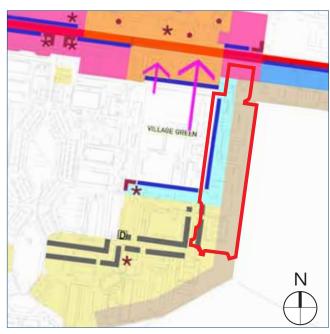
### 3.2 Character Areas

3.2.1 CA1, CA3, CA4 and CA7 lie outside the planning application.

The following sections demonstrate compliance of the Planning Application with the Design Codes for CA2, CA5, CA6 and CA8.



Design Code - Regulating Plan Showing Character Areas



### Note

Special Conditions ABC&D are shown incorrectly on the above plan - refer to P. 40 - Indicative Street Hierarchy - Location of Bus Route and P. 112 Special Condition D.

Therefore it has been assumed that Special Condition D does not lie within this Planning Application.





### 3.2.2 CA2 - Village Centre - Residential

### The Planning Application shows:

 High / medium density housing fronting onto Camp Road.

It should be noted that due to constraints, the Camp Road frontage has been amended to detached dwellings rather than short terraces. This has been agreed with the LPA and also reflects the approved Phase 1 development.

- Development has strong presence along Camp Road.
- Provision of wide verges and mature tree planting along Camp Road.

### CA2 - VILLAGE CENTRE RESIDENTIAL

CA2	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	Consistent built frontage facing primary road network. Greater presence and continuity of urban form is expected in this area of Camp Road. Development should front directly onto Camp Road and reinforce its linear character. Building types should be selected that ensure windows of habitable rooms give onto and provide surveillance of the street.  A street character should be developed that provides consistency and grouping of similar house types and heights.  Buildings should be arranged in groups of 4 – 10 which share similar characteristics.  Development should frame the entrance into the existing Carswell Circle Area, using landmark, corner turning buildings to support the orientation to this area of the site.	
2	BUILDING TYPOLOGY	<ul> <li>See typology table - Heyford terraces and semi-detached housing.</li> <li>Development will be predominantly terraced, with some semi detached dwellings.</li> <li>Where terraced housing is proposed properties should have consistent features across the row.</li> <li>Bespoke corner turning buildings will be required that address Camp Road and the Village Centre.</li> </ul>	
3	DENSITY	• Will generally be higher than peripheral areas at 36–40dph.	
4	BUILDING LINES	Consistent to give coherance to built form.  See edge type E1/E3/E4 (in part).  Development should follow a predominant building line along the length of Camp Road.	
5	HEIGHT / ENCLOSURE	<ul> <li>Generally greater height and enclosure than adjacent CA4 Camp Road housing.</li> <li>Development will have greater presence than other areas. This will be provided through steeper roof pitches (minimum of 45 degrees and greater use of 2.5 storey.</li> </ul>	
6	ROOFSCAPE	Pitched roofs with frequent gable or dormers to animate public realm frontages. Housing will be predominantly ridged onto Camp Road. Eaves lines will be consistent. Gables where proposed should be functional. Gables will be promoted on the corner turning buildings.	
7	SCALE AND PROPORTION	• Symmetric and proportionate in scale to plot size and surrounding context.	
8	BUILDING DETAIL	• Traditional details providing a transition between other character areas and CA1 and CA4 which adjoin the area. • Dwellings should be designed to ensure no blank walls front onto the public realm. • Window arrangements to be predominantly symmetrical to provide transition from facilities/barracks that adjoin the edge of this area.	
9	BUILDING MATERIALS		
10	LANDSCAPE DESIGN	<ul> <li>Formal street tree planting, typically within grassed verges. Street furniture – modern design.</li> <li>Camp Road is currently defined by strong existing planting which should be retained where possible.</li> <li>To west of the Village Centre there is a substantial area of vegetation and development in this area needs to be carefully considered to retain as much high value tree cover as possible.</li> </ul>	
11	PARKING	<ul> <li>Parking will be configured using a variety of types.</li> <li>Drive through arches, with residential development above will be acceptable in this area.</li> <li>As one of the objectives of development in this area is to promote a greater continuity of frontage, some rear parking will be acceptable in this location.</li> </ul>	

Design Code - CA2 - Village Centre - Residential - Mandatory & Desired Requirements

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

### PREDOMINANT BUILDING



Brick predominantly Red with occasional brown

### **ROOF MATERIALS**



Slate/Slate Effect

#### BUILDING WALL MATERIAL FOR KEY NOTE DETAILING/ DENTIL COURSES



Brick Blue/Grey

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

Render

### WINDOW COLOUR



White

Light Grey

### COMMENTS

See Edge Types E1 (Camp Road interface), E3 (to reinforce connection to Carswell Circle) & E4 (Park Street frontages where away from Camp Road).

Terraces to be predominant (target 50% minimum).

Allowance for increase in E1/E3/E4 build out up to 90% and Camp Road setback predominantly 8M.

Predominantly 2.5st will be encouraged. Apparent 2.5 storey height can be provided by use of full gable fronting Camp Road.

Main roof minimum 45° pitch.

Regular dormer or gable spacing encouraged.

Bay windows allowed on corner and

Chimney on corner plots, flat canopy on each main door where fronting public realm.

Occasional render may be used if all of dwelling.

Materials to be agreed at RMA stage.

Street tree species to continue as the majority of Camp Road (CA4) to provide continuity and maintain the tree hierarchy. Verges could be planted with spring flowering bulbs to create interest.

### 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 0521/200 onward
- Refer to Planning Layout, Housetype Booklet & Dwg *0521-103 Street Scenes*.
- ✓ Refer to Housetype Booklet 0521/200 onward
- $\checkmark$  Refer to Dwg *0521-108 Materials Plan*.
- ✓ Refer to Section 4. Public Realm Codes.
- ✓ Refer to Section 3.2 Parking Strategies.

### 3.2.3 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 formally aligned with common building lines and equal spaces between dwellings.

### CA5 - VILLAGE GREEN

CA5	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	<ul> <li>Frontage to village green</li> <li>Development will generally be formal, comprising a unified and regular massing of built form that fronts onto the Village Green.</li> <li>Villa style development, with detached and semi detached units will provide a regular rhythm to the space.</li> <li>Coherent groups of house types and styles to be used.</li> </ul>	
2	BUILDING TYPOLOGY	Detached and semi detached dwellings in the form of villas.	
3	DENSITY	• Will generally be medium 30–35dph.	
4	BUILDING LINES	<ul> <li>Consistent frontages with regular spacing between dwellings.</li> <li>Development will follow a formal fixed building line.</li> <li>Encroachments are allowed in the form of balconies and central projections.</li> </ul>	
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	<ul> <li>Pyramidal or full hip roof to all dwellings.</li> <li>A consistent eaves and ridge line should be maintained.</li> <li>Dwellings should have a largely symmetrical plan and facade.</li> </ul>	
7	SCALE AND PROPORTION	<ul> <li>Relatively deep front to back symmetric buildings proportionate in scale and plot size to its surrounding context.</li> <li>Consistency in plot width across elevations.</li> <li>Eaves and roof line to be consistent across a frontage to maintain a symmetrical approach.</li> </ul>	
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	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

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

### CA5 - VILLAGE GREEN- MATERIALS (OR SIMILAR APPROVED)

PREDOMINANT BUILDING WALL MATERIAL



Slate/Slate effect

ROOF MATERIALS

WINDOW COLOUR







Render -Ivory or White Colour



Brick predominantly Red with occasional brown tones

### 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 0521/200 onward
- ✓ Refer to Planning Layout, Housetype Booklet & Dwg 0521-103 Street
  Scenes.
- ✓ Refer to Housetype Booklet 0521/200 onward
- ✓ Refer to Dwg *0521-108 Materials Plan*.
- ✓ Refer to Section 4. Public Realm Codes.
- ✓ Refer to Section 3.2 Parking Strategies.

COMMENTS

See edge type E6.

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

Tree planting within this area to be focused upon trees within the village green.

Street furniture – modern design.

See table overleaf.

### 3.2.4 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.

- ✓ A lower density of detached and semidetached dwellings.
- ✓ Informal layout with less adherence to specific building lines.
- ✓ Greater variety of roof and ridge lines.
- Development to have views out to open countryside.

### CA6 - RURAL EDGE

CA6	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	<ul> <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  - Heyford Farmhouses.  - Detached and semi-detached to be dominant built form.  - Dwellings will typically be detached.  - Short rows of terraces will also be supported.		
3	DENSITY	• Will generally be low up to 24dph.	
4	BUILDING LINES	<ul> <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	• 2–2.5 Storeys (predominantly 2 storey).	
6	Overhang creating pronounced eaves will be required. Varied eave height and gable ends to animate sides. A variety of roof types are encouraged.		
7	SCALE AND PROPORTION	Asymmetric buildings with either an 'L' or 'T' shaped footprint.	
8	BUILDING DETAIL	Door canopies to be simple pitched. Traditional details, chimneys to act as prominent building feature. Houses should be all brick or all render only.	
9	BUILDING MATERIALS  • Walls - Brick with render. • Roof - Slate/Slate effect/clay tile.		
10	<ul> <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 land 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	Parking will be informally located on plot, in garages or in informal parallel/perpendicular groups in front of dwellings	

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

### CA6 - RURAL EDGE - MATERIALS (OR SIMILAR APPROVED)

#### PREDOMINANT BUILDING WALL MATERIAL



with occasional brown

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

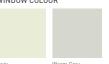




**ROOF MATERIALS** 



### WINDOW COLOUR







### 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

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.

### **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 0521/200 onward
- Refer to Planning Layout, Housetype Booklet & Dwg 0521-103 Street
- Refer to Housetype Booklet 0521/200 onward
- Refer to Dwg 0521-108 Materials Plan.
- Refer to Section 4. Public Realm Codes.
- Refer to Section 3.2 Parking Strategies.

### 3.2.5 CA8 - Core Housing East

The Planning Application shows:

- Simple and formal "perimeter block" housing with a strong sense of public and private space with fronts facing onto the shared public realm.
- 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 frontage onto streets and public realm.
- Eaves and ridge lines consistent within groups of buildings but may vary along length of street.

CA8	CODE CATEGORY	DEFINITION (MANDATORY)	
1	URBAN FORM	<ul> <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> <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	Density will typically be 30 - 35 dph but will vary through the site.	
4	BUILDING LINES	<ul> <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	• 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	<ul> <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	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.	

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

### CA8 - HOUSING WEST - MATERIALS (OR SIMILAR APPROVED)

### PREDOMINANT BUILDING WALL MATERIAL







with occasional brown with occasional

**ROOF MATERIALS** 





WINDOW/FENESTRATION COLOUR







### IENTS

dge types E2/E3/E4/E5.

spends that infills areas of Carswell should have consistent ridge and eave s, building lines, massing and detail to sisting buildings development proposals ress effective retention of Building 488.

ilding typology table. Terraces raged to provide consistency across ges and limit narrow gaps between er house types.

dge types E2/E3/E4/E5.

ence for 2.5 storey to be used on

f dwellings have gable or dormer roof form.

stency of building scale encouraged with s of 4–10 buildings that share similar

ional chimneys to act as building featur ional bay windows. Window size may va s elevation.

minantly brick, occasional render. minantly slate effect, occasional tile. er whole dwelling where used. ials to be agreed at RMA stage

trees to be formal in habit along tertiar s and secondary streets; and informal 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.
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- Refer to Dwg 0521-108 Materials Plan.
- Refer to Section 4. Public Realm Codes.
- Refer to Section 3.2 Parking Strategies.

### 3.3 Building Types

### 3.3.1 Built Form Guidance - Streetscene Overview

The Planning Application shows:

- Active frontages onto streets created by main frontages and windows.
- Windows are provided to principle elevations.
- Dwellings to 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 simple palette of materials which will vary according to character area.

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

### 3.3.3 Built Form - Architectural Design

The Planning Application shows:

- Variation in structural form to create different, identifiable character areas. 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 provide sense of depth.

### 3.3.4 Built Form Guidance - Fenestration

The Planning Application shows:

- An emphasis on entrances through set backs, recesses, canopies and steps.
- An emphasis on windows of principal rooms through larger size or greater prominence.
- ✓ Windows are located to allow ease of surveillance of property, especially at entrances.
- Scale and proportions of windows relate to the facade composition.

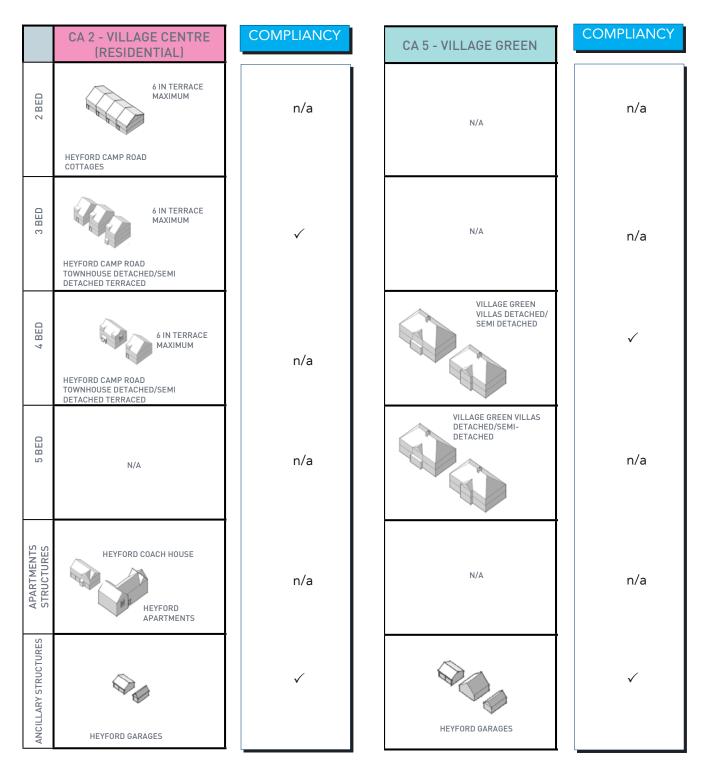
### 3.3.5 Built Form - Materials

The Planning Application shows:

- ✓ A limited palette of materials, and generally:
- ✓ Maximum 3-4 finishes in a single elevational treatment.
- Change of materials used to express geometry.
- Where buildings form a focus, the main architectural elements such as entrances or projecting elements will be emphasised.

### 3.3.6 Building Typology

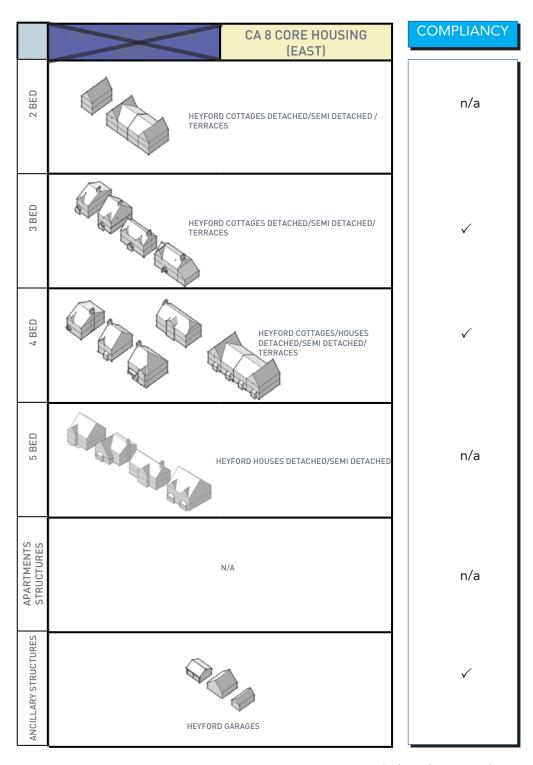
The Planning Application complies with the Building Typology Codes as follows:



Design Code - Built Form Typologies

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

Design Code - Built Form Typologies



Design Code - Built Form Typologies



Planning Layout

A A







STREET SCENES 2 VILLAGE CENTRE ( OFF CAMP ROAD)







Street Scenes

4

## Public Realm Codes

### 4.1 Landscape Strategy & Placemaking

### 4.1.1 Public Realm Code

The character of the public realm will help establish the different character areas. This includes formal and informal landscape and planting, and private gardens.

Please refer to Section 4.4 Landscape Proposals.

### 4.1.2 Parks and Gardens

There are no Parks or Gardens within this Planning Application, however the Site lies adjacent to the Village Green open space.

### 4.1.3 Linear Park / SUDS Corridor

There is no Linear Park or SUDS Corridor within this Planning Application.





Design Code - Landscape Strategy Plan

### 4.2 Play Areas

### 4.2.1 Camp Road

There are no Camp Road play areas within this Planning Application, however the site is located close to, and with good access, to a LAP and a LEAP within the Village Green open space and a LAP within CA8 - Core Housing East.

### 4.2.2 Gateway Feature

There are no Gateway Features within this Planning Application.

### 4.2.3 Pocket Parks

There are no Pocket Parks within this Planning Application.

### 4.2.4 Urban Landscaped Node

This area falls outside the Planning Application.

### 4.3 Boundary Treatments & Street Furniture

### 4.3.1 Boundary Treatments

Refer to Section 3.2 Character Areas.

 Hedge planting alongside Camp Road will be in the public realm to allow it to be retained and managed in a consistent way.

### 4.3.2 Street Furniture

- There will be an emphasis on timber street furniture.
- ✓ Street furniture will reflect the architecture to ensure a coordinated approach.
- 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.

### 4.4 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 landscape plans 1619 01 & 02 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.

To the north and located off Camp Road a small more informal, wildlife area is proposed which incorporates several mature tree specimens. To the east, south-east a strong existing tree belt is to be retained and enhanced.

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 set behind railings/walls filtering views of the adjacent road.

All of the retained trees which will be made safe and managed appropriately to an agreed programme of works. Generally, where space permits to the eastern boundary 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 soften this important boundary. 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 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 swaves 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.







# 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 balancing ponds, permeable paving and attenuation tanks where necessary. Swales will be incorporated within the development parcels.
- 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.
- The maximum surface water discharge rate is 112.8l/s/ha.
- The maximum surface water storage volume estimated in the calculations in 2531m cu.

### 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.

- 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 balancing ponds/ 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.

### 5.1.3 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:

- Parcel D2a
- Parcel D2e
- Parcel D3a
- Parcel D4a
- Parcel D4a
- Former school site
- 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 current design incorporated Hydrobrakes and orifices to restrict the speed of water passing through the system. Where water backs up due to these controls, culverts, oversized pipes and storage tanks have been utilised to ensure the water can be stored within the underground system.

### 5.1 Drainage Infrastructure cont.../

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 2097m 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 165.6m long, 500mm deep with 1:3 side slopes.

The planning layout also requires a length of porous paving. 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 251.2l/s.

### 5.1.4. SUDS

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

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

### 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, 11 plots will discharge into the existing pumpstation located to the South West of RMA2.

### 5.1.6. Parcel D2a specifics

Parcel D2a represents the first 50 dwellings on the RMA2 development.

The main surface water strategy for this section of the scheme consists of 2 No. Flow control manholes, twin pipes for storage/ conveyance and 163m cu of below ground "crate" type storage tanks. There is no above ground flooding during a 1 in 100 year event including a 30% allowance for climate change. The surface water flows from the parcel, into Road 1 to the west of the parcel before connecting into the main proposed RMA2 network.

The foul drainage flows from the parcel, into the drainage under Road 1 to the west of the parcel before connecting into the existing foul network prior in the east of the development.

### 5.2 Building Construction

5.2.1 The dvelopent 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.

