



**PINS ref APP/U2234/W/23/3329481
LPA ref: 23/500899/OUT**

Appeal by

Wates Developments

in relation to

**LAND NORTH OF THE A20/ASHFORD
ROAD, HOLLINGBOURNE, KENT**

**APPENDICES TO
PROOF OF EVIDENCE ON
LANDSCAPE AND VISUAL
MATTERS**

prepared by

Peter Radmall, M.A., B.Phil, CMLI

on behalf of

Maidstone Borough Council

December 2023



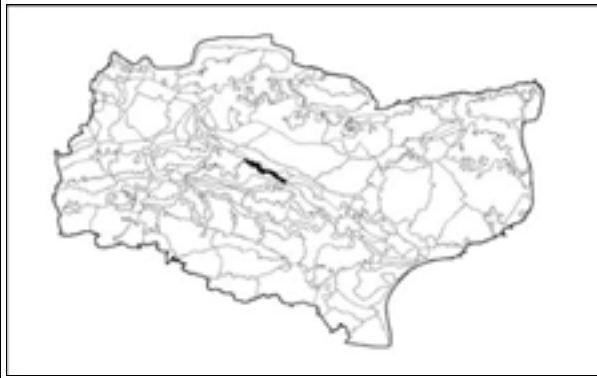
APPENDIX A

Published Landscape Character Descriptions

- A.1: Leeds-Lenham Farmlands
- A.2: Leeds Castle Parklands
- A.3: White Heath Farmlands

APPENDIX A.1
Leeds-Lenham Farmlands

LEEDS-LENHAM FARMLAND



This is generally an undulating rural landscape of narrow lanes of mixed farmland of medium sized arable fields and pastures and small copses developed on the well-drained sands and loams of the Folkestone Beds. It includes slivers of land to the north of Maidstone at Sandling, including Cuckoo Wood, and further east around Newnham Court Farm. Along the streamlines to the south through Vinter's Park and along the railway line the soft Folkestone Beds have been eroded away to expose the harder Hythe Beds below.

East of Bearsted this character area includes a narrow belt of mixed farmland as far east as Sandway. The landscape is distinguished from its neighbours to the south by a higher percentage of pasture and few if any orchards due to the poorer quality of the sandy soils. Traditionally cereals, potatoes and field vegetables would have been grown as well as extensive pasture.

The soils give rise to distinctive flora such as woodrush, broom, foxglove and creeping hair-grass in Pope's Wood. At Leeds Castle sessile oak is dominant on the acid, sandy soils with the pedunculate oak found on the wetter Gault. The farmlands at Leeds Castle exploit the generally good, loamy soils of the Hythe Beds with the poorer quality sandy soils being under woodland or forming the ancient deer park. The geological boundary runs roughly along the line of the Len.

Leeds Castle forms just one of many fine parklands that exploit the free-draining loams of the Folkestone Beds, where enhanced by marshy alluvial streams feeding the river Len.

Settlement consists of scattered farmsteads working the thin soils, although there is also a long tradition of extraction for the fine sands and several sand pits are found close to Charing. More recently, however, the rural and tranquil nature of the area has been shattered by the alignment of the M20 and Channel Tunnel Rail Link which cuts through the north of the character area. A single carriageway by-pass is also proposed for the villages of Leeds and Langley Heath which may affect the western end.

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LEEDS-LENHAM FARMLAND

PHOTOGRAPH



CHARACTERISTIC FEATURES

Undulating farmland development on well-drained sandy loams. Small copses with heathy characteristics. Historic parklands. Mineral extraction. Transport corridor.

LANDSCAPE ANALYSIS

Condition

The small scale landscape pattern, which has areas of dramatic local relief, is fragmented by the CTRL. Road and rail transport corridors and areas of mineral extraction produce many large scale visual detractors. The visual unity of the area is significantly interrupted. Networks of semi-natural habitats are also physically fragmented - the remaining pockets of woodland and mature trees are vulnerable. Heritage hedgerows are widespread, but many are unmanaged and appear redundant. Built form has a moderate positive impact on the landscape and includes some vernacular housing, but some hamlets are now isolated by the transport corridors. The condition of the area is very poor.

Sensitivity

The inherent landscape characteristics are mainly historic, with more ancient overtones of woodland and highways. The effect of fringe development and physical fragmentation of the area has resulted in the loss of many of the distinguishing features, in particular highways and woodlands. The land form is apparent and views are intermittent. The sensitivity of the area is considered to be low.

LANDSCAPE ACTIONS

Create a coherent framework for transport corridors using small scale copses and parkland features.
Create new settings for fragmented and isolated settlements so that they develop a new focus and identity, using small woodland and small scale land use with much enclosure by trees and hedgerows.

CONTEXT

Regional: Greensand Belt

Condition

good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	<u>CREATE</u>	RESTORE & CREATE	RESTORE
	low	moderate	high

Sensitivity

SUMMARY OF ANALYSIS

Condition **Very Poor.**

Pattern of elements:	Incoherent.
Detracting features:	Many.
Visual Unity:	Significantly Interrupted.
Cultural integrity:	Poor.
Ecological integrity:	Weak.
Functional Integrity:	Very Weak.

Sensitivity

Low.

Distinctiveness:	Characteristic.
Continuity:	Recent.
Sense of Place:	Weak.
Landform:	Apparent.
Extent of tree cover:	Intermittent.
Visibility:	Moderate.

SUMMARY OF ACTIONS

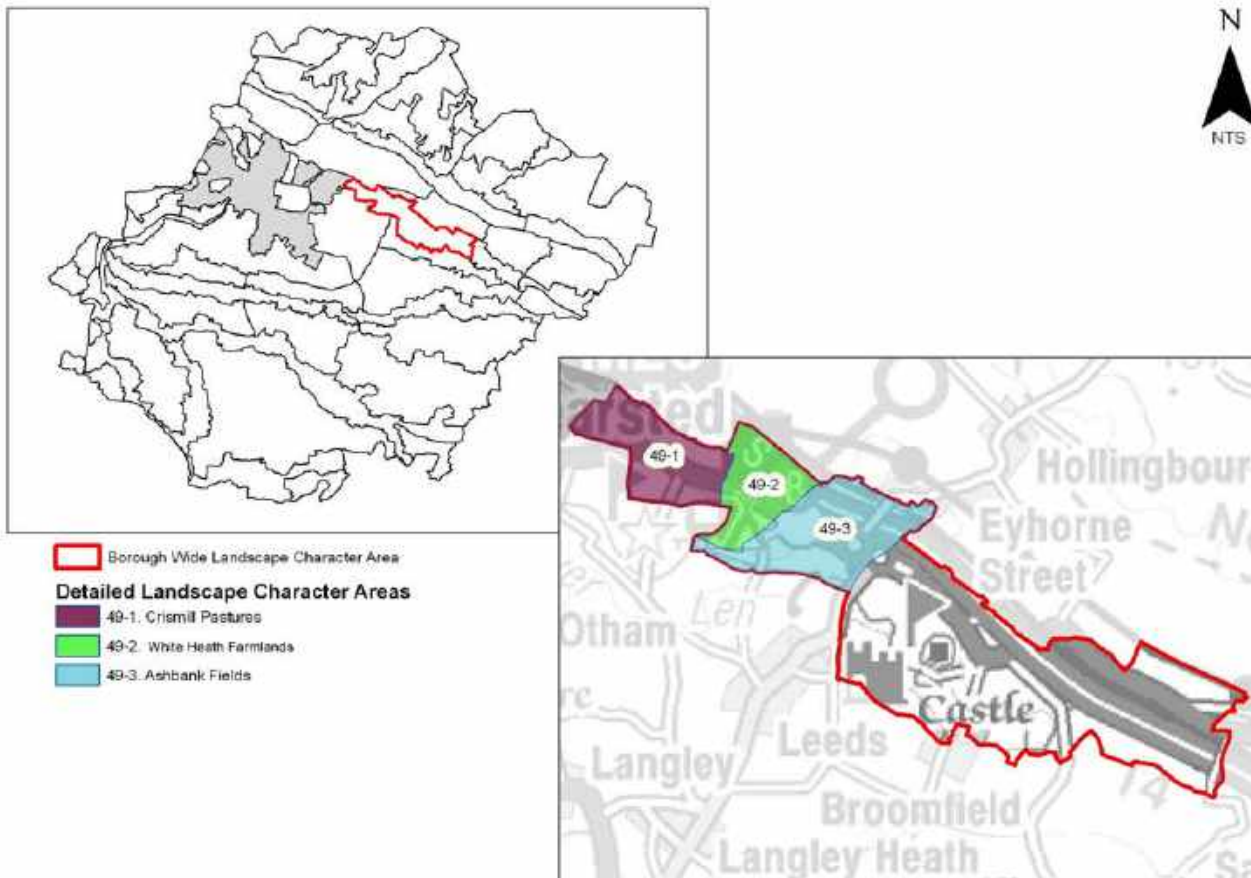
CREATE.

Create a coherent framework for isolated hamlets
Create a coherent framework for the transport corridor
Create a network of semi-natural woodland and heathland habitats

[previous <<](#)

APPENDIX A.2
Leeds Castle Parklands

49. Leeds Castle Parklands



KEY CHARACTERISTICS

- Artificial landform as part of golf course at Leeds Castle
- Historic Leeds Castle and surrounding parkland
- Pocket of lowland dry acid grassland
- Mature parkland trees including oak, horse chestnut and pine
- River Len to the south
- Severance caused by the M20, HS1 and A20

Location

49.1 Leeds Castle Parklands are situated to the east of Maidstone, and encompass a section of the Len Valley. The major infrastructure corridor comprising the M20 and HS1 lies to the north, but it is the transition between loam and clay soils which broadly defines this boundary. The western boundary is formed by the eastern extent of Maidstone's urban area, and the eastern boundary is defined by the edge of Harrietsham.



49. Leeds Castle Parklands



LANDSCAPE DESCRIPTION

49.2 Tree cover is scattered across the landscape, in the form of small blocks of mixed woodland, mitigation planting along transport corridors and ribbons of vegetation along the River Len to the south and other minor water courses. More significant woodland cover is concentrated around Leeds Castle and its surrounding grounds. Isolated oak, ash and pine trees feature in open grassland and define the route along Broomfield Road, and blocks of mixed woodland give a mature parkland character to the landscape. A pocket of lowland dry acid grassland occurs to the north west of Leeds Castle grounds.

49.3 To the south, the narrow and subtle River Len is less well defined than the deeper valley landscape which contains the River Medway to the west of Maidstone. Sections of the River Len are designated as Local Wildlife Sites. Much of the valley comprises a narrow floodplain covered in dense alder carr with willow, elder, hazel and ash along the drier perimeter. A small amount of woodland is situated on the slopes above the floodplain on the northern side, where oak standards, hazel, alder and chestnut coppice form the canopy above bramble, bluebell, wood anemone and red campion. The river corridor provides a wildlife habitat, and is especially rich in birdlife. Meadows and ancient woodland between the A20 and the M20 are also designated as a Local Wildlife Site, which include a disused sand quarry with an exposed sand cliff that is used by a colony of sand martins.

49.4 The field pattern is very irregular because the landscape comprises a significant amount of open parkland, little arable land and is severed by major infrastructure routes. However the grounds at Leeds Castle are

notably open in comparison with other areas, such as the smaller field pattern to the west where the land has been subdivided into private parcels around the periphery of Maidstone. Although tree cover provides a sense of enclosure and restricts views, the major infrastructure corridor of the M20, HS1 and the A20 are clearly audible from the surrounding landscape and reduce the sense of remoteness. Where minor routes pass over or under the M20 and HS1, the size and dominance of the infrastructure becomes most apparent.

49.5 Built development is sparsely scattered along the A20 and adjoining roads and to the east near Harrietsham. A notable amount of commercial development is situated along the A20, with a large hotel, caravan park, garden centre and car cleaning facilities. North of the M20, Eyhorne Street comprises a particularly distinctive settlement with exceptionally strong local vernacular, which is recognised as a Conservation Area. Timber framed houses, cottages of red and grey chequered brick, ragstone and weatherboarding line the southern traditional section of Eyhorne Street. To the south the grand, moated Leeds Castle is recorded on the Register of Historic Parks and Gardens. Set in 500 acres of parkland, some of which is now used as a golf course, the grade I listed ragstone castle was built in 1119 on the site of a Saxon Manor by Robert de Crevecoeur for one of William the Conqueror's Lords. In later years, Leeds Castle was held by numerous Medieval queens and in Tudor times, Henry VIII visited frequently. From approximately the 16th century it has been in private ownership, and has been used as a garrison, prison and has also been home to several affluent families.

49. Leeds Castle Parklands

Geology, soils and topography

49.6 The solid geology predominantly comprises Lower Greensand Folkestone Beds. Within the Len Valley to the south, the solid geology comprises Lower Greensand Hythe Beds and Lower Greensand Atherfield Clay forms the base of the river. There are minor drifts of head and Fourth Terrace River Gravel. Soils are mostly well drained loams over sandstone, although heavier seasonally wet deep clay and fringes of loam over limestone are found to the south around the River Len.

The topography is undulating, and generally rises northwards away from the Len Valley.

Views

49.7 Views are generally restricted by intervening vegetation throughout this landscape, although there are some longer views across the open parkland landscape surrounding Leeds Castle. Wider panoramic views of the North Downs are available from higher vantage points, such as along Old Mill Lane.

LANDSCAPE ANALYSIS

Condition

49.8 The major infrastructure routes of HS1, the M20 and A20 cause a significant degree of fragmentation to this landscape, and create an incoherent pattern of elements. Despite these routes being reasonably well integrated into the landscape in visual terms, the audibility of traffic degrades the remote and rural character. In addition to infrastructure, there are many other visual detractors including caravan parks, equestrian grazing and associated facilities, and numerous commercial developments along the A20. The ecological integrity is strong. Woodland and other native vegetation is scattered across the landscape, particularly around Leeds Castle and its golf course, and isolated mature trees and vegetation belts along roads provide a reasonable habitat network. There is limited arable land, and although major infrastructure routes sever connectivity, many parts of the landscape are recognised for their ecological diversity. The cultural integrity is variable. Tree cover is reasonably extensive and is well managed and varied in age structure, with newer planting across the golf course. Traditional field boundaries comprising woodland blocks and tree belts, are generally in good condition, although infrastructure routes have caused significant severance to the original field pattern. The built environment is also generally in good condition and there are many examples of local vernacular, which brings an element of consistency to the landscape.

Sensitivity

49.9 Infrastructure routes, recent development and the recent golf course landscape slightly weaken local distinctiveness and fragment the continuity. However overall, Leeds Castle and the surrounding parkland landscape, with frequent isolated mature trees, are very distinctive and create a very strong sense of place. There is a regularity in vernacular styles and materials throughout many of the traditional buildings, which provides continuity across much of the built environment. Visibility is moderate, with much screening provided by intervening vegetation.



49. Leeds Castle Parklands

SUMMARY OF ANALYSIS

Condition Assessment	Moderate	Sensitivity Assessment	High
Pattern of elements:	Incoherent	Distinctiveness:	Distinct
Detracting features:	Many	Continuity:	Ancient
Visual Unity:	Significantly Interrupted	Sense of Place:	Strong
Ecological integrity:	Strong	Landform:	Apparent
Cultural integrity:	Good	Tree cover:	Intermittent
Functional integrity:	Very Strong	Visibility:	Moderate

GUIDELINES – CONSERVE AND RESTORE

Condition	good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
	moderate	IMPROVE & REINFORCE	CONSERVE & IMPROVE	CONSERVE & RESTORE
	poor	IMPROVE	RESTORE & IMPROVE	RESTORE
		low	moderate	high
		Sensitivity		

SUMMARY OF ACTIONS

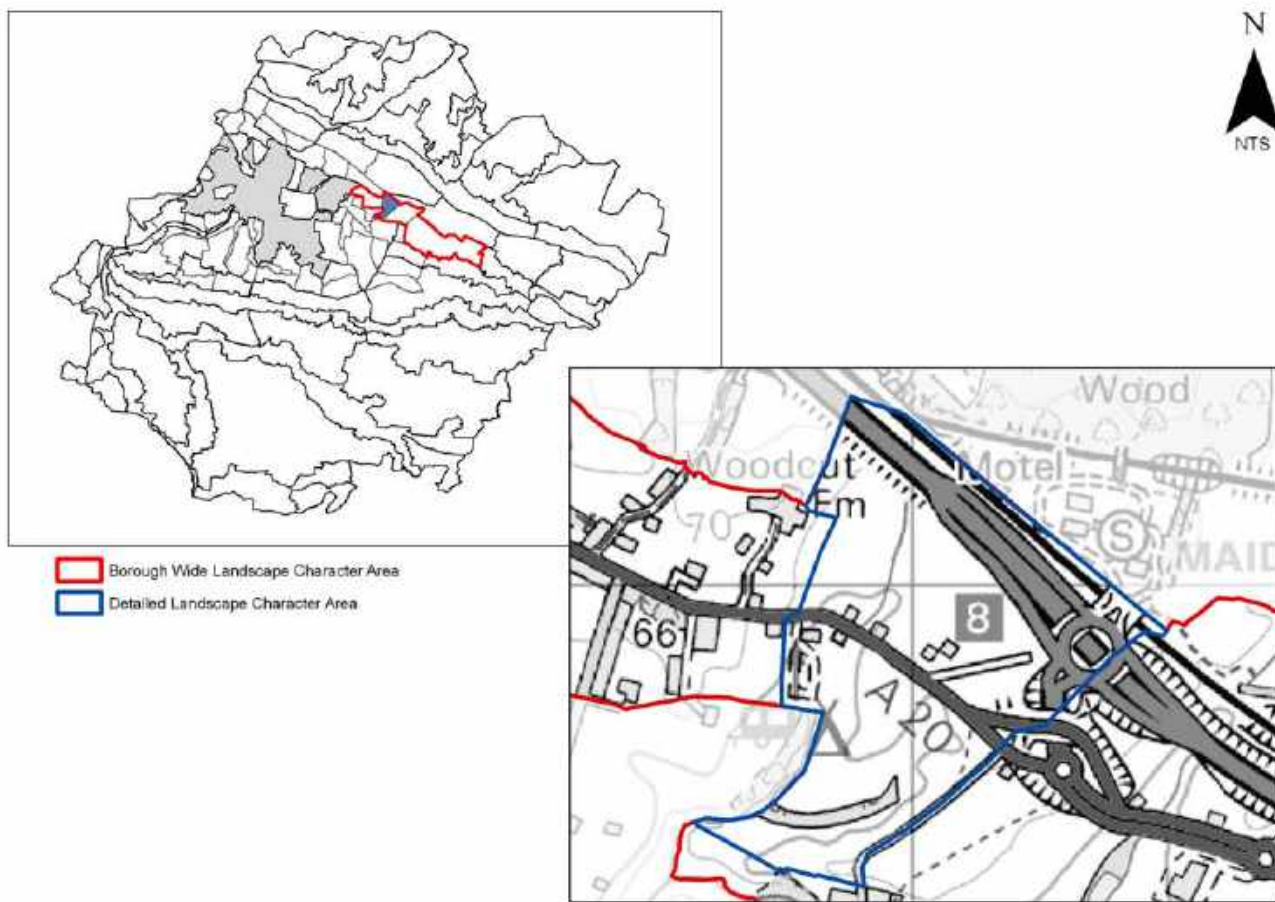
- Consider the generic guidelines for Valleys
- Conserve the traditional parkland character of the landscape
- Conserve the remote qualities of the Len Valley and its setting, and strengthen vegetation along the River Len and adjoining ditches to improve habitat connectivity
- Conserve and appropriately manage the pocket of lowland dry acid grassland to the northwest. Refer to Maidstone's local Biodiversity Action Plan Phase 1: 2009 – 2014 HAP 2 Lowland Dry Acid Grassland and Heath
- Conserve and restore tree cover, which helps to screen views of major infrastructure routes
- Ensure continuity of mature isolated trees through planting new stock
- Restore hedgerow boundaries where they have been removed
- Resist field segregation, avoiding fenceline boundaries



APPENDIX A.3

White Heath Farmlands

49-2. White Heath Farmlands



KEY CHARACTERISTICS

- Major infrastructure
- Vegetation belts along the head of the Len valley
- Urban influences including car dealership
- Modern development

Location

49.19 White Heath Farmlands are situated to the east of Maidstone. This area lies within part of the foreground of the Kent Downs Area of Outstanding Natural Beauty (AONB). Old Mill Road lies to the east and the M20/HS1 corridor borders the area to the north. Field boundaries border the area to the south and west, enclosing the large parcels of arable land.



49-2. White Heath Farmlands



LANDSCAPE DESCRIPTION

49.20 Fields are large and are used for a mixture of arable and pasture land. There is little woodland vegetation throughout the area, although significant swathes of vegetation line the drains which form the head of the Len Valley and sections of gappy hedgerow and vegetation belts remain in places. To the north the landscape is heavily influenced by the M20/HS1 corridor, and traffic is both visible and audible. The busy A20, Ashford Road, also dissects the area in an east west direction, increasing the impact of major infrastructure and fragmenting the landscape. There is little development within the landscape, although a few modern properties and a car dealership are situated along the A20 which give a slightly sub urban character.

Geology, soils and topography

49.21 The geology of the area is largely Lower Greensand Folkestone Beds with bands of Gault Clay located north of the M20 motorway and Lower Greensand Sandgate Beds underlying the tree-lined drainage channels in the south. There is no drift geology in the area. The soils are predominantly loam over sandstone with deep clay soils found in the north. The

landform is flat to gently undulating towards the head of the Len Valley. Artificial undulations line the transport corridor of the M20 and HS1.

Views

49.22 Views within the area are relatively open across the farmland, with the major infrastructure standing out. Views out of the area are limited, with the significant woodland block of Snarkhurst Wood to the north and dense vegetation along the River Len to the south. There are open views across slightly larger arable fields to the east, and glimpses of housing along Caring Lane to the east across subdivided fields and paddocks. There are wide views of the North Downs to the north.

Urban edge influence

49.23 The area is much influenced by the urban features, especially heavy road and rail infrastructure. The urban edge of Maidstone is not visible from within the area, although recent development along the A20 gives a slightly sub urban character.

49-2. White Heath Farmlands

BIODIVERSITY

49.24 This area comprises improved and arable farmland with broadleaved trees occurring around the periphery of fields and properties. To the south there is a block of ancient woodland and a band of mature broad leaved trees. The arable and improved grassland areas may support breeding birds whilst field margins may potentially support species of reptile including slow worm and common lizard. The ancient woodland and mature trees may potentially provide suitable habitat for badger and hazel dormouse, as well as roosting, commuting or foraging bats and nesting birds. The lines of trees and hedgerow present throughout the site link with adjacent rural plots but do not directly connect to Maidstone town centre. Therefore the features of this area are primarily important in providing wildlife corridors in the countryside surrounding Maidstone.

LANDSCAPE ANALYSIS

SUMMARY OF ANALYSIS

Condition	Condition Assessment	Poor
49.25 Fragmentation is caused by the heavy transport infrastructure. There are habitat opportunities to the south at the head of the Len Valley, although hedgerow boundaries have been removed in part. Although some of the woodland is designated as ancient woodland, there are few other heritage features.	Pattern of elements:	Incoherent
	Detracting features:	Few
	Visual Unity:	Coherent
	Ecological integrity:	Moderate
	Cultural integrity:	Poor
	Functional integrity:	Weak

Sensitivity	Sensitivity Assessment	Moderate
49.26 This is a sensitive location in that the landscape provides the setting to the Kent Downs AONB to the north. Whilst the transport corridors and service area provide little in the way of local distinctiveness, the dense vegetation belts along the drains which form the head of the Len Valley form localised distinctive features.	Distinctiveness:	Distinct
	Continuity:	Historic
	Sense of Place:	Moderate
	Landform:	Apparent
	Tree cover:	Intermittent
	Visibility:	Moderate

GUIDELINES – RESTORE AND IMPROVE

SUMMARY OF ACTIONS

Condition	good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
	moderate	IMPROVE & REINFORCE	CONSERVE & IMPROVE	CONSERVE & RESTORE
	poor	IMPROVE	RESTORE & IMPROVE	RESTORE
		low	moderate	high
		Sensitivity		

- Consider the generic guidelines for Valleys
- Improve the rural setting of the Kent Downs AONB through avoiding further urban edge influences and expansion of motorway services to the north of the M20
- Improve ecological connectivity between existing woodland blocks
- Restore, improve and appropriately manage ancient woodland and dense vegetation belts along drains

APPENDIX B

Visualizations

B.1: Technical Methodology

B.2: Visualizations for VP6 and Associated
Views along PRow

APPENDIX B.1

Technical Methodology



Technical Methodology:
Photography, 3D Modelling and Accurate Visual Representations

PINS reference: APP/U2235/W/23/3329481

Appeal

Site Address: Ashford Road, Maidstone

For

Maidstone Borough Council



Peter Radmall Associates
Environmental Planning and Assessment

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Introduction

Michael Spence BA (Hons), MLD, CMLI, REIA, FRGS is one of the UK's leading independent exponents of technical photography, verified photomontages and visualisations. Since 2013 Mike has been a technical advisor to the Landscape Institute on 'photography and photomontage in landscape and visual impact assessment', and has been undertaking this technical work for over 25 years. He is one of the main authors of the Landscape Institute's TGN 06/19 and provided technical support to Scottish Natural Heritage(NatureScot) on their windfarm visualisation guidance. He is a current member of the Landscape Institute Technical Committee. His background as a Chartered Landscape Architect, Registered EIA Practitioner and Fellow of the Royal Geographical Society working on strategic infrastructure projects has meant that the accuracy of the visualisation work is paramount, and technical photography, together with extensive surveying experience, use of GIS and detailed 3D modelling using real world co-ordinates ensures that the visualisations produced follow a clear and transparent methodology to ensure they are as accurate as possible.

Recent projects include the UNESCO World Heritage Sites at Valletta (Malta), Royal Botanic Gardens at Kew, Fountains Abbey for The National Trust, and West Cumbria Coal Mine for Friends of the Earth. Mike has also been working closely with Bath City Council on proposed development in the UNESCO World Heritage City of Bath. Mike's work and objective technical checks have been used at numerous Public Inquiries and Planning Hearings, on behalf of both local authorities, Historic England, the National Trust, Friends of the Earth and developers.

In September 2023 Peter Radmall Associates contacted MSE to request Technical Photography, GNSS/RTK Surveying, 3D Modelling and preparation of visualisations to illustrate the proposed impact of a shed development on Ashford Road in Maidstone.

Verified Photography and 3D Modelling

The photographs were taken with a full frame camera (Canon EOS 5D Mark IV) and 50mm lens combination consistent with Landscape Institute's TGN 06/19, GLVIA3 and the emerging understanding of the requirement for technical photography for visualisation work. As part of the work 3 viewpoints were identified providing views of the site and visited in November 2023. The weather was excellent with clear visibility.

Technical Photography

The camera was mounted on a Manfrotto 303 SPH panoramic tripod head, levelled using a Manfrotto Leveller, supported on a Manfrotto Tripod. The tripod head was levelled using a spirit level, to avoid pitch and roll. The camera was set with the centre of the lens 1.60m above ground level. Photographs were taken in Manual mode with an aperture of f/8 or f/11 and a fixed focal length throughout. Photographs were taken in landscape orientation. A Sigma 50mm f/1.4 lens was used for all viewpoint photographs.



A Single Frame 50mm photograph is insufficient to capture the extents of a wide, linear development. Each view was taken with a series of overlapping 50mm images, as shown above.



To ensure consistent geometry each image was cylindrically re-projected, as above. This ensures that a full 360 degree panorama can be created to match the 3D model view, as shown below:

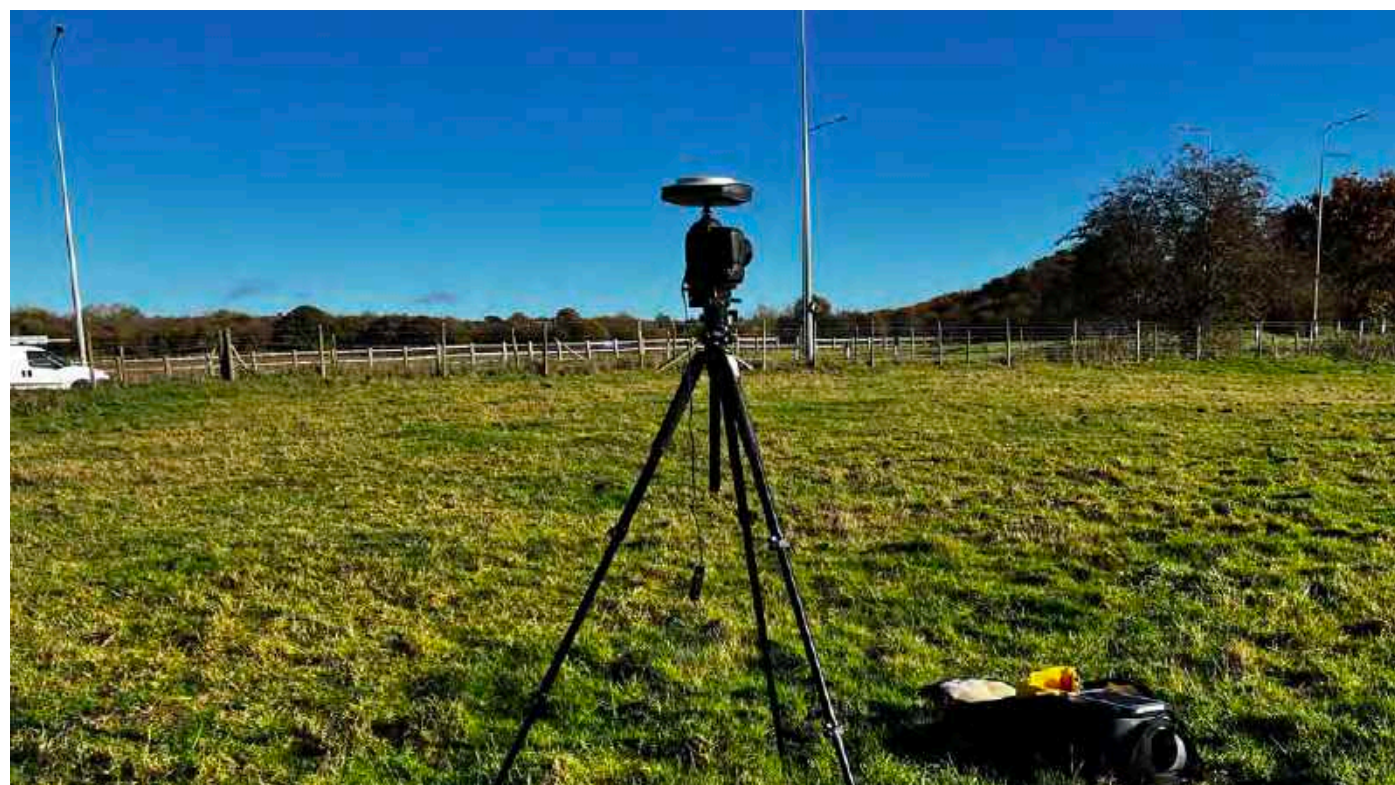


From the 360 degree panorama a 90 (or 180 degree) degree portion can be extracted to present the context view as shown below:



Surveying

The position of each camera location was surveyed using Spectra Precision GNSS equipment with Real Time Kinematic Correction (RTK) which achieves an accuracy down to 1cm in eastings, northings and height (metres Above Ordnance Datum). The equipment included Spectra Precision SP85 GNSS smart antennae with Panasonic Toughpad data recorder. A photograph of the camera location was taken.



3D Modelling

Using a 3D model built by MSE with added 3D LIDAR DTM height data into a geo-referenced model. The proposed shed development was constructed using layout proposals prepared by Pegasus/Scott Brownrigg.

Camera locations surveyed on site were added to the geo-referenced 3D model.

Cylindrical renders generated using V-Ray for Rhino were exported from the 3D modelling software and used to overlay the cylindrical images. Target points from both the photograph and the model view were aligned to ensure a precise fit between the two images.

Visualisations are presented as either AVR 0, 1, 2 or 3. The differences are explained in the Landscape Institute's Technical Guidance Note 06/19: Visualisation of Development Proposals.

The results are presented as a sequence of visualisations as follows:

Existing View



Infrastructure/3D Model View

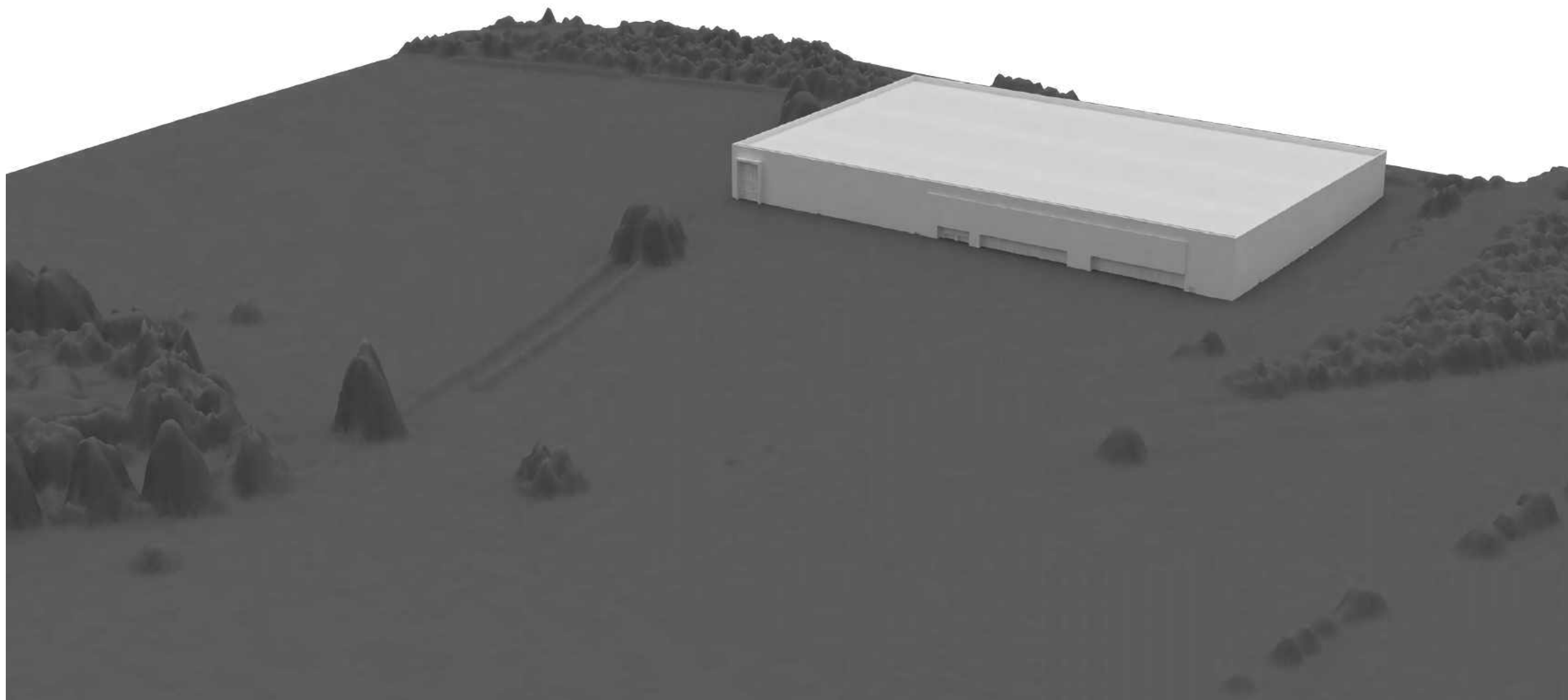


3D Model Composite View



The following image illustrates the combination of the site layout on the LIDAR DSM built by MSE.
FFL 52.5mAOD. Bulidning height 15m. Max height 67.5mAOD.

3D~Model on LIDAR DSM data



50mm lens on Full Frame Sensor Camera

For decades it has been accepted that a 50mm lens on a full frame sensor camera provides the optimum image to replicate what is seen by the human eye. There are important differences between the human eye (binocular) and the camera lens (monocular). These have been explored in research by The Highland Council & the University of Stirling, as well as by myself through the Landscape Institute. We know that a single frame 50mm image on an A3 sheet of paper provides the same view as that gained in the field by someone with one eye closed. As we are binocular, and normally use both eyes, a different size of image is required, and the reason why we have presented the images as effectively a 75mm image on A2 paper. This gives what The Highland Council, University of Stirling, Scottish Natural Heritage (NatureScot) and the Landscape Institute agree is the most representative size of image to understand the nature and scale of a development on a photograph.

Planar or Cylindrical Projection

All photographs are taken as single frame planar images. Each single frame image has a single point of perspective lying at the centre of the image. To correctly match and align with the 3D modelling software the camera must be mounted on a levelled tripod, and directed towards the proposed development.

When a viewpoint is close to the development, or a development is wide or you want to show the context of a view, a wider panorama is required. The alternative is to use a series of overlapping 50mm images and generate a 'cylindrical' perspective view,.

The 3D model renders have been rendered out in cylindrical projection to allow the precise image re-mapping to match the 90 degree cylindrical photograph.

3D Modelling software

The work has largely been undertaken using Rhino 3D. All 3D modelling has been undertaken in metres and geo-referenced to align with OSGB36. RESOFT Windfarm was also used which is a 3D modelling package which we use to check on vertical and horizontal alignment of the 3D model against the precise image geometry. This is also set up to OSGB36. RESOFT Windfarm has been used to generate the geometric grid from LIDAR DTM data present in all 3D model visualisations. Scripting has been used to align the solar panels perfectly to the underlying LIDAR DTM data.

Viewing Printed Images

The visualisations have been prepared to be printed in the Technical Methodology at A3 (420 x 297mm) and in the separate 'Verified Visualisations' document at A1 (841mm x 297mm), to show the scale of the proposed development.

The image size is considered to give a fair monocular representation of the view for everyone, and the scale of the development in that view.

Summary

This work has been undertaken in accordance with the the Landscape Institute TGN 06/19 and the developing understanding of visualisation work. The accuracy of camera locations and 3D modelling conforms with the Landscape Institute's Type 4 (the highest level of accuracy). The 3D modelling has been produced to AVR3 (photorealistic).

The photography has been undertaken in an extremely robust manner, using professional full frame sensor DSLR and 50mm lens with levelled tripod. The camera position has been surveyed using highly accurate GNSS Smart Antennae equipment, giving high levels of accuracy of camera location. The 3D model has been built in Rhino 3D using detailed information contained in the planning application drawings. An additional check on the vertical scaling has been undertaken using RESOFT Windfarm.

The resultant visualisations are highly accurate.

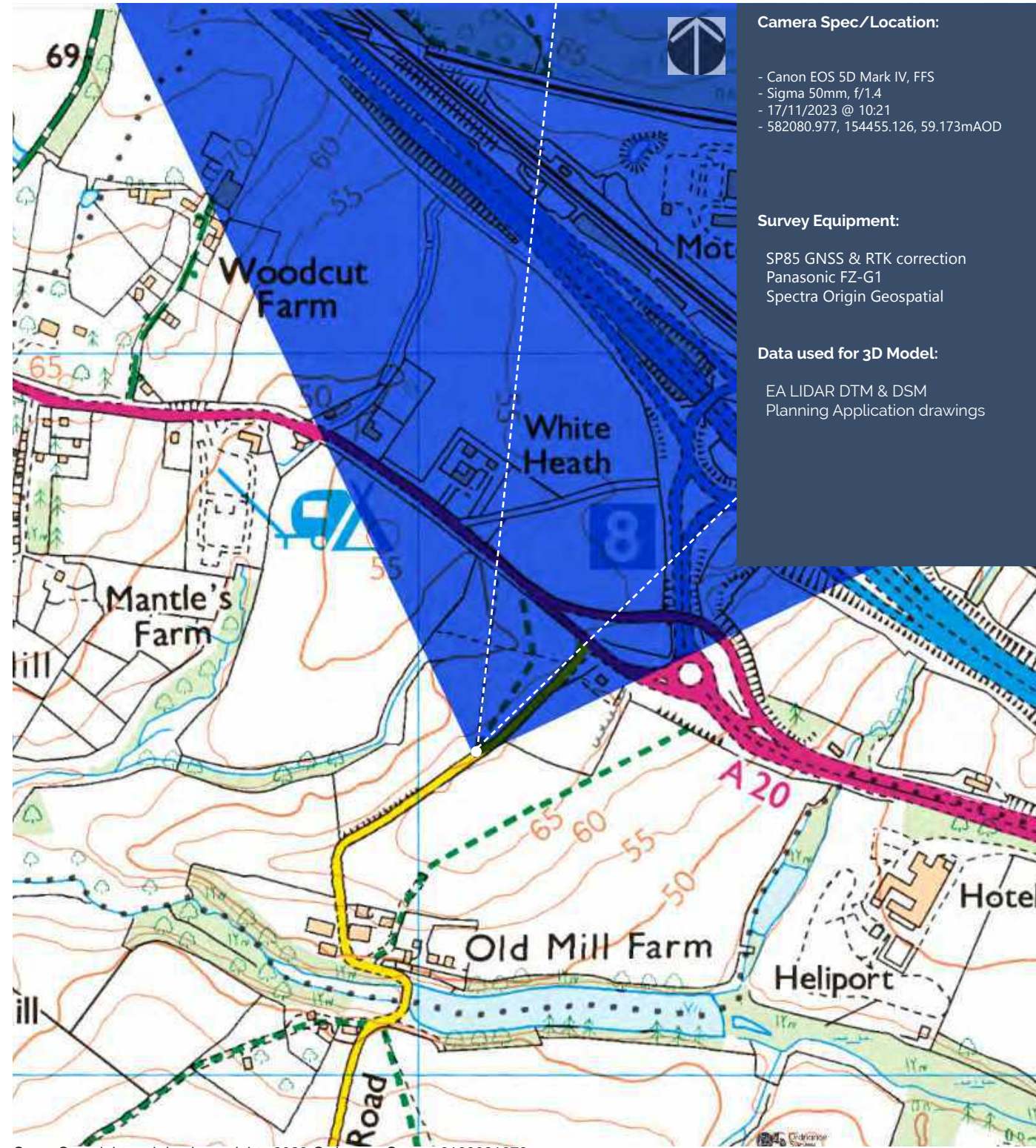
The photography, surveying and 3D modelling have followed a transparent methodology, and the resultant visualisations and the size at which they are presented are considered robust and fit for purpose to illustrate the positioning, and scale and massing of the proposed scheme in its local and wider context.



M.A.Spence BA(Hons), MLD, CMLI, REIA, FRGS 28 November 2023
Principal, MSEnvironmental



Camera Location:



Ordnance Survey 0100031673

Tripod:



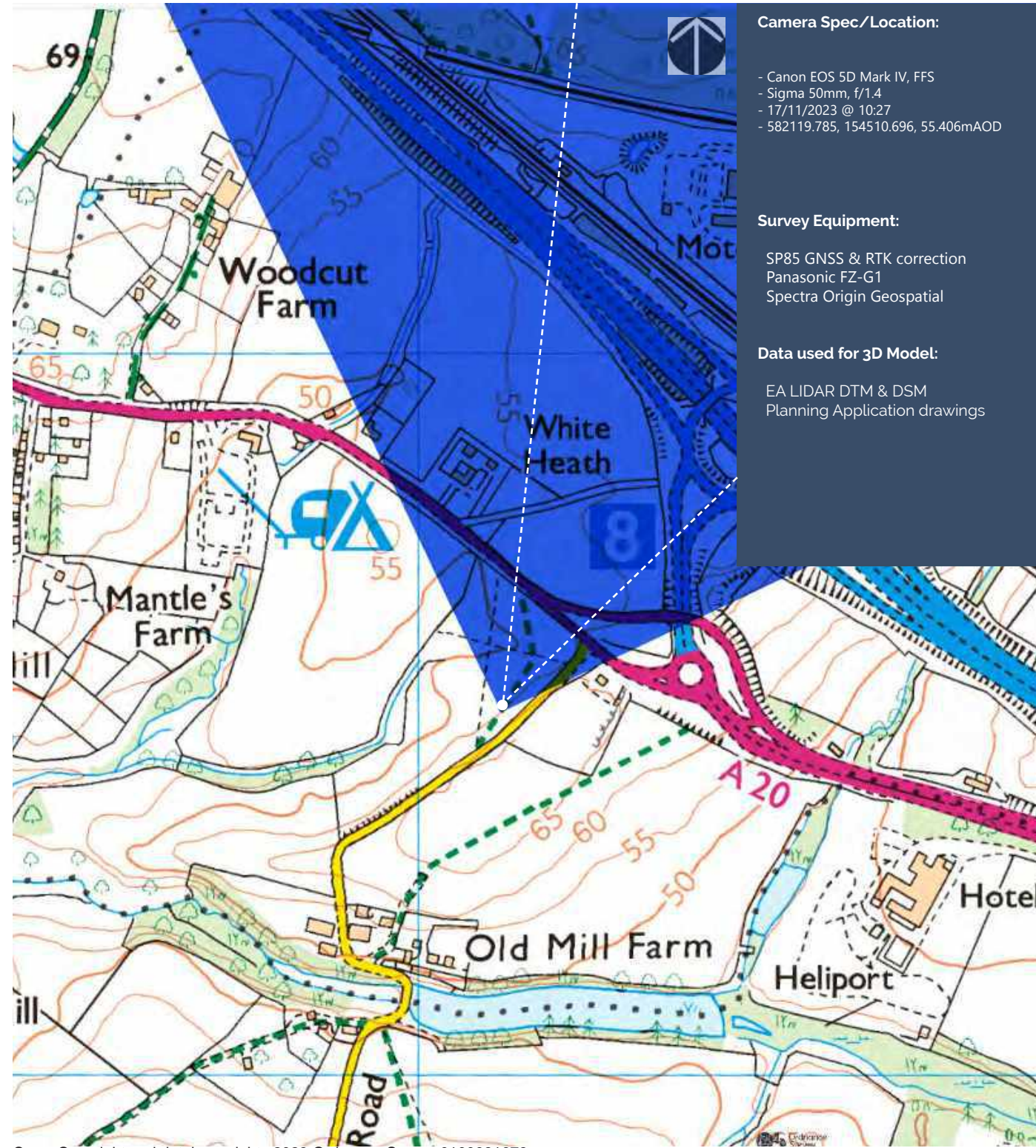
50mm Lens Planar Projection (actual 49.6mm; 39.9 deg HFOV)



Point of Perspective

Viewpoint 6 Single Frame 50mm Reference image

Camera Location:



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Tripod:

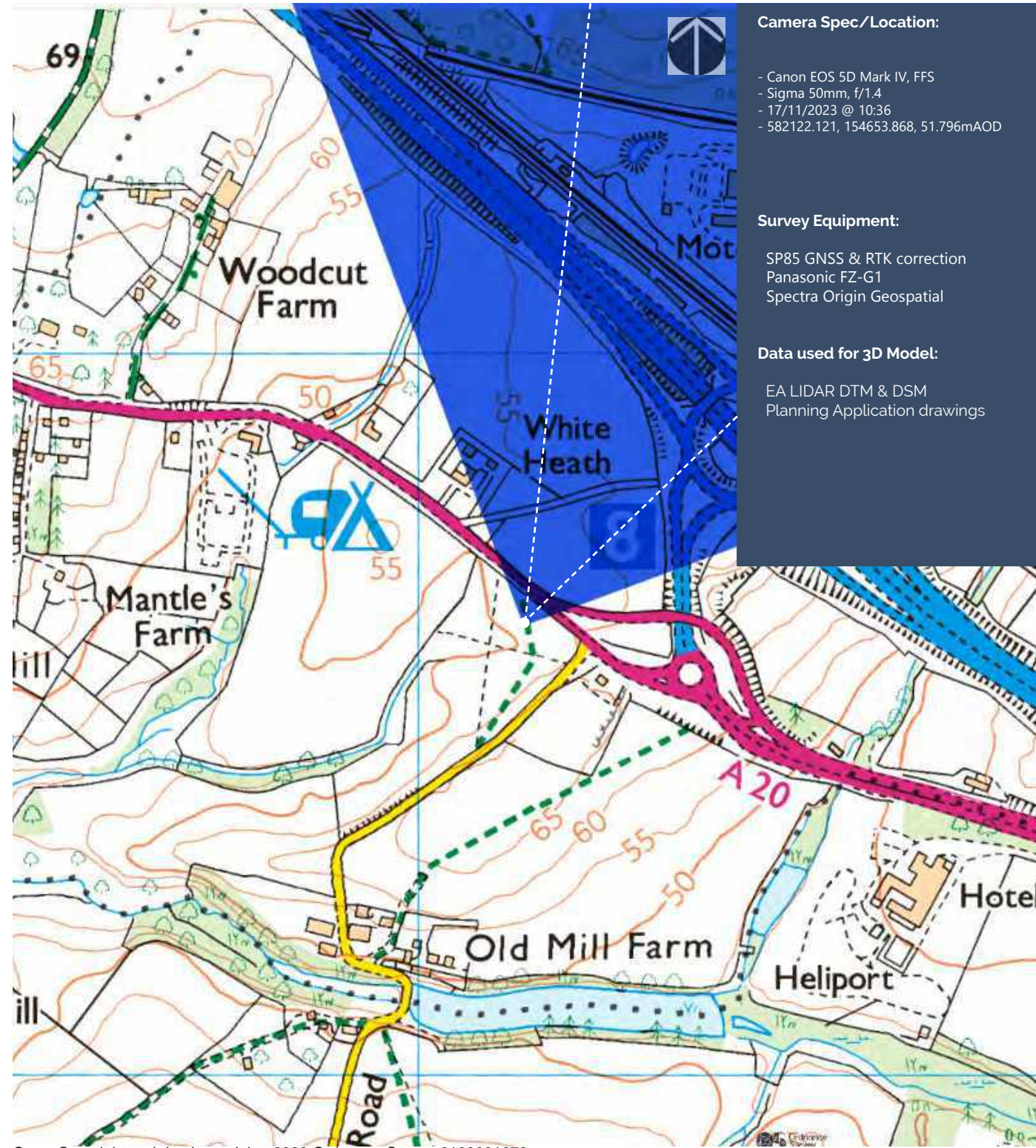


50mm Lens Planar Projection (actual 49.6mm; 39.9 deg HFOV)



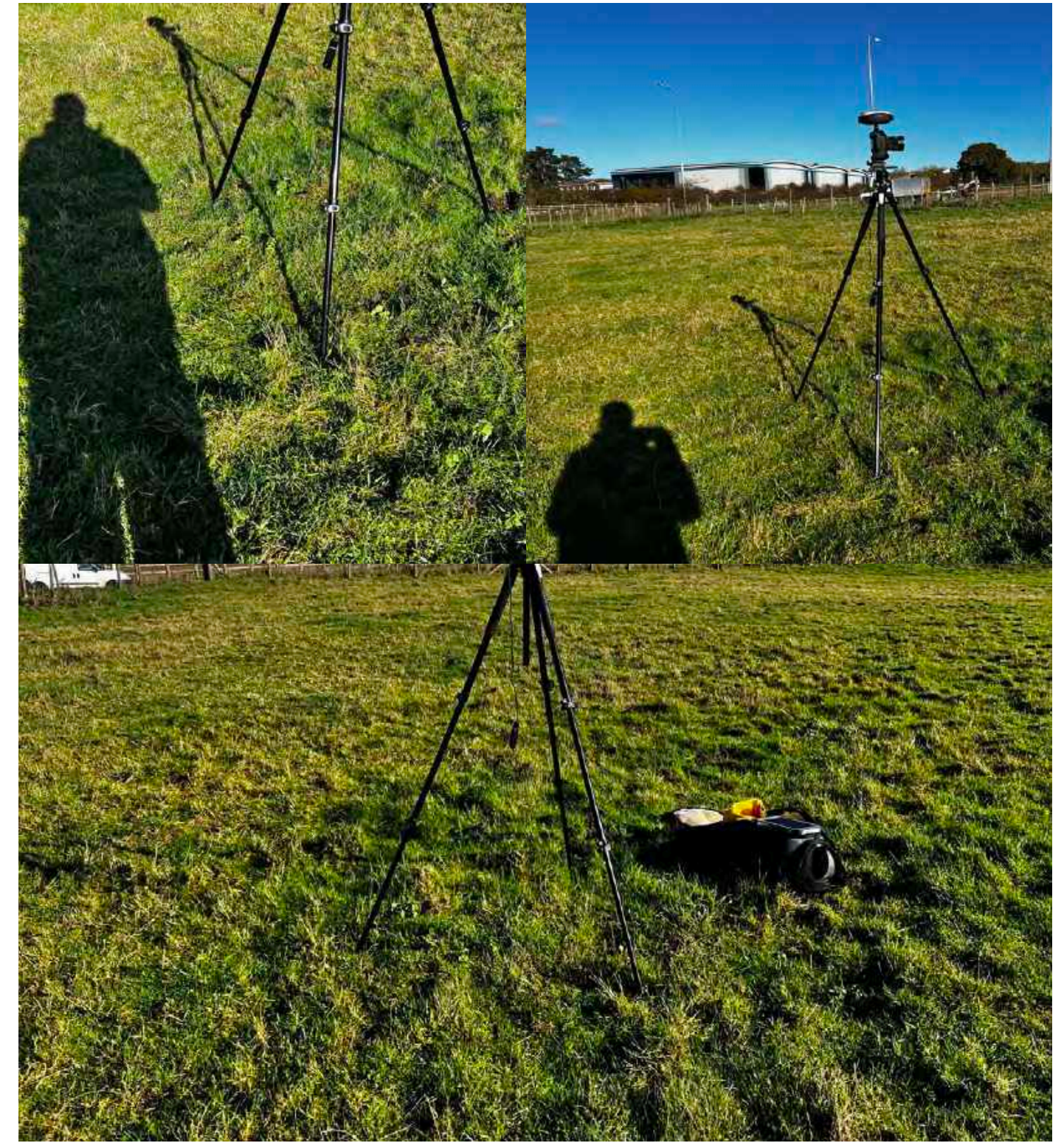
Viewpoint 6A Single Frame 50mm Reference image

Camera Location:



Ordnance Survey 0100031673

Tripod:



50mm Lens Planar Projection (actual 49.6mm; 39.9 deg HFOV)



Point of Perspective

Viewpoint 6B Single Frame 50mm Reference image



SPECTRA®
GEOSPATIAL

SP85



spectrageospatial.com

UNMATCHED CONNECTIVITY

SPECTRA®
GEOSPATIAL

SP85

GNSS CHARACTERISTICS

- 600 GNSS channels
 - GPS L1C/A, L1P(Y), L2C, L2P(Y), L5
 - GLONASS L1C/A, L1P, L2C/A, L2P, L3
 - BeiDou (Phase III) B1, B2
 - Galileo E1, E5a, E5b
 - QZSS L1C/A, L1C, L2C, L5
 - IRNSS L5
 - SBAS L1C/A, L5 (WAAS, EGNOS, MSAS, GAGAN, SDCM)
 - L-band MSS
- Patented Z-Blade technology for optimal GNSS performance
 - Full utilization of signals from all 7 GNSS systems (GPS, GLONASS, BeiDou, Galileo, QZSS, IRNSS and SBAS)
 - Enhanced GNSS-centric algorithm: fully-independent GNSS signal tracking and optimal data processing, including GPS-only, GLONASS-only, Galileo-only, or BeiDou-only solution (Autonomous to full RTK)
- Fast Search engine for quick acquisition and re-acquisition of GNSS signals
- SBAS ranging for using SBAS code & carrier observations and orbits in RTK processing
- Patented Strobe™ Correlator for reduced GNSS multi-path
- Up to 20 Hz real-time raw data (code & carrier and position output)
- Supported data formats: ATOM, CMR, CMR+, RTCM 2.1, 2.2, 2.3, 3.0, 3.1 and 3.2 (including MSM), CMRx and sCMRx (rover only)
- NMEA 0183 messages output

REAL-TIME ACCURACY (RMS) ⁽¹⁾⁽²⁾⁽³⁾

SBAS (WAAS/EGNOS/MSAS/GAGAN)

- Horizontal: < 50 cm
- Vertical: < 85 cm

Real-Time DGPS position

- Horizontal: 25 cm + 1 ppm
- Vertical: 50 cm + 1 ppm

Real-Time Kinematic Position (RTK)

- Horizontal: 8 mm + 1 ppm
- Vertical: 15 mm + 1 ppm

Network RTK ⁽⁴⁾

- Horizontal: 8 mm + 0.5 ppm
- Vertical: 15 mm + 0.5 ppm

POST-PROCESSED KINEMATIC (PPK)

- Horizontal: 8 mm + 1 ppm
- Vertical: 15 mm + 1 ppm

REAL-TIME PERFORMANCE

- Instant-RTK® Initialization
 - Typically 2 sec for baselines < 20 km
 - Up to 99.9% reliability
- RTK initialization range: over 40 km

POST-PROCESSING ACCURACY (RMS) ⁽¹⁾⁽²⁾⁽³⁾

- **Static & Fast Static**
 - Horizontal: 3 mm + 0.5 ppm
 - Vertical: 5 mm + 0.5 ppm
- **High-Precision Static ⁽⁵⁾**
 - Horizontal: 3 mm + 0.1 ppm
 - Vertical: 3.5 mm + 0.4 ppm

DATA LOGGING CHARACTERISTICS

Recording Interval

- 0.05 - 999 seconds

PHYSICAL CHARACTERISTICS

Size

- 22.2 x 19.4 x 7.5 cm (8.7 x 7.6 x 3.0 in)

Weight

- 1.17 kg (2.57 lb)

User Interface

- Graphical PMOLED display
- WEB UI (accessible via WiFi) for easy configuration, operation, status, and data transfer

I/O Interface

- RS232 serial link
- USB 2.0/UART
- Bluetooth 5.0 dual mode
- WiFi (802.11 b/g/n)
- 3.5G quad-band GSM (850/900/1800/1900 MHz) / penta-band UMTS module (800/850/900/1900/2100 MHz)

Memory

- 4GB internal memory NAND Flash (3.5 GB user data)
- Over two years of 15 sec. raw GNSS data from 14 satellites
- SD/SDHC internal memory card (up to 32GB)

Operation

- RTK rover & base
- RTK network rover: VRS, FKP, MAC
- NTRIP, Direct IP
- CSD mode
- Post-processing
- RTK bridge
- UHF repeater
- UHF networking

Environmental Characteristics

- Operating temperature: -40° to +65°C (-40° to +149°F) ⁽⁶⁾
- Storage temperature: -40° to +85°C (-40° to +185°F) ⁽⁶⁾
- Humidity: 100% condensing
- IP67 waterproof, sealed against sand and dust
- Drop: 2m pole drop on concrete
- Shock: ETS300 019
- Vibration: MIL-STD-810F

Power Characteristics

- 2 Li-Ion hot-swappable batteries, 41.4 Wh (2 x 7.4 V, 2800 mAh)
- Battery life time (two batteries): 10 hrs (GNSS On, and GSM or UHF Rx On)
- External DC power: 9-28 V

Standard System Components

- SP85 receiver
- 2 Li-Ion batteries
- Dual battery charger, power supply and international power cord kit
- Tape measure (3.6 m / 12 ft)
- 7 cm pole extension
- USB to mini-USB cable
- Hard case
- 2 year warranty

Optional System Components

- SP85 UHF Kit (410-470 MHz 2W TRx)
- SP85 Field Power Kit
- SP85 Office Power Kit
- Data collectors
 - ST10
 - Ranger™ 7
 - Ranger™ 3
 - T41
 - MobileMapper® 60
 - MobileMapper® 50
- Field software
 - Survey Pro
 - Survey Mobile (Android)
 - SPace control app for 3rd party devices (Android)

- 1 Accuracy and TFF specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality.
- 2 Performance values assume minimum of five satellites, following the procedures recommended in the product manual. High multi-path areas, high PDOP values and periods of severe atmospheric conditions may degrade performance.
- 3 Long baselines, long occupations, precise ephemeris used
- 4 At very low temperatures UHF module should not be used in the transmitter mode.
- 5 Without batteries. Batteries can be stored up to +70°C.
- 6 Network RTK PPM values are referenced to the closest physical base station.
- 7 Receiver initialization time varies based on GNSS constellation health, level of multipath, and proximity to obstructions such as large trees and buildings.

CONTACT INFORMATION:

Americas

Europe, Middle East and Africa

Asia-Pacific

SP85 GNSS RECEIVER

The Spectra Geospatial® SP85 is a next generation GNSS receiver that combines decades of GNSS RTK technology with revolutionary new GNSS processing. Featuring the new 600-channel “7G” chipset combined with the patented Z-Blade™ technology, the SP85 system is optimized for tracking and processing signals from all GNSS constellations in challenging environments. With unmatched connectivity in the GNSS receiver market, the SP85 offers a unique combination of integrated 3.5G cellular, WiFi and UHF communications with SMS, email and anti-theft technology. These powerful capabilities, packaged in an ultra-rugged housing and patented antenna design, make SP85 an extremely versatile turnkey solution that can be used with unlimited operation time because of the SP85’s hot-swappable, dual battery setup.



KEY FEATURES

- Patented Z-Blade™ technology
- 600-channel 7G ASIC
- Hot-swappable batteries
- Internal TxRx UHF radio
- L-band satellite capable GNSS antenna
- 3.5G cellular modem
- Built-in WiFi communication
- SMS and e-mail alerts
- Anti-theft technology
- Backup RTK
- RTK bridge
- eLevel technology
- Up to 20 Hz update rate

UNIQUE 7G GNSS-CENTRIC TECHNOLOGY

Patented Z-Blade processing technology running on a next generation Spectra Geospatial 600-channel 7G ASIC fully utilizes all 6 GNSS systems: GPS, GLONASS, BeiDou, Galileo, QZSS, IRNSS and SBAS, in addition to MSS corrections delivered via L-band. Unlike GPS-centric technology which requires a minimum number of GPS satellites for GNSS processing, Z-Blade™ unique GNSS-centric capability optimally combines GNSS signals without dependency on any specific GNSS system; this allows SP85 to operate in GPS-only, GLONASS-only, Galileo-only or BeiDou-only mode if needed. In addition, SP85 supports RTCM 3.2 Multiple Signal Messages (MSM), a standardized definition for broadcasting all GNSS signals from space, regardless of their constellation. This protects the surveyor’s investment well into the future by providing superior performance and improved productivity as new signals become available.

SMS AND EMAIL MESSAGING

SP85 has a unique combination of communication technologies including an integrated 3.5G GSM/UMTS modem, Bluetooth and WiFi connectivity, and optional internal UHF transmit radio, providing unmatched connectivity for the user. The cellular modem may be used for SMS (text message) and e-mail alerts as well as regular Internet or VRS connectivity. SMS (text messages) can be used to monitor and configure the receiver. Likewise, SP85 can use all available RTK correction sources and connect to the Internet from the field using WiFi hotspots, where available. The internal UHF transmit/receive radio allows for quick and easy setup as a local base station. This saves time and increases the surveyor’s efficiency, allowing for more productive workflows.

ANTI-THEFT PROTECTION

A unique anti-theft technology secures the SP85 receiver when installed as a field base station in remote or public areas and can detect if the receiver has been disturbed, moved, or stolen. This technology allows the surveyor to lock the device to a specific location and make it unusable if the device is moved elsewhere. In this case, the SP85 receiver will generate an audio alert and show an alert message on its display. Additionally, a SMS or e-mail will be sent to the surveyor’s mobile phone or computer and provides the receiver’s current coordinates to allow tracking of its position and follow for a quick recovery of the receiver. SP85’s anti-theft technology provides surveyors with remote security and peace of mind.

THE MOST POWERFUL TOOL FOR RELIABLE FIELD USE

The SP85’s rugged housing, created by Spectra Geospatial’s engineering design lab in France, incorporates a host of practical innovations. Dual hot-swappable batteries can be easily exchanged in the field as a one hand operation for an interruption-free working day, ensuring surveyors remain productive until the job is done. The impact-resistant fiberglass reinforced casing, designed to withstand 2 metre pole drops and waterproof to IP67, ensures that SP85 can handle the toughest outdoor conditions. The patented UHF antenna, set inside the rugged carbon fiber rod, extends the range of RTK radio performance at the same time as armoring protection. The sunlight-readable display offers instant access to key information like the number of satellites, RTK status, battery charge and available memory. With eLevel technology, the user is able to focus in one place when leveling and measuring as well as automatically store measurements when the receiver is level. These powerful design features combine to make SP85 the most capable, most reliable GNSS receiver, backed by a comprehensive standard 2 year warranty.



THE SPECTRA GEOSPATIAL EXPERIENCE

With the most advanced and rugged field data collectors from Spectra Geospatial, surveyors get maximum productivity and reliability every day. Spectra Geospatial Survey Pro software is specifically tailored for the SP85 GNSS receiver providing easy-to-use, yet powerful GNSS workflows, letting the surveyor concentrate on getting the job done. Spectra Geospatial Survey Office Software provides a complete office suite for post-processing GNSS data and adjusting survey data, as well as exporting the processed results directly back to the field or to engineering design software packages. Combined with Spectra Geospatial field and office software, SP85 is an extremely powerful and complete solution.

TOUGHPAD FZ-G1

Panasonic recommends Windows.

SOFTWARE	<ul style="list-style-type: none"> Windows 10 Pro 64 bit Panasonic Utilities (including Dashboard, Recovery Partition) 														
DURABILITY	<ul style="list-style-type: none"> MIL-STD-810G certified (4' drop, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, temperature shock, humidity, explosive atmosphere) IP65 certified sealed all-weather design Optional class I division 2, groups ABCD certified model Solid state drive heater Magnesium alloy chassis encased with ABS and elastomer corner guards Optional hand strap or rotating hand strap Port covers Raised bezel for LCD impact protection Pre-installed replaceable screen film for LCD protection 														
CPU	<ul style="list-style-type: none"> Intel® Core™ i5-6300U vPro™ Processor ~ 2.4 GHz up to 3.0 GHz with Intel® Turbo Boost Technology Intel Smart Cache 3MB 														
STORAGE & MEMORY	<ul style="list-style-type: none"> 8GB DDR3L SDRAM^{4,5} 256GB solid state drive (SSD) with heater^{4,5} Optional 512GB ~ up to 64GB additional storage with optional microSDXC card slot 														
DISPLAY	<ul style="list-style-type: none"> 10.1" WUXGA 1920 x 1200 with LED backlighting 10-point capacitive multi touch + Waterproof Digitizer pen daylight-readable screen ~ 2-800 nit IPS display with direct bonding Anti-reflective and anti-glare screen treatments Ambient light sensor, digital compass, gyro and acceleration sensors Automatic screen rotation Intel® HD Graphics 520 (Built-in CPU) video controller Concealed mode (configurable) 														
AUDIO	<ul style="list-style-type: none"> Integrated microphone Realtek high-definition audio Integrated speaker On-screen and button volume and mute controls 														
KEYBOARD & INPUT	<ul style="list-style-type: none"> 10-point gloved multi touch + digitizer screen Supports bare-hand touch and gestures and electronic waterproof stylus pen Supports glove mode and wet-touch mode 7 tablet buttons (2 user-definable) Integrated stylus holder On-screen QWERTY keyboard 														
CAMERAS	<ul style="list-style-type: none"> 720p webcam with mic 8MP rear camera with autofocus and LED light 														
EXPANSION	<ul style="list-style-type: none"> Optional MicroSDXC3 														
INTERFACE	<table border="0"> <tr> <td>Docking connector</td> <td>24-pin</td> </tr> <tr> <td>HDMI</td> <td>Type A</td> </tr> <tr> <td>Headphones/speaker</td> <td>Mini-jack stereo</td> </tr> <tr> <td>Optional Serial Dongle¹</td> <td>D-sub 9-pin</td> </tr> <tr> <td>USB 3.0 (x 1)²</td> <td>4-pin</td> </tr> <tr> <td>Optional second USB 2.0²</td> <td>4-pin</td> </tr> <tr> <td>Optional 10/100/1000 Ethernet³</td> <td>RJ-45</td> </tr> </table>	Docking connector	24-pin	HDMI	Type A	Headphones/speaker	Mini-jack stereo	Optional Serial Dongle ¹	D-sub 9-pin	USB 3.0 (x 1) ²	4-pin	Optional second USB 2.0 ²	4-pin	Optional 10/100/1000 Ethernet ³	RJ-45
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Optional second USB 2.0 ²	4-pin														
Optional 10/100/1000 Ethernet ³	RJ-45														
WIRELESS	<ul style="list-style-type: none"> Optional integrated 4G LTE multi carrier mobile broadband with satellite GPS Optional GPS (u-blox NEO M8N)⁷ Intel® Dual Band Wireless-AC 8260 (IEEE802.11a/b/g/n/ac) Bluetooth v4.1, Classic mode/Low Energy mode, Class 1 (Windows 10 pro 64-bit) Security <ul style="list-style-type: none"> Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP Encryption: TKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES Dual high-gain antenna pass-through 														
POWER SUPPLY	<ul style="list-style-type: none"> Li-ion battery pack: <ul style="list-style-type: none"> Standard battery: Li-ion 11.1 V, 4200 mAh (typ.), 4080 mAh (min.) Optional long life battery⁸: Li-ion 10.8V, 9300mAh (typ.), 8700mAh (min.) Battery operation⁹: <ul style="list-style-type: none"> Standard battery: 14 hours Optional long life battery⁸: 28 hours Battery charging time⁹: <ul style="list-style-type: none"> Standard battery: 2.5 hours off, 3 hours on Optional long life battery⁸: 3 hours off, 4 hours on Optional bridge battery⁸ (1 minute swap time) 														
POWER MANAGEMENT	<ul style="list-style-type: none"> Suspend/Resume Function, Hibernation, Standby 														
SECURITY FEATURES	<ul style="list-style-type: none"> Password Security: Supervisor, User, Hard Disk Lock Kensington cable lock slot Trusted platform module (TPM) security chip v2.0¹⁰ CompuTrace[®] theft protection agent in BIOS⁸ Optional Insertable SmartCard reader¹¹ Optional Contactless SmartCard/HF RFID reader¹² ISO 15693 and 14443 A/B compliant 														

WARRANTY	<ul style="list-style-type: none"> 3-year limited warranty, parts and labor 																																																						
DIMENSIONS & WEIGHT	<ul style="list-style-type: none"> 10.6" (L) x 7.4" (W) x 0.8" (H) 2.4 lbs. (standard battery) 3.0 lbs. (optional long life battery)¹ 																																																						
INTEGRATED OPTIONS¹⁴	<ul style="list-style-type: none"> 4G LTE multi carrier mobile broadband with satellite GPS Choice of 1D/2D barcode reader (EA11 or EA21), GPS, Serial Dongle, Ethernet, MicroSDXC or second USB 2.0 port¹ Choice of bridge battery, magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery, contactless SmartCard/RFID HF reader or UHF 900MHz RFID reader (EPC Gen 2)¹² 																																																						
ACCESSORIES¹⁵	<table border="0"> <tr> <td>AC Adapter (3-prong)</td> <td>CF-AA6413CM</td> </tr> <tr> <td>Standard Battery Pack</td> <td>FZ-VS0864ZU</td> </tr> <tr> <td>Long Life Battery Pack¹</td> <td>FZ-VS0888U</td> </tr> <tr> <td>Long Life Battery Bundle (includes rotating hand strap and corner guard set)</td> <td>FZ-BNDL0111ST1CG4</td> </tr> <tr> <td>Single Battery Charger Bundle</td> <td>FZ-BNDL01BATCHR</td> </tr> <tr> <td>LIND 3-Bay Battery Charger</td> <td>FZ-LND3BAYG1</td> </tr> <tr> <td>LIND Car Adapter 120W</td> <td>CF-LNDDC120</td> </tr> <tr> <td>LIND Car/AC Adapter 90W (with USB port)</td> <td>CF-LNDACDC90</td> </tr> <tr> <td>LIND Car Adapter 90W MIL-STD</td> <td>CF-LNDMLDC90</td> </tr> <tr> <td>Tall Corner Guard Set</td> <td>FZ-WCGG111</td> </tr> <tr> <td>Rotating Hand Strap and Tall Corner Guard Set Bundle</td> <td>FZ-BNDL01ST1CG4</td> </tr> <tr> <td>ToughMate G1 Always-On Case (with hand strap)</td> <td>TBCG1AGNL-P</td> </tr> <tr> <td>ToughMate G1 Professional Portfolio</td> <td>TBCG1PFLD-BLK-P</td> </tr> <tr> <td>ToughMate G1 X Hand Strap</td> <td>TBCG1XSTP-P</td> </tr> <tr> <td>Desktop Cradle</td> <td>FZ-VEBG11AU</td> </tr> <tr> <td>Vehicle Docks (no pass-through)</td> <td></td> </tr> <tr> <td>- Gamber-Johnson</td> <td>7160-0486-00-P</td> </tr> <tr> <td>- Havis with LIND power supply</td> <td>CF-H-PAN-702-P</td> </tr> <tr> <td>Vehicle Docks (dual pass-through)</td> <td></td> </tr> <tr> <td>- Gamber-Johnson</td> <td>7160-0486-02-P</td> </tr> <tr> <td>- Havis with LIND power supply</td> <td>CF-H-PAN-702-2-P</td> </tr> <tr> <td>Cradlepoint Router</td> <td></td> </tr> <tr> <td>- Verizon</td> <td>CP-IBR1100LPE-VZ</td> </tr> <tr> <td>- AT&T</td> <td>CP-IBR1100LPE-AT</td> </tr> <tr> <td>Replacement Digitizer Pen Waterproof</td> <td>FZ-VNPG11U-S</td> </tr> <tr> <td>Tether</td> <td>FZ-VNTG11U</td> </tr> <tr> <td>10.1" LCD Protective Film</td> <td>FZ-VFPG11U</td> </tr> </table>	AC Adapter (3-prong)	CF-AA6413CM	Standard Battery Pack	FZ-VS0864ZU	Long Life Battery Pack ¹	FZ-VS0888U	Long Life Battery Bundle (includes rotating hand strap and corner guard set)	FZ-BNDL0111ST1CG4	Single Battery Charger Bundle	FZ-BNDL01BATCHR	LIND 3-Bay Battery Charger	FZ-LND3BAYG1	LIND Car Adapter 120W	CF-LNDDC120	LIND Car/AC Adapter 90W (with USB port)	CF-LNDACDC90	LIND Car Adapter 90W MIL-STD	CF-LNDMLDC90	Tall Corner Guard Set	FZ-WCGG111	Rotating Hand Strap and Tall Corner Guard Set Bundle	FZ-BNDL01ST1CG4	ToughMate G1 Always-On Case (with hand strap)	TBCG1AGNL-P	ToughMate G1 Professional Portfolio	TBCG1PFLD-BLK-P	ToughMate G1 X Hand Strap	TBCG1XSTP-P	Desktop Cradle	FZ-VEBG11AU	Vehicle Docks (no pass-through)		- Gamber-Johnson	7160-0486-00-P	- Havis with LIND power supply	CF-H-PAN-702-P	Vehicle Docks (dual pass-through)		- Gamber-Johnson	7160-0486-02-P	- Havis with LIND power supply	CF-H-PAN-702-2-P	Cradlepoint Router		- Verizon	CP-IBR1100LPE-VZ	- AT&T	CP-IBR1100LPE-AT	Replacement Digitizer Pen Waterproof	FZ-VNPG11U-S	Tether	FZ-VNTG11U	10.1" LCD Protective Film	FZ-VFPG11U
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10.1" LCD Protective Film	FZ-VFPG11U																																																						

Please consult your reseller or Panasonic representative before purchasing.

Caution: Do not expose bare skin to this product when handling this unit in extreme hot or cold environments.

¹ Approximate time. Battery operation and recharge times will vary based on many factors, including screen brightness, applications, features, power management, battery conditioning and other customer preferences. Battery testing results from MobileMark 2007.

² Bridge battery, magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery, contactless SmartCard reader and UHF RFID reader are mutually exclusive. Please note, USB 3.0 port cannot be accessed when the unit is equipped with the magstripe reader, but optional USB 2.0 port can be accessed.

³ GPS, Serial Dongle, Ethernet, MicroSDXC and second USB port are mutually exclusive options.

⁴ 1GB = 1,000,000,000 bytes.

⁵ Total usable memory will be less depending upon actual system configuration.

⁶ The size of the VRAM cannot be set by the user and varies by operating system as well as the size of the RAM. Windows 7 max. VRAM is 1555MB.

⁷ Magstripe reader, insertable SmartCard reader, insertable SmartCard reader with bridge battery and UHF RFID reader include full corner guards and rotating hand strap. Bridge battery (without SmartCard reader) includes medium corner guards and rotating hand strap.

⁸ Requires software and activation to enable theft protection.

⁹ Length measurements do not include protrusions. Weight varies with options and digitizer pen.

¹⁰ Accessories and Integrated Options may vary depending on your configuration. Visit the Panasonic website for more accessories and details.

¹¹ Hazardous location certifications may not apply to all configurations. Consult your Panasonic representative for availability.

¹² TPM 1.2 available upon request - please contact your reseller or Panasonic representative.



TOUGHPAD



1.800.662.3537
panasonic.com/toughpad/G1

Panasonic is constantly enhancing product specifications and accessories. Specifications subject to change without notice. Trademarks are property of their respective owners. ©2018 Panasonic Corporation of North America. All rights reserved. Toughpad FZ-G1 m3 Spec Sheet_01/18



Canon
EOS 5D Mark IV



+ Design detail



Incredible resolution ideal for the high-megapixel era. Introducing the new benchmark large-aperture standard lens

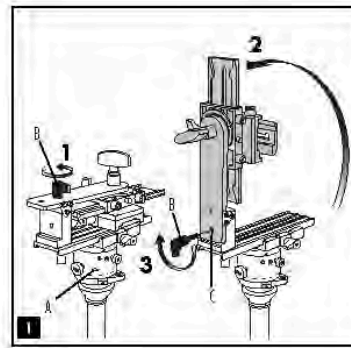
In 2008, Sigma released a large diameter standard lens designed for digital SLRs, "SIGMA 50mm F1.4 EX DG HSM". At that time, products for film cameras were prevalent, yet we spent enormous effort to set a new benchmark for the 50mm lens that optimizes the characteristics of digital cameras, such as compensating peripheral brightness, controlling the point images in the corners, and improving the image drawing, not only around the focusing point, but also other areas in the image.

APPENDIX 1.4: CAMERA EQUIPMENT (MANFROTTO 303 SPH)



MANFROTTO
INSTRUCTIONS

303SPH
SPECIAL "VR" HEAD



The spherical "VR" head is designed to allow vertical scenes to be created by Computer from a variety of panoramic sequences of digital or digital photographic, when a 1/4 turn is made.

- There are 4 requirements to achieve good panoramic sequence shots:
1. Accurate leveling of the panoramic axis.
 2. A panoramic head that enables you to choose the angle of rotation between one distant and the next.
 3. The ability to position the camera on the "Metal Point" of the lens (the front lens) is exactly above the panoramic axis of rotation, to eliminate any parallax problems between the near and distant objects in the scene.
 4. An additional raising axis that enables you to disassemble panoramic sequences at different vertical angles in order to achieve a complete spherical scene.

The spherical "VR" head comprises three main modules that perform the functions mentioned above in points 2, 3 and 4.

When your tripod has a built-in leveling device (such as the one in a bubble tripod's 50mm ball head), you will need to use one of the leveling accessories available from the Manfrotto range to ensure accurate leveling of the head (see point 1).

SET UP 1
Fit the leveling device (not supplied) in the tripod, then fit the "VR" head on the leveling device via knob attachment "A". Completely remove knob "B", rotate the bracket into the vertical position as shown in Fig. 1 and lock it in place by screwing the knob "B" into hole "C".

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Fig. 4: Figure 10 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 5: Figure 11 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 6: Figure 12 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 7: Figure 13 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 8: Figure 14 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 9: Figure 15 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 10: Figure 16 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 11: Figure 17 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 12: Figure 18 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 13: Figure 19 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 14: Figure 20 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 15: Figure 21 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 16: Figure 22 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 17: Figure 23 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 18: Figure 24 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 19: Figure 25 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 20: Figure 26 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 21: Figure 27 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 22: Figure 28 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 23: Figure 29 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 24: Figure 30 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 25: Figure 31 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 26: Figure 32 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

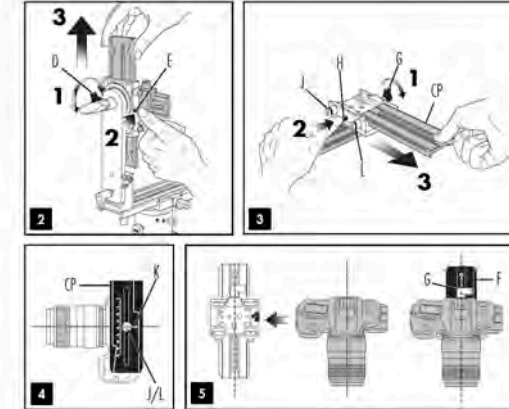
Fig. 27: Figure 33 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 28: Figure 34 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 29: Figure 35 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 30: Figure 36 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 31: Figure 37 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

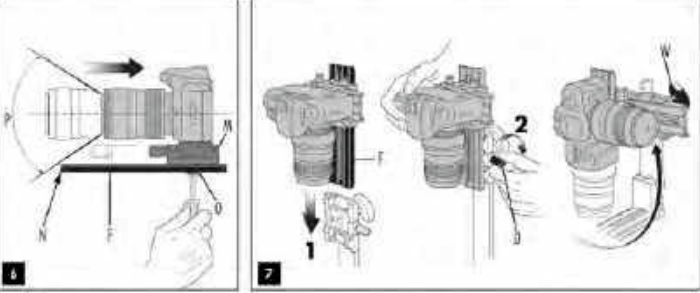


1 Remove the top assembly (Fig. 7) by releasing knob "D". To slide it completely out of the housing, push safety button "E".

Remove camera plate "CP" (Fig. 3) by releasing knob "G". To slide it completely out of the housing, push safety button "H".

You will find two screws attached to the top assembly: screw "I" (Fig. 3) is 1/4 in. (1") is 3/8 in. Depending on your camera tripod attachment, choose the correct screw and use it to fix your camera to plate "CP" (Fig. 4). Use a coin or screwdriver to lock, take care to align the lens with the center of the plate indicated by letter "K".

Mount the camera on the top assembly as shown in figure 5 by sliding the camera + plate into the housing following the direction shown by the "Insert" arrow. Lock in place using knob "G", before locking, take care to align the lens with the long plate "P" - the lens end must be perfectly above the slot of the plate as shown in figure 5. The angle of the lever on the raised knob "G" can be repositioned as required without affecting the lock shell. Pull the lever upwards, rotate as required and release and it will locate in the new position.



NOTE 1
The position of the housing "W" relative to the long plate "P" will need to be adjusted. Insert screw "J" to slide the housing. The ideal position is with the camera body set far back on the plate so it can go before the lens edge "M" of the long plate "P" inserts into the camera's ball of view "N".

ADJUST THE CAMERA ON THE HEAD 2
Align the whole top assembly + camera on the head as shown in figure 7 by sliding the long plate "P" into the housing and locking it by screwing knob "L". Then unscrew knob "M" and move the camera on the vertical plate.

Fig. 6: Figure 38 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 7: Figure 39 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 8: Figure 40 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 9: Figure 41 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 10: Figure 42 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 11: Figure 43 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 12: Figure 44 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 13: Figure 45 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 14: Figure 46 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 15: Figure 47 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 16: Figure 48 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 17: Figure 49 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 18: Figure 50 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 19: Figure 51 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 20: Figure 52 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 21: Figure 53 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 22: Figure 54 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 23: Figure 55 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

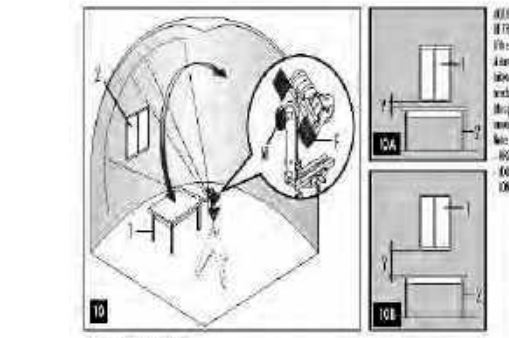
Fig. 24: Figure 56 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 25: Figure 57 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 26: Figure 58 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 27: Figure 59 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 28: Figure 60 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".



10 LATERAL POSITIONING 1
Set figure 10. Choose a frame that contains both a near object "1" and a distant object "2" situated along the same horizontal line of vision. (See figure 11A and 11B): unscrew knob "AF" and move the camera around the panoramic axis so that the two objects are first on the left hand side of the frame, then on the right. Check whether the horizontal gap "X" between the two objects varies in the two frames: the more constant the distance remains, the more accurately the "Metal Point" has been positioned. 2. For optimum results, make minor adjustments by moving plate "S".

11A LATERAL POSITIONING 2
Once the right position is achieved it is VERY USEFUL to measure it by setting the position of the plate "S" on the index on the graduated scale.

Fig. 10: Figure 61 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 11: Figure 62 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 12: Figure 63 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 13: Figure 64 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 14: Figure 65 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 15: Figure 66 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 16: Figure 67 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 17: Figure 68 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 18: Figure 69 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 19: Figure 70 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 20: Figure 71 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 21: Figure 72 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 22: Figure 73 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 23: Figure 74 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 24: Figure 75 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 25: Figure 76 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 26: Figure 77 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 27: Figure 78 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 28: Figure 79 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

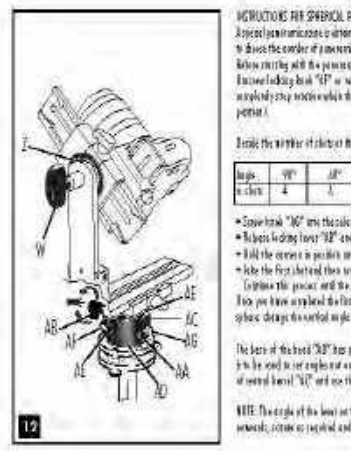
Fig. 29: Figure 80 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 30: Figure 81 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 31: Figure 82 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 32: Figure 83 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 33: Figure 84 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".



INSTRUCTIONS FOR SPHERICAL PANORAMA SHOOTING 1
A special panoramic sequence is obtained by editing together panoramic sequences taken at different angles from the horizontal. If you will need to shoot the center of panoramic sequence you will need to complete the plates depending on the angle of the lens you will be using. Before starting with the panoramic sequence, choose the initial vertical angle using the raised knob "G" (Fig. 12). Unscrew locking knob "AF" to rotate it completely. If you are concerned about the angle to completely stop rotate while the head is level in a vertical position, or to avoid any collateral movement of the head in any position.

Define the number of shots at the angle of rotation between each shot for the first panoramic sequence (see the chart below):

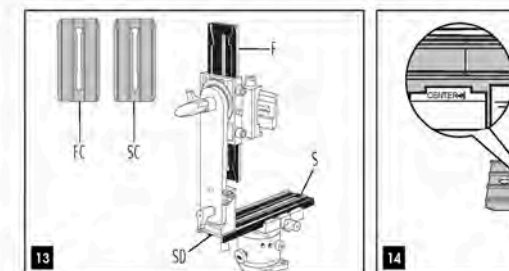
Angle	180°	120°	90°	60°	30°	24°	180°	15°	10°	5°
shots	4	3	3	3	3	3	3	3	3	3

- Unscrew knob "AF" and rotate the camera on the tripod.
- Adjust locking lever "AF" and rotate the camera on the tripod.
- Hold the camera in position and rotate the camera head "AF" until the first "shot stop" is reached, then lock lever "AF".
- Take the first shot and then rotate the camera to the next "shot stop" without releasing "AF" and take the next shot.
- Continue this process until the shot position is reached.

Once you have completed the first complete panoramic sequence, you can start with other panoramic sequences (make sure the sphere change the vertical angle using knob "AF" and knob "G", and repeat the operations described above for each sequence).

The lens of this head "AF" has graduated scale markings from 0° to 300° and a reference index "AF" to the vertical knob "AF". This is to be used to set angles out on the chart. To use the head in this way, rotate knob "AF" to disengage the "shot stop" locking mechanism at vertical level "AF" and use the locking knob "AF" to lock the position during shooting.

NOTE: The angle of the lens on the vertical knob "AF" can be repositioned as required without affecting the lock shell. Pull the lever upwards, rotate as required and release and it will locate in the new position.



13 ADDITIONAL PLATES 1
If you have a very compact camera we suggest you fit one of the short plates "SC" (Fig. 13) and "FC" (supplied with this head) instead of the two long plates "P" and "S". In order to reduce space and weight of the system.

To replace the plate "S", unscrew screw "SO" (Fig. 13).

To replace the plate "P", please refer to Fig. 6 and unscrew screw "O".

Fig. 13: Figure 85 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 14: Figure 86 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 15: Figure 87 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 16: Figure 88 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 17: Figure 89 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 18: Figure 90 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 19: Figure 91 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 20: Figure 92 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 21: Figure 93 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 22: Figure 94 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

Fig. 23: Figure 95 shows the horizontal plate for leveling the head. The head is mounted on the tripod by means of knob "A" and leveling screw "B". The head is then rotated to the vertical position by means of knob "B".

APPENDIX B.2
Visualizations for VP6 and
Associated Views along PRow



Appendix B

Photography, 3D Modelling and Accurate Visual Representations
Viewpoints 6, 6A & 6B

PINS reference: APP/U2235/W/23/3329481

Appeal

Site Address: Ashford Road, Maidstone

For

Maidstone Borough Council



 Peter Radmall Associates
Environmental Planning and Assessment



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

This visualisation is a tool for assessment and is best used for comparison in the field from the viewpoint location shown. It cannot be considered a substitute for visiting the viewpoint location.

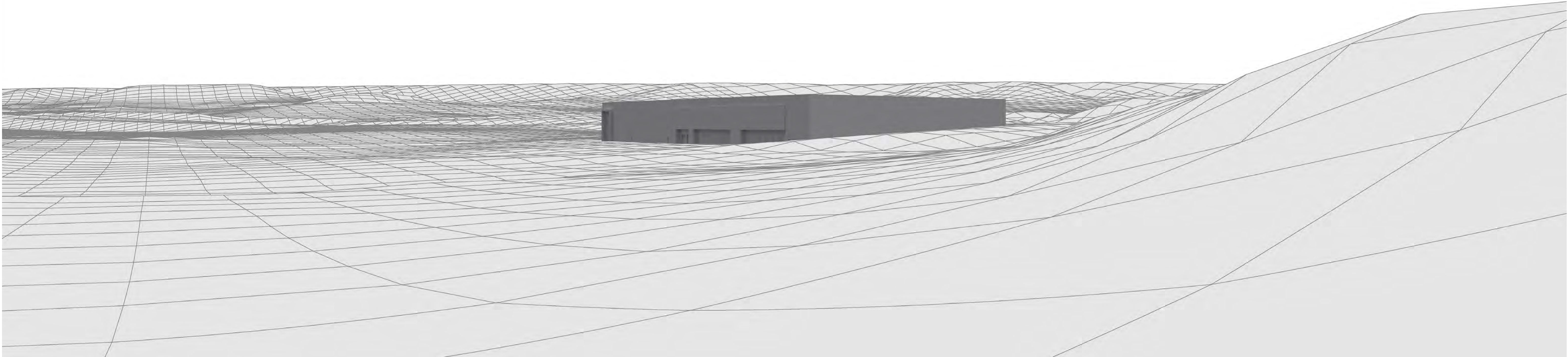
Printing Note

This viewpoint visualisation is spread across a single sheet 841mm wide and 297mm high. To give the correct viewing distance the sheet should be printed at a scale of 1:1 on large format paper and cut to size. Do not print at A3



Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6
Existing Context View



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6
Predicted 3D Model View (AVR Type 2)



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6
Composite 3D Model View (AVR Type 2)



Viewing Information

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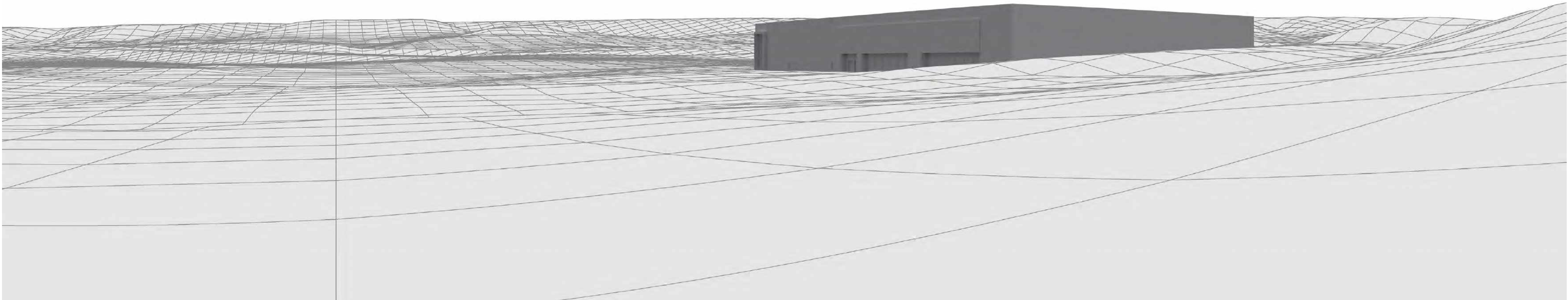
Printing Note

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6A
Existing Context View



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

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Ashford Road, Maidstone
Viewpoint 6A
Predicted 3D Model View (AVR Type 2)



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6A
Composite 3D Model View (AVR Type 2)



Viewing Information

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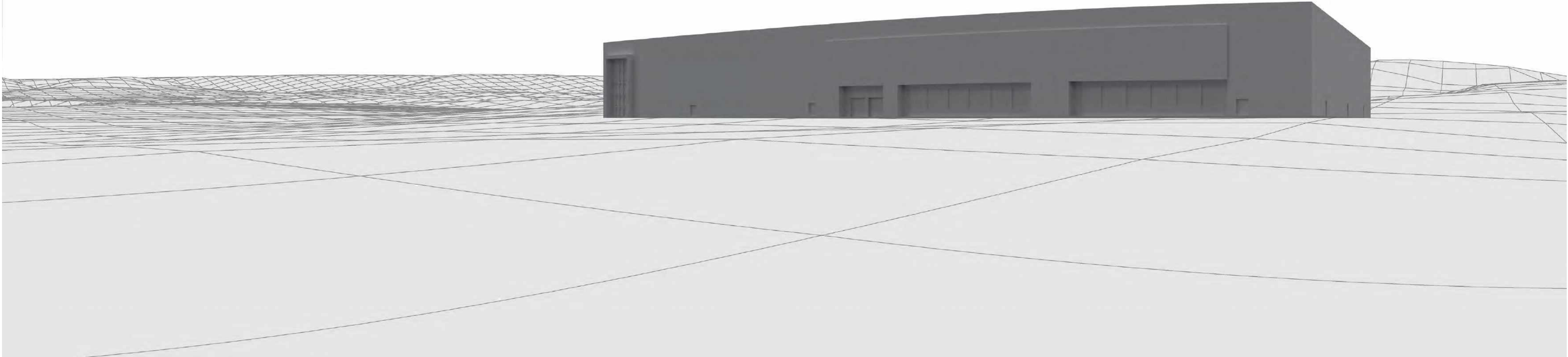
Printing Note

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6B
Existing Context View



Viewing Information

This photograph and visualisation is a cylindrical projection panorama. Hold this sheet at a comfortable arm's length from your eyes and curve the image through 90° and turn head to view. Alternatively, the visualisation can be laid flat and viewed by scanning left or right parallel to the sheet maintaining a 50cm viewing distance between your eye and the page.

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Peter Radmall Associates
Environmental Planning and Assessment

Ashford Road, Maidstone
Viewpoint 6B
Predicted 3D Model View (AVR Type 2)



Viewing Information

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Environmental Planning and Assessment

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APPENDIX C
Cawrey Case

Neutral Citation Number: [2016] EWHC 1198 (Admin)

Case No: CO/5683/2015

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
PLANNING COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 23/05/2016

Before :

MR JUSTICE GILBART

Between :

CAWREY LIMITED
and
SECRETARY OF STATE FOR COMMUNITIES
AND LOCAL GOVERNMENT
AND
HINCKLEY AND BOSWORTH BOROUGH
COUNCIL

Claimant

First
Defendant

Second
Defendant

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Tel No: 020 7404 1400, Fax No: 020 7831 8838
Official Shorthand Writers to the Court)

Alison Ogley (instructed by **Marrons Shakespeares, Solicitors of Leicester**) for the **Claimant**
Tim Buley (instructed by **Government Legal Department**) for the **First Defendant**

Hearing dates: 10th May 2016

Judgment
As Approved by the Court

MR JUSTICE GILBART :

ACRONYMS USED IN JUDGMENT

<i>TCPA 1990</i>	Town and Country Planning Act 1990
<i>LBCAA 1990</i>	Planning (Listed Buildings and Conservation Areas) Act 1990
<i>PCPA 2004</i>	Planning and Compulsory Purchase Act 2004
NPPF	National Planning Policy Framework (March 2012)
LPA	Local Planning Authority
SSCLG	Secretary of State for Communities and Local Government
HBBC	Hinckley and Bosworth Borough Council
CS	Core Strategy
CL	Cawrey Limited
PROW	Public Right of Way

1. This is an application by CL under s 288 *TCPA 1990* to quash a decision letter of one of the Defendant SSCLG's Inspectors, dated 9th October 2015, whereby he dismissed the appeal of CL against the refusal of HBBC to grant outline planning permission for residential development on land south of Markfield Road, Ratby, Leicestershire. The full description of the development was "residential development, new access, public open space, equipped children's play area, cycle and footpath routes and sustainable urban drainage measures."
2. It is another case in which the interpretation and application of NPPF must be addressed.
3. I shall deal with this matter under the following heads:
 - a. The grounds of challenge;
 - b. Development Plan context;
 - c. NPPF policy;
 - d. The case for the Claimant at the inquiry;
 - e. The Decision Letter;
 - f. Submissions by Ms Ogley for the Claimant CL;
 - g. Submissions by Mr Buley for the Defendant SSCLG;
 - h. Discussion and Conclusions.

(a) The grounds of challenge

4. The grounds of challenge are that:
 - (1) The Inspector failed to provide adequate reasons, or alternatively took into account immaterial considerations, when dealing with the issue of landscape impact. His errors included misinterpretation of the Development Plan and NPPF, and inadequate reasoning in his conclusions concerning the impact on the landscape and on recreational use;
 - (2) He had failed to consider the nature and extent of any conflict with policies RES5 and NE5 of the Development Plan. He had failed to address

the weight to be applied to them properly in the light of NPPF. He had failed to address properly the scheme's compliance with policy CS8, and that it complied with the Development Plan taken as a whole;

- (3) He had failed to consider whether the scheme involved sustainable development in terms of the policy in NPPF, and therefore whether the presumption in favour of such development applied to the proposal.

5. Ms Ogley said that Ground 3 was a subset of Ground 2. When she developed her grounds orally, it became apparent that her attack on the Inspector's approach included what she said was his failure to tackle issues relating to the supply of housing, and specifically in the case of affordable housing. I shall deal with those matters when I set out her submissions to the Court.

(b) The Development Plan context

6. The Development Plan consists, inter alia, of a Core Strategy (CS) adopted in December 2009, and the Hinckley and Bosworth Local Plan, which was adopted in February 2001. Some policies were saved with effect from 28th September 2007, including NE5 and RES5, which are set out below. Those policies are effective until the new Local Plan 2006-2026 is adopted. The policies of relevance to this challenge are:

CS Policy 8

This sets out policies for rural centres which relate to Leicester, namely Desford, Groby, Ratby and Markfield. In the case of Ratby, it states insofar as is relevant (I have numbered the policies so as to make subsequent cross reference easier):

Ratby

To support the local services in Ratby and ensure local people have access to a range of housing the council will:

- (1) Allocate land for the development of a minimum of 75 new homes. Developers will be expected to demonstrate that the number, type and mix of housing proposed will meet the needs of Ratby, taking into account the latest Housing Market Assessment and local housing needs surveys where they exist in line with Policy 15 and Policy 16.
- (2) Support additional employment provision to meet local needs in line with Policy 7.
- (3) Support the improvement of the GP facilities in Ratby to provide for the increase in population, to be delivered by the PCT and developer contributions. Work with the PCT to expand the range of services available in the village including a dentist and optician as supported by the Ratby Parish Plan.
- (4) Address the existing deficiencies in the quality, quantity and accessibility of green space and play provision in Ratby as detailed in the council's most up to date strategy and the Play Strategy. New green space and play provision will be provided where necessary to meet the standards set out in Policy 19.
- (5) Deliver improvements to the quality of Ferndale Park Outdoor Facilities as supported by Hinckley & Bosworth Cultural facilities audit.

- (6) Deliver safe cycle routes as detailed in Policy 14, in particular from Ratby to Groby Community College, into Glenfield and Kirby Muxloe and to Timkens employment site.
- (7) Implement the strategic green infrastructure network detailed in Policy 20. To achieve this, the following strategic interventions relating to Ratby will be required: Ratby to Desford Multifunctional Corridor; Tourism Support (promotion of Ratby as a 'gateway village' to the National Forest); Transport Corridor Disturbance Mitigation; and the Rothley Brook Corridor Management.
- (8) Support proposals that contribute to the delivery of the National Forest Strategy in line with Policy 21.
- (9) Support proposals that contribute to the delivery of the Charnwood Forest Regional Park in line with Policy 22.
- (10) Support improvements to the existing community centres
.....
- (11) Support measures to reduce the noise and air pollution (from the M1)
- (12) Support measures to direct through traffic away from Ratby Village.....
- (13) Require new development to respect the character and appearance of the Ratby Conservation Area by incorporating locally distinctive features of the conservation area into the development.

Saved Local Plan Policies

NE5 reads as follows

“Policy NE5 - Development in the countryside

The countryside will be protected for its own sake. Planning permission will be granted for built and other forms of development in the countryside provided that the development is either:

- (a) important to the local economy and cannot be provided within or adjacent to an existing settlement; or
- (b) for the change of use, reuse or extension of existing buildings, particularly those of historic value; or
- (c) for sport or recreation purposes;

and only where the following criteria are met:

- (i) it does not have an adverse effect on the appearance or character of the Landscape.
- (ii) it is in keeping with the scale and character of existing buildings and the general surroundings.
- (iii) where necessary it is effectively screened by landscaping or other methods.
- (iv) the proposed development will not generate traffic likely to exceed the capacity of the highway network or impair road safety.”

RES 5 reads as follows

“Policy RES 5 - residential proposals on unallocated sites

On sites which are not specifically allocated in the plan for housing, planning

permission will only be granted for new residential development if:

- (a) the site lies within the boundaries of an urban area or rural settlement as defined on the proposals map, and
- (b) the siting, design and layout of the proposal do not conflict with the relevant plan policies.”

(c) NPPF-The National Planning Policy Framework

7. The issues argued before the Court involved the interpretation and application of NPPF. I shall in due course refer to the authorities on its status, meaning and application.

8. The parts relevant to this matter are:

“6. The purpose of the planning system is to contribute to the achievement of sustainable development. The policies in paragraphs 18 to 219, taken as a whole, constitute the Government’s view of what sustainable development in England means in practice for the planning system.

7. There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- an economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community’s needs and support its health, social and cultural well-being; and
- an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.”

“The presumption in favour of sustainable development

11. Planning law requires that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise.

12. This National Planning Policy Framework does not change the statutory status of the development plan as the starting point for decision making. Proposed development that accords with an up-to-date Local Plan should be

approved, and proposed development that conflicts should be refused unless other material considerations indicate otherwise. It is highly desirable that local planning authorities should have an up-to-date plan in place.

13

14. At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.

For plan-making this means that:

- local planning authorities should positively seek opportunities to meet the development needs of their area;
- Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or
 - specific policies in this Framework indicate development should be restricted.” (A footnote (9) gives as examples policies relating to Habitat Directives, designated Sites of Special Scientific Interest, designated Green Belts, Areas of Outstanding Natural Beauty, Heritage Coasts, National Parks, designated heritage assets or areas at risk of flooding or coastal erosion)

For decision-taking this means”: (“unless material considerations indicate otherwise” appears in a footnote)

- “● approving development proposals that accord with the development plan without delay; and
- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or
 - specific policies in this Framework indicate development should be restricted. (Reference is again made to footnote (9))

15. Policies in Local Plans should follow the approach of the presumption in favour of sustainable development so that it is clear that development which is sustainable can be approved without delay. All plans should be based upon and reflect the presumption in favour of sustainable development, with clear policies that will guide how the presumption should be applied locally.”

“Core planning principles

17. Within the overarching roles that the planning system ought to play, a set of

core land-use planning principles should underpin both plan-making and decision-taking. These 12 principles are that planning should:

- be genuinely plan-led, empowering local people to shape their surroundings, with succinct local and neighbourhood plans setting out a positive vision for the future of the area. Plans should be kept up-to-date, and be based on joint working and co-operation to address larger than local issues. They should provide a practical framework within which decisions on planning applications can be made with a high degree of predictability and efficiency;
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- take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it;
-
- contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this Framework;
-
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9. Chapter 6 deals with “Delivering a wide choice of high quality homes.” The following paragraphs are relevant:

“6. *Delivering a wide choice of high quality homes*

47. To boost significantly the supply of housing, local planning authorities should:

- use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period;
- identify and update annually a supply of specific deliverable sites sufficient to provide five years’ worth of housing against their housing requirements with an additional buffer of 5% (moved forward from later in the plan period) to ensure choice and competition in the market for land. Where there has been a record of persistent under delivery of housing, local planning authorities should increase the buffer to 20% (moved forward from later in the plan period) to provide a realistic prospect of achieving the planned supply and to ensure choice and competition in the market for land (a footnote adds “To be considered deliverable, sites should be available now, offer a suitable location for development now, and be

achievable with a realistic prospect that housing will be delivered on the site within five years and in particular that development of the site is viable. Sites with planning permission should be considered deliverable until permission expires, unless there is clear evidence that schemes will not be implemented within five years, for example they will not be viable, there is no longer a demand for the type of units or sites have long term phasing plans”

- identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15 (a footnote adds “To be considered developable, sites should be in a suitable location for housing development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged.”)
- for market and affordable housing, illustrate the expected rate of housing delivery through a housing trajectory for the plan period and set out a housing implementation strategy for the full range of housing describing how they will maintain delivery of a five-year supply of housing land to meet their housing target; and
- set out their own approach to housing density to reflect local circumstances.

48

49 Housing applications should be considered in the context of the presumption in favour of sustainable development. Relevant policies for the supply of housing should not be considered up-to-date if the local planning authority cannot demonstrate a five-year supply of deliverable housing sites.

50. To deliver a wide choice of high quality homes, widen opportunities for home

ownership and create sustainable, inclusive and mixed communities, local planning authorities should:

- plan for a mix of housing based on current and future demographic trends, market trends and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes);
- identify the size, type, tenure and range of housing that is required in particular locations, reflecting local demand; and
- where they have identified that affordable housing is needed, set policies for meeting this need on site, unless off-site provision or a financial contribution of broadly equivalent value can be robustly justified (for example to improve or make more effective use of the existing housing stock) and the agreed approach contributes to the objective of creating mixed and balanced communities. Such policies should be sufficiently flexible to take account of changing market conditions over time.”

10. Section 11 of the NPPF deals with “Conserving and enhancing the natural environment”. Paragraphs [109], [110], [113] and [115] read, insofar as is relevant to this case:

“109. The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
-
-
-
-

110. In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.

113. Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged.....

115. Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.”

11. Annex 1 to NPPF deals with “Implementation.” It includes at paragraph [215]:

“215. due weight should be given to relevant policies in existing plans according to their degree of consistency with this framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given).”

(d) *The case for the Claimant at the inquiry*

12. The original application had anticipated the erection of 134 dwellings. HBBC officers encouraged CL to increase the density to 158. The refusal by the HBBC members was against the professional advice of its officers. There had been two reasons for refusal, but only one remained extant at the time of the inquiry, which was that

“The development would have a detrimental landscape impact contrary to Policy NE5.....and the environmental dimension of the (NPPF)”

13. The Claimant’s case contended that:

- a. the development complied with the Development Plan as a whole, having particular regard to Core Strategy Policy 8;
- b. there was a shortfall in the 5 year housing supply, and in the supply of affordable housing;
- c. If there was a shortfall, it was argued that the mechanism in NPPF [49] applied, thereby depriving NE5 (and by implication RES 5) of weight;
- d. the landscape was not one meriting protection under NPPF [109];
- e. the highways impact would be acceptable;

f. the development met the sustainability criteria in NPPF [7].

14. Evidence put before him by the Claimant in its Planning witness' evidence, and apparently unchallenged by HBBC, addressed the three dimensions of sustainable development in NPPF [6] and also referred to the CS:

Economic Dimension

(i) Securing long term employment of 15 employees at the Claimant's business; providing construction jobs; providing increased local spending, generating £1.4m in New Homes bonus payments to enable HBBC to better support local services and make infrastructure improvements.

(ii) Ratby is a sustainable location given its accessibility (by public transport) to major job opportunities to Leicester;

Social Dimension

It will provide 158 homes, of which 64 will be affordable homes to meet local needs, generating £915,000 to meet the costs of any identified impacts, including contributions to education, the GPs' surgery, additional open space including accessible woodland in the National Forest, and improved highway safety. It will ensure continuity of supply in market and affordable housing over the remainder of the Plan period;

Environmental Dimension

Any landscape harm will be offset by proposed landscape and woodland planting at Ratby, the gateway entrance to the National Forest. A new hedgerow and woodland planting will bring biodiversity to an area currently poor ecologically. It is designed to encourage cycling and pedestrian links with a new footpath into the Forest and the village centre, a safer cycle route along National Route N63, and new bus shelters.

(d) The Decision Letter

15. The Inspector identified as the two main issues of the appeal ([5])

(a) the effect of the proposed development on the character and appearance of the landscape;

(b) the contribution of the proposed development to the supply of housing in the district and in the local area.

16. He dealt with the issues as follows:

“The effect of the proposed development on the character and appearance of the landscape

6. ‘Saved’ Policies RES5 and NE5 of the Hinckley and Bosworth Local Plan 2001, which despite their age still form part of the development plan, allow housing development within settlement boundaries but resist development beyond those boundaries unless, among other things, it is important to the local economy and would not have an adverse effect on the appearance and character of the landscape. The appeal scheme would extend outside the defined settlement boundaries. A new hedge and trees would be planted to define the western boundary of the development, broadly aligned with the rear of the plots in Stamford Street. The proposed houses

would occupy the area between this new boundary, Markfield Road, and the houses in The Poplars, Ash Close and Stamford Street. The Appellants refer to the development as rounding-off at the western edge of Ratby and argue that the scheme would provide a new defensible boundary for the village.

7. Markfield Road and part of the adjacent field have a character influenced by nearby houses, but the scheme would extend some way beyond this into the wider countryside and I consider that it would cut across existing natural features and boundaries in a visually harmful manner. Ratby currently appears on the rim of the landscape when seen from the countryside, and is partly contained by the sharp drop at the end of Stamford Street, but the development would appear to spill over the rim into a trough and up the opposite slope, extending beyond existing field boundaries towards a low ridge. In doing so it would form a substantial urban intrusion into the wider open landscape. The development would also include a very distinctive area of sloping paddock, with scattered trees and ridge-and-furrow. This paddock, topped by the Stamford Street houses at the top of the green bluff, forms a pleasant and interesting landscape setting for the village when looking back from the countryside towards its western edge. This is clearly appreciated from the well-used footpath that leads through the site. Similarly, when looking out of the village from the end of Stamford Street, the land drops away providing a pleasant aspect. Residents can walk from an enclosed, traditional terraced street straight into the open countryside. I consider that the development would cause substantial harm to the landscape.

8. Ratby, like many villages, has ragged edges that come from the complex interactions between historical development, activities, movement and the landscape. There is nothing inherently wrong with that form, nor anything inherently beneficial in rounding off these edges. The proposed hedge at the development's outer boundary, other than being a theoretical projection of the rear boundary of Stamford Street, would not clearly relate to any existing landscape feature. Even if the hedge were made thicker as suggested at the inquiry, it would be no more or less 'defensible' than the current situation. The Appellants propose by means of a unilateral undertaking to plant new woodland beyond the boundary of the site to extend the National Forest and create new rights of way. But even with these proposals and their potential ecological benefits I consider that the scheme overall would have a harmful effect on the landscape for the reasons I have given, and would diminish the benefit of the existing, evidently valued, public right of way.

9. One of the Framework's core planning principles is to recognise the intrinsic character and beauty of the countryside. The appeal site is ordinary countryside, but it has visual value and provides space for walking, jogging and other forms of informal recreation. I conclude that the development would amount to a substantial extension of built development into open countryside, harmful to the character and appearance of the landscape, and would conflict with 'saved' Policies RES5 and NE5 of the Hinckley and Bosworth Local Plan 2001.

The contribution of the proposed development to the supply of housing in the district and in the local area

10. The Statement of Common Ground indicates that the full, objectively assessed housing need for the Borough is 9,000 dwellings for the period 2006-2026, or 450

dwellings per annum, which is derived from the adopted Hinckley and Bosworth Core Strategy 2009. Using the Sedgefield methodology, the shortfall of 328 dwellings since the start of the plan period is added to the annual requirement of 450 dwellings over the next 5 years, equating to 516 dwellings per year. None of this is in dispute.

11. The District's housing strategy over the Core Strategy plan period is heavily reliant on two Sustainable Urban Extensions (SUEs), at Earl Shilton and Barwell, which are referred to in Policies 2 and 3 of the Core Strategy respectively. The Appellants argue that neither site is likely to deliver new homes in the next 5 years and that, combined with the absence of delivery on a large site west of Hinckley, there is less than a 5 year supply of housing land in the Borough.

12. It has taken a long time to bring the two SUEs forward, but I consider that there is now reasonable evidence that things are moving. At Earl Shilton, a letter dated 3 September 2015 from Bloor Homes on behalf of the developer consortium, which also includes Barwood Developments, Jelson Homes and Persimmon Homes, states that all the parties have now confirmed that they are in a position to enter into a collaboration agreement. The focus is now on viability in the light of recent sales evidence. This will clarify what the scheme can deliver in terms of affordable housing and other off-site contributions once essential on site infrastructure has been accounted for. Subject to settling the collaboration agreement and the viability position, an outline planning application is to be submitted before Christmas this year.

13. The Barwell SUE is subject to a resolution to grant planning permission subject to a s106 agreement; the Chief Planning and Development Officer has been granted delegated powers to finalise the remaining matters including the obligation and the latter is expected to be completed and planning permission issued by the end of the year.

14. These are complex sites and the process of reserved matters approval and infrastructure provision will take time, but I consider that there is enough evidence to conclude that, even allowing for time to provide initial infrastructure, both sites are likely to make some contribution to the supply of housing in the next 5 years. This will clearly be towards the back end of the 5 year period, but the Council's revised September 2015 calculation of the 5 year housing trajectory, submitted to the Inquiry, rightly makes realistically low assumptions about the level of early delivery on these sites.

15. The site west of Hinckley is included in the submitted Site Allocations and Development Management Policies DPD as HIN02, and is subject to both outline application and a full application for the development of the first two phases. No permission has yet been granted and the Appellants argue that the site should be discounted completely, pointing to an absence of recent information on the Council's website. However, a letter dated 3 September 2015 from the owner, Bloor Homes, indicates that negotiations are well under way in connection with the applications. Issues regarding measures at the site access have been resolved, negotiations are continuing with bus operators, a further round of traffic modelling has been completed, the design has been the subject of a favourable design review and the s106 obligation for the main site outline is at an advanced stage. The developer's suggestion that first build completions are likely to take place in June 2016 seems

tight, but in the light of the information available I consider it probable that this site will make a significant contribution towards the housing supply in the first five years.

16. I consider that the Council has been realistic about housing delivery from these large sites. I am satisfied that all three sites are deliverable within the terms of the Framework.

17. As for the delivery trajectory from some of the smaller sites allocated in the submitted Site Allocations and Development Management Policies DPD, I again consider that the Appellants' assessment is unduly negative. They suggest that sites HIN 04, 06, 08, 11 and 12 should be discounted largely because they are Council-owned and, owing to internal processes and the need for a development partner, they will take longer to deliver. But in these cases the authority has the benefit of control and, from experience, local authorities are capable of bringing their own sites forward sites reasonably quickly for development. Site MKBOS02 is more constrained, but even allowing for some slippage I consider that it would be capable of contributing a reasonable number of homes towards the end of the 5 year period. Site NEW02 is not in the developer's current build programme but even with that slippage it is capable of being delivered within the 5 years. Taking all the evidence into account I consider that, in respect of these smaller sites, the Council has been realistic in its delivery calculations.

18. The Appellants argue that there has been persistent housing under-delivery in the Borough. It is true that a surplus against the annual average requirement has only been registered three times since 2006. However, two of these surpluses have been in the last two years, the most recent one being substantial. The early part of this period was affected by reduced demand linked to the economic downturn, and the most recent two years have registered a notable upturn which is likely to reflect improved economic circumstances. Whilst it is not known whether the improvement will be continued into 2015/16, it is reasonable to allow for cyclical variations in the housing market and in that context I do not consider that there has been a persistent under-supply. A 5% buffer is therefore appropriate to apply to the calculation of the 5 year land supply.

19. Taking all these factors into account, I consider that the housing land supply calculation submitted by the Council to the Inquiry, which is based on the Sedgefield method and a 5% buffer, is as sound a calculation as is possible to make at this time. The new positive evidence from the Council and from the developer in respect of the sites at Earl Shilton and on land west of Hinckley, the information update on Barwell, and the fact that the Site Allocations and Development Management Policies DPD is now at the stage of Examination, clearly point towards a different conclusion on the 5 year supply from that of the Inspectors in appeals at Sketchley House, Burbage APP/K2420/A/13/2208318 (Secretary of State's decision November 2014) and at Ratby Road, Groby APP/K2420/A/12/2181080 (Inspector's decision March 2015). I conclude that there is currently sufficient housing land in the Borough as a whole to meet requirements for the next 5 years.

20. The Appellants argue that a more local housing need has not been satisfied. In the adopted Hinckley and Bosworth Core Strategy 2009, Ratby is one of four Key Rural Centres relating to Leicester in which the focus is on maintaining existing local services, with a scale of new development to support local needs, rather than allowing

larger scale development which might encourage commuting. In this context, Core Strategy Policy 7 supports housing within the settlement boundaries and Policy 8 indicates that the Council will allocate land for the development of a minimum of 75 new homes.

21. Rather more than 75 homes have already been built in Ratby since 2006, and the proposed development on the Casepak site will add to the total; but even so, reading Policies 7 and 8 together with the explanatory text it is clear that, in addition to development within the settlement boundaries, the Core Strategy seeks a development plan allocation at Ratby to meet local needs. No such allocation has been made in the submitted Site Allocations and Development Management Policies DPD. Whilst that is a matter for the DPD Examination, I give some weight to the Appellants' arguments, informed in part by information from the Council's Housing Officer and by their local knowledge, that the scheme would help to satisfy a currently unmet need for local market and affordable housing. Moreover, I do not consider that the number of houses sought in this scheme would be disproportionately large in relation to the minimum of 75 referred to by Policy 8. That said, it is my conclusion that the landscape harm that would arise from the particular scheme before me would considerably outweigh the benefits in respect of local housing provision.

Other matters

22. A number of objectors including the Parish Council express concern about the effect of the development on local services, although the Council itself has withdrawn its objection in connection with this issue. One disadvantage would be that more young children would have to travel to the adjacent village to go to school, but there is little evidence that local facilities would be adversely affected and indeed I consider that the scheme would generally support local services both through the additional local population and through the contributions effected by means of the s106 agreement towards education and other social facilities. Overall, I consider that, in relation to support for local facilities, the scheme would be in accordance with the objectives of Core Strategy Policy 8.

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25. The Appellants refer to the negative effects of a refusal on their own business and employees. Whilst recognising the importance of a healthy economy as one of the elements of sustainable development, risk is an inherent part of business and this matter does not carry so much weight as to make a difference to my conclusions.

Conclusions

26. The development would harm the character and appearance of the landscape by spilling out into the wider countryside, removing the characterful steep paddock next to Stamford Street, and failing to respect existing landscape features. It would not conform with 'saved' Policies RES5 and NE5 of the Hinckley and Bosworth Local Plan 2001 which, though many years old, still have relevance as a means of protecting the countryside from urban encroachment.

27. Policies RES5 and NE5 of course rely on defined settlement boundaries which affect the supply of housing land. These may need adjustment where housing allocations are made, but given my conclusion that there is currently an adequate supply of housing land in the Borough for the next 5 years, I continue to give them full weight as far as the appeal site is concerned.

28. The scheme would provide benefits in terms of the provision of a range of housing in Ratby, including affordable housing, which would help to meet local needs, and it would generally support local facilities, so it would not be in conflict with Policy 8 of the adopted Hinckley and Bosworth Core Strategy 2009. However, I consider that the harm to the landscape overrides these benefits.

29. I therefore consider that the scheme would be in conflict with the development plan taken as a whole. I have taken into account all the other matters raised but they do not alter my conclusion that the appeal should be dismissed.”

(e) Submissions by Ms Ogley for the Claimant CL

17. It follows from the terms of the Decision Letter that the attack by CL on the 5 year housing land supply point had failed. Ms Ogley did not seek to argue that the Inspector had erred in law with regard to that issue. It follows also that the policy effects of a deficiency, as per NPPF [49], did not apply.
18. Ms Ogley’s Ground 1 started with her criticisms of the Inspector’s assessment of landscape impact. Both parties had addressed this on the basis, inter alia, of what is said in NPPF at [109] about protecting “valued” landscapes. The language of the Inspector seemed to have that concept in mind. Ms Ogley contended that the effect of the unreported decision of Ouseley J in *Stroud District Council v SSCLG and Gladman Developments Limited* [2015] EWHC 488 (Admin) is that “ordinary” countryside does not fall within the scope of NPPF [109].
19. In the absence of reasons, there is a real doubt about whether the Inspector erred in his approach to whether the site was protected under NPPF [109].
20. He erred at paragraph [9] of the Decision Letter in referring to matters which are irrelevant to the assessment of landscape impact, namely Local Plan policies RES5, NE5 and the core principle relating to protecting the countryside for its own sake at paragraph [17] of NPPF.
21. The reference at paragraph [9] to “walking, jogging and other forms of informal recreation” was unreasoned. The most that could be said is that a PROW crossed the site. Otherwise it was in use as agricultural land. The Inspector’s description was tantamount to describing it as a village green.
22. One should contrast this Decision letter with that endorsed by Patterson J in *Cheshire East BC v SSCLG* [2016] EWHC 694 (Admin).
23. As to Grounds 2 and 3, Miss Ogley argued that the Inspector found that there was a conflict with policies NE5 and RES 5, but failed to describe the nature and extent of the conflict: he was required to do so- see *Tesco Stores Ltd v Dundee City Council*

[2012] UKSC 13 at [22] per Lord Reed. He had to do that to be able to consider what weight he attached to that conflict.

24. It was not enough to find that there was a 5 year supply of housing land when considering whether there was consistency with the policies in NPPF, as the Inspector did at [27]. The fact that he found a 5 year supply did not answer the question of whether or not this was sustainable development, which despite its prominence in NPPF, was never addressed by him. They had been before him expressly: reference was made to the Claimant's planning witness' evidence wherein he addressed each of the three heads (Economic, Social and Environmental Dimensions) set out in NPPF [7], cross referenced to objectives of the Core Strategy.
25. He had to apply the test in NPPF [215]. The unchallenged evidence of the Claimant was that there was only 2.1 years' supply of affordable housing. CS 8 sought housing to meet the needs of Ratby, and sought housebuilding to reflect the outcome of the latest Housing Market Assessment and Housing Needs Surveys. 40% of these scheme of up to 158 dwellings would be affordable housing, or 64 houses. The unchallenged evidence on shortfall was that it was between 446 and 556 units (depending on whether one took a 5% or 20% buffer).
26. He had to consider, and failed to do so, whether this scheme complied with the Development Plan as a whole.
27. However he does appear to have concluded that the scheme accorded with CS 8 (see Decision Letter [22] and [28]). By reason of its provision of affordable housing it complied with Core Strategy Policy 15, and by its woodland and other planting, complied with Policy 21 relating to the National Forest.
28. The Decision Letter does not deal with NPPF [14] explicitly or impliedly. The Inspector had to consider whether the approach of the saved policies in the Local Plan was consistent with the approach now adopted in NPPF. Reference was made to the analysis in *Colman v SSCLG, N Devon CC and RWE NPower* [2013] EWHC 1138 (Admin) per Kenneth Parker J at [7], [22] and [23]. NE5 and RES5 were elderly saved policies, but they were out of date for other reasons:
 - a. NPPF [109] now distinguished between different grades of countryside and its protection;
 - b. The proposal complied with the Core Strategy taken as a whole.
29. The effect of s 38(5) *PCPA 2004* was that where there was conflict, one had to give precedence to the more recent Development Plan policy. In this case that was the Core Strategy. His findings at [21] amount to a finding of compliance with the Core Strategy.

(f) Submissions by Mr Buley for the Defendant SSCLG

30. The starting point in this case must be s 38(6) *PCPA 2004*. Having identified the first of the two main issues as the effect of the proposal on the character and appearance of the landscape, the Inspector made clear findings that the landscape in question had

value by reference to its particular features. He concluded that the development would constitute a substantial extension of the built up area into the countryside, which would be harmful to the character and appearance of the landscape, and would conflict with policies RES 5 and NE5 (see Decision letter at [9]).

31. He found that the scheme would provide some benefits in compliance with policy CS 8, but found expressly that the harm to the landscape overrode those benefits [28], and that therefore the scheme would be in conflict with the Development Plan taken as a whole [29].
32. It is not unusual for Development Plan policies to pull in different directions- see *R v Rochdale MBC ex p Milne (no 2)* [2001] Env LR 22 per Sullivan J.
33. As to Ground 1, he made clear and unassailable findings of the value of the site in landscape terms, and of the harm which the development would cause in landscape terms. NPPF paragraph [109] is not setting a statutory test which must be passed. In any event, *Stroud DC* has been misunderstood. It was considering whether the Inspector had equiparated the meaning of the term “valued” with that of the term “designated”. There is nothing in *Stroud* which supports the idea that land which is not designated is not worthy of protection. Like the Inspector in the *Cheshire East* case this Inspector was exercising his planning judgment.
34. On Grounds 2-3, it is unarguable that there would not be a breach of RES 5, since the effect of approval would be to extend built development beyond its current boundary. As he found that the development would harm the character and appearance of the landscape, there would be a breach of NE5 also.
35. NPPF [215] does not assist the Claimant. NPPF may give more nuanced protection to the countryside than occurred beforehand, but is still thinks it worthy of protection- see the core principles at [17]. But in any event the Inspector was addressing, and was entitled to address, the question of weight. For the reasons he gave in [26] and [27] he considered that NE5 and RES5 were still relevant because they protected the countryside from urban encroachment, which accords with the core principle at NPPF [17].
36. There is no conflict between CS8 and RES 5. The fact that a scheme fulfils some objectives of CS 8 does not thereby mean that the scheme complied with it. CS 8 was a policy addressing objectives, not particular allocation. In any event the Inspector accepted that the scheme offered some advantages which complied with paragraph CS 8, which were considerably harmed by the landscape harm it would cause. Once allocations are made, then RES 5 will protect land beyond the then urban boundary.
37. On sustainable development, Paragraph [14] of NPPF only required that one engage in this exercise if the Plan was absent, silent or not up to date. The Inspector had held that the policies which were restrictive of development were none of those things.

(g) Discussion and Conclusions

38. I shall start with the relevant principles of law.

39. This case is yet another to come before the Planning Court in which the meaning and application of NPPF must be addressed, as well as its effect (if any) on decision making for the purposes of decisions made under s 77 or 78 of *TCPA 1990*. Fortunately, since these challenges were made, the Court of Appeal has stilled some of the arguments, through the judgment of Lindblom LJ in *Suffolk Coastal District Council v Hopkins Homes Ltd & Anor* [2016] EWCA Civ 168, to which I shall make substantial reference presently.
40. But given some of the arguments that were deployed in this case, it is necessary to refer to some matters of first principle, which largely follow the list given by Lindblom J in *Bloor* at [19]. I have added to that list only because some matters not of moment in that decision were more relevant in this one.
41. The list given by Lindblom LJ is:
- “(1) Decisions of the Secretary of State and his inspectors in appeals against the refusal of planning permission are to be construed in a reasonably flexible way. Decision letters are written principally for parties who know what the issues between them are and what evidence and argument has been deployed on those issues. An inspector does not need to "rehearse every argument relating to each matter in every paragraph" (see the judgment of Forbes J. in *Seddon Properties v Secretary of State for the Environment* (1981) 42 P. & C.R. 26, at p.28).
- (2) The reasons for an appeal decision must be intelligible and adequate, enabling one to understand why the appeal was decided as it was and what conclusions were reached on the "principal important controversial issues". An inspector's reasoning must not give rise to a substantial doubt as to whether he went wrong in law, for example by misunderstanding a relevant policy or by failing to reach a rational decision on relevant grounds. But the reasons need refer only to the main issues in the dispute, not to every material consideration (see the speech of Lord Brown of Eaton-under-Heywood in *South Bucks District Council and another v Porter (No. 2)* [2004] 1 WLR 1953, at p.1964B-G).
- (3) The weight to be attached to any material consideration and all matters of planning judgment are within the exclusive jurisdiction of the decision-maker. They are not for the court. A local planning authority determining an application for planning permission is free, "provided that it does not lapse into *Wednesbury* irrationality" to give material considerations "whatever weight [it] thinks fit or no weight at all" (see the speech of Lord Hoffmann in *Tesco Stores Limited v Secretary of State for the Environment* [1995] 1 WLR 759, at p.780F-H). And, essentially for that reason, an application under section 288 of the 1990 Act does not afford an opportunity for a review of the planning merits of an inspector's decision (see the judgment of Sullivan J., as he then was, in *Newsmith v Secretary of State for* [2001] EWHC Admin 74, at paragraph 6).
- (4) Planning policies are not statutory or contractual provisions and should not be construed as if they were. The proper interpretation of planning policy is ultimately a matter of law for the court. The application of relevant policy is for the decision-maker. But statements of policy are to be interpreted objectively by the court in accordance with the language used and in its proper context. A failure properly to understand and apply relevant policy will constitute a failure to have regard to a

material consideration, or will amount to having regard to an immaterial consideration (see the judgment of Lord Reed in *Tesco Stores v Dundee City Council* [2012] PTSR 983, at paragraphs 17 to 22).

(5) When it is suggested that an inspector has failed to grasp a relevant policy one must look at what he thought the important planning issues were and decide whether it appears from the way he dealt with them that he must have misunderstood the policy in question (see the judgment of Hoffmann LJ, as he then was, *South Somerset District Council v The Secretary of State for the Environment* (1993) 66 P. & C.R. 80, at p.83E-H).

(6) Because it is reasonable to assume that national planning policy is familiar to the Secretary of State and his inspectors, the fact that a particular policy is not mentioned in the decision letter does not necessarily mean that it has been ignored (see, for example, the judgment of Lang J. in *Sea Land Power & Energy Limited v Secretary of State for Communities and Local Government* [2012] EWHC 1419 (QB), at paragraph 58).

(7) Consistency in decision-making is important both to developers and local planning authorities, because it serves to maintain public confidence in the operation of the development control system. But it is not a principle of law that like cases must always be decided alike. An inspector must exercise his own judgment on this question, if it arises (see, for example, the judgment of Pill L.J. *Fox Strategic Land and Property Ltd. v Secretary of State for Communities and Local Government* [2013] 1 P. & C.R. 6, at paragraphs 12 to 14, citing the judgment of Mann L.J. in *North Wiltshire District Council v Secretary of State for the Environment* [1992] 65 P. & C.R. 137, at p.145).

42. I would add the following, given the issues in this case: an Inspector appointed to conduct a planning appeal must:

(8) have regard to the statutory Development Plan (see s 70(1) *TCPA 1990*);

(9) have regard to material considerations (s 70(1) *TCPA 1990*);

(10) determine the proposal in accordance with the Development Plan unless material considerations indicate otherwise (s 38(6) *PCPA 2004*);

(11) consider the nature and extent of any conflict with the Development Plan: *Tesco Stores Ltd v Dundee City Council* [2012] UKSC 13 at [22] per Lord Reed;

(12) consider whether the development accords with the Development Plan, looking at it as a whole- see *R(Milne) v Rochdale MBC (No 2)* [2000] EWHC 650 (Admin), [2001] JPL 470, [2001] Env LR 22, (2001) 81 P & CR 27, [2000] EG 103 per Sullivan J at [46]- [48]. There may be some points in the plan which support the proposal but there may be some considerations pointing in the opposite direction. He will require to assess all of these and then decide whether in the light of the whole plan the proposal does or does not accord with it; per Lord Clyde in *City of Edinburgh Council v. the Secretary of State for Scotland* [1997] UKHL 38, [1997] WLR 1447, 1998 SC (HL) 33 cited by Sullivan J in *R(Milne) v Rochdale MBC (No 2)* at [48];

(13) apply national policy unless s/he gives reasons for not doing so- see Nolan LJ in *Horsham District Council v Secretary of State for the Environment and Margram Plc* [1993] 1 PLR 81 following Woolf J in *E. C. Gransden & Co. Ltd. v. Secretary of State for the Environment* [1987] 54 P & CR 86 and see Lindblom J in *Cala Homes (South) Ltd v Secretary of State for Communities & Local Government* [2011] EWHC 97 (Admin), [2011] JPL 887 at [50].

I would add one other matter of principle:

(14) If it is shown that the decision maker had regard to an immaterial consideration, or failed to have regard to a material one, the decision will be quashed unless the Court is satisfied that the decision would necessarily have been the same: see *Simplex GE (Holdings) Ltd v. Secretary of State for the Environment* [1988] 57 P & CR 306.

43. It follows from the above that NPPF was very relevant to the determination of the appeal. But it was so because, as a statement of Government policy, it was a material consideration; no more and no less. While the arguments there were directed towards paragraph 49 of NPPF, it is important to note what Lindblom LJ said in *Suffolk Coastal* at [42] and [43] about NPPF generally

“42 The NPPF is a policy document. It ought not to be treated as if it had the force of statute. It does not, and could not, displace the statutory "presumption in favour of the development plan", as Lord Hope described it in *City of Edinburgh Council v Secretary of State for Scotland* [1997] 1 WLR 1447 at 1450B-G). Under section 70(2) of the 1990 Act and section 38(6) of the 2004 Act, government policy in the NPPF is a material consideration external to the development plan. Policies in the NPPF, including those relating to the "presumption in favour of sustainable development", do not modify the statutory framework for the making of decisions on applications for planning permission. They operate within that framework – as the NPPF itself acknowledges, for example, in paragraph 12 It is for the decision-maker to decide what weight should be given to NPPF policies in so far as they are relevant to the proposal. Because this is government policy, it is likely always to merit significant weight. But the court will not intervene unless the weight given to it by the decision-maker can be said to be unreasonable in the *Wednesbury* sense.

43 When determining an application for planning permission for housing development the decision-maker will have to consider, in the usual way, whether or not the proposal accords with the relevant provisions of the development plan. If it does, the question will be whether other material considerations, including relevant policies in the NPPF, indicate that planning permission should not be granted. If the proposal does not accord with the relevant provisions of the plan, it will be necessary to consider whether other material considerations, including relevant policies in the NPPF, nevertheless indicate that planning permission should be granted.”

44. I refer also to paragraphs [46] – [47] which deal with what must now be seen as the inappropriate application and consideration of NPPF, including to some extent judicially:

“46 We must emphasize here that the policies in paragraphs 14 and 49 of the NPPF do not make "out-of-date" policies for the supply of housing irrelevant in the determination of a planning application or appeal. Nor do they prescribe how much weight should be given to such policies in the decision. Weight is, as ever, a matter for the decision-maker (see the speech of Lord Hoffmann in *Tesco Stores Ltd. v Secretary of State for the Environment* [1995] 1 WLR 759, at p.780F-H). Neither of those paragraphs of the NPPF says that a development plan policy for the supply of housing that is "out-of-date" should be given no weight, or minimal weight, or, indeed, any specific amount of weight. They do not say that such a policy should simply be ignored or disapplied. That idea appears to have found favour in some of the first instance judgments where this question has arisen. It is incorrect.

47 One may, of course, infer from paragraph 49 of the NPPF that in the Government's view the weight to be given to out-of-date policies for the supply of housing will normally be less than the weight due to policies that provide fully for the requisite supply. The weight to be given to such policies is not dictated by government policy in the NPPF. Nor is it, nor could it be, fixed by the court. It will vary according to the circumstances, including, for example, the extent to which relevant policies fall short of providing for the five-year supply of housing land, the action being taken by the local planning authority to address it, or the particular purpose of a restrictive policy – such as the protection of a "green wedge" or of a gap between settlements. There will be many cases, no doubt, in which restrictive policies, whether general or specific in nature, are given sufficient weight to justify the refusal of planning permission despite their not being up-to-date under the policy in paragraph 49 in the absence of a five-year supply of housing land. Such an outcome is clearly contemplated by government policy in the NPPF. It will always be for the decision-maker to judge, in the particular circumstances of the case in hand, how much weight should be given to conflict with policies for the supply of housing that are out-of-date. This is not a matter of law; it is a matter of planning judgment (see paragraphs 70 to 75 of Lindblom J.'s judgment in *Crane*, paragraphs 71 and 74 of Lindblom J.'s judgment in *Phides*, and paragraphs 87, 105, 108 and 115 of Holgate J.'s judgment in *Woodcock Holdings Ltd. v Secretary of State for Communities and Local Government and Mid-Sussex District Council* [2015] EWHC 1173 (Admin)).”

45. I respectfully suggested in *Dartford Borough Council v Secretary of State for Communities and Local Government & Anor* [2016] EWHC 649 (Admin) that *Suffolk Coastal* has laid to rest several disputes about the interpretation of NPPF, both as to the particular paragraphs it addressed, but also generally. Before *Suffolk Coastal* it had been striking that NPPF, a policy document, could sometimes have been approached as if it were a statute, and as importantly, as if it did away with the importance of a decision maker taking a properly nuanced decision in the round, having regard to the development plan (and its statutory significance) and to all material considerations. In particular, I would emphasise this passage in Lindblom LJ's judgment at [42]-[43], which restates the role of a policy document, and just as importantly how it is to be interpreted and applied. NPPF is not to be used to obstruct sensible decision making. It is there as policy guidance to be had regard to in that process, not to supplant it. Given Point 6 in the list of principles set out by Lindblom

J, an Inspector is not, as a general rule, required to spell out the provisions of NPPF. However if s/he were minded to depart from it, then the authorities cited above are clear that reasons must be given for doing so.

46. For completeness, I should add that I drew the attention of both Counsel to the *Suffolk Coastal* and *Dartford BC [2016]* judgments.
47. In that context, I turn to the issues before me. The first observation I must make is that however disappointing it must be to the Claimant CL that the Inspector has not endorsed a proposal which had been supported by HBBC's professional officers, he was the decision maker, and the earlier endorsement cannot affect the analysis of the Decision Letter. I should stress however that at no time did Ms Ogley try and argue that the recommendation for approval should be taken into account in the analysis which this Court had to conduct. To have done so would have been inappropriate.
48. I accept the proposition advanced by Mr Buley that in this case one must start with the Development Plan. It was for the Inspector to determine as a matter of planning judgment whether or not there was a breach of it, looking at it as a whole. Given the Inspector's thorough and reasoned critique of the effect of the development on the character and appearance of the area, there can be no doubt that the proposal was found to be in conflict with Policy NE5. He was entitled to find that the objective of that policy remained relevant and up to date. Given his finding on the 5 year supply, it cannot be argued that paragraph [49] of NPPF applied so as to affect the weight to be given to that conflict. The breach of RES5 goes along with it, as the effect of NE5 at this point is to maintain the urban boundary. But on any view, the Inspector had given powerful reasons why the extension of the urban area at this point would cause significant harm. It is impossible to argue that he did not address the nature and extent of the conflict with these policies.
49. The argument of the Claimant that the matters to which the Inspector referred are not relevant in terms of landscape assessment is misconceived. He had given reasons which identified why harm would flow from the extension of the built up area at this point. NPPF undoubtedly recognises the intrinsic character of the countryside as a core principle. The fact that paragraph [109] may recognise that some has a value worthy of designation for the quality of its landscape does not thereby imply that the loss of undesignated countryside is not of itself capable of being harmful in the planning balance, and there is nothing in *Stroud DC v SSCLG [2015]* EWHC 488 per Ouseley J or in *Cheshire East BC v SSCLG [2016]* EWHC 694 per Patterson J which suggests otherwise. Insofar as Kenneth Parker J in *Colman v SSCLG* may be interpreted as suggesting that such protection was no longer given by NPPF, I respectfully disagree with him. For it would be very odd indeed if the core principle at paragraph [17] of NPPF of "recognising the intrinsic beauty and character of the countryside" was to be taken as only applying to those areas with a designation. Undesignated areas – "ordinary countryside" as per Ouseley J in *Stroud DC* - may not justify the same level of protection, but NPPF, properly read, cannot be interpreted as removing it altogether. Of course if paragraph [49] applies (which it did not here) then the situation may be very different in NPPF terms.
50. Whether that loss of countryside is important in any particular case is a matter of planning judgment for the decision maker. In any event, extant policies in a Development Plan which are protective of countryside must be had regard to, and in a

case such as this a conflict with them could properly determine the s 38(6) *PCPA 2004* issue. If the conclusion has been reached that the proposal does conflict with the development plan as a whole, then a conclusion that a development should then be permitted will require a judgment that material considerations justify the grant of permission. If reliance is then placed on NPPF, one must remember always what Lindblom LJ has said in *Suffolk Coastal* about its status. It is not suggested in this case that this is one where the NPPF paragraph [14] test applies, which given the Inspector's findings on the effect on the landscape, and the fact that HBBC is the Borough, and Ratby the settlement, where the policies considered in *Bloor* applied, is unsurprising. Nor is it suggested that he should have applied NPPF [49] given his findings on housing land. There is in my judgment nothing at all in NPPF which *requires* an Inspector to give no or little weight to extant policies in the Development Plan. Were it to do so, it would be incompatible with the statutory basis of development control in s 38(6) *PCPA 2004* and s 70 *TCPA 1990*.

51. That effectively disposes of Ground 1. I should perhaps say for completeness that I am quite unimpressed by the argument that the appeal site had no recreational value. It is, after all, crossed by a footpath, leading to the countryside. Its presence on either side of the path no doubt contributed to the ambiance of the walk along the path. That must not lead to exaggeration of its value, and there may be proper arguments about how one maintains an agreeable footpath link in a development, but it is idle to argue that the Inspector's approach was not capable of being argued or was not properly reasoned.
52. As to Grounds 2 and 3, I accept Mr Buley's argument that the achievement of objectives under CS8 does not of itself amount to compliance. The difficulty is that CS 8 is but one policy. The Inspector had to look at the Development Plan overall. He made a clear finding that if one did so, this development did not accord with the Development Plan because of the breaches of RES 5 and NE5. It is true that CL had made a strong case on the need for more affordable housing, and the planning benefits which would follow from the development, but the Inspector, as he was entitled to do, found that the harm which it would cause to the character and appearance of the area outweighed the benefits.
53. It is true that he did not set out in any formal separate section an assessment of whether the development was sustainable, measuring it against the criteria in NPPF [7], but he did so implicitly in paragraphs [20] and [22]- [25]. He also addressed the Claimant's arguments about affordable housing and local housing, but he held that those benefits (which he accepted would be created) were outweighed by the landscape harm [21]. That was a planning judgment which he was entitled to make.
54. I can well understand the frustration the Claimant must feel at having worked up a scheme, and increased the density at the request of officers, and then to have it refused, and that refusal upheld on appeal. But in my judgment when properly analysed, no criticism can be made of the Decision Letter on any ground arguable in law. I express no view at all on the planning merits, which is not for a judge to do.
55. For the above reasons, this claim is dismissed.
- 56.