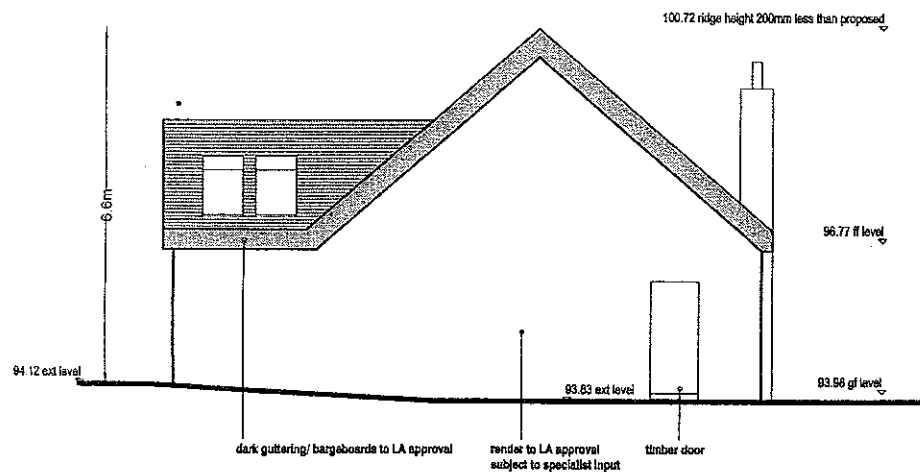
DATE: 21/04/11
BY: BM

NOTES

- All dimensions are in millimetres unless otherwise stated.
- All drawings are to be read in conjunction with the specification.

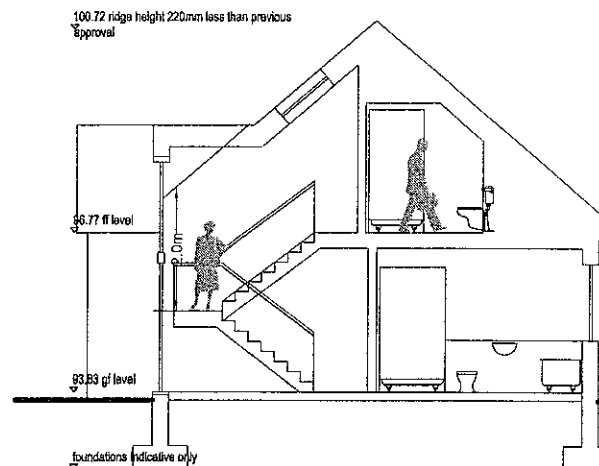
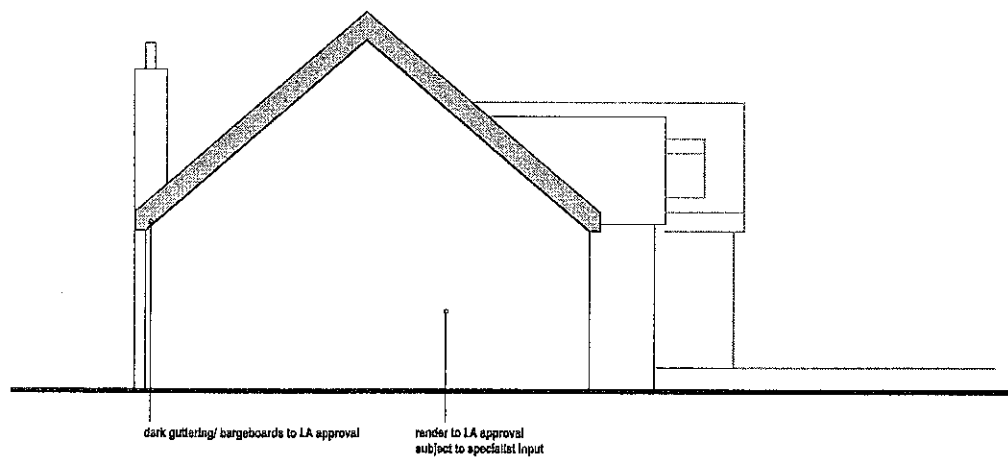
SIDE

SECTION A-A
320110807P



SIDE

SECTION B-B



0 1 2 3 4 5 6 7 8 9 10m
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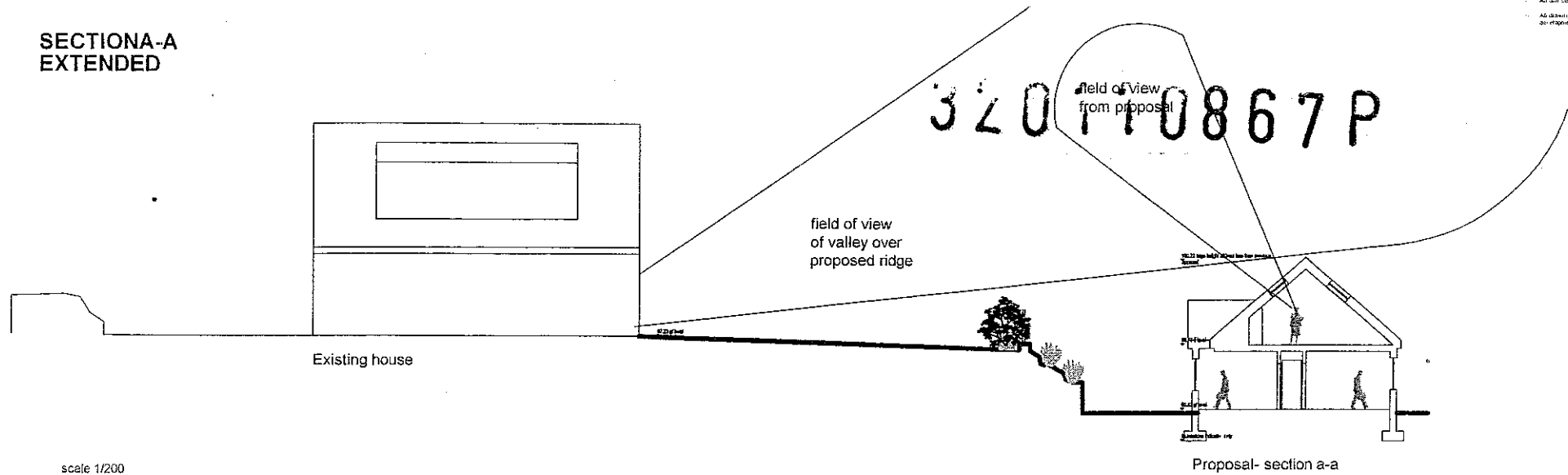
REV	DATE	BY	CHKD	DESCRIPTION
C	06/07/11	AM	RTM	Update to LA approval, 10/07/11
B	16/07/11	AM	RTM	Final to LA approval, 10/07/11
A	16/07/11	AM	RTM	Initial to LA approval, 10/07/11

Working stage	PLANNING
FOR APPROVAL	
MIRRORED HOUSING	
HOMESTEAD	
AMENDED	
R VALLEY	
ELEVATIONS/SECTIONS	

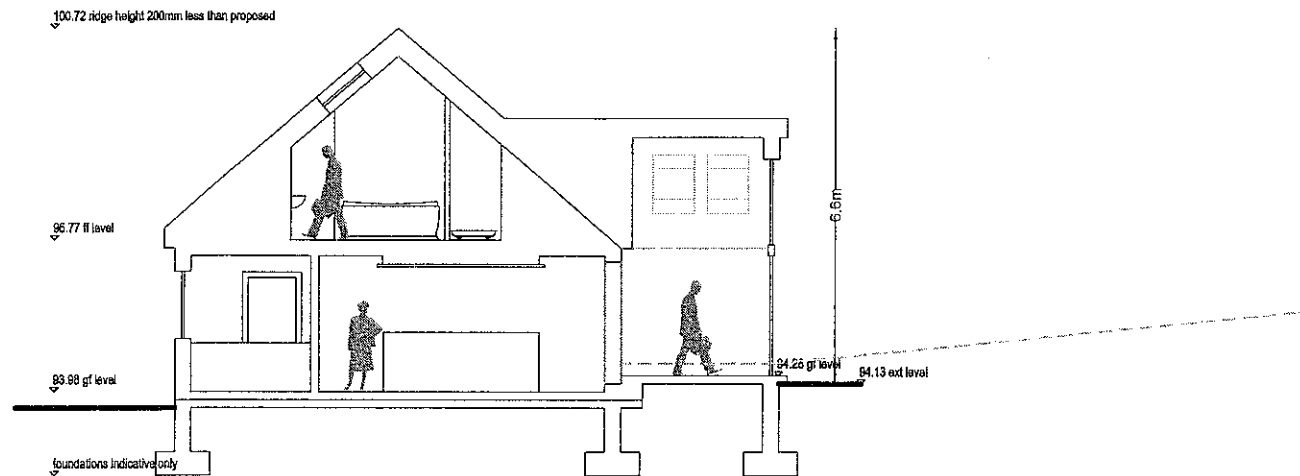
DATE	27/07/11	BY	AM
DATE	17/08/11	BY	RTM

PA04 REV C

SECTION A-A EXTENDED



SECTION C-C



0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 @ A3

NOTES

- 1. All dimensions are in millimeters unless otherwise stated.
- 2. All drawings are to be read in accordance with the project brief.

DATE	BY	PROJECT	LOCATION
15/03/11	DR	DR	DR
PLANNING			
FOR APPROVAL			
MR & MRS D. HOUGHTON			
HOMESTEAD AVENUE R VALLEY			
ELEVATIONS & SECTIONS			

DATE	21/04/11	PROJECT	DR
BY	1. DRG-3	CHECK	DR

NOTES

- All dimensions are in metres unless otherwise stated.
- All drawings are to be read in conjunction with the specification.

0 1 2 3 4 5 6 7 8 9 10m

SCALE 1:100

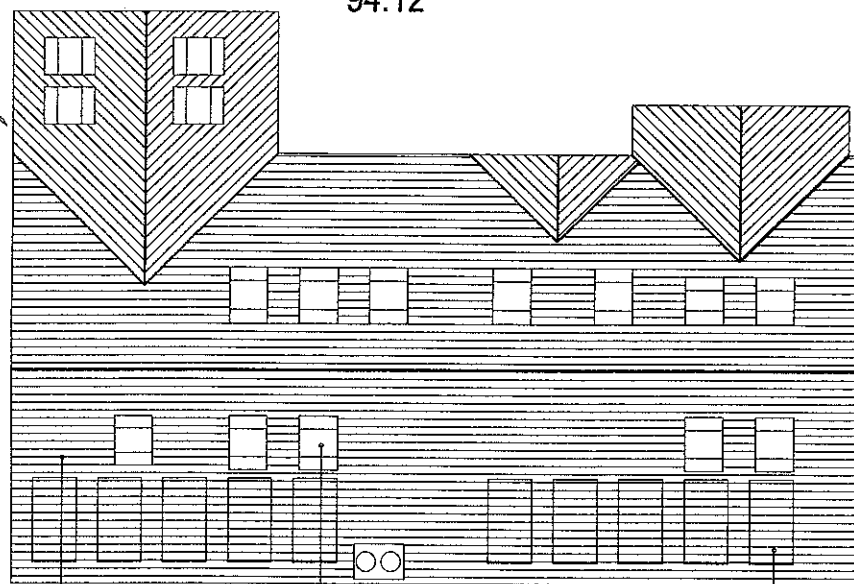
@A3

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93.735

94.12

50



also or similar approved to LA approval

Rooflights- spec as per part I requirements type subject to LA approval and specialist input

Proposed PVs- size and amount to be confirmed by specialist



DATE: 15/10/11
DRAWN BY: [signature]
CHECKED BY: [signature]

PLANNING

FOR APPROVAL

MRS MRS D HOUGHTON

HOMESTEAD
AMENDED
R. VALLEY

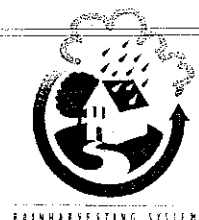
ROOFPLAN

DATE: 27/01/11
DRAWN BY: [signature]
CHECKED BY: [signature]

PA06 REVA

Proposed rainwater harvesting system for:

D Houghton
BLACKBURN, LANCs



Date: 24/08/11

re: Quotation no. 21885

Thank you for your request for a quotation for a rainwater harvesting system, which is enclosed with this letter. Based on the information you supplied we recommend a suitable system as outlined below. The following provides a specification for the components required and is intended to serve as an initial guide to the installer. Reference should be made to any accompanying drawing and data sheets.

Please be sure to read all the documents, paying particular attention to the "important notes" section at the end. If you have any queries, please phone for clarification before placing an order, we will be glad to help.

The system is designed to provide a supply of clean rainwater for WCs, washing machine and for garden use. Rainwater enters the storage tank via a special filter unit, designed to remove all but very fine particles of dirt, leaves and other debris. This clean water is then pumped as required to specific outlets. The system will have an automatic back-up from the mains water supply, via a type AA air gap compliant with current Water Regulations. The storage tank will be fitted with a flow-calming inlet and a trapped overflow unit.

The layout of the system should be decided at an early stage, with particular attention paid to drain invert levels, location of storage tank, soakaway etc. The system controls (such as pump controller, mains water top-up, level gauge) need to be sited in a convenient location - e.g. utility room.

It must be fully understood that the water from the system is not of a potable quality and should therefore not be used for drinking or bathing purposes, without further treatment. Additional filtration and UV sterilisation units are available on request. N.B. - we do not recommend using rainwater for personal use (drinking, bathing, or for use in dishwashing machines) unless it is first sterilised.

Calculations:

Available roof area:	140 square metres
Annual rainfall (approx):	1200 mm
Recommended storage capacity:	6000 litres
Annual estimated volume of water from rainwater harvesting system:	136080 litres

Storage

A storage volume of 6000 litres is recommended. This will be a one-piece GRP underground tank pre-fitted with a smoothing inlet to calm the flow of water entering the tank and an overflow trap designed to remove any floating debris. Please refer to the enclosed document regarding the installation of the tank. It is important to ascertain the state of the ground conditions.

Filtration

The system will use a Wisy WFF100 filter to remove all particles greater than 280 microns. A secondary suction filter will be fitted to the pump as a further safeguard and to protect the pump from any large debris that should inadvertently find its way into the tank. Further cleaning of the water takes place within the tank through the process of sedimentation and through the removal of floating debris during overflow conditions.

Pump

The system will use a Multigo 40/06 submersible pump to provide clean rainwater to the specified outlets. The pump will extract water through the suction filter designed to prohibit any sediment that may accumulate at the bottom of the tank.

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Mains water back-up

To ensure continuity of supply, there will be a mains water connection to the storage tank, via a type AA air gap in compliance with current water regulations. The mains top-up device consists of a solenoid valve connected to a tundish, the solenoid being activated by a float switch located in the storage tank at low level. The device will deliver mains water under gravity to the tank through a dedicated pipe of at least 50mm diameter. This pipe will be connected to the clean water outlet pipe of the rainwater filter. Thus, both rainwater and mains water will enter the tank through the same calmed inlet.

Components required:

- Supplied by Rainharvesting Systems Ltd. (see relevant quotation):

Storage tank:	6000 litres nominal capacity
Smoothing inlet:	EB0300 110mm smoothing inlet, pre-fitted
Overflow trap:	overflow trap with anti-backflow device, pre-fitted
Rainwater filter:	1 no. Wisy WFF100
Pump:	1 no. Multigo 40/06 submersible
Pump controller:	Controlmatic
Pump dry-run protection:	by pump controller
Pump delivery pipe:	32mm MDPE (black)
Non-return valve:	integral
Suction filter:	1" fine fixed suction filter
Mains water top-up:	TW 8820 ½" top-up kit (20m cable)
Tank level gauge (optional):	manual analogue type with 10 metre extension kit
Pipe identification tape:	1 no. 30m roll 25mm – marked RAINWATER – NON-POTABLE

- Materials to be supplied by client/contractor:

Drainage pipe to filter:	110mm
Drainage pipe from filter to tank:	110mm
Overflow pipe from filter:	110mm
Overflow pipe from tank:	110mm
Duct from tank to house:	110mm
Pump delivery pipe:	n/a
Header tank:	n/a
Internal pipework:	22mm and 15mm to outlets as required
Electrical requirements:	2no. 230v AC switched outlets
Mains water supply:	15mm to mains top-up unit
Mains top-up delivery pipe:	50mm waste pipe
For tank installation:	Concrete to 20 N/mm and 30-55 slump

Installation requirements:

Underground storage tank:

The tank must be installed strictly in accordance with the manufacturers recommendations. Suitable handling equipment or manpower must be available on site to offload and position the tank. The tank must be backfilled with concrete to the manufacturer's specifications. If the tank is to be installed in an area subject to vehicular traffic or other excessive loads, a suitable concrete raft must be engineered and a heavy-duty access cover should be used. Detailed installation instructions will be sent upon receipt of order.

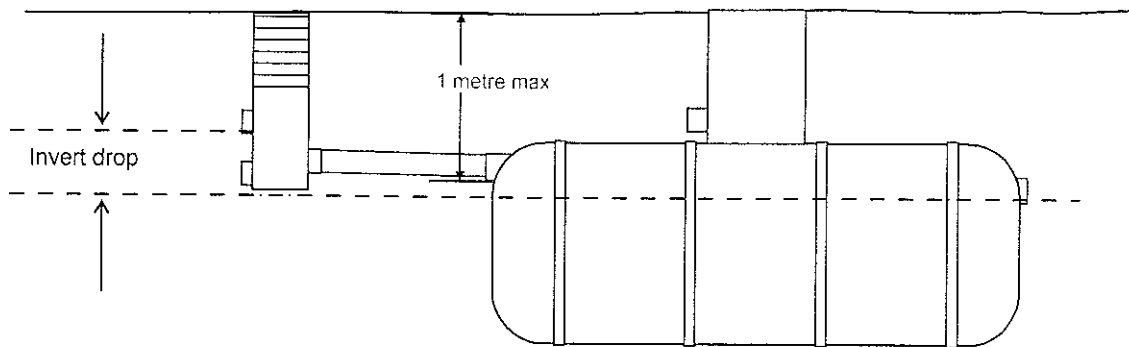
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Tank connections:

Three connecting pipes are required to the underground tank. The tank is supplied with appropriate connection sockets;

- 1) 110mm inlet pipe from the rainwater filter
- 2) 110mm overflow pipe to storm drain or soakaway
- 3) 110mm pipe to act as a duct for the pump delivery/suction hose and power cables. This duct must connect from the shaft of the tank to a convenient location in the house (e.g. utility room, cloak room, garage)

It is important to ascertain drain invert levels prior to commencing work. The invert level of the rainwater drain will dictate the level of the rainwater filter, which in turn will dictate the level of the rainwater storage tank and therefore the overflow from the tank to soakaway or storm drain. The site must therefore be able to accommodate this drop in invert levels - approximately 460mm when using the WFF100 filter with a *Rainsava* storage tank



Rainwater filter:

The filter must be installed strictly in accordance with the manufacturers recommendations. The filter has one inlet and two outlets; one to storage and one to storm drain or soakaway. All connections are standard 110mm. In normal circumstances the filter can be installed in the same manner as the adjoining drainage, bedded on and surrounded by pea shingle. If it is to be installed in an area subject to vehicular traffic or other excessive loads, it should be bedded on concrete. The filter has a GVW rating of 30T.

Mains water top-up pipe:

Mains water is supplied to the storage tank via a type AA air gap, in accordance with current water regulations. The mains water is therefore no longer under pressure, and must feed to the tank by gravity. The pipe carrying this water must therefore be of sufficient bore to allow free flowing of the water. We recommend a pipe of 50mm diameter is used for that part of the mains water top-up pipeline that is within the building. At floor level this can change to a larger diameter; 82 or 110mm for that portion which is underground. This pipe should then join the 110mm pipe that takes clean water from the rainwater filter to the storage tank. Please refer to the drawing on page 5.

Important notes

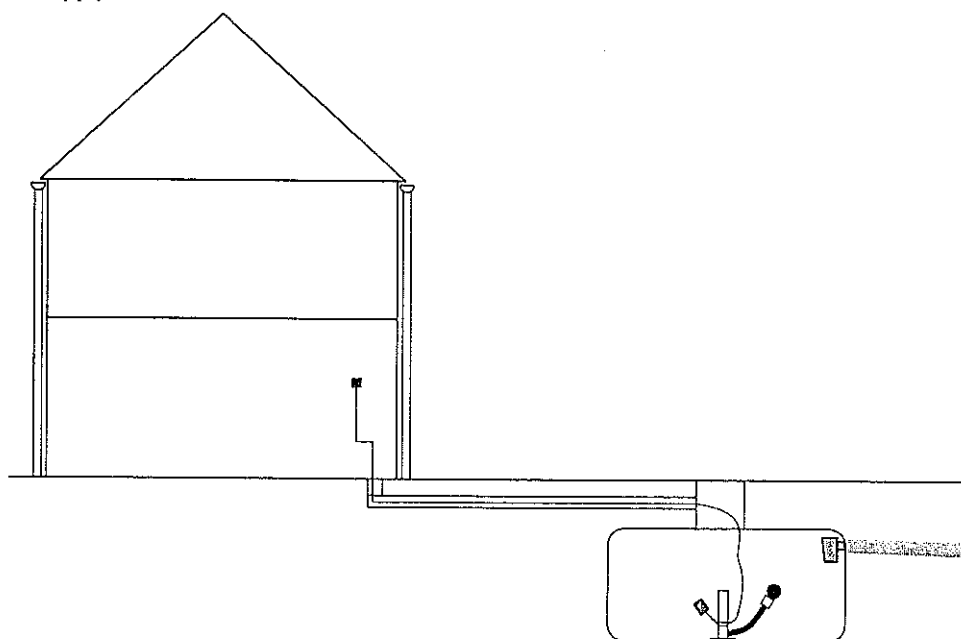
- 1) The standard duty tanks are suitable only for burial up to 1 metre above tank inlet. If tank depth will be greater a reinforced tank can be supplied at extra cost.
- 2) It is the customers' responsibility to offload goods upon arrival to site. This is particularly important with rainwater storage tanks, as usually mechanical handling equipment will be required.
- 3) Terms are strictly pro forma for non-account customers, payment is required before orders can be processed.
- 4) Rainwater downpipes that are part of the system should not discharge into open gullies. They should rather connect directly to the stormwater drain with proprietary connectors; this reduces the risk of undesirable contaminants entering the system.
- 5) If the overflow from the tank is to discharge to foul drain or other potential source of contamination, an overflow trap with integral anti-backflow device and/or a vermin barrier should be considered (available on request if not already specified).

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- 6) If the service duct enters the house (rather than garage or other attached outbuilding) cold moist air will enter from the tank. The end of this duct should therefore be appropriately sealed to avoid this. Proprietary fittings are available from us on request.
- 7) Rainwater should only be used for specific purposes (usually WC flushing, laundry use and garden irrigation/car washing) unless it undergoes further treatment such as Ultra-Violet sterilisation or Reverse Osmosis. Untreated rainwater can contain potentially harmful organisms so should be regarded with respect and assumed to be 'unwholesome'.
- 8) The Water Regulations require *that pipes that do not carry wholesome water are readily distinguishable from those that do*. All internal pipes used to supply rainwater should therefore be clearly marked. We supply an appropriate adhesive tape for this purpose with all our systems.
- 9) Similarly, cisterns, valves and other outlets should be clearly marked. We have adhesive labels for this purpose and recommend that they are used discreetly (e.g. inside the lid of a WC cistern), but where they will easily be seen by anyone carrying out future maintenance or alterations.

Additional notes:

The quotation attached to this document includes item TW8820, part of which is a float switch that will be located in the rainwater storage tank. The cable must reach back to the house where it connects with other components and the mains electrical supply:-



The item we have specified has a cable length of 20 metres, which is normally sufficient. If a longer length is required, it will be necessary to extend these cables accordingly and this should be borne in mind as an additional expense.

Please note that the system outlined here and in the attached quotation is a direct pumped (pressurised) system. If required, the system can be supplied with a header tank to provide gravity feed.

Additional services

We offer a testing and commissioning service for newly installed systems. We also offer an annual maintenance service. Please contact us for details.

Warranty

All our equipment is guaranteed for a period of one year from the date of purchase, with the exception of the Wisy filters which have a two-year warranty.

Disclaimer

The information in this document is based upon data supplied to us by the customer and is assumed to be accurate. It is the responsibility of the client or their representative to check that information is correct. Rainharvesting Systems Ltd accept no liability for loss or error as a result of the information in this document.

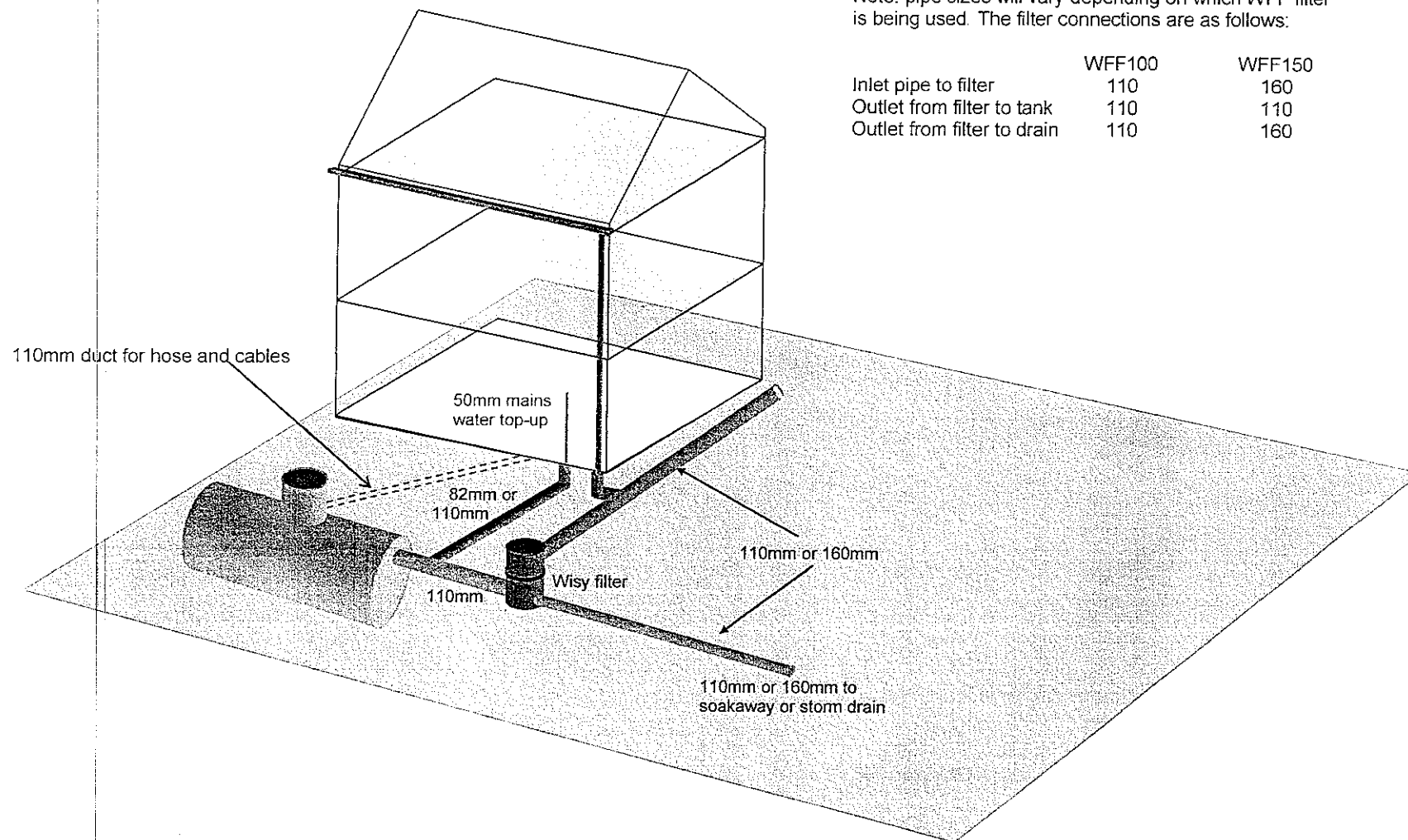
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Suggested layout for mains water top-up and drainage pipes connected to the filter and storage tank.
For clarity other components are not shown here.

Note: pipe sizes will vary depending on which WFF filter is being used. The filter connections are as follows:

	WFF100	WFF150
Inlet pipe to filter	110	160
Outlet from filter to tank	110	110
Outlet from filter to drain	110	160



IMPORTANT

Think GAI

For Life and the Earth

ANY PROPOSAL TO CONNECT TO A PUBLIC SEWER MUST
BE APPROVED BY THE COUNCIL'S DRAINAGE SECTION.
NO PUBLIC SEWER MUST BE DISTURBED WITHOUT THE
WRITTEN AUTHORITY OF THE ABOVE
CONTACT DRAINAGE SECTION 01200 425111
BEWARE! SEWERS CAN KILL!

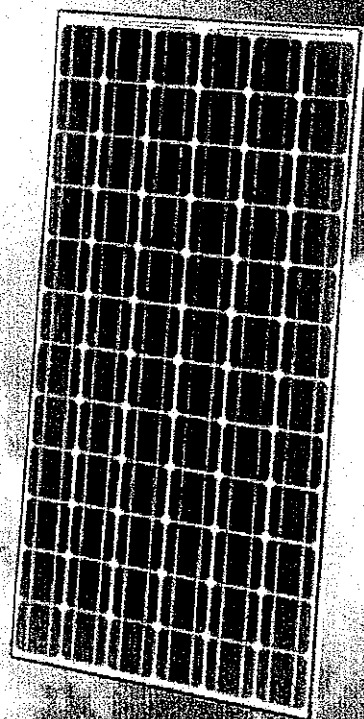
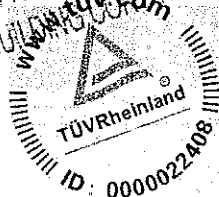
SANYO

HIT photovoltaic module

HIP-215NKHE1
HIP-210NKHE1
HIP-205NKHE1

ATTENTION
WORK MUST NOT START UNTIL YOU
HAVE CHECKED THE REGULATIONS
APPLICABLE TO THE PROJECT
BUILDING CONTROL ONLY YOU

Valley Borough Council
Planning Act 1990
17 JUL 2009

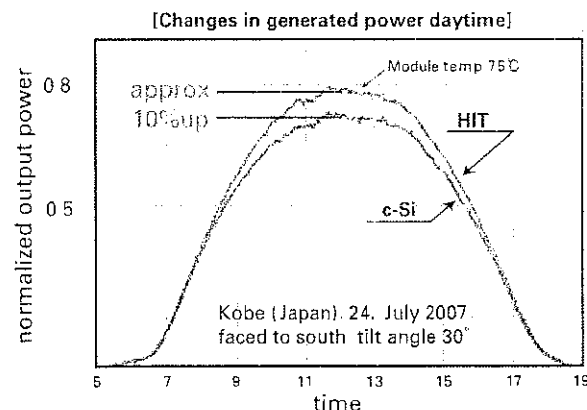


The SANYO HIT (Heterojunction with Intrinsic Thin-layer) solar cell is made of a thin mono crystalline silicon wafer surrounded by ultra-thin amorphous silicon layers. This product provides the industry's leading performance and value using state-of-the-art manufacturing techniques.

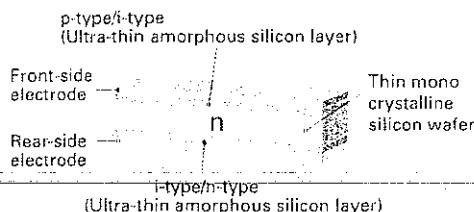
Benefit in Terms of Performance
The HIT cell and module have very high conversion efficiency in mass production.

Model	Cell Efficiency	Module Efficiency
HIP-215NKHE1	19.3%	17.1%
HIP-210NKHE1	18.9%	16.7%
HIP-205NKHE1	18.4%	16.3%

High performance at high temperatures
Even at high temperatures, the HIT solar cell can maintain higher efficiency than a conventional crystalline silicon solar cell.



HIT Solar Cell Structure



Development of HIT solar cell was supported in part by the New Energy and Industrial Technology Development Organization (NEDO).

Environmentally-Friendly Solar Cell More Clean Energy

HIT can generate more clean Energy than other conventional crystalline solar cells.

Special Features

SANYO HIT solar modules are 100% emission free, have no moving parts and produce no noise. The dimensions of the HIT-modules allow space-saving installation and achievement of maximum output power possible on given roof area.

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ARMED PLANS RESERVED
DATE 5 June 2009

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8 THE CONCLUSION

The applicant is aware the Ribble Valley Council are committed to securing high quality design for all new developments across the borough. We are also aware that poor design is a valid reason for the refusal of planning permission.

Against that background, the applicant has demonstrated through this document a thorough detailed site analysis, reference to planning policy, design guidance and reference to consultations.

We believe that this proposal will enhance the character and context of the local area and ultimately strengthen its identity.

We believe that this proposal merits a recommendation for planning approval by relevant Planning Officer(s) and merits full planning permission.