

15/01612 REM

Phases 4&5B, Heyford Park,  
Upper Heyford, Bicester

Statement of Compliance  
to support an application for  
Reserved Matters

HEYFORD PARK, BICESTER PHASES 4&5B  
Statement of Compliance

produced by

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On behalf of  
Dorchester Living

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# 1 Introduction

## 1.1 Purpose of Document

1.1.1 This Statement of Compliance is submitted on behalf of Dorchester Living in support of an application for the approval of Reserved Matters following Outline Planning Approval (Ref 10/01642/OUT) for the following proposal:

“Outline - Proposed new settlement of 1075 dwellings including the retention and change of use of 267 existing military dwellings to residential use Class C3 and the change of use of other specified buildings, together with associated works and facilities, including employment uses, a school, playing fields and other physical and social infrastructure.”

The Outline Permission defined the development form and principle of development, set out as a series of parameter plans. These were then used as the basis of the subsequently approved Heyford Park Design Code V5.2 (Ref Pegasus B.0286\_21).

This document sets out to demonstrate compliancy with the performance criteria for each development area as set out in this Design Code for the development parcel identified within Section 1.2.

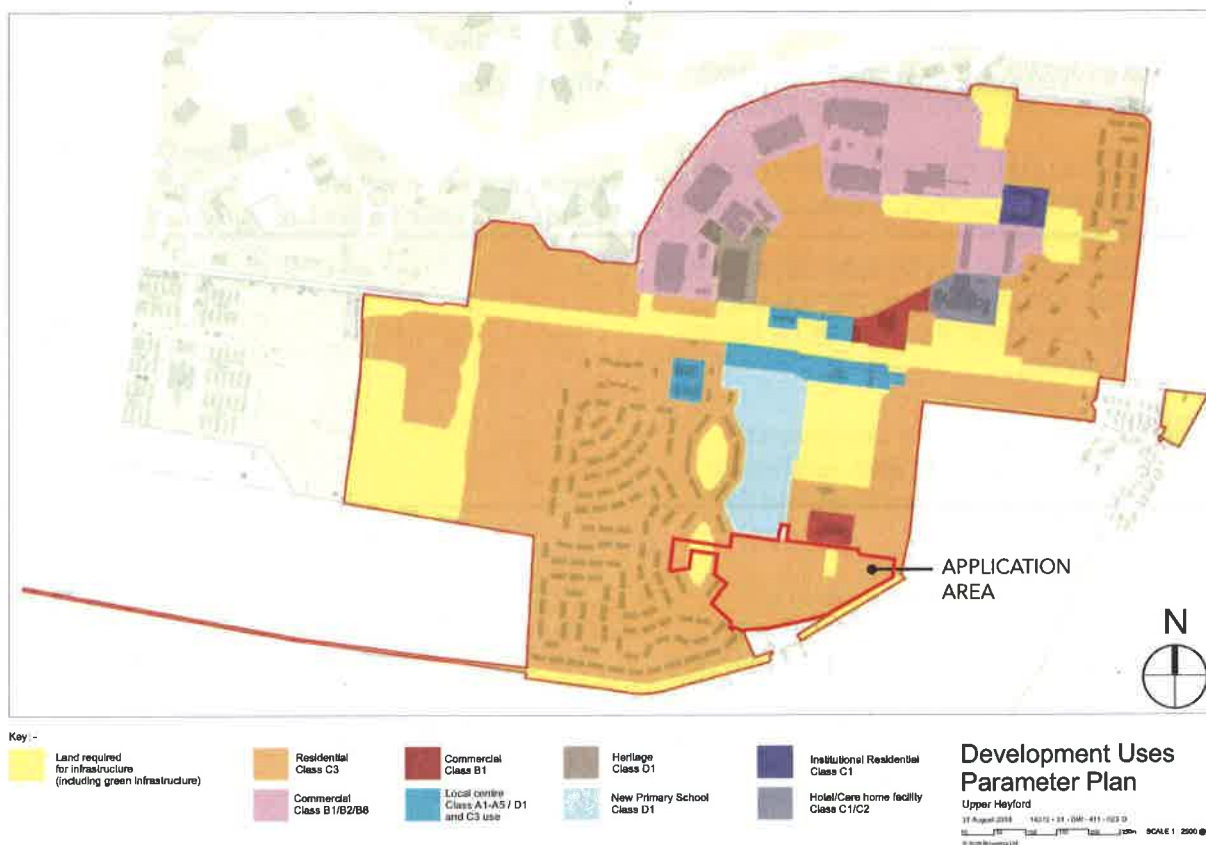
## 1.2 Site Location

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

1.2.2 This Statement of Compliance is for the development area identified in the plan below.

The development area identified includes the following two character areas as defined in the Design Code:

- CA6 - Rural Edge
- CA8 - Core Housing East



OPA - Parameter Plan - Development Uses

## 1.3 Purpose of the 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 Residential

The Planning Application provides 86 no dwellings.

The planning application complies with the density guidance set out in the Design Code. Refer to Section 3.1.5 Building Density & Heights.

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

### 1.4.2 Affordable Housing

Affordable housing will be provided in a series of clusters and will include rented and affordable (rented and intermediate) properties.

### 1.4.3 Public Open Space & Green Infrastructure

The planning application will contain 0.314ha of open space which will include one LAP. Refer to Section 4.0 Public Realm Codes for further details.



# 2

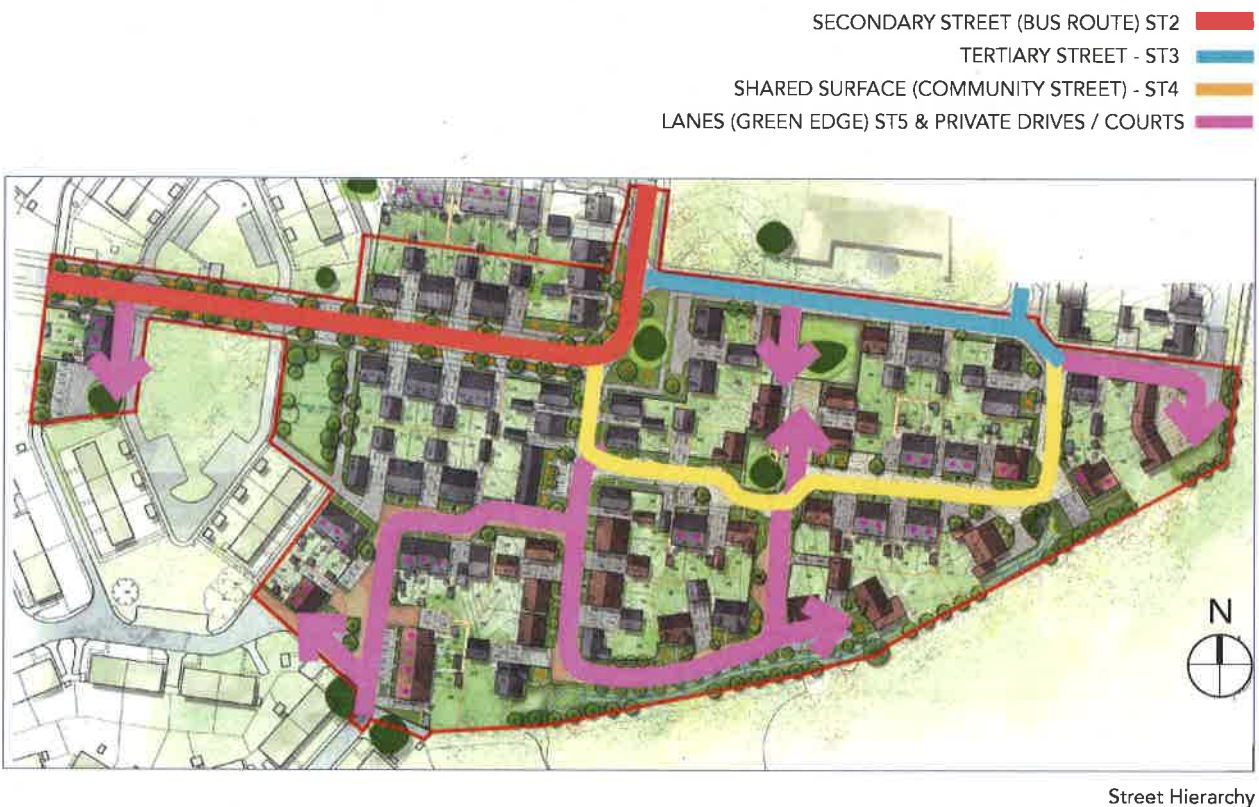
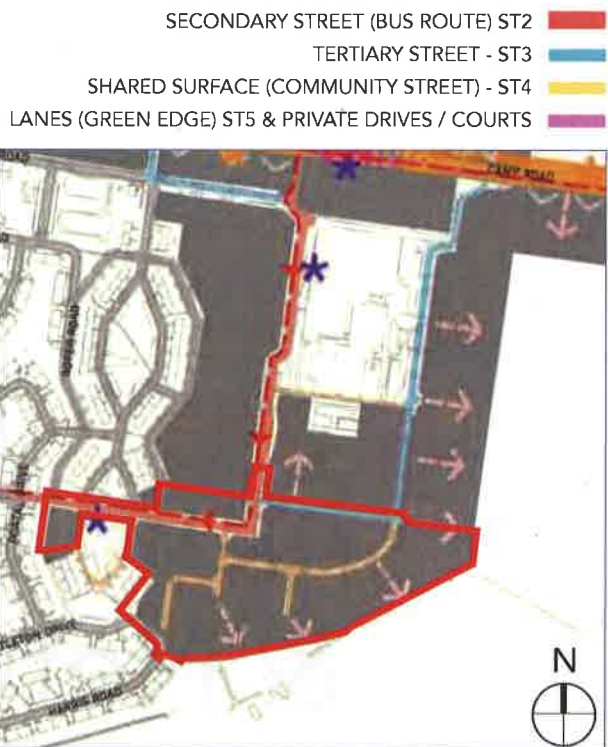
## Street, Movement & Network Codes

## 2.1 Street Codes

### 2.1.1 Hierarchy of Streets and Spaces

The Planning Application includes Secondary Streets - Bus Routes (ST1), Tertiary Streets (ST3), Shared Surface / Community Streets (ST4) and Lanes and Drives (ST5).

- ✓ 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.



### 2.1.2 Infrastructure

Refer to Street Hierarchy Table.

### 2.1.3 Secondary Streets ST2

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

### 2.1.4 Tertiary Streets ST3

✓ 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.

### 2.1.5 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.

✓ 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.

### 2.1.6 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.

### 2.1.7 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.

### 2.1.8 Adoption Arrangements

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

		SECONDARY STREET ST2	COMPLIANCY
DESIGN SPEED		20 mph	✓
FOOTWAY		1.8m both sides	✓
CYCLEWAY		On Road	✓
VERGE		Staggered	✓
BUS ACCESS		Yes	✓
MAX PROPERTIES		Up to 300	✓
CARRIAGEWAY WIDTH		6.1 m	✓ Generally minimum 6.1m
ACCESS TO PROPERTIES		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	✓
TRAFFIC CALMING OPTIONS	A	Horizontal deflection (left or right build out)	✓ Refer to Dwg 0521-PH4-PH5B-104
	B	Horizontal deflection (central pinch point)	✓
	C	Raised table (gentle approach ramp)	✓
	D		✓
SWEPT PATHS		Buses, refuse vehicle and Emergency Service Vehicles	✓ Larger service vehicles
ON STREET PARKING		On street parking bays 2.5 by 6m	✓ Refer to Dwg 0521-PH4-PH5B-104
FORWARD VISIBILITY		33m	✓
JUNCTION SIGHTLINES		2.4 x 33m	✓
JUNCTION SPACING		Site Specific	✓
JUNCTION RADII		6m	✓ 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

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 PROPERTIES		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	✓
TRAFFIC CALMING OPTIONS	A	Horizontal deflection (left or right build out) calming at 100–150m	✓ Refer to Dwg 0521-PH4-PH5B-104
	B	Horizontal deflection (central pinch point)	✓
	C	Raised table (gentle approach ramp)	✓
	D	Informal alignment (calming method D)	✓
SWEPT PATHS		Refuse vehicle and Emergency Service Vehicles	✓ Larger service vehicles
ON STREET PARKING		On street parking bays 2.5 by 6m	✓ Refer to Dwg 0521-PH4-PH5B-104
FORWARD VISIBILITY		10m	✓
JUNCTION SIGHTLINES		2.4 x 25m	✓
JUNCTION SPACING		Site Specific	✓
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

Design Code - Street Hierarchy Table - 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 PROPERTIES		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	✓	
TRAFFIC CALMING OPTIONS	A	-	n/a	
	B	-	n/a	
	C	-	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		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 ST5

LANES ST5	
DESIGN SPEED	10 mph
FOOTWAY	Shared surface
CYCLEWAY	Shared surface
VERGE	None
BUS ACCESS	No
MAX PROPERTIES	Up to 25
CARRIAGEWAY WIDTH	3.5 – 6.0 m
ACCESS TO PROPERTIES	100% direct access
CARRIAGEWAY SURFACING	Asphalt (HRA)/Block Paving
VERGE SURFACING	Shrub Planted
FOOTWAY SURFACING	
KERBING	PCC Bull Nosed Kerb 25mm upstand
TRAFFIC CALMING OPTIONS	A
	B
	C
	D
SWEPT PATHS	Refuse vehicle and Emergency Service Vehicles
ON STREET PARKING	Visitor parking bays
FORWARD VISIBILITY	10m
JUNCTION SIGHTLINES	2.4 x 25m
JUNCTION SPACING	Driveway Crossovers
JUNCTION RADII	4m
STREET LIGHTING (to be agreed at detailed stage with OCC)	Column mounted
STATUTORY SERVICES	In carriageway(see note below)
DRAINAGE	Gully or permeable paving / Over edge
LANDSCAPE/TREE PLANTING	Intermittent tree planting.

Design Code - Street Hierarchy Table - Lanes ST5

COMPLIANCY	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	Block Paving & HRA
✓	
n/a	
✓	
n/a	
n/a	
n/a	
✓	Larger service vehicle
✓	
✓	
✓	
✓	
X	Increased to suit larger service vehicles
✓	To be determined
✓	
✓	
✓	Refer to landscape design

## 2.2 Pedestrian & Cycle Movement

### 2.2.1 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 to be used by everyone.
- ✓ All routes will be overlooked by properties with good levels of natural surveillance.

## 2.3 Parking Strategies

### 2.3.1 Parking Strategy

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

Parking will be provided as a mix of on street parallel parking, on plot / on street perpendicular parking and on plot as a mix of attached / integral garage, hard standing and detached garage.

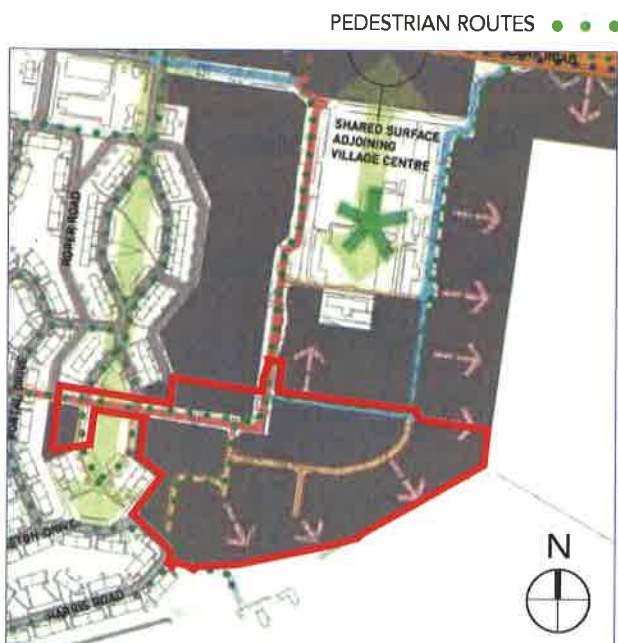
### 2.3.2 Parking and Garages

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 parking spaces in line with Oxfordshire County Council Parking Guidance.

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



Design Code - Routes & Linkages Plan



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

### COMPLIANCY

n/a	No mobility units are provided.
✓	
✓	
✓	
✓	Refer to Dwg 0521-PH4-PH5B-109

### CAR PARKING PROVISION AT HEYFORD PARK

NUMBER OF BEDROOMS PER DWELLING	MAXIMUM NUMBER OF ALLOCATED SPACES	TARGET NUMBER OF VISITOR SPACES WHEN MINIMUM ALLOCATED SPACE PER DWELLING IS 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

n/a	
✓	Refer to Parking Matrix
✓	Refer to Parking Matrix
✓	Refer to Parking Matrix



On plot parking



On street visitor parking

Planning Layout Extracts (Dwg 0521-PH4-PH5B-102)

	Name	Type	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 courtyard.	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 <sup>o</sup> . bays.
5	MEWS COURT-HOUSE/ COVERED PARKING	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/CA7	ST2/ST3 ST4/ST5	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/CA7	ST2/ST3 ST4/ST5	
CA2	ST3/ST4	--
CA2/CA4/CA5/ CA7	ST1/ST4	Garages to be set back behind building line with tandem parking allowed in this instance camp road ca4 to serve 2 dwellings where possible. May have accommodation over access. If not habitable residential then enough depth to provide the appearance of habitable space.
CA2	ST1/ST4	
CA2/CA4/CA5/ CA7	ST1/ST4	--
CA2/CA4/CA5/ CA7	ST1/ST4	Garages to be setback from prominent frontages.

COMPLIANCY	
✓	CA6 / CA8
✓	CA6 / CA8
✓	CA6 / CA8
✓	CA6 / CA8
✓	CA6 / CA8

Design Code - Parking Typology Table

## 2.4 Bus Routes & Refuse Collection

### 2.4.1 Bus Routes and Bus Stops

A bus route will run along the Secondary Street between Phases 4 and 5b.

There are no bus stops within this application.

### 2.4.2 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 nearest adoptable road.

### 2.4.3 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.

### 2.4.4 Apartments and Village Centre Refuse

There are no apartments proposed within this application.



REFUSE STORE LOCATIONS ●

Refuse Storage Plan

# 3

## New Built Environment Codes

# 3.1 General Urban Design Principles

## 3.1.1 Key Frontages

There are no Key Frontages within this Planning Application.

## 3.1.2 Existing & New Landmarks

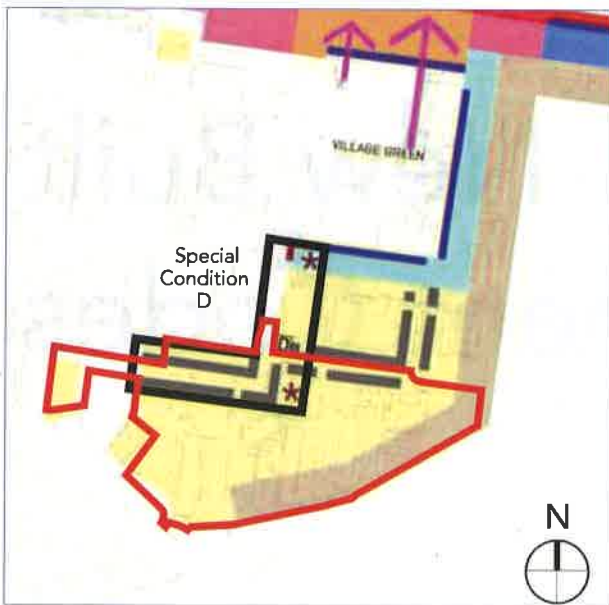
✓ This Planning Application contains a new landmark within Character Area 8 - Core Housing East.

## 3.1.3 Key Spaces (Gateways)

There are no Key Gateways within this Planning Application.

## 3.1.4 Key Corners

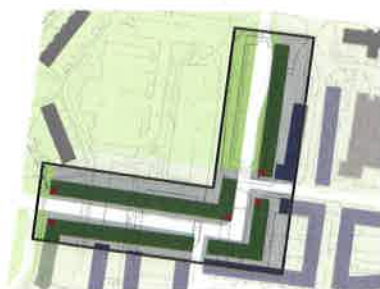
Prominent development parcel corners that turn key corners will become focal points. Refer to Section 3.2 Character Areas - Framework Plans.



Design Code - Regulating Plan Showing Character Areas

- NEW LANDMARKS ✕
- KEY FRONTAGES —
- CA 6 - RURAL EDGE —
- CA 8 - CORE HOUSING EAST —
- (SPECIAL CONDITION D)\* —

\* The extent of Special Condition Areas D - "Secondary Street Bus Route Through CA7 and CA8" is shown incorrectly on the Regulating Plan and should be as shown below. Refer to Section 3.2.4. Special Condition Areas.



Design Code - Special Condition D

### 3.1.5 Building Density & Heights

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

MEDIUM DENSITY - 30 - 38 dph - CA8 ■  
 MEDIUM / LOW DENSITY - UP TO 30 dph - CA 6 ■



Design Code - Indicative Building Density Plan



32 dph ■  
 23 dph ■  
 Density

### 3.1.6 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*



1 STOREY ■ 2.5 STOREY ■  
2 STOREY ■

Storey Heights Plan



### 3.1.7 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.

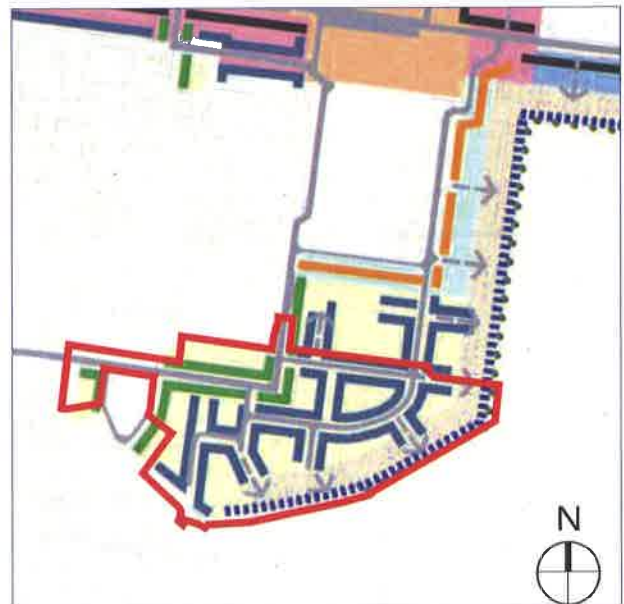
### 3.1.8 Edge Types

The application area includes the following Edge Treatments:

E3 - Landscaped Frontages to promote and extend verdant character;

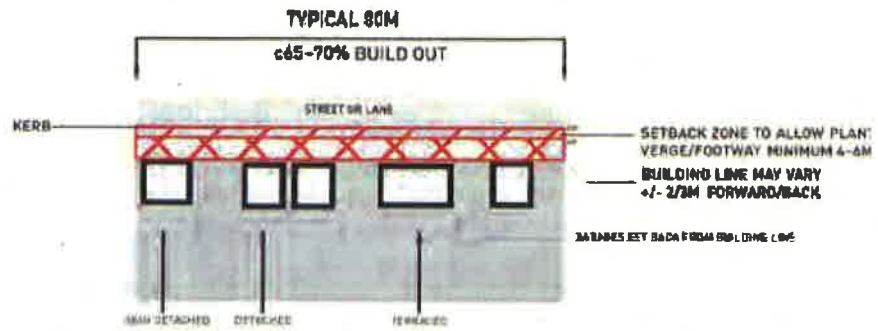
E4 - Park Streets generally core residential areas CA7 - CA8;

E7 - Rural Edge is the most irregular frontage, CA6 only.

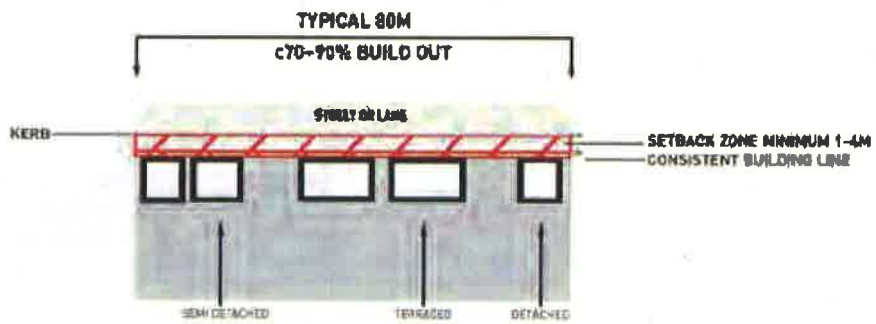


*Design Code - Frontages and Edge Treatments*

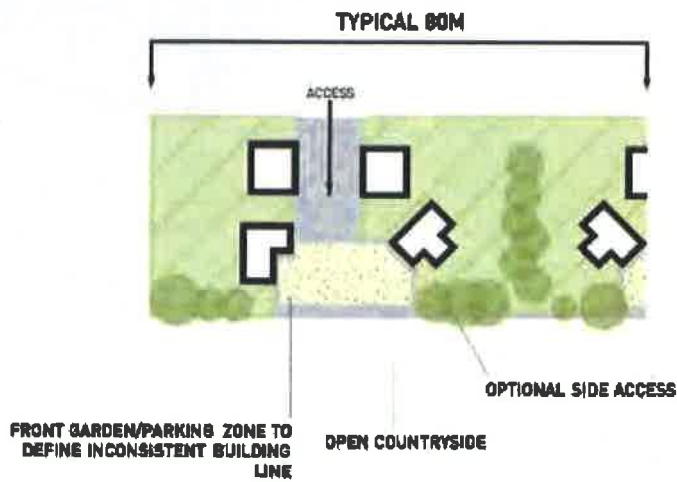
- E3 - LANDSCAPED FRONTAGE —
- E4 - PARK STREETS —
- E7 - RURAL EDGE —



*Design Code - E3 Edge Treatment - Landscaped Frontage*



*Design Code - E4 Edge Treatment - Park Streets*



*Design Code - E7 Edge Treatment - Rural Edge*

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.
- ✓ E7: an inconsistent building line defined by front garden / parking zone.



E3 Landscaped Frontage



E4 Park Streets



E7 Rural Edge

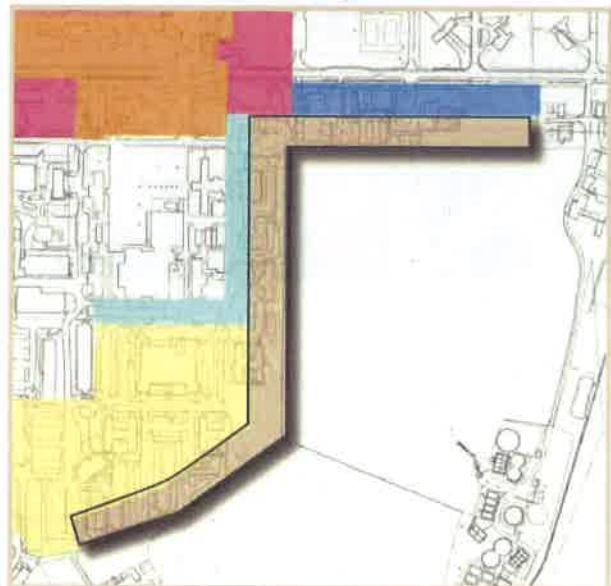
## 3.2 Character Areas

3.2.1 The following sections demonstrate compliance of the Planning Application with the Design Codes for CA6 - Rural Edge and CA8 - Core Housing East.

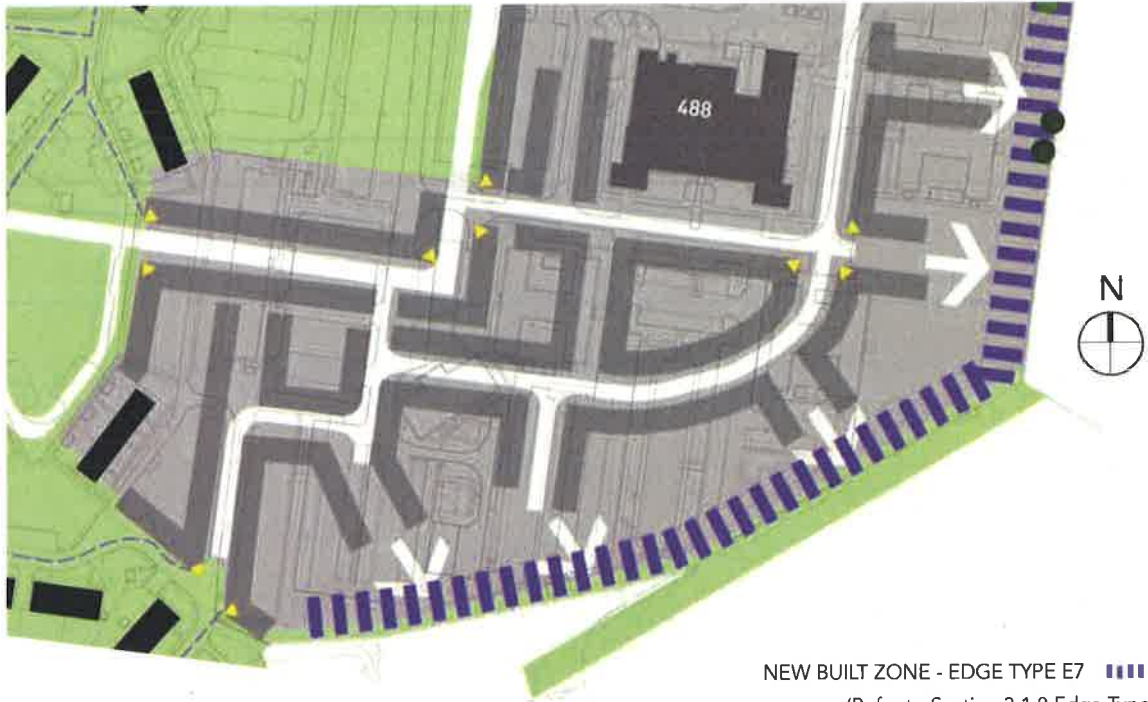
### 3.2.2 CA6 - Rural Edge


The Planning Application shows:

- ✓ Detached dwellings, generally served off private landscaped drives.
- ✓ A more open form with a greater landscape emphasis and increased tree cover.
- ✓ A less formal character that fits with its more rural context.
- ✓ A lower density of detached and semi-detached dwellings with some smaller terraces, forming loose clusters.
- ✓ Informal layout with less adherence to specific building lines.
- ✓ Greater variety of roof and ridge lines to create a more informal character.
- ✓ Development to maximise views over open countryside.



*Design Code - Character Area 6 - Rural Edge*



NEW BUILT ZONE - EDGE TYPE E7   
 (Refer to Section 3.1.8 Edge Types)

*Design Code - CA 6 Rural Edge Framework Plan*



CA6 - RURAL EDGE 

Character Area CA6 - Rural Edge

## CA6 - RURAL EDGE

CA6	CODE CATEGORY	DEFINITION (MANDATORY)
1	URBAN FORM	<ul style="list-style-type: none"> <li>• Adjoining countryside dispersed built form.</li> <li>• The area will have an informal character, made up of largely detached and semi-detached units which will form loose clusters.</li> <li>• There should be landscaped areas between groups of dwellings.</li> </ul>
2	BUILDING TYPOLOGY	<ul style="list-style-type: none"> <li>• Heyford Farmhouses.</li> <li>• Detached and semi-detached to be dominant built form.</li> <li>• Dwellings will typically be detached or semi-detached.</li> <li>• Short rows of terraces will also be supported.</li> </ul>
3	DENSITY	<ul style="list-style-type: none"> <li>• Will generally be low up to 24dph.</li> </ul>
4	BUILDING LINES	<ul style="list-style-type: none"> <li>• Irregular with spaces between buildings allowing landscape to dominate.</li> <li>• An emphasis on informal approach will be required.</li> <li>• There will be no formal building line and the informal configuration of dwellings needs to be considered as a whole.</li> </ul>
5	HEIGHT / ENCLOSURE	<ul style="list-style-type: none"> <li>• 2-2.5 Storeys (predominantly 2 storey).</li> </ul>
6	ROOFSCAPE	<ul style="list-style-type: none"> <li>• Overhang creating pronounced eaves will be required.</li> <li>• Varied eave height and gable ends to animate sides.</li> <li>• A variety of roof types are encouraged.</li> </ul>
7	SCALE AND PROPORTION	<ul style="list-style-type: none"> <li>• Asymmetric buildings with either an 'L' or 'T' shaped footprint.</li> </ul>
8	BUILDING DETAIL	<ul style="list-style-type: none"> <li>• Door canopies to be simple pitched.</li> <li>• Traditional details, chimneys to act as prominent building feature.</li> <li>• Houses should be all brick or all render only.</li> </ul>
9	BUILDING MATERIALS	<ul style="list-style-type: none"> <li>• Walls - Brick with render.</li> <li>• Roof - Slate/Stone effect/clay tile.</li> </ul>
10	LANDSCAPE DESIGN	<ul style="list-style-type: none"> <li>• Informal tree planting will soften the urban edge and break up the built form, typically semi-native species and a range of sizes, shapes and colours. Larger landscaped areas provide visual transition. Residential frontages to be bounded by soft landscaping.</li> <li>• Development should be landscape led and buildings should 'feather' into the rural edge.</li> <li>• The existing site boundary stone wall is to be retained.</li> </ul>
11	PARKING	<ul style="list-style-type: none"> <li>• Parking will be informally located on plot, in garages or in informal parallel/perpendicular groups in front of dwellings.</li> </ul>

### Design Code - CA6 - Rural Edge - Residential - Mandatory & Desired Requirements

COMPLIANCY

✓ Planning application external building materials reflect Design Code. Refer to Dwg 0521-PH4-PH5B-108- Materials Plan.

CA6 - RURAL EDGE - MATERIALS (OR SIMILAR APPROVED)

PREDOMINANT BUILDING WALL MATERIAL



Brick predominantly Red with occasional brown tones

SECONDARY BUILDING WALL MATERIAL (USED TO BREAK UP AND DETAIL ELEVATION)



Render - hazy or Sand Colour

ROOF MATERIALS



Tile



Slate/Slate Effect

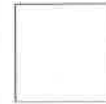
WINDOW COLOUR



Ivory



Warm Grey



White

COMPLIANCY

COMMENTS

See edge type E7

See building typology table more than 50% of units to be detached. Opportunity for larger units and wide frontage properties are encouraged.

See edge type E7

Pronounced eaves may be created by use of exposed rafter feet  
No single pitch roof on individual stand alone buildings.

Occasional bay windows to be at least one bay per 5 dwellings encouraged

Predominantly brick with occasional render. Slate effect predominant and occasional clay tile  
Materials for garages to be agreed at RMA stage

General planting to be informal with flowering herbaceous and shrub planting in a mix of colours and textures, mature species encouraged with decorative planting of individual 'cottage style' species adjoining houses.

- ✓ 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 Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Planning Layout, Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Housetype Booklet 0521-PH4-PH5B-200-229.
- ✓ Refer to Dwg 0521-PH4-PH5B-108 - Materials Layout.
- ✓ Refer to Section 4.0 Public Realm Codes.
- ✓ Refer to Section 2.3 Parking Strategies.

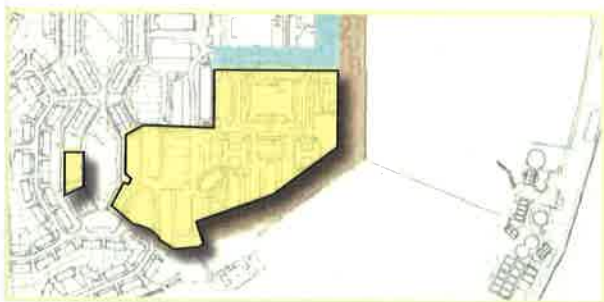
### 3.2.3 CA8 - Core Housing East

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.

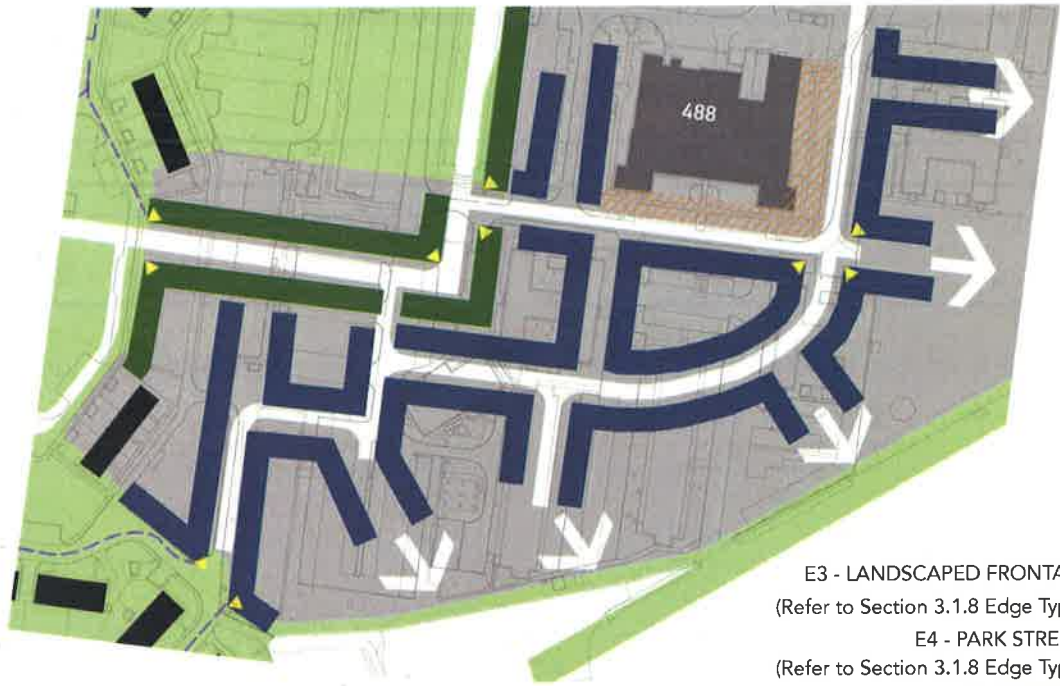
The design approach of the Planning Application is:




- ✓ 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.



*Design Code* - Character Area 8 - Core Housing East







- E3 - LANDSCAPED FRONTAGE (Refer to Section 3.1.8 Edge Types) 
- E4 - PARK STREETS (Refer to Section 3.1.8 Edge Types) 
- KEY CORNERS 

LINKS THROUGH PROPOSED DEVELOPMENT 

*Design Code* - CA 8 Core Housing East Framework Plan



- CA 8 - CORE HOUSING EAST 
- KEY CORNERS 

Character Area CA8 - Core Housing East

CA8	CODE CATEGORY	DEFINITION (MANDATORY)
1	URBAN FORM	<ul style="list-style-type: none"> <li>• Arranged in perimeter blocks with strong distinction between public and private realm</li> <li>• 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</li> <li>• Dwellings will provide clear presence and frontage onto streets and public realm</li> </ul>
2	BUILDING TYPOLOGY	<ul style="list-style-type: none"> <li>• Detached and semi-detached housing with short terraces.</li> <li>• Buildings will be predominantly single family homes.</li> <li>• Buildings should be arranged in groups of 4 – 8 units which share similar characteristics to provide consistency across the street scene.</li> </ul>
3	DENSITY	<ul style="list-style-type: none"> <li>• Density will typically be 30 – 35 dph but will vary through the site.</li> </ul>
4	BUILDING LINES	<ul style="list-style-type: none"> <li>• Frontage in terms of setback may vary depending on edge type.</li> <li>• Building lines should be consistent between groups of buildings but may vary along the length of the street.</li> <li>• Building lines will be permitted to vary forward or back to give emphasis in key locations.</li> </ul>
5	HEIGHT / ENCLOSURE	<ul style="list-style-type: none"> <li>• 2-2.5 Storeys (predominantly 2 storey).</li> </ul>
6	ROOFSCAPE	<ul style="list-style-type: none"> <li>• Eaves and ridge lines will typically be consistent between groups of buildings, but may vary along the length of a street.</li> <li>• Dormer windows should be well set back to break up the roof line.</li> </ul>
7	SCALE AND PROPORTION	<ul style="list-style-type: none"> <li>• Buildings and fenestration to encourage asymmetric buildings form, proportionate in scale and plot size to its surrounding context.</li> </ul>
8	BUILDING DETAIL	<ul style="list-style-type: none"> <li>• Traditional details, porch to be pitched or flat canopy with mandatory changes in canopy design between neighbouring dwellings.</li> <li>• The houses should be configured to ensure, wherever possible, that windows to habitable rooms front onto the street and public realm.</li> <li>• Dwellings should be designed to ensure that there are no blank walls onto the street and public realm.</li> </ul>
9	BUILDING MATERIALS	<ul style="list-style-type: none"> <li>• Walls - Brick and render.</li> <li>• Roof - Slate/Slate effect and tile.</li> </ul>
10	LANDSCAPE DESIGN	<ul style="list-style-type: none"> <li>• Soft landscaping to be simple and largely open frontages</li> <li>• Planting to be used screen and break up parking areas.</li> </ul>
11	PARKING	<ul style="list-style-type: none"> <li>• Parking will predominantly be on plot.</li> <li>• Parking will be configured as part of the public realm design.</li> </ul>

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

**COMPLIANCY**

✓ Planning application external building materials reflect Design Code. Refer to Dwg 0521-PH4-PH5B-108 - Materials Plan.

**CAB - HOUSING WEST - MATERIALS (OR SIMILAR APPROVED)**

**PREDOMINANT BUILDING WALL MATERIAL**



Brick Type 1 - predominantly Red with occasional brown tones  
Brick Type 2 - predominantly Red with occasional brown tones

**ROOF MATERIALS**



Slate/Slate effect  
Tile

**WINDOW/FENESTRATION COLOUR**



Ivory  
Warm Grey  
White

COMMENTS
See edge types E2/E3/E4/E5. Development that fills areas of Carwell 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 188.
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 2.0 storey to be used on corners.
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.

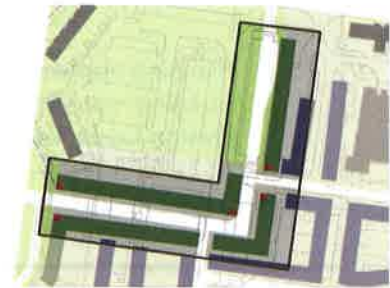
**COMPLIANCY**

- ✓ 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 Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Planning Layout, Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Housetype Booklet 0521-PH4-PH5B-200-229.
- ✓ Refer to Dwg 0521-PH4-PH5B-108 - Materials Layout.
- ✓ Refer to Section 4.0 Public Realm Codes.
- ✓ Refer to Section 2.3 Parking Strategies.

### 3.2.4 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 north western area 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	<ul style="list-style-type: none"> <li>The area should have generally formal streets and plots which will be articulated through the landscape and building form and detail.</li> <li>Dwellings will provide clear presence and frontage onto secondary street and public realm.</li> <li>Buildings adjacent to pedestrian connections to the bungalow area should turn the corner and have greater presence.</li> </ul>
2. BUILDING TYPOLOGY	<ul style="list-style-type: none"> <li>Mainly detached and semi-detached housing with short terraces.</li> <li>Buildings will be predominantly single family homes.</li> <li>Buildings should be arranged in groups of 8-10 units which share similar characteristics to provide consistency across the street scene.</li> <li>Corner runner buildings are required at key junctions. These buildings should have greater presence and architectural detail.</li> </ul>
3. DENSITY	<ul style="list-style-type: none"> <li>Density will typically be 30-35 dph/ha will vary through the site.</li> </ul>
4. BUILDING LINES	<ul style="list-style-type: none"> <li>4-6m building frontage setback zone from kerb edge to promote wider scale to street and promote tree planting.</li> <li>Building lines will be permitted to move forward or back to give emphasis in key locations.</li> </ul>
5. HEIGHT/ ENCLOSURE	<ul style="list-style-type: none"> <li>2/2.5 Storeys</li> </ul>
6. ROOFSCAPE	<ul style="list-style-type: none"> <li>Eaves and ridge lines will typically be consistent between groups of buildings, but may vary along the length of a street.</li> <li>Dormer windows should be well set back to break up the roof line.</li> </ul>
7. SCALE AND PROPORTION	<ul style="list-style-type: none"> <li>Building depth to promote complementary asymmetric buildings.</li> </ul>
8. BUILDING DETAIL	<ul style="list-style-type: none"> <li>Traditional details, with front door canopy and changes in canopy design between neighbouring dwellings (where not in terrace).</li> <li>The houses should be configured to ensure that windows to habitable rooms front onto the street and public realm.</li> <li>Dwellings should be designed to ensure that there are no blank walls onto the street and public realm.</li> </ul>
9. BUILDING MATERIALS	<ul style="list-style-type: none"> <li>Walls - Predominantly brick with limited render.</li> <li>Roof - Slate/Slate effect and tile.</li> </ul>
10. LANDSCAPE DESIGN	<ul style="list-style-type: none"> <li>Soft landscaping to be simple and largely open.</li> <li>Emphasis on providing space for street trees.</li> </ul>
11. PARKING	<ul style="list-style-type: none"> <li>Range of parking strategies following good practice guidance.</li> <li>On shared surface routes parking can be parallel to maximise efficiency.</li> <li>Parking will be predominantly on plot.</li> <li>Parking will be configured as part of the public realm design.</li> </ul>

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

COMPLIANCE

COMMENTS
Edge types E3
Building typology table
Edge types E3
Reference for 23 stories if used on others
Provision for dwelling to have gable or eave within roofspace
Consistency of building scale with tops of 4-10 buildings sharing similar characteristics
Window size may vary across elevation or canopies to be simple pitched, occasional bay windows
Roofers encouraged on landmark building occasional chimneys to act as building feature
Materially brick, occasional render, predominantly stone effect, occasional fib
Plant trees to be formal in habit along primary streets and secondary streets; occasional formal along shared surface streets and

- ✓ 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 Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Planning Layout, Housetype Booklet 0521-PH4-PH5B-200-229 & Dwg 0521-PH4-PH5B-103 - Street Scenes.
- ✓ Refer to Housetype Booklet 0521-PH4-PH5B-200-229.
- ✓ Refer to Dwg 0521-PH4-PH5B-108 - Materials Layout.
- ✓ Refer to Section 4.0 Public Realm Codes.
- ✓ Refer to Section 2.3 Parking Strategies.

## 3.3 Building Types

### 3.3.1 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.

### 3.3.2 Building Detail

The Planning Application shows:

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

Refer to Dwg 0521-PH4-PH5B-103 Street Scenes and Dwg 0521-PH4-PH5B-108 Materials Layout.

### 3.3.3 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.

### 3.3.4 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.




### 3.3.5 Built Form - Materials

The Planning Application shows:

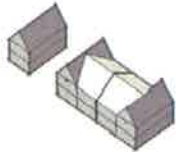
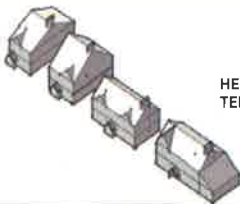
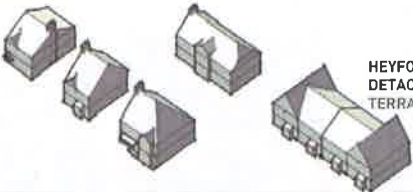
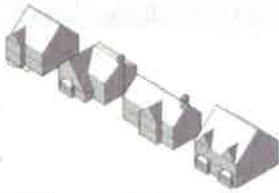

- ✓ A limited palette of materials which reflect the early 20thC Arts and Crafts architecture, and generally:
- ✓ Maximum 3-4 finishes in a single elevational composition.
- ✓ Change of materials used to express geometry of the building design rather than just for variety.
- ✓ Where buildings form a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

### 3.3.6 Building Typology

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

CA 6 - RURAL EDGE		COMPLIANCY
2 BED	N/A	2 beds included in design for market purposes
3 BED	N/A	3 beds included in design for market purposes
4 BED	 HEYFORD FARMHOUSES DETACHED/SEMI DETACHED	✓
5 BED	 HEYFORD FARMHOUSES DETACHED/SEMI DETACHED	✓
APARTMENTS STRUCTURES	N/A	n/a
ANCILLARY STRUCTURES	 HEYFORD BARNS	✓



	<del>CA 8 CORE HOUSING (WEST)</del>	CA 8 CORE HOUSING (EAST)	COMPLIANCY
2 BED		HEYFORD COTTAGES DETACHED/SEMI DETACHED / TERRACES	✓
3 BED		HEYFORD COTTAGES DETACHED/SEMI DETACHED/ TERRACES	✓
4 BED		HEYFORD COTTAGES/HOUSES DETACHED/SEMI DETACHED/ TERRACES	✓
5 BED		HEYFORD HOUSES 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 - RURAL EDGE



# 4

## Public Realm Codes

## 4.1 Landscape Strategy & Placemaking

### 4.1.1 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.

### 4.1.2 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.

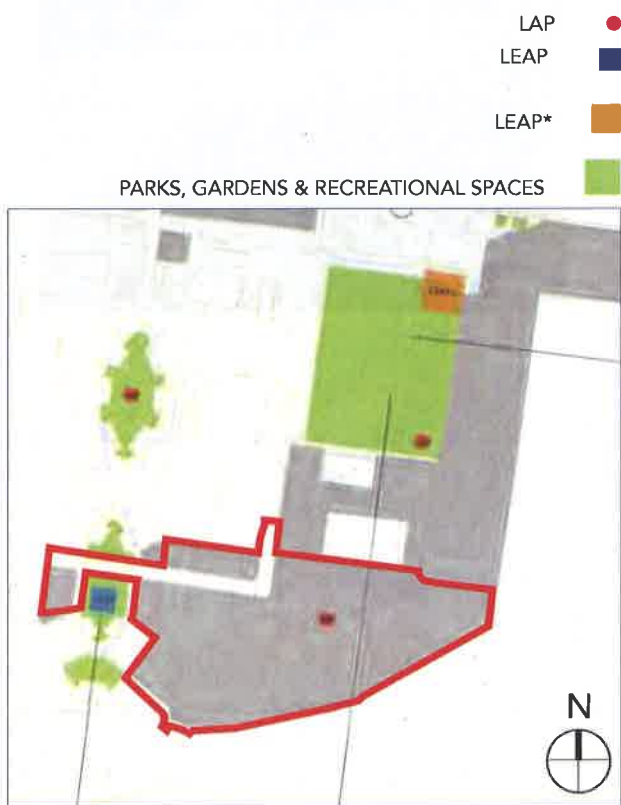
The proposals shown on the detailed landscape reflect the need for a high quality scheme which links with the architectural style and prominence. Where space allows strategically placed trees along garden frontages and road verges will help to break up the building mass, these predominantly native tree 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.



Design Code - Landscape Strategy Plan

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 self-binding 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.



## 4.2 Play Areas

### 4.2.1 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.

### 4.2.2 Pocket Parks

There are no Pocket Parks within this Planning Application.

## 4.3 Boundary Treatments & Street Furniture

### 4.3.1 Boundary Treatments

Refer to Section 3.2 Character Areas.

### 4.3.2 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.

# 5

## Sustainable Design & Infrastructure



## 5.1 Drainage Infrastructure

### 5.1.1 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.
- 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.

### 5.1.2 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.

### 5.1.3 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 - 174.8m<sup>3</sup>
- Phase 4 - 1263.3m<sup>3</sup>
- Phase 5 - 374m<sup>3</sup>
- Phase 5b - 150m<sup>3</sup>
- Phase 6 - 214.5m<sup>3</sup>
- Parcel D4a west - 0m<sup>3</sup>

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<sup>3</sup> 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.

#### 5.1.4 SUDS

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

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

## 5.2 Building Construction

### 5.1.5 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.

### 5.2.1 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 application for the approval of reserved matters.



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