Phase 6, Heyford Park, Upper Heyford, Bicester

Design and Access Statement to support an application for Full Planning Permission

HEYFORD PARK, BICESTER PHASE 6 Design and Access Statement

produced by

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On behalf of Dorchester Living

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1 Introduction

1.1 Site Location

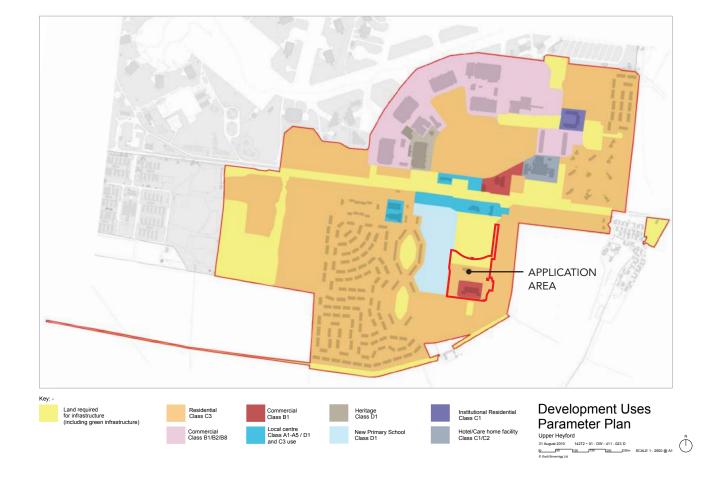
1.1.1 The site is located at Heyford Park, Camp Road, Upper Heyford, Bicester, Oxfordshire, OX25 5HD.

The OPA Parameter Plan below shows the site in the context of an Outline Planning Application (Ref 10/01642/OUT) which covers the wider site context.

1.2 Purpose of Document

1.2.1 This Design and Access Statement is submitted on behalf of Dorchester Living in support of a Full Planning Application for land known as Phase 6 at Heyford Park.

Planning Practice Guidance on Validation requirements states that "A Design And Access Statement is a concise report They provide a framework for applicants to explain how the proposed development is a suitable response to the site and its setting, and demonstrate that it can be adequately accessed by prospective users".



It states that a Design and Access Statement must:

- (a) explain the design principles and concepts that have been applied to the proposed development; and
- (b) demonstrate the steps taken to appraise the context of the proposed development, and how the design of the development takes that context into account.

A development's context refers to the particular characteristics of the application site and its wider setting. These will be specific to the circumstances of an individual application and a Design and Access Statement should be tailored accordingly.

Design and Access Statements must also explain the applicant's approach to access and how relevant Local Plan policies have been taken into account. They must detail any consultation undertaken in relation to access issues, and how the outcome of this consultation has informed the proposed development. Applicants must also explain how any specific issues which might affect access to the proposed development have been addressed.

Section 2.0 of this report responds to (a) and sets out the constraints and context of the site. It sets out the design development of the site and explains that due to a change in use from residential, commercial and village green to residential, the decision was made to submit a full planning application.

<u>Section 3.0</u> of this report responds to (b). It is set out to show compliancy to the Heyford Park Design Code V5.2 (Ref Pegasus B.286.21) which followed on from the Parameter Plans set out in the Outline Permission granted for the wider site context.

<u>Section 4.0</u> of this report describes how the development addresses access.

1.3 OPA Design Codes

1.3.1 The purpose of the Code is defined in Para 1.26 - 1.29 of the Design Code, as follows:

"1.26 The objective of producing Design Codes is not to add another layer of complexity to the planning process, but to provide a clear framework for development that is supported by all parties. This is particularly important on a strategic development site such as this which may be developed by several developers / house builders over the life of the scheme.

The Design Codes are proposed in order to:

- ESTABLISH A LONG TERM VISION FOR THE SITE AND DESIGN LED FRAMEWORK FOR THE SITE
- BUILD UPON THE WORK ESTABLISHED BY THE OUTLINE PLANNING APPLICATION AND THE DESIGN AND ACCESS STATEMENT FOR THE AREA
- ENSURE OVERALL COORDINATION AND CONSISTENCY BETWEEN DEVELOPMENT SITES
- PROVIDE A LEVEL OF CERTAINTY TO THE LANDOWNER, COUNCIL, DEVELOPER AND THE COMMUNITY
- PROVIDE A CLEAR GUIDE FOR DEVELOPERS WORKING ON INDIVIDUAL PLOTS AND SETS THE CONTEXT FOR MORE DETAILED DESIGN WORK.
- 1.28 The code establishes clear performance criteria for each development area, setting out the level of prescription alongside desired and mandatory requirements.
- 1.29 There may be circumstances where a designer working up proposals in accordance with the Code feels that a design proposal could better contribute to the quality and identity of the development by localised deviation from the Code. In these circumstances, a rationale for the approach being proposed is recommended in conjunction with early discussions with CDC."

1.4 Use and Amount of Development

1.4.1 Site Area

The application area is 1.71 ha.

1.4.2 Residential

The Planning Application provides 43 no dwellings.

There will be a range of sizes and tenures across the site. The planning application includes detached, semi-detached and terraced forms and includes open market and affordable properties.

1.4.2 Affordable Housing

Affordable housing will be provided in a series of clusters and will include affordable 1, 2 & 3 bedroom rented and 2 and 3 bedroom intermediate properties.

1.4.3 Public Open Space & Green Infrastructure

The planning application will contain 0.074 ha of open space which will include one LAP. Refer to Section 3d Public Realm Codes for further details.

2

Design Development

2.1 Site Influences

2.1.1 Introduction

The site lies adjacent to the following development Phases which have been developed in reference to the Design Code and are currently at different stages in the planning process as follows:

2.1.2 Phase 2

Phase 2 is a residential area which has received planning approval.

2.1.3 Phase 4 & 5b

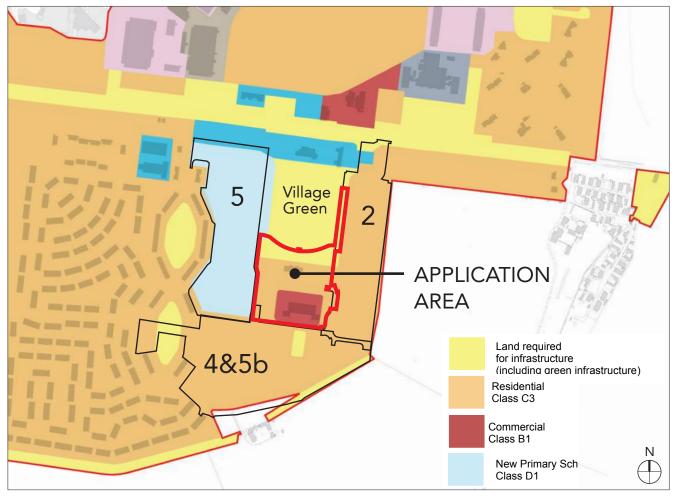
Phase 4&5b is a residential area which has been submitted for Reserved Matters approval.

2.1.4 Phase 5

Phase 5 is now proposed for residential uses and will be submitted shortly for Reserved Matters approval once the s106 Agreement has been signed.

2.1.5 Village Green

This area will be developed as a Village Green which will form one of a series of Parks, Gardens and Recreational Spaces within Heyford Park.



OPA - Parameter Plan - Development Uses

2.2 Site Boundaries

2.2.1 Eastern Boundary

The site's eastern boundary comprises a Tertiary Street (ST3) with the design fixed by the Phase 2 Reserved Matters Application and the Phase 2 development.

2.2.2 Southern Boundary

The southern boundary comprises a Tertiary Street (ST3) with the design fixed by the Phase 2 Reserved Matters Application.

2.2.3 Western Boundary

The western boundary lies adjacent to the Phase 5 Reserved Matters Application and includes a Secondary Street (Bus Route) ST2.

2.2.4 Northern Boundary

The northern boundary lies adjacent to the Village Green which had its design fixed by a separate Reserved Matters Application for this area of open space.

2.3 Design Development



OPA - Parameter Plan - Development Uses

2.3.1 OPA Parameter Plan

The Parameter Plan land use plan shows a mixed use site with predominantly residential uses with commercial uses to the south and land required for infrastructure (for a park) to the north.

Pre-Application Submission - 13.03. 2015 SK01 Sketch Proposal



Pre-Application Submission - 13.03. 2015 SK02 Sketch Proposal

2.3.2 Pre-application Submission

SK01 and SK02 were submitted to Cherwell District Council in March 2015 as part of a Preapplication process with a pre-application meeting held on 17 March 2015.

SK01 shows residential uses extended slightly northwards overlooking a Shared Surface (Community Street) ST4.

SK02 shows the southern part of existing building No 488 retained for use either as commercial or for conversion into residential and to the north, building No 485 retained for conversion to residential use.



Planning Layout (Dwg 0521-PH6-102D)

2.3.3 Sketch CL02-2 - July 2015

Following feedback from the pre-application process and further discussions with Cherwell DC it was agreed to submit an application for a full residential scheme. CL02-2 represents the revised proposals showing a strong crescent form framing the re-proportioned Village Green to the north.

2.3.4 Planning Layout

Following negotiations with the Tree Officer in February / March 2016, it was agreed that 2no trees could be removed from the centre of the scheme. This has meant that the Tertiary Street now extends through the centre of the scheme.

3a

Design Code Compliance: Street, Movement & Network Codes

3a.1 Street Codes

3a.1.1 Hierarchy of Streets and Spaces

The Planning Application includes Secondary Streets (Bus Route ST2, Tertiary Streets (ST3), Shared Surface / Community Streets (ST4) and Lanes (ST5) and Drives.

- \checkmark The design of the streets provides continuity across the character areas Refer to Street Hierarchy Table.
- ✓ The movement network has been designed to be pedestrian and cyclist friendly.

This has been done by creating good quality footway and cycle links connecting to the wider Heyford Park site.

3a.1.2 Infrastructure

Refer to Street Hierarchy Table.

3a.1.3 Secondary Streets ST2

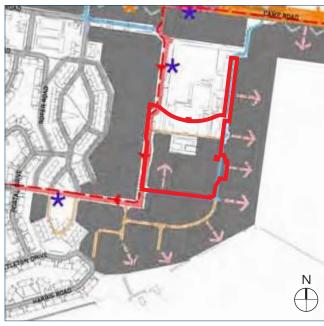
 \checkmark Secondary Streets provide the key bus route to the south of Camp Road. Refer to Street Hierarchy Table.

3a.1.4 Tertiary Streets

✓ Tertiary Streets will provide the main access into development parcels from Primary and Secondary Streets. They will be formal in design. Refer to Street Hierarchy Table.

3a.1.5 Shared Surface (ST4) / Lanes (ST5)

✓ Shared Surface / Community Streets will be more informal and provide access to smaller groups of dwellings. Their design has been informed by Manual for Streets. Refer to Street Hierarchy Table.



Design Code - Indicative Street Hierarchy Plan

SECONDARY STREET (BUS ROUTE) ST2

TERTIARY STREET - ST3

SHARED SURFACE (COMMUNITY STREET) - ST4

LANES (GREEN EDGE) ST5 &

PRIVATE DRIVES / PARKING COURTS



Street Hierarchy

3a.2 Pedestrian & Cycle Movement

✓ Lanes / Drives will be more informal and provide access to smaller groups of dwellings. Their design will be informed by Manual for Streets. Refer to Street Hierarchy Table.

3a.1.6 Traffic Calming Beyond Primary Street ST.1

✓ Secondary and Tertiary Streets will be designed to discourage higher traffic speeds. This will be done through horizontal deflection / raised block paved tables at junctions / having an informal alignment.

3a.1.7 LAPs & Street Integration

- ✓ The LAP will be located where traffic movement is at relatively low levels and the design speed is below 30mph. Refer also to Section 4 Public Realm Codes.
- ✓ Shared surface streets have been designed to encourage community use and will offer opportunities for casual play space over and above dedicated facilities.

3a.1.8 Adoption Arrangements

✓ All streets will be built to adoptable standards, subject to condition surveys of existing streets (para 3.25).

3a.2.1 Routes and Linkages

- ✓ All routes will be direct, barrier free routes.
- ✓ All routes will be attractive, well lit and safe.
- All routes will be designed in line with the Design Code and previously approved phases.
- ✓ All routes will be overlooked by properties with good levels of natural surveillance.

Provision for pedestrians will be in the form of good quality footways either immediately adjacent to the carriageway or separated from the carriageway by a verge.

Cyclists will be provided for on-carriageway.



Design Code - Routes & Linkages Plan

PEDESTRIAN ROUTES

		SECONDARY STREET ST2			COMPLIANCY
DESIGN SPEED		20 mph		√	
FOOTWAY		1.8m both sides		\checkmark	
CYCLEWAY		On Road		\checkmark	
VERGE		Staggered		\checkmark	
BUS ACCESS		Yes		\checkmark	
MAX PROPERTIES		Up to 300		\checkmark	
CARRIAGEWAY WIDTH		6.1 m		\checkmark	Generally minimum 6.1m
ACCESS TO PROPERTI	ES	100% direct access		\checkmark	
CARRIAGEWAY SURFACING		Asphalt (HRA) with block paved junctions		\checkmark	
VERGE SURFACING		Grass		\checkmark	Grass & planting
FOOTWAY SURFACING		As carriageway		\checkmark	
KERBING		PCC Half Batter Kerb 125mm upstand		✓	
	А	Horizontal deflection (left or right build out)		✓	Refer to Dwg 0521-PH6-104D
TRAFFIC CALMING B OPTIONS C D		Horizontal deflection (central pinch point) Raised table (gentle approach ramp)		✓ ✓	
		-		\checkmark	
		Buses, refuse vehicle and Emergency Service Vehicles		\checkmark	Larger service vehicles
ON STREET PARKING		On street parking bays 2.5 by 6m		\checkmark	Refer to Dwg 0521-PH6-104D
FORWARD VISIBILITY		33m	Ÿ	\checkmark	
JUNCTION SIGHTLINES	5	2.4 x 33m		\checkmark	
JUNCTION SPACING		Site Specific	Ÿ	\checkmark	
JUNCTION RADII		6m		\checkmark	Increased to suit service vehicle
STREET LIGHTING (to be agreed at detailed stage with OCC)		Column mounted	,	✓	To be determined
STATUTORY SERVICES		In footway		\checkmark	
DRAINAGE		Gully or permeable paving	U	✓	
LANDSCAPE/TREE PLANTING		Regular tree planting on alternating sides of road.		✓	Refer to landscape design

Design Code - Street Hierarchy Table - Secondary Street ST2

		TERTIARY STREET ST3			COMPLIANCY
DESIGN SPEED		20 mph	,	/	
FOOTWAY		1.8m both sides	✓	/	
CYCLEWAY		On Road	✓	/	
VERGE		None	✓		
BUS ACCESS		No	✓	/	
MAX PROPERTIES		Up to 50	✓	/	
CARRIAGEWAY WIDTH		5.5 – 6.5 m	✓	,	Generally minimum 5.5m
ACCESS TO PROPERTIE	:S	100% direct access	✓	/	
CARRIAGEWAY SURFACING		Asphalt (HRA) with block paved junctions	✓	/	
VERGE SURFACING		Grass	✓	,	Grass & planting
FOOTWAY SURFACING		As carriageway	✓	/	
KERBING		PCC Half Batter Kerb 125mm upstand	✓	•	
	Α	Horizontal deflection (left or right build out) calming at 100–150m	✓	/	Refer to Dwg 0521-PH6-104D
TRAFFIC CALMING OPTIONS	С	Horizontal deflection (central pinch point) Raised table (gentle approach ramp)	✓ ✓		
	D	Informal alignment (calming method D)	✓	•	
		Refuse vehicle and Emergency Service Vehicles	✓	,	Larger service vehicles
ON STREET PARKING		On street parking bays 2.5 by 6m	~	/	Refer to Dwg 0521-PH6-104D
FORWARD VISIBILITY		10m	✓	•	
JUNCTION SIGHTLINES		2.4 x 25m	✓	,	
JUNCTION SPACING		Site Specific	V		
JUNCTION RADII		4m	✓	/	Increased to suit service vehicle
STREET LIGHTING (to be agreed at detailed stage with OCC)		Column mounted	/	/	To be determined
STATUTORY SERVICES		In footway	✓		
DRAINAGE		Gully or permeable paving	~	/	
LANDSCAPE/TREE PLANTING		Regular tree planting on alternating sides of road.	~	/	Refer to landscape design

 ${\it Design \ Code} \ \hbox{-} \ {\it Street \ Hierarchy \ Table} \ \hbox{-} \ {\it Tertiary \ Street \ ST3}$

		SHARED SURFACE ST4		COMPLIANCY
DESIGN SPEED		10 mph	✓	
FOOTWAY		Shared surface	✓	
CYCLEWAY		Shared surface	✓	
VERGE		None	✓	
BUS ACCESS		No	✓	
MAX PROPERTIES		Up to 25	✓	
CARRIAGEWAY WIDTH		4.5 – 5.0 m (6m opposite parking/garaging)	✓	
ACCESS TO PROPERTII	ES	100% direct access	✓	
CARRIAGEWAY SURFACING		Block paving	✓	Block Paving & HRA
VERGE SURFACING		Shrub Planted	✓	
FOOTWAY SURFACING			n/a	
KERBING		Flush kerb and/or PCC Bull Nosed Kerb 25mm upstand where drainage required	√	
	А	-	n/a	
TRAFFIC CALMING	В	-	n/a	
OPTIONS	С	-	n/a	
	D	-	n/a	
SWEPT PATHS		Refuse vehicle and Emergency Service Vehicles	✓	Larger service vehicle
ON STREET PARKING		On street informal bays 2.5 by 6m	✓	Yes 2.5m x 6m
FORWARD VISIBILITY		10m	✓	
JUNCTION SIGHTLINES	5	2.4 x 25m	✓	
JUNCTION SPACING		Site Specific	✓	
JUNCTION RADII		4m	X	Increased to suit larger service vehicles
STREET LIGHTING (to be agreed at detailed stage with OCC)		Column mounted	✓	To be determined
STATUTORY SERVICES		In carriageway (see note below)	✓	
DRAINAGE		Gully or permeable paving	✓	
LANDSCAPE/TREE PLANTING		Intermittent tree planting.	✓	Refer to landscape design

Design Code - Street Hierarchy Table -Shared Surface (Community St) ST54

		СО		
DESIGN SPEED		10 mph	✓	
FOOTWAY		None	n/a	
CYCLEWAY		None	n/a	
VERGE		None	n/a	
BUS ACCESS		No	n/a	
MAX PROPERTIES		N/A	n/a	
CARRIAGEWAY WIDTH		N/A	n/a	
ACCESS TO PROPERTIE	ES	100% direct access	✓	
CARRIAGEWAY SURFACING		Permeable surface (parking court only)	✓	Loose gr
VERGE SURFACING		Site Specific	✓	
FOOTWAY SURFACING			n/a	
KERBING		PCC Bull Nosed Kerb 25mm upstand	√	
	А	-	n/a	
TRAFFIC CALMING	В	-	n/a	
OPTIONS	С	-	n/a	
	D	-	n/a	
SWEPT PATHS		Motor vehicles	✓	
ON STREET PARKING		Visitor parking bays	✓	Casual p
FORWARD VISIBILITY			n/a	
JUNCTION SIGHTLINES	5		n/a	
JUNCTION SPACING		Driveway Crossovers	✓	
JUNCTION RADII			n/a	
STREET LIGHTING (to be agreed at detailed stage with OCC)		None	n/a	
STATUTORY SERVICES		In carriageway (see note below)	✓	
DRAINAGE		Gully or permeable paving / Over edge	✓	
LANDSCAPE/TREE PLANTING		Intermittent tree planting.	√	Refer to

Design Code - Street Hierarchy Table - Private Drive / Parking Court

	COMPLIANCY
√	
n/a	
✓	
✓ ✓	Loose gravel system & tarmac
✓	
n/a	
√	
n/a	
n/a	
n/a	
n/a	
√	
✓	Casual parking only
n/a	
n/a	
✓	
n/a	
n/a	
✓	
√	
√	Refer to landscape design

3a.3 Parking Strategies

3a.3.1 Parking Strategy

 Overall, parking will be provided on plot and / or adjacent to properties.

Parking will be provided as a mix of on plot and courtyard parking with on plot provided as a mix of hard standing and detached garage.

3a.3.2 Parking and Garages

Para 3.39 of the Design Code states: "CDC are yet to adopt the Oxfordshire County Council parking standards, and the unique constraints of the site require a site specific variation (as noted at item 2.6 of the parking standards). However it should be noted that garages of 3x6m internal dimension will be required if garages are to count towards parking standards."

Following the completion of the Design Code, Oxfordshire County Council published its latest Parking Guidance (ref Parking Standards for New Residential Development v1 2011). The planning application therefore follows this more current guidance.

Visitor parking will be provided on street in the form of parallel and perpendicular parking spaces in line with Oxfordshire County Council Parking Guidance.

Refer to the "Parking Matrix" submitted as part of the Reserved Matters Application.

Cycle parking will be provided within garages or where there are no garages, cycle parking will be provided within lockable sheds.

Cycle parking will be provided throughout the site. All cycle parking will be secured, convenient and visible and the minimum level of cycle parking provision will be in line with OCC standards of 1 space per 1 bedroom dwelling, 2 spaces per all other dwellings.



On plot parking



Courtyard parking Planning Layout Extracts (Dwg 0521-PH6-102A)

PERPENDICULAR: EG.ON DRIVEWAYS AND PARKING COURTS	MINIMUM LENGTH (M)	MINIMUM WIDTH (M)
SPACE FOR PEOPLE WITH MOBILITY DIFFICULTIES	5.5	2.9+1.0
STANDARD SPACE (UNOBSTRUCTED)	5.0	2.5
STANDARD SPACE (OBSTRUCTED ON ONE SIDE)	5.0	2.7
STANDARD SPACE (OBSTRUCTED ON BOTH SIDES, INCLUDES CAR PORTS AND UNDERCROFTS)	5.0	2.9
INSIDE GARAGE (GARAGES BELOW THIS WILL NOT COUNT AS A PARKING SPACE)	6.0	3.0

Design Code - Minimum Space Size

CAR PARKING PROVISION AT HEYFORD PARK				
NUMBER OF BEDROOMS PER DWELLING		TARGET NUMBER OF VISITOR SPACES WHEN MINIMUM ALLOCATED SPACE PER DWELLING PROVIDED		
		MINIMUM ALLOCATED SPACES		
1	1.5	1	0.25	
2	2	1	0.25	
3	3	2	0.25	
4+	4	2	0.5	

Design Code - Parking Provision

COMPLIANCY No mobility units are provided.

\checkmark	Refer to
	Dwg 0521-PH6-109A

n/a

COMPLIANCY

- n/a Refer to Parking Matrix
- Refer to Parking Matrix
 - Refer to Parking Matrix

	Name	Туре	Allocated	Description	Comments
1	PARKING SQUARE	On/Off-plot	Optional	Group(s) of Parking bays located adjoining the main carriageway providing convenient access to dwellings.	Convenient access to the parking. Good surveillance from neighbouring properties.
2	LANDSCAPED PARKING COURT	On/Off-plot	Optional	Group(s) of parking bays and/or garages located within a shared courtvard.	Generally limited to up to 8 dwellings.
3	PARALLEL	On street	Optional	Parking located parallel along the roadside. Accessed directly off the road.	Can be marked or unmarked. Easily accessible.
4	PERPENDICULAR	On plot/On street	Optional	Parking located perpendicular along the roadside. Accessed directly off the road.	Can be marked or unmarked. Easily accessible. Generally suited to streets where speeds are kept to a minimum. Parking to be separated by landscaping and/ or footways into maximum rows of 4N°. bays.
5	MEWS COURT- HOUSE/ COVERED PARK- ING	On/Off-plot	Yes	Terraced garages with residential uses above. Serving dwellings in the vicinity.	Allows enhanced natural surveillance over parking and offers efficient use of land.
6	ATTACHED/ INTEGRAL GARAGE	On-plot	Yes	Private garage adjoining the dwelling, often allowing access into the house.	Can be located against the road or set back to allow parking in front. Convenient access to dwelling. Can be joined to neighbouring garage and allows for room above.
7	DRIVE THROUGH	On-plot	Yes	Parking bay and/or garage accessed through an archway on the street.	Helps avoid a car-dominated street scene whilst providing secure on-plot parking.
8	HARD STANDING	On-plot	Yes	Parking bay located next to the dwelling.	Can be located against the road or set back to allow additional parking in front. Can be joined to neighbouring parking bay.
9	DETACHED GARAGE	On-plot	Yes	Private Garage often located next to the dwelling. Garages to be set back from prominent frontages. Careful design required to mitigate impact of parked cars on the streetscene.	Can be located against the road or set back to allow parking in front. Can be joined to neighbouring garage and allows room above.

Design Code - Parking Typology Table

Character Area	Street type	Design Approach
CA1/CA2/CA3	N/A	
CA3/CA7/CA8	N/A	Landscaped court encouraged in ca3 edged with low formal hedge.
CA1/CA2/CA3/ CA5 <mark>/CA6/CA7/8</mark>		Not allowed on majority of camp road hence excluded from CA4 where away from Village Centre. Parallel parking is allowed in the Village Centre itself.
CA1/CA2/CA3/ CA5/CA6/CA7/8	ST2/ST3/ ST4/ST5	
CA2	ST3/ST4	
CA2/CA4/ <mark>CA5/</mark> CA6/CA7 <mark>/8</mark>	ST1/ <mark>ST5</mark>	Garages to be set back behind building line with tandem parking allowed in this instance camp road ca4 to serve 2 dwell- ings where possible.
CA2	ST1/ST4	May have accommodation over access. If not habitable residential then enough depth to provide the appearance of habitable space.
CA2-CA8	ST1-ST5	
CA2-CA8	ST1-ST5	Garages to be setback from prominent frontages.

COMPLIANCY		
✓	CA8	
✓	CA5 / CA8	
✓	CA5 / CA8	
V	CA5 / CA8	
√	CA5 / CA8	
✓	CA5 / CA8	
	-	

Design Code - Parking Typology Table

3a.4 Bus Routes & Refuse Collection

3a.4.1 Bus Routes and Bus Stops

There are no bus stops within this application site.

The nearest existing bus stop is on Camp Road approximately 400m actual walking distance from the furthest dwelling within Phase 6. The existing service 25A serves this stop and operates at a frequency of hourly.

The site benefits from a half-hourly service on route 25A as part of the consented scheme. The service will be re-routed though the residential area in a loop to the south of Camp Road which will run along the Secondary Street on the western edge of the site.

3a.4.2 Recycling and Refuse Collection Strategy

✓ The Refuse Storage Plan shows the location of areas for the storage of refuse and recycling. These will be positioned at a maximum distance of 30m from the furthest dwelling curtilage and positioned a maximum of 25m from the road.

3a.4.3 Dwelling Refuse

✓ The Planning Layout provides rear access to each dwelling to allow residents to store containers away from frontages and within the dwelling curtilage.

3a.4.4 Apartments and Village Centre Refuse

There are no apartments proposed within this application.



Refuse Storage Plan (Dwg 0521-PH6-111D)

3b

Design Code Compliance: New Built Environment Codes

3b.1 General Urban Design Principles

3b.1.1 Key Frontages

✓ This Planning Application contains a Key Frontage within Character Area CA5 Village Green. The detailed layout of this Key Frontage has changed to reflect new development now located further north, with frontage retained overlooking the new Village Green.

It also contains part of Special Condition D. Refer to "Section 3b.2.4 Special Condition Areas" for further information.

3b.1.2 Existing & New Landmarks

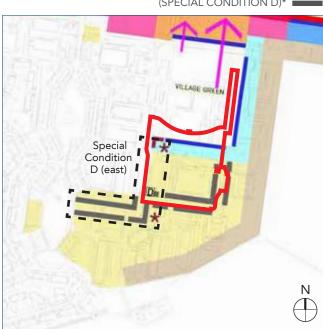
Amendment: The Design Code shows a New Landmark to the west of the site within Character Area CA5. However the development layout overlooking the new Village Green has been altered, as described under "Section 3b.1.1 Key Frontages" and the introduction of a New Landmark is no longer judged to be required at this point as the Key Frontage will provide the appropriate mechanism to aid legibility.

Note - the CA5 Framework Plan does not show any New Landmarks. Refer to "Section 3b.2.2 CA5 - Village Green".

3b.1.3 Key Spaces (Gateways)

There are no Key Gateways within this Planning Application.





Design Code - Regulating Plan Showing Character Areas

* The extent of Special Condition Area D - East "Secondary Street (Bus Route) through new (east/ west) core housing" is shown incorrectly on the Regulating Plan and should be as shown below.



Design Code - Special Condition D

3b.1.4 Key Corners

Amendment: The Design Code shows a Key Corner to the west of the site within Character Area CA5. However the development layout overlooking the new Village Green has been altered, as described under "Section 3.1.1 Key Frontages" and the introduction of a Key Corner is no longer judged to be required at this point as the Key Frontage will provide the appropriate mechanisms to turn corners, provide focal points and provide animation and surveillance.

Note - the CA8 Framework Plan (refer to "Section 3b.2.3 CA8 - Core Housing East") and Special Condition Area D (refer to "Section 3b.2.4 Special Condition Areas") show a Key Corner to the south west within Phase 6.

3b.1.5 Building Density & Heights

✓ The Planning Layout complies with the indicative Building Density Plan and the indicative Building Heights Plan.





Design Code - Indicative Building Density Plan



Density Plan

3b.1.6 Urban Form & Morphology

The way the buildings relate to one another is one of the most important aspects that can be used to define an area's character. These key aspects are addressed for each character area, and include:

- urban form including edge types
- building typology
- density
- building lines
- height / enclosure
- roofscape
- scale and proportion including fenestration
- building detail
- building materials
- landscape design
- parking

The character areas also provide more detail in relation to building heights.



Design Code - Indicative Building Heights Plan

2 - 3 STOREY



Storey Heights Plan

3 STOREY
2.5 STOREY
2 STOREY
1 STOREY

3b.1.7 Built Form - Plot Structure

- Buildings are arranged for the most part in perimeter blocks.
- Dwellings are terraced, semi-detached linked or detached, according to location.
- The design of the new areas retains and exploits the pattern of existing east-west axis development (within 30 degrees) to exploit the benefits of solar energy.

3b.1.8 Edge Types

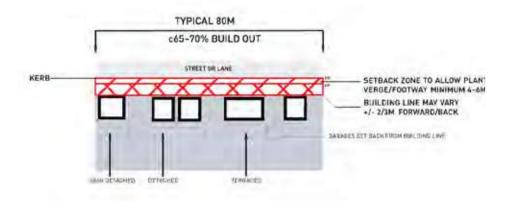
The application area includes the following Edge Treatments:

- E3 Landscaped Frontages to promote and extend verdant character;
- E4 Park Streets generally core residential areas CA7 - CA8;
- E6 Village Green the most symmetrically balanced edge type with the repetition of built form creating consistent building lines.

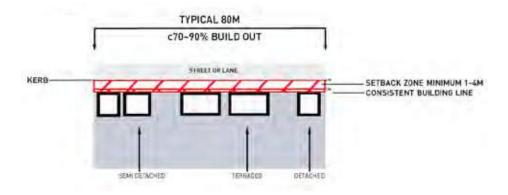




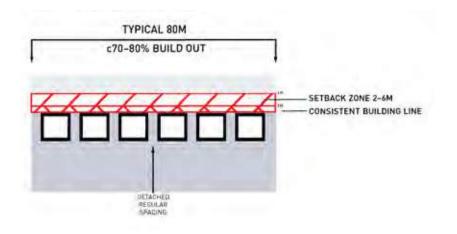
Design Code - Frontages and Edge Treatments



Design Code - E3 Edge Treatment - Landscaped Frontage



Design Code - E4 Edge Treatment - Park Streets



Design Code - E6 Edge Treatment - Village Green

The Planning Application shows:

- E3: 65 70% build out with a building line varying between +/- 2-3m comprising a mix of semi-detached, detached and terraced and a 4-6m min setback zone to allow for a planted verge / footway.
- E4: 70 90% build out with a consistent building line comprising a mix of semi-detached, detached and terraced forms and a 1-4m min setback from back edge of kerb.
- E6: 70 80% build out with a consistent building line comprising regular spaced detached forms and a 2-6m setback from back edge of kerb.



E3 Landscaped Frontage



E4 Park Streets



E6 Village Green

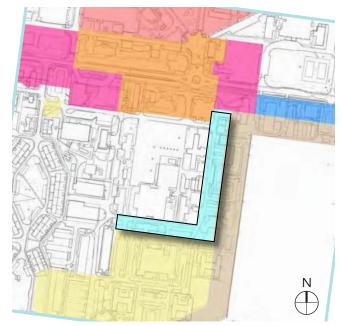
3b.2 Character Areas

3b.2.1 The following sections demonstrate compliance of the Planning Application with the Design Codes for CA5 - Village Green and CA8 - Core Housing East.

3b.2.2 CA5 - Village Green

The Planning Application shows:

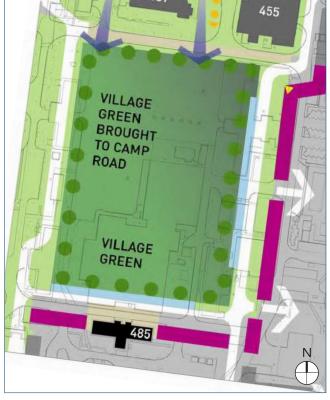
- ✓ Higher density, set piece housing fronting the Village Green.
- A maximum height of 3 storey detached, and semi-detached dwellings only formally aligned with common building lines and equal spaces between dwellings.



Design Code - Character Area 5 - Village Green

NEW BUILT ZONE - EDGE TYPE E7

(Refer to Section 3.1.8 Edge Types)



Design Code - CA 5 Village Green Framework Plan



Character Area CA5 - Village Green

CA5 -VILLAGE GREEN

CA5 - VILLAGE GREEN

CA5	CODE CATEGORY	DEFINITION (MANDATORY)
1	URBAN FORM	 Frontage to village green Development will generally be formal, comprising a unified and regular massing of built form that fronts onto the Village Green. Villa style development, with detached and semi detached units will provide a regular rhythm to the space. Coherent groups of house types and styles to be used.
2	BUILDING TYPOLOGY	Detached and semi detached dwellings in the form of villas.
3	DENSITY	• Will generally be medium 30–35dph.
4	BUILDING LINES	Consistent frontages with regular spacing between dwellings. Development will follow a formal fixed building line. Encroachments are allowed in the form of balconies and central projections.
5	HEIGHT / ENCLOSURE	 2/3 Storey. Development should have greater presence than other areas of the scheme. Consideration should also be given to raise the ground floor 400mm to provide greater presence and privacy.
6	ROOFSCAPE	 Pyramidal or full hip roof to all dwellings. A consistent eaves and ridge line should be maintained. Dwellings should have a largely symmetrical plan and facade.
7	SCALE AND PROPORTION	 Relatively deep front to back symmetric buildings proportionate in scale and plot size to its surrounding context. Consistency in plot width across elevations. Eaves and roof line to be consistent across a frontage to maintain a symmetrical approach.
8	BUILDING DETAIL	• Symmetrically arranged windows with a greater height than width. • There should be a clear unity between building features and a formal geometry.
9	BUILDING MATERIALS	Wall- Render and brick to be dominant/consistent across frontage. Roof - Slate/Slate effect only.
10	LANDSCAPE DESIGN	 Consistent and formal planting will match the character of the built form. Tree species will be of a formal habit. The landscape character should be formal and rectilinear in character. Strong connections visual and pedestrian connections are required to the Village Centre. A play area will form a component of this area designed in a manner complementary to the attractive visual prominence of the area.
11	PARKING	Parking will be locating alongside housing and predeominantly be on plot. Parallel or perpendicular parking alongside village green.

Design Code - CA5 - Village Centre Green - Mandatory & Desired Requirements

COMPLIANCY

 Planning application external building materials reflect
 Design Code. Refer to Dwg 0521-PH6-108D - Materials
 Layout.

CA5 - VILLAGE GREEN- MATERIALS (OR SIMILAR APPROVED)

ROOF MATERIALS

PREDOMINANT BUILDING WALL MATERIAL



Slate/Slate effect

WINDOW COLOUR





Render -Ivory or White Colour



Brick predominantly Red with occasional brown tones

COMPLIANCY

- See edge type E6.

COMMENTS

- See building typology table
- See edge type E6. Allowance for central gable projection.
- Greater ceiling height than other housing areas encouraged.
- Centrally located chimney encouraged.
- Taller floor heights than other housing areas encouraged.
- Central gable is not mandatory but encouraged.
- 4 pane windows with raised central glazing bar enouraged. Eaves to project 300mm beyond wall line.
- Windows should be well proportioned with vertical emphasis.
- Render to be dominant on frontage
- Materials to be agreed at RMA stage.
- Tree planting within this area to be focused upon trees within the village green.
- Street furniture modern design.
- See table overleaf.

- Refer to Section 3.1.8 Edge Types.
- ✓ Refer to Section 3.3.6 Building Typology.
- Refer to Section 3.1.5 Building Density & Heights.
- Refer to Section 3.1.1 Key Frontages & Section 3.1.8 Edge Types.
- ✓ Refer to Section 3.1.5 Building Density & Heights.
- Refer to 0521-PH6-HTB-Housetype Booklet-Issue 2 & Dwg 0521-PH6-103D Street Scenes.
- Refer to Dwg 0521-PH6-102D Planning Layout, 0521-PH6-HTB-Housetype Booklet-Issue 2 & Dwg 0521-PH6-103D Street Scenes.
- ✓ Refer to 0521-PH6-HTB-Housetype Booklet-Issue2
- ✓ Refer to Dwg 0521-PH6-108D Materials Layout.
- ✓ Refer to Section 4. Public Realm Codes.
- ✓ Refer to Section 3.2 Parking Strategies.

3b.2.3 CA8 - Core Housing East

The Planning Application shows:

- Simple and formal "perimeter block" housing with a strong sense of public and private realm relationship with fronts facing onto the shared public realm and private backs in the gardens.
- ✓ A maximum of 2.5 storey dwellings, with similar, but subtle differences to the form, detailing and range of materials and colours proposed within CA7.

The design approach of the Planning Application is:

- Character is inspired by simple Arts and Crafts form of Carswell Circle and Officers housing.
- A mix of formal and informal streets with dwellings providing clear presence and frontage onto streets and public realm.
- Eaves and ridge lines consistent within groups of buildings but may vary along length of street.



(Refer to Section 3.1.8 Edge Types)

E4 - PARK STREETS

(Refer to Section 3.1.8 Edge Types)
FRONTAGE TO BE DESIGNED AS A COMPOSITION

TO INTEGRATE NEW & EXISTING BUILT FORM KEY CORNERS



LINKS THROUGH PROPOSED DEVELOPMENT





Design Code - CA 8 Core Housing East Framework Plan



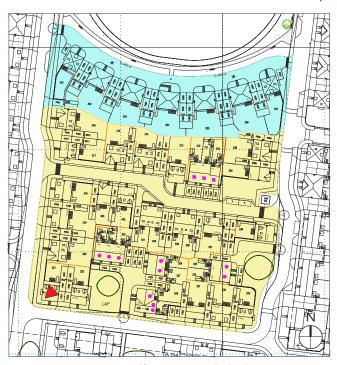
Design Code - Character Area 8 - Core Housing East

CA 8 - CORE HOUSING EAST





KEY CORNERS



Character Area CA8 - Core Housing East

CA8	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	 Arranged in perimeter blocks with strong distinction between public and private realm. The area should have a mixture of formal and informal streets and places, which will be articulated through the landscape and building form and detail. Dwellings will provide clear presence and frontage onto streets and public realm. 	
2	BUILDING TYPOLOGY		
3	DENSITY	• Density will typically be 30 - 35 dph but will vary through the site.	
4	BUILDING LINES	 Frontage in terms of setback may vary depending on edge type. Building lines should be consistent between groups of buildings but may vary along the length of the street. Building lines will be permitted to vary forward or back to give emphasis in key locations. 	
5	HEIGHT / ENCLOSURE	• 2–2.5 Storeys (predominantly 2 storey).	
6	ROOFSCAPE	• Eaves and ridge lines will typically be consistent between groups of buildings, but may vary along the length of a street. • Dormer windows should be well set back to break up the roof line.	
7	SCALE AND PROPORTION	Buildings and fenestration to encourage asymmetric buildings form, proportionate in scale and plot size to its surrounding context.	
8	BUILDING DETAIL	 Traditional details, porch to be pitched or flat canopy with mandatory changes in canopy design between neighbouring dwellings. The houses should be configured to ensure, wherever possible, that windows to habitable rooms front onto the street and public realm. Dwellings should be designed to ensure that there are no blank walls onto the street and public realm. 	
9	BUILDING MATERIALS	•Walls - Brick and render. •Roof - Slate/Slate effect and tile.	
10	LANDSCAPE DESIGN	• Soft landscaping to be simple and largley open frontages • Planting to be used screen and break up parking areas.	
11	PARKING	Parking will predominantly be on plot. Parking will be configured as part of the public realm design.	

Design Code - CA8 - Core Housing East - Mandatory & Desired Requirements

COMPLIANCY

Planning application external building materials reflect Design Code. Refer to Dwg 0521-PH6-108D - Materials Layout.

CA8 - HOUSING WEST - MATERIALS (OR SIMILAR APPROVED)

PREDOMINANT BUILDING WALL MATERIAL







ROOF MATERIALS



predominantly Red predominantly F with occasional brown with occasional

WINDOW/FENESTRATION COLOUR







COMMENTS

See edge types E2/E3/E4/E5.

Development that infills areas of Carswell Circle should have consistent ridge and eave heights, building lines, massing and detail to the existing buildings development proposals to address effective retention of Building 488.

See building typology table. Terraces encouraged to provide consistency across frontages and limit narrow gaps between smaller house types.

See edge types E2/E3/E4/E5.

Preference for 2.5 storey to be used on

50% of dwellings have gable or dormer within roof form.

Consistency of building scale encouraged with groups of 4–10 buildings that share similar characteristics.

Occasional chimneys to act as building feature. Occasional bay windows. Window size may vary across elevation.

Predominantly brick, occasional render. Predominantly slate effect, occasional tile. Render whole dwelling where used. Materials to be agreed at RMA stage.

Street trees to be formal in habit along tertiary streets and secondary streets; and informal along shared surface streets and lanes.

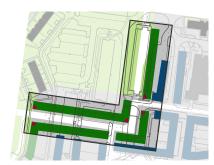
COMPLIANCY

- Refer to Section 3.1.8 Edge Types.
- Refer to Section 3.3.6 Building Typology.
- Refer to Section 3.1.5 Building Density & Heights.
- Refer to Section 3.1.1 Key Frontages & Section 3.1.8 Edge Types.
- Refer to Section 3.1.5 Building Density & Heights.
- Refer to 0521-PH6-HTB-Housetype Booklet-Issue2 & Dwg 0521-PH6-103D - Street Scenes.
- Refer to Dwg 0521-PH6-102D Planning Layout, 0521-PH6-HTB-Housetype Booklet-Issue2 & Dwg 0521-PH6-103D - Street Scenes.
- Refer to 0521-PH6-HTB-Housetype Booklet-Issue2
- Refer to Dwg 0521-PH6-108D Materials Layout
- Refer to Section 4.0 Public Realm Codes.
- Refer to Section 2.3 Parking Strategies.

3b.2.4 Special Conditions Areas

Certain areas require a special approach in response to particular opportunities and constraints, a distinct design over and above that set out by the character definition.

The western edge of the Planning Application includes a section of "Special Condition Area D - Secondary Street (bus route) through new (east/west) core housing".



Design Code - Special Condition D

	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	 The area should have generally formal streets and places which will be articulated through the landscape and building form and detail. Dwellings will provide clear presence and frontage onto secondary street and public realm. Buildings adjacent to pedestrian connections to the bungalow area should turn the corner and have greater presence. 	
2	BUILDING TYPOLOGY	 Mainly detached and semi-detached housing with short terraces. Buildings will be predominantly single family homes. Buildings should be arranged in groups of 8–10 units which share similar characteristics to provide consistency across the street scene Corner turner buildings are required at key junctions. These buildings should have greater presence and architectural detail. 	
3	DENSITY	• Density will typically be 30–35 dph but will vary through the site.	
4	BUILDING LINES	 4-6m building frontage setback zone from kerb edge to promote wider scale to street and promote tree planting. Building lines will be permitted to move forward or back to give emphasis in key locations 	
5	HEIGHT / ENCLOSURE	• 2–2.5 Storeys	
6	ROOFSCAPE	• Eaves and ridge lines will typically be consistent between groups of buildings, but may vary along the length of a street • Dormer windows should be well set back to break up the roof line	
7	SCALE AND PROPORTION	Building depth to promote complementary asymmetric buildings.	
8	BUILDING DETAIL	 Traditional details, with front door canopy and changes in canopy design between neighbouring dwellings (where not in terrace). The houses should be configured to ensure that windows to habitable rooms front onto the street and public realm Dwellings should be designed to ensure that there are no blank walls onto the street and public realm 	
9	BUILDING MATERIALS	Walls - Predominantly brick with limited render. Roof - Slate/Slate effect and tile	
10	LANDSCAPE DESIGN	Soft landscaping to be simple and largely open. Emphasis on providing space for street trees.	
11	PARKING	 Range of parking strategies following good practice guidance. On shared surface routes parking can be parallel to maximise efficiency. Parking will be predominantly on plot. Parking will be configured as part of the public realm design. 	

Design Code - Special Condition Area D - Secondary Street Bus Route Through CA7 & CA8

Refer to Section 3.1.8 Edge Types. Refer to Section 3.3.6 Building Typology. Refer to Section 3.1.5 Building Density & Heights. Refer to Section 3.1.1 Key Frontages & Section 3.1.8 Edge Types
Refer to Section 3.1.5 Building Density & Heights.
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Refer to Section 3.1.1 Key Frontages & Section 3.1.8 Edge Types.
Refer to Section 3.1.5 Building Density & Heights.
Refer to 0521-PH6-HTB-Housetype Booklet-Issue2 &
Dwg 0521-PH6-103D - Street Scenes. Refer to Dwg 0521-PH6-102D-Planning Layout, 0521-PH6-HTB-Housetype Booklet-Issue2 & Dwg 0521-PH6-103D - Street Scenes. Refer to 0521-PH6-HTB-Housetype Booklet-Issue2.
Refer to Dwg 03211110 100D Widterfulls Layout.
Refer to Section 4.0 Public Realm Codes. Refer to Section 2.3 Parking Strategies.

3b.3 Building Types

3b.3.1 Built Form Guidance - Streetscene Overview

The Planning Application shows:

- Creation of active street frontages through movement at building entrances and visibility through fenestration.
- ✓ Visible end elevations treated as part of the street scene.
- ✓ Dwellings will have living spaces fronting streets. No bathrooms or ancillary rooms to dominate street frontage / public realm.

3b.3.2 Building Detail

The Planning Application shows:

✓ A relatively simple palette of materials which vary according to character area.

Refer to Dwg 0521-PH6-103D Street Scenes and Dwg 0521-PH6-108D Materials Layout.

3b.3.3 Built Form - Architectural Design

The Planning Application shows:

- ✓ Modulation of structural form to create varied, identifiable character. This includes:
- ✓ Deep eaves to provide shading and modelling on walls.
- ✓ Use of simple projections including window bays to provide modulation and shading.
- ✓ Use of deeper door and window reveals (min 65mm) to give a sense of depth to openings.

3b.3.4 Built Form Guidance - Fenestration

The Planning Application shows:

- ✓ A hierarchy of parts, reflecting the relative importance of their functions. This includes:
- ✓ Entrances emphasised through set backs, recesses, canopies and steps.
- ✓ Windows of principal rooms (eg lounges and main bedrooms) expressed through larger size or greater prominence.
- ✓ Windows are located to allow ease of surveillance of property, especially at entrances.
- ✓ Scale and proportions of windows have been considered in relation to the facade composition.

3b.3.5 Built Form - Materials

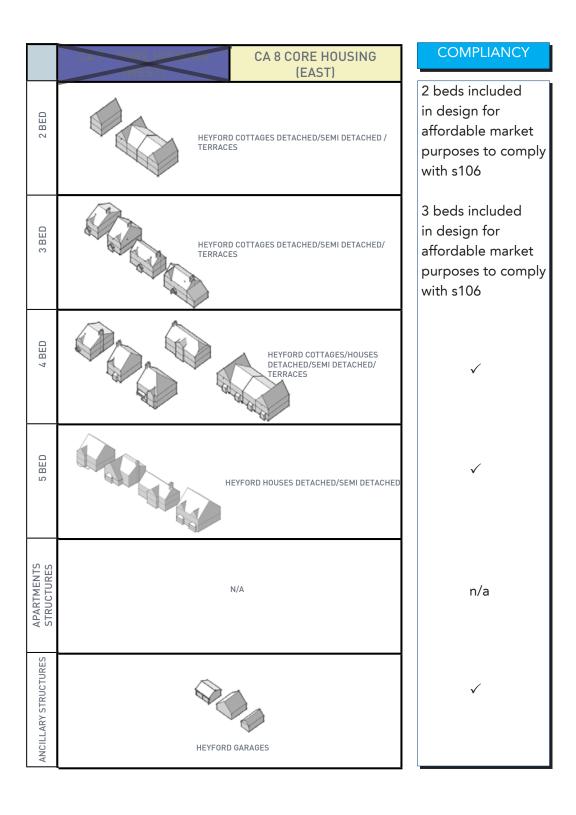
The Planning Application shows:

- ✓ A limited palette of materials which reflect the early 20thC Arts and Crafts architecture, and generally:
- ✓ Maximum 3-4 finishes in a single elevational composition.
- ✓ Change of materials used to express geometry of the building design rather than just for variety.
- ✓ Where buildings form a focus or marker, their main architectural elements such as entrances or projecting elements will be emphasised to create a feature.

3b.3.6 Building Typology

The Planning Application complies with the Building Typology Codes as follows:

	CA 5 - VILLAGE GREEN	COMPLIANCY
2 BED	N/A	n/a
3 BED	N/A	n/a
4 BED	VILLAGE GREEN VILLAS DETACHED/ SEMI DETACHED	✓
5 BED	VILLAGE GREEN VILLAS DETACHED/SEMI- DETACHED	✓
APARTMENTS STRUCTURES	N/A	n/a
ANCILLARY STRUCTURES	HEYFORD GARAGES	✓





STREET SCENE 1 - CORE HOUSING EAST



STREET SCENE 2 - CORE HOUSING EAST



STREET SCENE 3 - VILLAGE GREEN











1-PH6-103D)

3c

Design Code Compliance: Public Realm Codes

3c.1 Landscape Strategy & Placemaking

3c.1.1 Public Realm Code

The overall design and character of the public realm will help establish a clear and unified vision for the site that will transcend several development parcels. The design rationale for the external spaces varies depending on location and function, the key aspects of which are scale and orientation of open space, existing landscape features and planting and how this approach links to private gardens and frontages.



Design Code - Landscape Strategy Plan

LAP

LEAP

3c.1.2 Landscape Proposals

The landscape proposals have been designed in close association with the design team and client to help create a cohesive feel to the overall development, creating a contemporary and visually interesting setting to the new buildings.

The proposals shown on the detailed landscape reflect the need for a high quality scheme which links with the architectural style and prominence. Where space allows strategically placed trees along garden frontages and road verges will help to break up the building mass, these predominantly native tree species will link the adjacent trees and woodland areas creating 'green-corridors' through the development and beyond into the surrounding landscape.

Hard landscape treatments as described above will be designed to create interesting features and inviting exploration of the various open spaces.

Open space both within the site and surrounding environs helps to create a relatively soft setting to the scheme, the large area of open space to the village green has a relatively formal character and helps to unify the overall development proposals.

Robust yet simple landscape planting will be implemented which encapsulates a green structure of low native hedgerows, through which larger yet generally small canopied street trees will be implemented such as Tilia and Betula.

All of the retained trees which will be made safe and managed appropriately to an agreed programme of works. Generally, where space permits native shrub planting will be implemented to include species such as Holly, Dogwood & field maple to create vertical height and structure below the existing tree canopies and to help a green matrix throughout the site. It is anticipated that overall the proposals will encourage a range of birds and invertebrates typically found in gardens in the local area and to further this aim, new and existing tree species will be provided with bat and bird boxes.

Whilst the scheme is relatively tight regarding physical space for planting to individual plots the key landscape strategy is to create belts of colour to house frontages, this will be in the form of shrub and herbaceous planting to break the linearity with belts of smooth, curving planting with the structure of low/medium/high planted in waves wrapping through the scheme and leading through from primary to secondary routes, this will unify the scheme and create a sense of place and arrival.

The Local Areas for Play (LAPs) within these phases of the scheme has been designed to provide safe and secure areas for the local residents. The LAPs are individually designed to create distinct characters, specific to each phase, and thus improve orientation and enable local residents to experience a 'sense of ownership' of each space. The general palette of materials consists of selfbinding gravel, benches and open areas of grass with shrub and tree planting. The planting varies between the different LAPS, but is chosen to provide seasonal variation in colour, with strong colours and fragrance to appeal to younger user groups. Feature trees and existing trees have been used to create features of visual interest, and areas of dappled shade. Taller shrubs are located around the boundaries of the spaces to buffer external road activities and noise.

The benches are located to allow resting places whilst overseeing play within the space. Furthermore, each LAP is designed to be surrounded by a bow-top railing (approximately 1200mm in height) and self-closing gate, to enable a secure space for play but with good intervisibility to outside, thus creating a strong perception of safety and prevent any feeling of enclosure.



3c.2 Play Areas

3c.2.1 Play Areas

The application area contains 1 LAP. The Planning Application shows:

- This will be a landscaped space offering a variety of play experiences.
- ✓ Located to allow for surveillance and in open, welcoming locations and away from major vehicle movements and accessible directly from pedestrian routes.
- ✓ An open, unfenced play area.
- ✓ The LAP will contain a minimum of 2 pieces of equipment (or one multiuse piece of equipment and / or seating).
- ✓ The LAP will have a buffer zone of 5m from activity zone to forward most part of dwelling.

3c.2.2 Pocket Parks

There are no Pocket Parks within this Planning Application.

3c.3 Boundary Treatments & Street Furniture

3c.3.1 Boundary Treatments

Refer to Section 3.2 Character Areas.

3c.3.2 Street Furniture

- Street furniture will be coordinated across Heyford Park to create identity and be area specific with an emphasis on timber furniture in the informal landscape areas and more metal street furniture on more formal areas (eg Village Centre).
- ✓ Street furniture will be coordinated and will be of a design to reflect the architecture.
- ✓ Height of street lighting columns will emphasise size of space, subject to Section 38 Technical Submission.
- ✓ Street name signage will be attached to buildings wherever possible to minimise clutter.

3d

Design Code Compliance: Sustainable Design & Infrastructure

3d.1 Drainage Infrastructure

3d.1.1 On Site Drainage Strategy

The Approved Flood Risk Assessment (FRA) prepared by Waterman sets out the approach to drainage and attenuation across the Upper Heyford site. The FRA makes the following statements/ indications:

- The proposed surface water strategy must mimic the existing situation, restricting flows to the existing rate while taking climate change into account.
- Surface water attenuation will be provided through the use of permeable paving and attenuation tanks where necessary. Swales will be incorporated within the development parcels where appropriate.
- The potential for infiltration techniques will also be investigated further at the detailed design stage, to confirm whether soakage rates are favourable.
- The area known as RMA2 falls within existing catchment area 2 which outfall to the south of the development as part of the "central diversion" network.

3d.1.2 Adoption Strategy

It is envisaged that:

- All new primary drainage runs (generally located within adoptable roads) are to be adopted by the Water Company subject to a Section 104 application.
- All existing drainage downstream of the proposed drainage outfalls are to be adopted by the Water Company subject to a Section 102 application.

- All gullies serving the proposed adoptable roads are to be adopted by the County Council subject to a Section 38 application.
- All Storage tanks and swales are to be maintained by the Water Company or management company.
- All drainage not covered by the above will be the responsibility of the homeowners or management company.

3d.1.3 Surface water strategy overview

The proposed surface water drainage system will be separate from the foul water system.

Due to the shallow groundwater and underlying rock encountered within the development, infiltration is not a suitable as the primary surface water discharge method for the scheme.

The proposed system has been designed using the latest version of micro drainage simulation software for storm events up to and including a 1 in 100 year return period plus a 30% allowance for climate change.

The area known as RMA2 includes:

- Phase 3 (parcels D1a and D2a)
- Phase 4 (parcels D3a and D4a)
- Phase 5 (former school site D6a)
- Phase 5b (parcel D4a north and D4a west)
- Phase 6 (parcel D4b)
- Cricket pitch

The design for RMA2 has been modelled as a complete system with no additional restrictions limiting where each individual parcel starts/ ends.

The maximum surface water storage volume estimated for each phase is as follows:

- Phase 3 174.8m3
- Phase 4 1263.3m3
- Phase 5 374m3
- Phase 5b 150m3
- Phase 6 214.5m3
- Parcel D4a west 0m3

The current design incorporated Hydrobrakes and orifices to restrict the speed of water passing through the system. Where water backs up due to these controls, oversized pipes and storage tanks have been utilised to ensure the water can be stored within the underground system.

In places the oversized pipes are shown as "twin" runs. This is due to the shallow nature of the drainage system defined by the level of the outfall.

The current design contains 1962.1m cu of underground storage tanks, the majority of which are 1.0m deep and are located within parking or other accessible areas.

A swale is also proposed for surface water attenuation and is currently located along the southern boundary. The swale has been designed as 132m long, 500mm deep with 1:3 side slopes.

The planning layout also requires a length of porous paving (on Phase 6). This will be lined and used for additional below ground attenuation.

Extreme event flood water is to be stored within the road. The proposed site levels will be designed so that the water will be directed away from the entrances to the proposed buildings and flow along designated flood routes.

It is proposed that the cricket pitch will drain by shallow infiltration trenches. This is subject to detailed design. RMA2 discharges into the existing network to the south west of the phase. Water in the existing network passes through an existing petrol interceptor before discharging to a concrete culvert/ ditch.

In addition to the petrol interceptor, trapped gully pots will provide further protection against contamination from hydrocarbons.

The existing discharge rate at the outfall from the development which includes RMA2 during a 1 in 100 year storm event has been calculated as 253.6l/s.

The proposed discharge rate at the outfall from the development which includes RMA2 during a 1 in 100 year storm event plus a 30% allowance for climate change has been calculated as 250.2l/s.

There is no above ground uncontrolled flooding during a 1 in 100 year event including a 30% allowance for climate change.

3d.1.4 SUDS

The SUDS elements proposed on RMA2 (and the downstream system) are:

- Flow control manholes
- Underground tanks
- Porous paving
- Petrol interceptor
- Swale

3d.2 Building Construction

3d.1.5 Foul Drainage

The area known as RMA2 has been designed as a complete system with no additional restrictions limiting where each individual parcel starts/ ends.

The majority of the scheme will flow by gravity through the "central diversion" network, under the Farmer's field to the east and into the existing Sewage Treatment Works.

Based on the current layout and preliminary levels design, 10 plots will discharge into the existing pumpstation located to the South West of RMA2.

3d.2.1 Building Fabric to Achieve Reduction in Carbon Emissions

The development will be constructed using the latest in building techniques and to the current building regulations.

A full construction specification document has been submitted as part of the planning application.

4 Access

4.1 Access

4.1.1 Introduction

This section is designed to complement "Section 3a Design Code Compliance: Street, Movement and Network Codes" in order to inform on the accessibility aspects of the scheme meaning ease of access for all into the development and to all elements within the site.

Formal pre-application meetings have been undertaken to inform access issues on the site.

4.1.2 Vehicular Access & Trip Generation

Vehicular access into the site from Camp Road will be via two priority junctions. The first priority junction to the northeast of the site and its adjoining road has planning consent. The second junction, to the northwest, and its adjoining road will seek approval in the near future. Subject to future planning applications, in full these two junctions will serve 241 residential units as part of Phase 3, 4 & 5b, 5, 6 and two units of Phase 1. It is also proposed to serve a Village Centre as part of future planning applications.

The outline planning consent for Phase 6 included three distinct elements; 18 residential units, which were part of the wider Heyford Park site consent for 1,075 units; Building 485 which was to be retained for conversion to residential use, to accommodate five 2-bed flats; and Building 488 which was to be retained for 1,500sqm B1 employment use.

Trip rates for residential houses and employment uses have been taken from the Transport Assessment which supported the outline planning application (Arup, 2007). Trip rates for residential flats have been extracted from the TRICS database. In total the consented use for Phase 6 results in 49 two way trips in the AM peak period and 48 in the PM peak.

The full residential scheme proposed within this application for Phase 6 includes 43 residential units which equates to 34 two-way trips in each peak period, applying the residential houses trip rate from the original application.

Therefore, the net traffic impact of the proposed scheme is up to 15 fewer two-way trips in each peak period.

4.1.3 Accessibility

Streets and Layout

The proposed street network and associated street hierarchy is based upon the principles in "Manual for Streets" which provides appropriate forms of access for all users and the layout is in accordance with building regulations for inclusive design.

The internal layout of the scheme has been designed to promote low vehicle speeds (through road narrowing, horizontal deflection and changes to surface materials) to encourage safe cycle and pedestrian integration.

Visibility splays have been provided at 2.4m x 33m in accordance with the Design Code for Secondary Streets (ST2) for a design speed of 20mph. Swept path analysis is shown on Dwg 0521-PH6-105.

Provision for pedestrians will be in the form of good quality footways either immediately adjacent to the carriageway or separated from the carriageway by verge.

Cyclists will be provided for on-carriageway.

The nearest existing bus stop is on Camp Road approximately 400m actual walking distance from the furthest dwelling within Phase 6. The existing service 25A serves this stop and operates at a frequency of hourly.

The site benefits from a half-hourly service on route 25A as part of the consented scheme. The service will be re-routed though the residential area.

Buildings and Parking

Level access is achieved to the front and/or rear of all dwellings to help achieve access for all.

Where Lifetimes Homes are provided, wider parking spaces have been included.

Emergency and Refuse Vehicles

The development has been designed to provide ease of movement for emergency vehicles. All internal rooms in dwellings are within 45m of adoptable highways.

Both private and adoptable areas have been designed to provide adequate turning facilities for service and emergency vehicles.

Rear access is provided for pedestrians to all properties to allow for easy transportation of refuse and/ or recycling waste.

