

Chapelgarth, Sunderland

Design Code

July 2016

siglion.

siglion.

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July 2016

This document has been updated in line with comments from the LPA and supersedes the document dated February 2016.

Produced on behalf of Siglion.

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Please print this document A3 Landscape short edge double sided on FSC certified paper.


Contents

01 Red Line Boundary	4	Chapelgarth Landscape Strategy	40	Delivery and Implementation	84
Introduction	5	11 Key Landscape Elements	42	27 Parcellation Plan, Management and Maintenance	86
How to Use The Code	6	12 Open Space Strategy	44	28 Phase 1 Infrastructure Works	87
The Vision	8	13 Recreational Routes	46	Appendix: Regulatory Plans	90
Illustrative Masterplan	10	14 Green Gateways	48		
The Neighbourhood Strategy	12	15 Suitable Alternative Natural Greenspace [SANG]	50		
The Landscape Strategy	13	16 Central Park - Joe's Paddock	52		
Chapelgarth Neighbourhood Strategy	14	17 Panoramic Park	53		
02 Access, Movement and Streets	16	18 Pocket Parks and Doorstep Play	54		
03 Neighbourhood Character Areas	20	19 Green Links & Amenity Open Space	56		
04 Building Line	22	20 Public Art	57		
05 Building Heights	23	21 Green Buffers and Easements	58		
06 Building Density	24	22 Planting Strategy: Planting Character Areas	61		
07 Developable Area Land Uses	25	23 Planting Strategy: Streets	66		
08 Sustainable Urban Drainage	36	24 Materials Strategy	70		
09 Parking Strategy	38	25 Boundary Treatment Strategy	78		
10 Sustainability	39	26 Lighting Strategy	82		

Section numbers relate to a principle of the masterplan which will be conditioned as part of the planning application approval, along with the regulatory plans and rules contained within that section.

01 Red Line Boundary



Red Line Parameters		
Key	Parameter	Details
	RP01A	Red Line: The red line boundary covers an area of 49.73 Hectares

Introduction

The purpose of this document is to set out the design principles of the hybrid planning application (No.16/00388/HY4) for the Chapelgarth development in Sunderland. This refers to the site shown edged red on the site location plan, displayed on the previous page (Regulatory Plan 1). This document sets out the exact extent of the hybrid consent and will be used to regulate the production of future planning applications for different areas of the site.

The hybrid planning application is seeking consent for:

The development of 49.73 hectares of land known as Chapelgarth, Sunderland. The application seeks outline consent for up to 750 residential units, public open space and new internal road network along with upto 1000 sq m of ancillary commercial uses including Retail (A1), Financial and Professional Services (A2), Restaurant and Cafes (A3) Offices (B1) Non Residential (D1) and Assembly and Leisure (D2), together with associated landscaping and car parking. All matters apart from access to be reserved in relation to the outline element of the proposals. The development also seeks detailed consent for a first phase of infrastructure which shall include the creation of a new protected right turn junction into the site, off Weymouth Road, landscaping and creation of attenuation ponds.

The nature of the application, being mostly outline, means we are seeking consent for siting, height and massing and means of access together with the overall number of housing units and extents of the community heart. The document is accompanied by a Design and Access Statement prepared by the design team that describes the thinking behind the different elements of the Illustrative Masterplan.

The Design and Access Statement is illustrative and includes a lot of detail not normally covered by a largely outline planning application. The team however recognises that in some cases the Planning Authority will require commitments

to be made on the layout of the scheme and the design and provision of the landscaping elements.

The rules and regulatory plans contained within this document seek to fix certain elements of the masterplan layout including the dimensions of the streets and spaces that make up the public realm and public open spaces of the scheme, which in turn fixes the building lines of each residential block. In doing this it fixes the public routes and therefore the permeability of the masterplan as well as the extent of active frontages.

This process of masterplanning with Illustrative and regulatory plans is very similar to the way that the great masterplans of the past were prepared by people like Nash and Haussemann. The principle is that the plan is very firm on the masterplanning parameters of siting, massing and use, but flexible in terms of detailed design, materials and architecture. The principle is that layers of detail can be added as the scheme develops over time so that it becomes richer.

Layout of this Document

This document is organised into 3 chapters which explain what we are intending to fix in more detail:

The Vision: Sets out our vision for a new sustainable development in Sunderland, and provides details of the design principles to be covered in the Code.

Chapelgarth Neighbourhood Strategy: sets out the parameters for the areas of the masterplan concerning housing, the community heart and roads.

Chapelgarth Landscape Strategy: sets out the landscape parameters and includes the location and design of the public open space to be delivered.

Delivery and Implementation: provides information on how each area of green space will be delivered within the provisional timescales.

A new housing development for Chapelgarth:

Up to
750 homes

New
community
heart

13.74 ha
of natural
greenspace

Connected
recreational
routes

Drainage
strategy

How to Use The Code

It is intended that this document, alongside the Design and Access Statement, will be used by Housebuilders to guide future development proposals for the Chapelgarth site. It will also be used by the Local Planning Authority (LPA) whilst determining forthcoming planning applications.

This document should be read in conjunction with the Design and Access Statement (dated February 2016) in order to understand the scheme. However this document is intended as the definitive record of the planning consent and in the case of conflict with the Design and Access Statement this document takes precedence.

The Design Code

Each numbered section within this document describes a principle of the masterplan. Within each section, more detail is provided, which falls into one of the three categories described below:

1. Parameters: These are spatial components which will be fixed to a certain location on the masterplan. These are defined on the regulatory plans. Each parameter is accompanied by a number e.g. RP01A. The Illustrative Masterplan displayed within 'The Vision' chapter then seeks to show the desired result of these parameters.

2. Rules: These are compulsory guidelines, which any new development must adhere to. Each rule is accompanied by a number e.g. RL01A. These will guide the detailed design of future housing proposals.

3. General Guidance: This provides exemplar and best practice examples to inspire future development. These are usually in the form of precedent images provided in each section.

It is intended that parameters and rules will be conditioned as part of the planning application approval along with the regulatory plans associated with the parameters.

The table on the following page provides an overview of each element of the masterplan and the parameters and/or rules which must be followed when designing up proposals.

The Design & Access Statement

This Design Code should be read in conjunction with the Design and Access Statement, submitted as part of the planning application. The D&A explains the thinking behind the masterplan and scheme design and justification behind each masterplan principle.

Recommended Reading

Further recommended reading is provided in the table below:

Type	Document	Source	Details
Local Authority Guidance	South Sunderland Growth Area SPD (Draft 2016)	http://www.sunderland.gov.uk/index.aspx?articleid=10631	Comprehensive design document providing guidance specific to the Chapelgarth Site
Local Authority Guidance	Residential Design Guide (Adopted Oct 2008)	Available on SCC website: http://www.sunderland.gov.uk/index.aspx?articleid=2202	Local Authority wide guidance on new housing developments
Good Practice Guidance	Footprint©	http://urbed.coop/sites/default/files/20131001%20-%20Footprint_0.pdf	igloo Regeneration's bespoke policy which provides guidance on creating sustainable places
Good Practice Guidance	Building for Life 12	http://www.designcouncil.org.uk/resources/guide/building-life-12-third-edition	Good practice guidance on designing future homes and communities for people

Design Code: List of Principles, Regulatory Plans, Parameters and Rules

Chapter	Principle	Pg	Regulatory Plan	Parameters	Rules
	01 Red Line Boundary	4	Reg 01 - Redline	Identifies the site boundary	
Neighbourhood Strategy	02 Access, Movement and Streets	16	Reg 02 - Access, Movement and Streets	Fixes the position of primary and secondary routes through the site. Identifies the rises, lanes and green streets.	Sets out the street layout requirements
	03 Neighbourhood Character Areas	20		Outlines the boundary of each character area	Pg 26-35 provides a summary of the elements defining each of the character areas to determine the look and feel of each neighbourhood.
	04 Building Line	22			Identifies the maximum building line and set-back by neighbourhood character area
	05 Building Heights	23			Identifies the permitted building heights by character area
	06 Building Density	24			Identifies the building density zones across the development
	07 Developable Area Land Uses	20	Reg 07 - Developable Area and Land Uses	Fixes the spread and location of the land uses across the site	
	08 Sustainable Urban Drainage	36			Provides an overview of the sustainable urban drainage strategy
	09 Parking Strategy	38			Provides an overview of the parking strategy
	10 Sustainability	39			Provides an overview of the sustainability requirements for new buildings
	Landscape Strategy	11 Key Landscape Elements	42		
12 Open Space Strategy		44	Reg 12 - Open Space Strategy	Identifies the location and extent of open spaces throughout the site and the green links to be provided	
13 Recreational Routes		46	Reg 13 - Recreational Routes	Identifies the location and connections between recreational routes to be retained/ enhanced or proposed as part of the masterplan.	
14 Green Gateways		48			Identifies key green gateway requirements
15 Suitable Alternative Natural Greenspace [SANG]		50			Identifies the required treatments for areas of SANG
16 Central Park - Joe's Paddock		52			Identifies the recommended treatments for the Central Park
17 Panoramic Park		53			Identifies the recommended treatments for Panoramic Park
18 Pocket Parks and Doorstep Play		54			Identifies the recommended treatments for areas of SANG
19 Green Links & Amenity Open Space		56			Identifies the recommended treatments for areas of SANG
20 Public Art		57			Guidance on public art provision and locations
21 Green Buffers and Easements		58			Identifies the recommended treatments for buffer areas
22 Planting Strategy: Planting Character Areas		61			Guidelines on the planting strategy across Planting Character Areas.
23 Planting Strategy: Streets		66			Guidelines on the planting strategy across Street types.
24 Materials Strategy		70			Guidelines on materials to be used across the site
25 Boundary Treatment Strategy		78			Guidelines on boundary treatments across the site.
26 Lighting Strategy		82			Guidelines on lighting across the site
Delivery and Implementation		27 Parcellation Plan, Management and Maintenance	86		
	28 Phase 1 Infrastructure Works	87			Details on the phase 1 infrastructure package

T
These are principles of the masterplan which will influence future proposals

T
Spatial components which will be fixed to a certain location on the masterplan. These are defined on the regulatory plans

T
These are compulsory guidelines, which any new development must adhere to.

The Vision





Illustrative Masterplan

The illustrative masterplan displayed on the following page is Siglion’s vision for the Chapelgarth site. The Landscaping and Drainage Strategy forms a key part of the masterplan, seeking to create public open spaces for new residents to enjoy whilst managing water movement around the site in a sustainable way.

Siglion is a joint venture between Carillion Developments and Sunderland City Council and is managed by leading property experts igloo Regeneration. Siglion were appointed to bring forward proposals to develop the Chapelgarth site for residential development.

The site is identified in the Sunderland UDP (1998) as a good location for growth and sets out that the majority of the site should be brought forward as housing with high quality, low density housing being promoted. The UDP policies are still relevant to the site and Sunderland City Council are in the process of creating the South Sunderland Growth Area (SSGA) Supplementary Planning Document, which will re-allocate the site for housing.

Planning policy from the saved UDP identifies Chapelgarth for residential development, with a strategic multi-user route passing through the site. Proposals will require an open connection through the site to be maintained to connect with the footpaths travelling south of the site.

Our Urban Designers URBED, along with local Landscape Architects, Colour, have developed the current masterplan for the site shown opposite. This plan provides an illustration of how the area could be built over the next 8-10 years.

This site provides a unique opportunity to develop a sustainable, well-connected neighbourhood with a variety of housing characters and accessible open spaces.

Key design drivers for the masterplan include:

- > Creating a new heart for both the new and existing community;
- > Creating a series of sub-neighbourhoods each with their own distinct characters;
- > Creating new accessible open green spaces as well as improving existing ones;
- > Creating a network of linked streets which connect into existing vehicular routes and the well used footpaths over the site;
- > Creating a place to live which has clear connections to the site’s natural setting;
- > Taking advantage of the site’s panoramic views to the sea in the east and the city centre in the north.

The illustrative masterplan is a result of combining all parameters and rules contained within this document. If housing is built out to the maximum densities specified in each character area, it will be able to accommodate 750 homes, and over 13.5 hectares of public green space:

Indicative area schedule: based on the illustrative masterplan

Type	Character Area	Area (Hectares)	Houses (Units)	Community Heart Floorspace (Square metres)
Neighbourhood	1: Knockles Square	3.22	91	
	2: Moor Farm	7.16	166	
	3: Chapelgarth Meadows	2.92	80	Up to 1,000
	4: Thristley	10.35	290	
	5: Foxcover	5.68	117	
	Total:	29.33	744	1,000
Landscape	SANG	13.74		
	Amenity Green Space (Parks and Pocket Parks)	5.18		
	Equipped Play Space	0.36		
	Total:	19.28		



Moorside

Morside Road

Burdon
Vale

Portland
Academy

Character
Area 1:
Knockles
Square

Weymouth Road

Blakeney
Woods

Character
Area 3:
Chapelgarth
Meadows

Silksworth
Plantation

Character
Area 2:
Moor Farm

Character
Area 4:
Thristley

Character
Area 5:
Foxcover

Proposed
Bellway
Scheme

A19

Burdon Lane

The Neighbourhood Strategy

We want to create a great place to live. A new neighbourhood which has its own identity and character but which respects and enhances its context and the beautiful landscape setting in which it sits. We want to create a new neighbourhood which people want to walk and cycle round, with public green spaces which both existing and new residents can enjoy.

1. Maintain a Sense of Local Identity

Orientate development to retain and optimise on panoramic views and landmarks within the surrounding area, connecting the new neighbourhood with the greater landscape and cultural character of the area. Notable views and landmarks include:

- Cleadon Hills Water Tower
- Ryhope Pumping Station chimney
- Tunstall Hills
- East coast sea views
- Sunderland city skyline and Stadium of Light

Integration of historical and geological interpretation shall help promote the areas rich geology and mining heritage and associated industry.

2. Creation of a Sense of Place

Development of the urban grain so that each street benefits from dual connections to either, site level open space and green infrastructure or a long view of adjacent countryside, seascape or landmark. This shall provide every neighbourhood with a desirable view and will mean vistas are terminated by green spaces rather than buildings to enhance the suburban character of the scheme.

3. Permeable Streets

Provide a connected and accessible street network which calms traffic and encourages walking and cycling. Creating routes which are easy to navigate and increase access to green open spaces.

4. Distinct Character Areas

Development of character areas with their own distinct character, created by housing facing onto the street, a mix of densities, hedges, street trees and open swales.



The Landscape Strategy

The Landscape is a vital part of this development and our Landscape Architect's Colour have produced this strategy to integrate the development into the landscape and take advantage of its best features. The strategy seeks to achieve the following elements:

1. Work with the Existing Landform and Topography

Development of circulation and access routes to take into account existing falls and reduce gradients where possible. Utilisation of cut material from excavations for foundations, utilities, roads and swales to create identity and mitigation.

2. Access to Open Space and Neighbourhood Assets:

Provision of a variety of community focused open spaces within a short walk of all residents. Each community neighbourhood shall be developed around a unique space, setting its identity. Elevated parts of the site shall be retained as public open space so that views can be enjoyed by all.

3. Promotion of a Healthy Lifestyle:

Creation of a residential destination where the ease of undertaking physical activity becomes a key character:

- Formalise and integrate well-loved footpaths with an enhanced network linked to each new area
- Traffic calmed streets creating comfortable walking and cycling environment
- Inclusion of natural play areas and green gyms.

6. Onward Access to Non-vehicle Recreational Networks:

Connectivity of neighbourhood recreational circuits to regional networks and wider established national leisure trails.

Strengthen cycle connections and use of routes into Sunderland

4. Integration of Blue Infrastructure:

Sustainable Urban Drainage including, permeable surfaces, swales, attenuation ponds and rain gardens shall be integrated into the design of each neighbourhood community and public open space.

5. Promote Ecological Networks:

Retain existing green infrastructure and enhance habitat connectivity around margins with native biodiverse planting. Easements to green corridors shall be integrated within the development and public edges maintained.

6. Sympathetic Integration of Noise Mitigation Strategies:

Provision of a suite of landscape design measures to help reduce the noise impact of the A19

7. Provision of Suitable Alternative Natural Greenspace [SANG]:

Reduce the likely significant effect of the development on both the Northumbria Coast Special Protection Area [SPA] and Ramsar Site and Durham Coast Special Area of Conservation [SAC]



Chapelgarth Neighbourhood Strategy

A photograph of a modern residential development. The buildings are multi-story, featuring a mix of brick, wood cladding, and large windows. There are green trees and shrubs in the foreground and between the buildings. A low stone wall runs across the bottom of the frame. The sky is a clear, bright blue.



02 Access, Movement and Streets

The regulatory plan on the following page identifies the street network to be delivered as part of the scheme, further details and cross sections of each street type are provided on the following pages.



There are two categories of streets, fixed and flexible. Fixed streets should be built out as identified on the regulatory plan. Deviation from the centre line of fixed streets will be permitted up to 5m, to build in tolerance once the roads are engineered in detail. Flexible streets can change position, but must connect through to the fixed streets, to maintain permeability throughout the scheme. All streets and routes try to either have a city view, a view out to the sea in the east or end in woodland/ natural aspect to reflect the existing character of the site.








Primary and Secondary Routes: All primary and secondary routes have been fixed and the primary route will be able to accommodate a bus route once the scheme is relatively built out. The primary and secondary routes connect all five neighbourhoods and their position has been influenced by existing breaks in hedgerows and tree belts where possible.

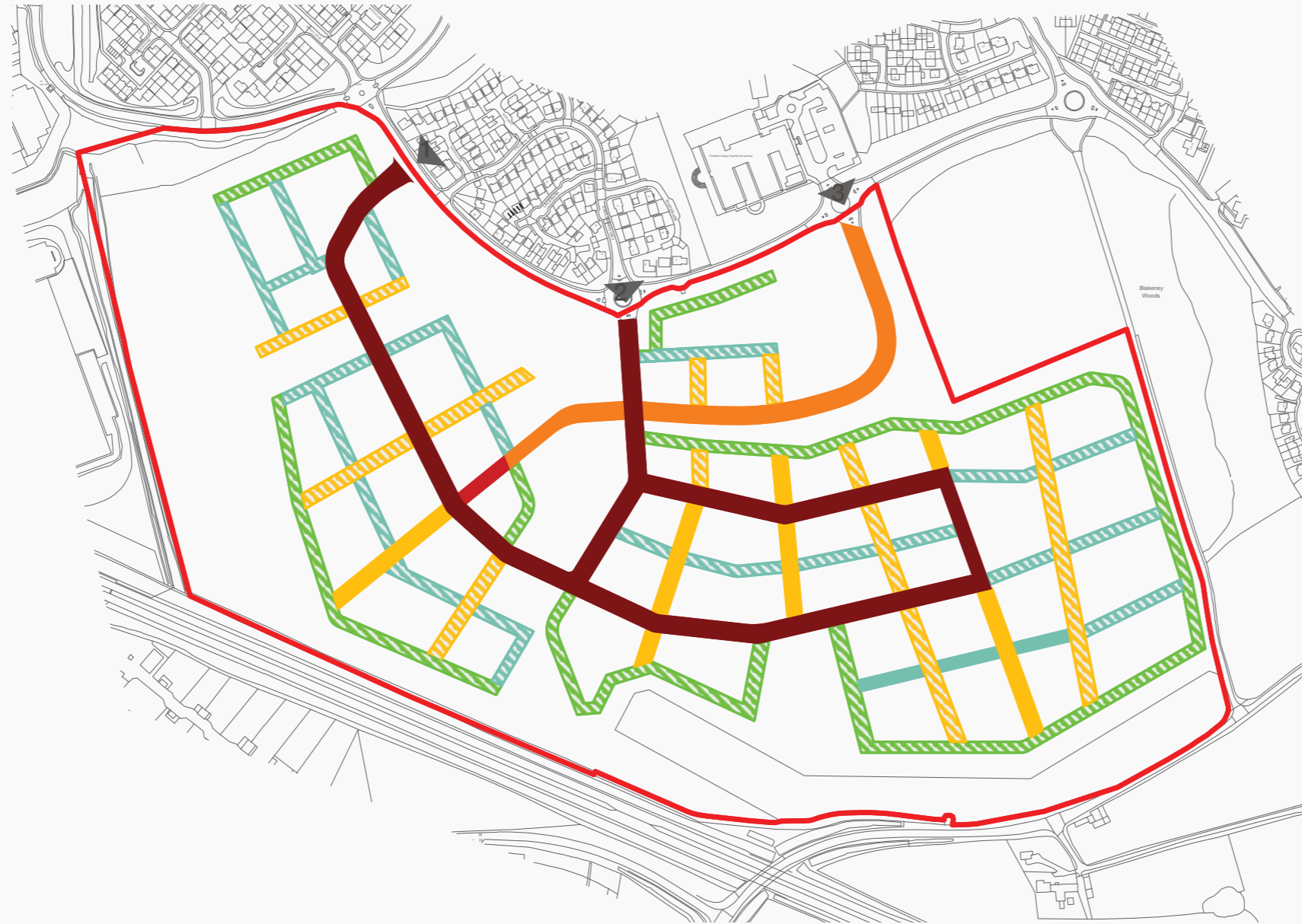
Rises and Lanes: Rises and Lanes feed off the primary and secondary streets to provide access to other areas of the site. The majority of these will be flexible in their exact location, but must connect into fixed streets to ensure the road network is permeable. A number of rises and lanes have been fixed to maintain key views and to enhance views out from elevated spaces such as the panoramic park.

Green Streets: A series of home-zones/ shared spaces complete the street network, and are designed to calm vehicular traffic to a speed of less than 20mph, prioritising walking and cycling over car use. These streets will be located at the edges of the development, where housing fronts onto open/green spaces and woodland and will act to soften the development edge.

Footpaths: There is an extensive network of existing footpaths across the site and we have where possible used these to dictate the footpaths provided across the masterplan. We have also tied these footpaths in with the proposed road network to encourage people to use the woods and open space for walking, cycling and leisure. These routes are detailed on the Recreation Routes Regulatory Plan in Section 13.

Access Parameters		
Key	Parameter	Details
	RP02A	The scheme will be accessed from three access points on Weymouth Road, as identified on the regulatory plan. Access Points 1 and 2 will be detailed as part of the planning application to be brought forward as Phase 1 (further information in the last section of this document). Detailed plans of these junctions are available as drawings submitted as part of this planning application.
	RP02B	A new pedestrian crossing will be provided across Weymouth Road in the location specified on the regulatory plan.

Street Type Parameters		
Key	Parameter	Details
	RP02A	Primary: This route is fixed and must be built out in accordance with the route identified on the accompanying regulatory plan. A tolerance of 5m either side of the centre line will be permitted. The design of the street must adhere to any rules relating to Primary Streets.
	RP02B	Secondary Street (Double and Single Sided): This route is fixed and must be built out in accordance with the route identified on the accompanying regulatory plan. A tolerance of 5m either side of the centre line will be permitted. The design of the street must adhere to any rules relating to Secondary streets.
 	RP02C	Rises: The dashed routes identified on the regulatory plan are flexible as to their exact location but must adhere to the rules relating to Rises and must comply with the SUDS strategy. They must also connect into the fixed streets. Solid lines are fixed and must be built in the location identified on the accompanying regulatory plan.
 	RP02D	Lanes: The dashed routes identified on the regulatory plan are flexible as to their exact location but must adhere to the rules relating to Lanes and must comply with the SUDS strategy. They must also connect into the fixed streets. Solid lines are fixed and must be built in the location identified on the accompanying regulatory plan.
	RP02E	Green Streets: The routes identified on the regulatory plan are flexible as to their exact location but are intended to be provided where housing fronts on green and open spaces and areas of woodland. These streets must adhere to the rules relating to Green Streets and must comply with the SUDS strategy.








CHAPELGARTH

REGULATORY PLAN 02:
ACCESS, MOVEMENT AND STREETS

SCALE 1:5000 @ A3




26-03-2016
944/REG02_RevA

KEY
FIXED ELEMENTS

-  PRIMARY
-  SECONDARY DOUBLE SIDED
-  SECONDARY SINGLE SIDED
-  RISES
-  LANES

 VEHICLE CONNECTION ONTO WEYMOUTH RD

FLEXIBLE ELEMENTS

-  RISES
-  LANES
-  GREEN STREETS

02 Access, Movement and Streets

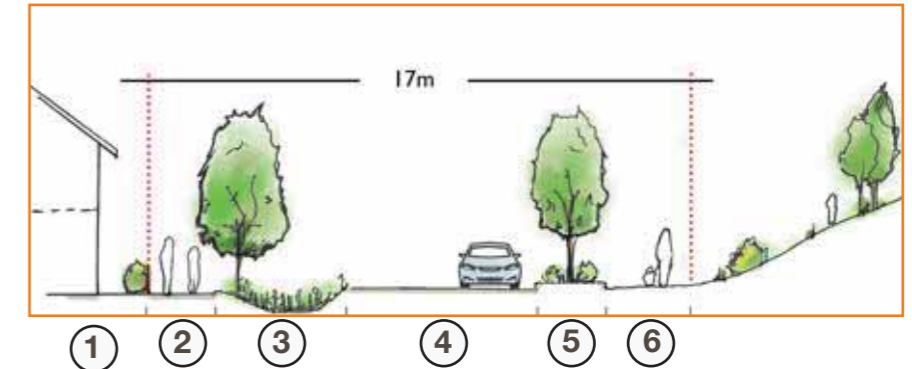
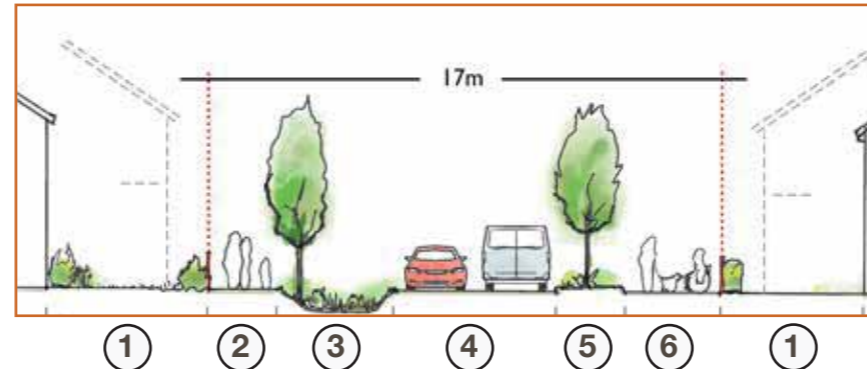
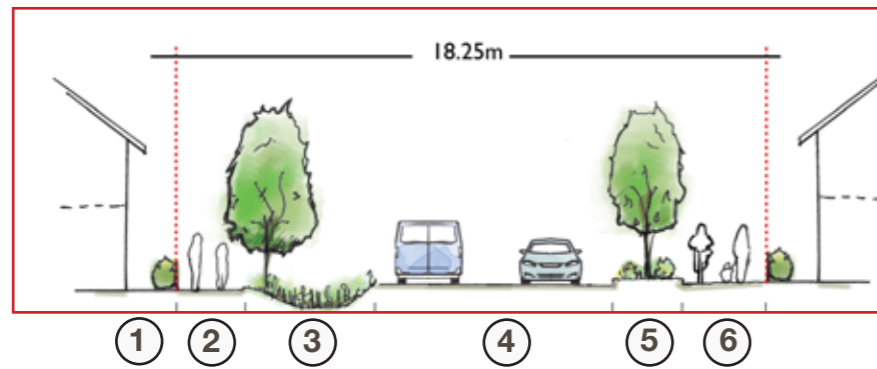
The following rules set out the requirements for each street type:

Street Type Rules	
Rule	Details
RL02A	<p>Primary Streets: 18.25m wide</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. Set-back, discussed for each character area in the next section. ② 2m footway ③ 4.5m swale ④ 6.75m carriageway ⑤ 2m verge (to include tree planting & parking at intervals) ⑥ 3m shared cycleway/footway

Street Type Rules	
Rule	Details
RL02B	<p>Secondary Streets: 17m wide</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. ② 2m footway ③ 4.5m swale ④ 5.5m carriageway ⑤ 2m verge (to include tree planting & parking at intervals) ⑥ 3m shared cycleway/footway

Street Type Rules	
Rule	Details
RL02C	<p>Secondary Streets (single sided): 17m wide</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. ② 2m footway ③ 4.5m swale ④ 5.5m carriageway ⑤ 2m verge (to include tree planting & parking at intervals) ⑥ 3m shared cycleway/footway

Cross Section



Plan view

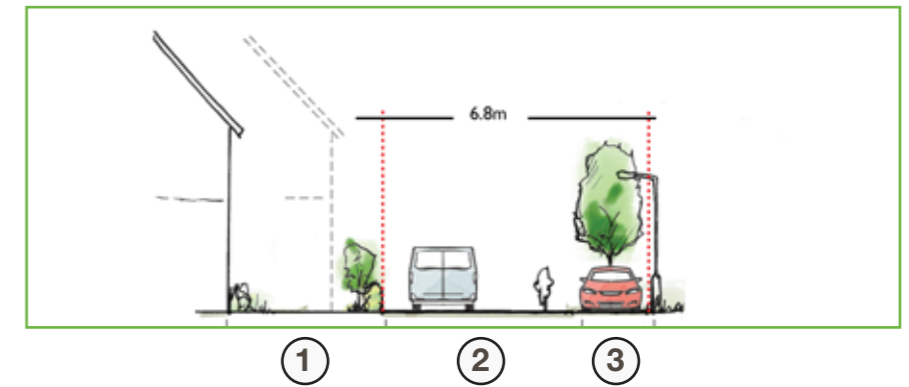
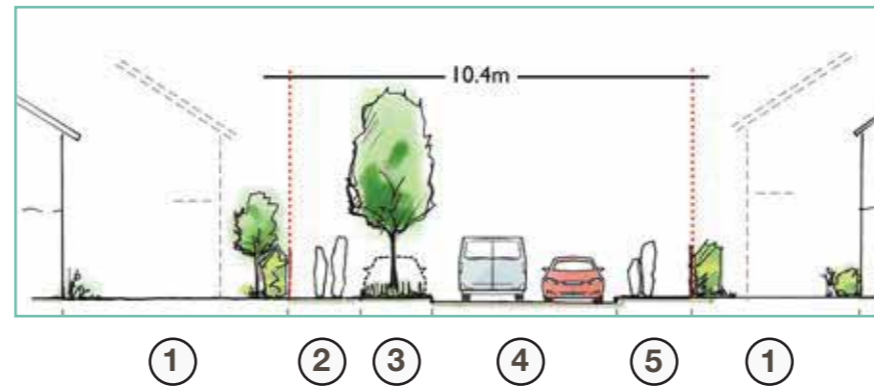
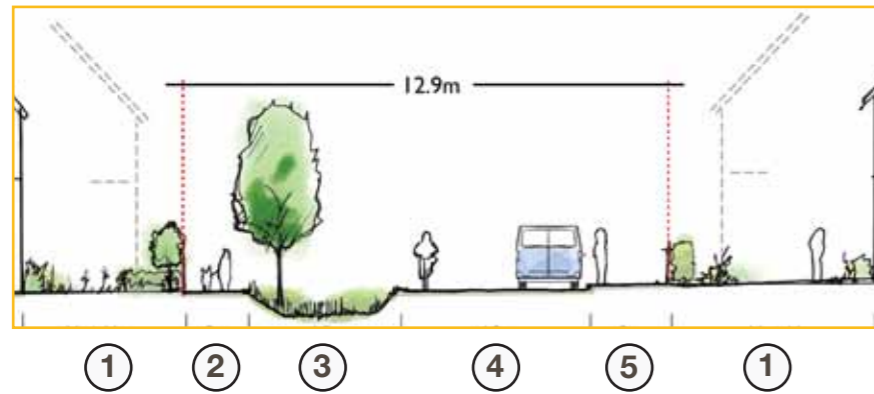


Street Type Rules	
Rule	Details
RL02D	<p>Rises (Macado): 13.3m wide, double fronted - generally crossing the site contours</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. ② 2m footway ③ 4.5m swale ④ 4.8m carriageway ⑤ 2m footway

Street Type Rules	
Rule	Details
RL02E	<p>Lanes: 10.8m wide, double fronted - generally following site contours / running perpendicular to the 'Rises'.</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. ② 2m footway ③ 2m verge (to include tree planting & parking at intervals - verge strip to alternate to create chicane) ④ 4.8m carriageway ⑤ 2m footway

Street Type Rules	
Rule	Details
RL02F	<p>Green Street: Designed as home zone to calm traffic, so will be shared surface.</p> <ol style="list-style-type: none"> ① 6m (max) setback for North Knockles & Thristley. 1.5m (max) setback for Chapelgarth Meadows. No defined set-back for Foxcover. ② 4.8m shared carriageway ③ 2m verge (to include tree planting & parking at intervals - verge strip to alternate to create chicane)

Cross Section



Plan view



03 Neighbourhood Character Areas

The regulatory plan on the following page demonstrates the extent of each of the five character areas. It is intended that within each Character Area, different treatments will be applied to future development, to create areas with their own identity. These treatments are explained in more detail on the following page.

Each neighbourhood has been given a name for the purpose of this Design Code, based on local features and local knowledge, and these will be subject to change.

Overview of Local Character

The local area is dominated by residential properties built between 1970 and the early 2000s. The majority of new housing is built in estates - with groups of very similar looking properties in each estate, and most if not all properties have brick façades.

A number of council properties have also been demolished in the local area, to be replaced with newer housing stock.

The local area is designed around the efficient movement of road vehicles, which can restrict pedestrian movement and detracts from the built form. The Chapelgarth Masterplan intends to take a different approach, by creating linear streets which are more permeable to pedestrians and providing traffic calming measures in certain areas to encourage people to walk and cycle.

Street Scene

The masterplan for Chapelgarth consists of perimeter blocks, the structure of which have been determined in response to various factors governing the site, its context and the constituent components of the layout such as the movement routes.

As a general rule, blocks should be between 40-70m wide and long. This allows buildings to front all sides whilst

maintaining frequent access routes between blocks, thereby ensuring a permeable layout, and natural surveillance onto streets.

Materials and Architectural Style






This guide does not intend to define the material palette or architectural styles of the proposed housing development. It is intended that as housebuilders come forward, they will propose their own building styles, which will add to the diversity of the masterplan, but lay these out in accordance with the regulatory plans.

Detailed Layout and Design

SCC provides more detail on housing developments, privacy distances, built form and layout in their [Residential Design Guide Supplementary Planning Document](#). This document should be consulted whilst designing up each of the character areas in more detail.



The masterplan is designed to accommodate perimeter urban blocks

Character Area Parameters		
Key	Parameter	Details
	RP03A	Character Area 1: Development contained within this area will need to adhere to rules relating to Character Area 1.
	RP03B	Character Area 2: Development contained within this area will need to adhere to rules relating to Character Area 2.
	RP03C	Character Area 3: Development contained within this area will need to adhere to rules relating to Character Area 3.
	RP03D	Character Area 4: Development contained within this area will need to adhere to rules relating to Character Area 4.
	RP03E	Character Area 5: Development contained within this area will need to adhere to rules relating to Character Area 5.



CHAPELGARTH

REGULATORY PLAN 03:
NEIGHBOURHOOD CHARACTER AREAS

SCALE 1:5000 @ A3

29-02-2016
944/REG03_Rev0

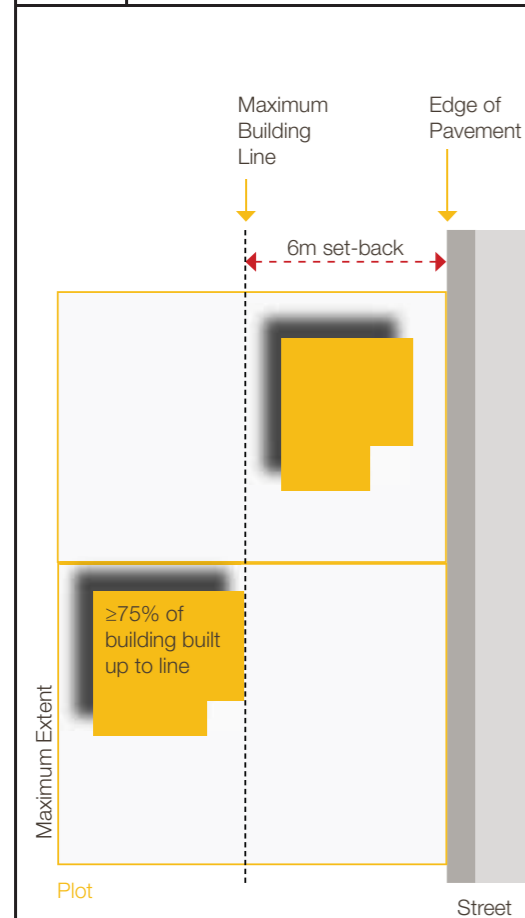
KEY

- CHARACTER AREA 1
- CHARACTER AREA 2
- CHARACTER AREA 3
- CHARACTER AREA 4
- CHARACTER AREA 5

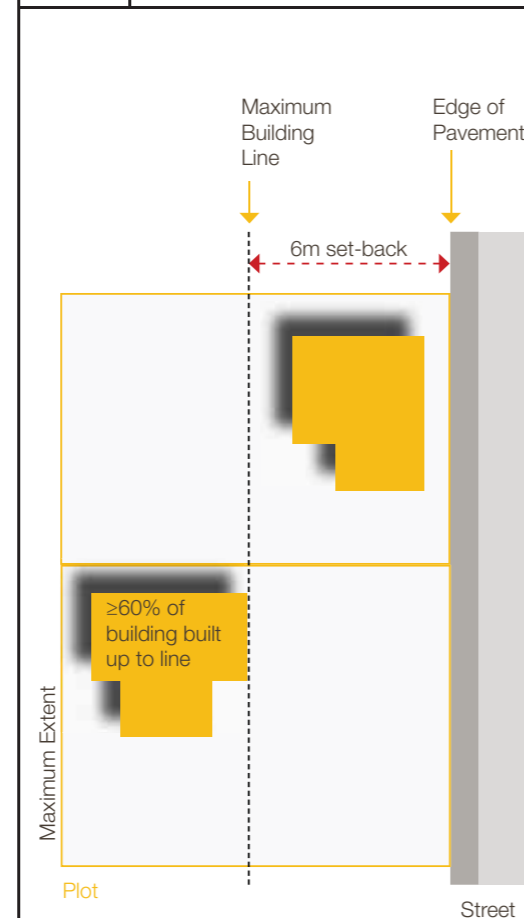
04 Building Line

The principle edge of the development should be positioned on the building line. This section describes the building line and set back from the edge of the pavement for each character area. By stipulating the building line we hope to create differentiation between the more urban and rural character areas. A minimum set-back RL04F has been stipulated for all character areas at 1m from the edge of the pavement.

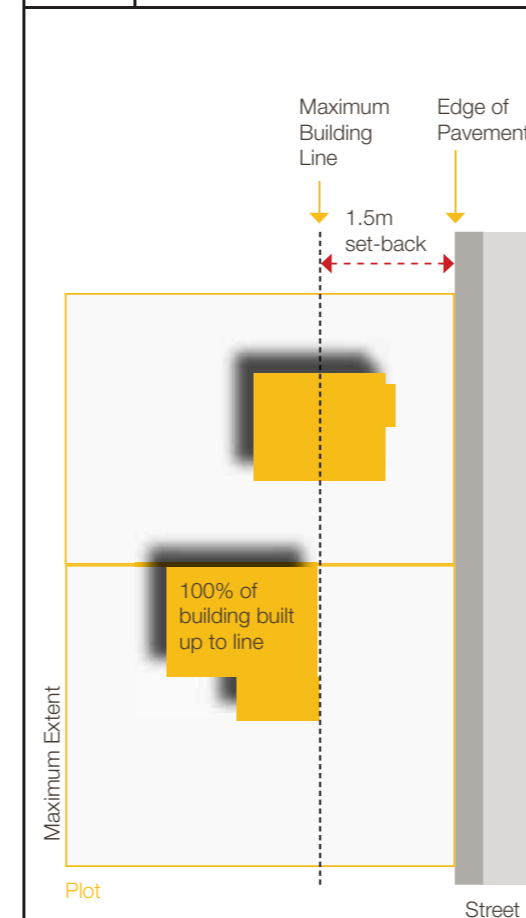
Building Line Rules	
Rule	Details
RL04A	<p>Character Area 1: Knockles Square</p> <ul style="list-style-type: none"> The maximum building line has been defined at a 6m set back from the edge of the pavement. Where the building sits exactly on the building line, greater than or equal to 75% of the principle edge must meet this line.



Building Line Rules	
Rule	Details
RL04B	<p>Character Area 2: Moor Farm</p> <ul style="list-style-type: none"> The maximum building line has been defined at a 6m set back from the edge of the pavement. Where the building sits exactly on the building line, greater than or equal to 60% of the principle edge must meet this line.



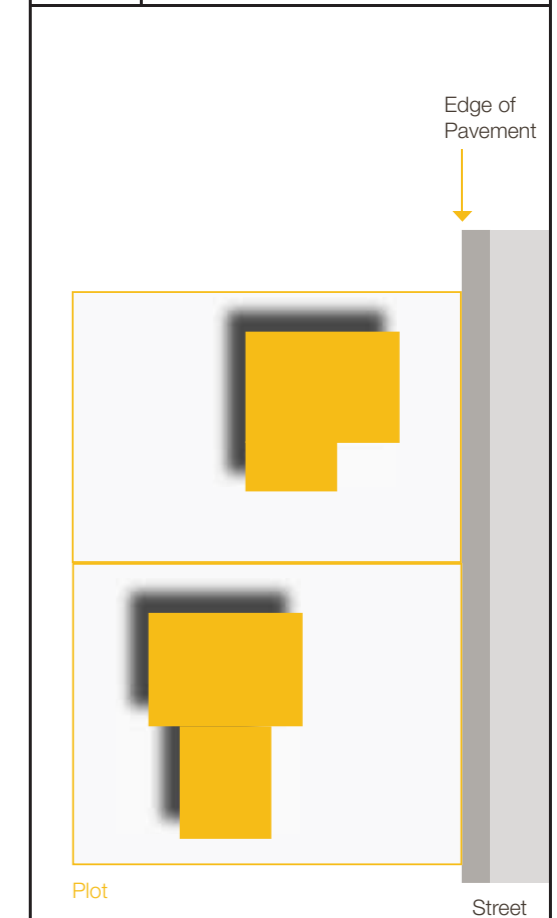
Building Line Rules	
Rule	Details
RL04C	<p>Character Area 3: Chapelgarth Meadows</p> <ul style="list-style-type: none"> The maximum building line has been defined at a 1.5m set back from the edge of the pavement. Where the building sits exactly on the building line, 100% of the principle edge must meet this line.



Building Line Rules	
Rule	Details
RL04D	<p>Character Area 4: Thristley</p> <ul style="list-style-type: none"> The maximum building line has been defined at a 6m set back from the edge of the pavement. Where the building sits exactly on the building line, greater than or equal to 60% of the principle edge must meet this line.



Building Line Rules	
Rule	Details
RL04E	<p>Character Area 5: Foxcover</p> <ul style="list-style-type: none"> No building line has been defined for this character area.



05 Building Heights

The majority of homes will be built up to an eaves height of two storeys. This will allow for bungalows to be accommodated on the site as well as two-storey houses with a room in the roofspace and dormer windows. The areas which are more dense in nature and those on less elevated parts of the site, particularly around Chapelgarth Meadows will be able to accommodate three-storey buildings. Permitted building heights across the scheme are identified in the table below.

Building Height Rules	
Rule	Details
RL05A	<p>Character Area 1: Knockles Square</p> <ul style="list-style-type: none"> Housing in this character area should be built up to an eaves height of two storeys. ≤25% of all housing will be permitted to be built up to an eaves height of three storeys. This housing should be concentrated around the primary street. 3 storey buildings will be permitted and encouraged at key corner/ gateway properties as identified in the neighbourhood character area section on page 26.
RL05B	<p>Character Area 2: Moor Farm</p> <ul style="list-style-type: none"> Housing in this character area should be built up to an eaves height of two storeys. ≤25% of all housing will be permitted to be built up to an eaves height of three storeys. This housing should be concentrated along the primary street. 3 storey buildings will be permitted and encouraged at key corner/ gateway properties as identified in the neighbourhood character area section on page 28.
RL05C	<p>Character Area 3: Chapelgarth Meadows</p> <ul style="list-style-type: none"> Housing in this character area should be built to an eaves height of two or three storeys. 3 storey buildings will be permitted and encouraged at key corner/ gateway properties as identified in the neighbourhood character area section on page 30. Buildings in the local centre will be permitted up to a height of 3 storeys.
RL05D	<p>Character Area 4: Thristley</p> <ul style="list-style-type: none"> Housing in this character area should be built up to an eaves height of two storeys. ≤25% of all housing will be permitted to be built up to an eaves height of three storeys. This housing should be concentrated along the primary streets. 3 storey buildings will be permitted and encouraged at key corner/ gateway properties as identified in the neighbourhood character area section on page 32.
RL05E	<p>Character Area 5: Foxcover</p> <ul style="list-style-type: none"> Housing in this character area should be built up to an eaves height of two storeys. ≤10% of all housing will be permitted to be built up to an eaves height of three storeys. This housing should be concentrated along the primary street. 3 storey buildings will be permitted and encouraged at key corner/ gateway properties as identified in the neighbourhood character area section on page 34.

06 Building Density

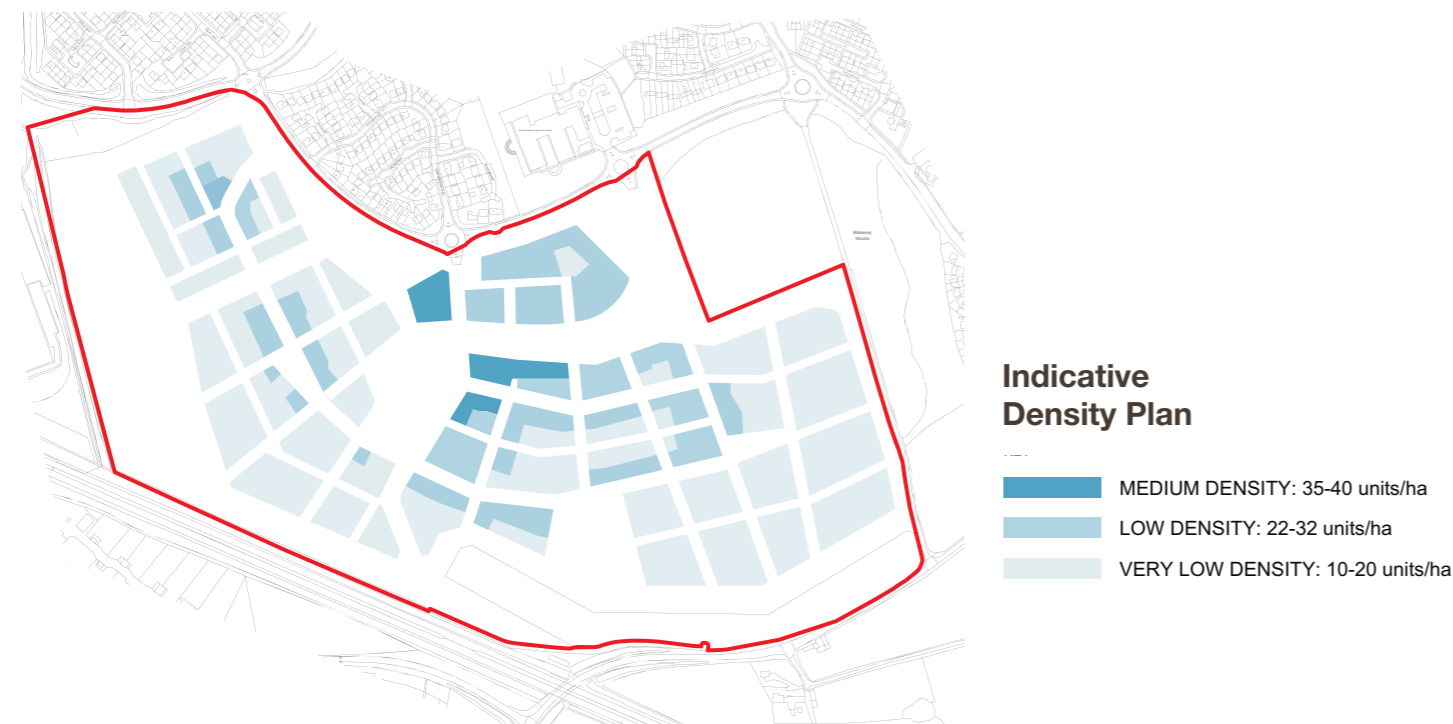
For the purpose of this document building density has been measured by counting the number of houses within an area of land. Building densities have been defined as falling within three categories:

- **Medium Density:** classified as 35 to 40 dwellings per hectare.
- **Low Density:** classified as 22 to 32 dwellings per hectare.
- **Very Low Density:** classified as 10 to 20 dwellings per hectare.

These have been defined to help create a sense of place at the centre of each neighbourhood and responds to the primary and secondary routes through the site. The regulatory plan below identifies the indicative spread of building densities across the site.

The building density rules provide instructions on how the density within each character area will be spread to achieve the desired neighbourhood feel. It is intended that higher density housing will be provided along the primary and secondary streets to create a natural centre to each of the new neighbourhoods.



Note: For the purpose of this document, when calculating the area of a parcel of land, a polygon has been drawn to include any plots and roads contained within that parcel of land and up to the centre line of roads which sit at the edge of that parcel of land.

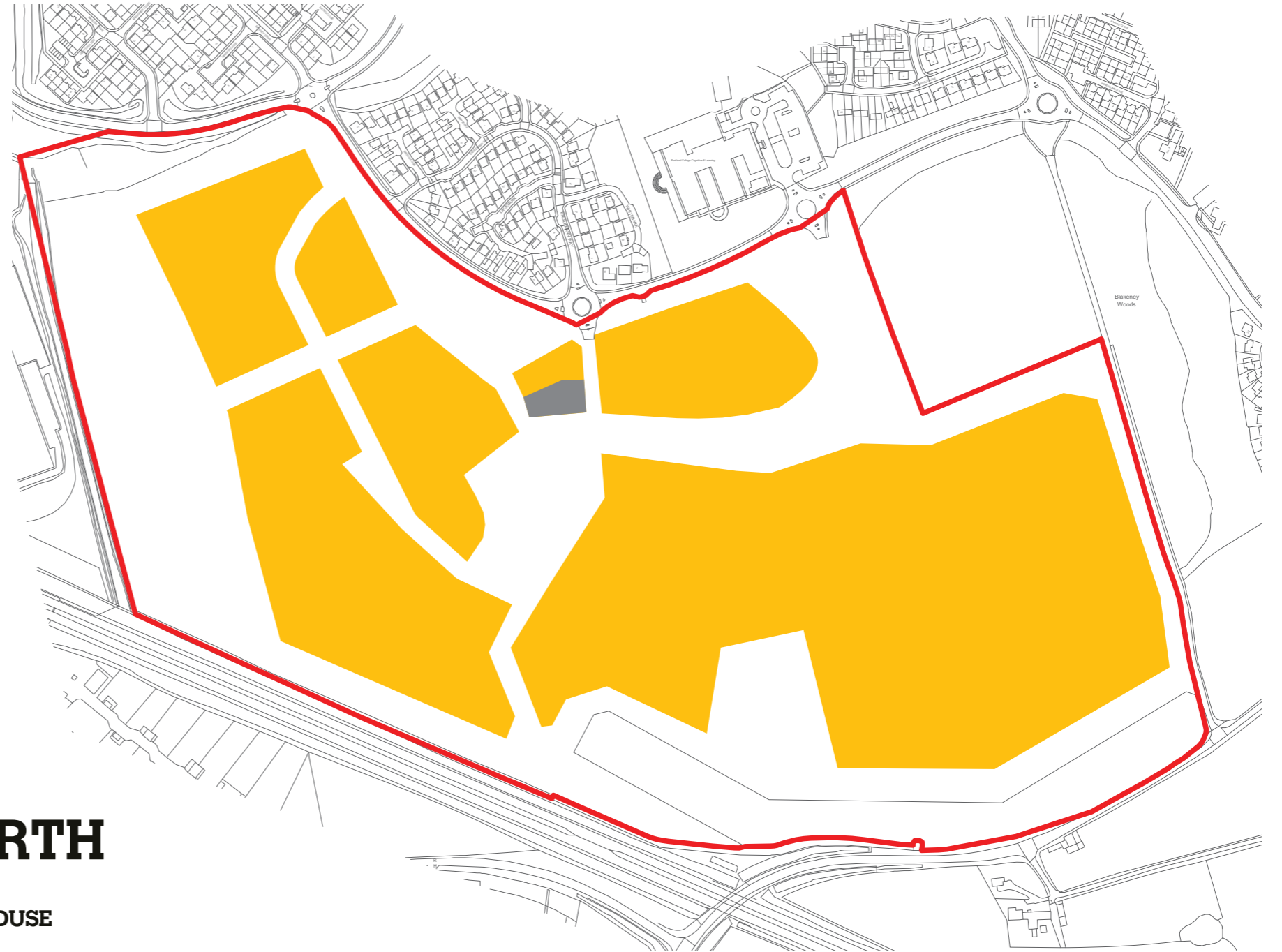


Building Density Rules	
Rule	Details
RL06A	<p>Character Area 1: Knockles Square</p> <ul style="list-style-type: none"> • ≤15% of all housing within this character area should be built at a medium density. All medium density housing will be required to be built along the primary streets. • ≤60% of all housing within this character area should be built at a low density. • The remaining housing in this character area should be built at very low density.
RL06B	<p>Character Area 2: Moor Farm</p> <ul style="list-style-type: none"> • ≤50% of all housing within this character area should be built at a low density. All low density housing will be required to be built along the primary streets. • The remaining housing in this character area should be built at very low density.
RL06C	<p>Character Area 3: Chapelgarth Meadows</p> <ul style="list-style-type: none"> • A mix of medium and low densities will be permitted in this character area.
RL06D	<p>Character Area 4: Thristley</p> <ul style="list-style-type: none"> • ≤15% of all housing within this character area should be built at a medium density. All medium density housing will be required to be built along primary or secondary streets. • ≤75% of all housing within this character area should be built at a low density. 50% of all low density housing will be required to be built along primary or secondary streets. • The remaining housing in this character area should be built at very low density.
RL06E	<p>Character Area 5: Foxcover</p> <ul style="list-style-type: none"> • ≤10% of all housing within this character area should be built at a low density. All low density housing will be required to be built along primary streets. • The remaining housing in this character area should be built at very low density.

07 Developable Area Land Uses

The majority of the land-use will be for housing. The regulatory plan below identifies the location of permitted land uses across the site.

Land Use Parameters		
Key	Parameter	Details
	RP07A	Residential: Area identified on the plan to be residential. Permitted Use Class will be C3. Includes any ancillary infrastructure such as sub-stations.
	RP07B	Mixed Use Community Heart: Area identified on the plan to accommodate a small local centre with upto 1000sq m of ancillary commercial uses including Retail (A1), Financial and Professional Services (A2), Restaurant and Cafes (A3) Offices (B1) Non Residential (D1) and Assembly and Leisure (D2), together with associated landscaping and car parking. This area may also accommodate residential dwellings (C3)



CHAPELGARTH

REGULATORY PLAN 07:
DEVELOPMENT AREA + LANDUSE

SCALE 1:5000 @ A3

29-03-2016
944/REG07_Rev0

Neighbourhood Character Area 1: Knockles Square

Character Area 1: Knockles Square

This neighbourhood is one of the arrival points for Chapelgarth as a whole and a primary bus route would be able to run through its centre. The natural square boundaries of the existing mature woodland and hedges define this character area.

The design of the streets take advantage of natural breaks in hedges and works with the topography to link on to Weymouth Road.

There is a mixture of very low, low and medium density housing here. Houses would be a range of detached and semi-detached and plots have been designed at an average of 8m-10m wide. They are all given generous privacy distances and gardens.

1. Building Heights

Most of the housing with this character area will be built up to an eaves height of 2 storeys, with 3 storey housing built around the primary street to reflect the existing urban edge.

2. Average Building Density

The average density for this area is 28 dwellings per hectare. Housing density is designed to increase towards the centre of the character area to create a sense of place, and recreate a village centre type feel to the centre of the neighbourhood, with lower density housing around the western edge in response to the natural open green space.

3. Boundary Treatment

From the edge of the pavement, the building line must not exceed a set-back of 6m, this is to keep the streets tight and to maintain a strong active frontage along each street feeding into the square. Greater than or equal to 75% of the building will be permitted to be built up to this line.

4. Parking

It is envisioned that parking in this character area will be provided within the curtilage of the property, either on a driveway to the side of the house, in a garage or on a driveway in front of the property.

A number of visitor parking bays will be allocated to on street bays, the positioning of these will help to calm traffic by reducing long stretches of undisturbed roadway.

5. Greenspace

The character area is surrounded by thick woodland to the north and hedgerows and natural open greenspace on the other edges, creating a green and natural backdrop.

Street trees would be planted along roads and each plot would enjoy generous garden.

The character area benefits from a small square at the centre of the neighbourhood. This will be overlooked by housing, providing natural surveillance.

6. SUDS

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

7. Built Form

RL03A: Streets are designed to end in views of the surrounding green space and wooded areas. The plan to the right identifies properties which should be designed to mark key gateway positions in the character area. These buildings should be designed to add architectural interest to the street scene through the provision of windows on the gable end and architectural detailing on street facing façades.



Illustrative masterplan for Knockles Square

 Key gateway properties



View into Knockles Square



Shirecliffe, Sheffield. Houses are setback from the pavement line and allow a car to be parked in front of the house



A small public square, overlooked by housing, New Bolton Woods, Bradford

Neighbourhood Character Area 2: Moor Farm

Character Area 2: Moor Farm

This neighbourhood again enjoys the existing green infrastructure of mature trees, and access to the existing well-used footpaths through to the open fields of Silksworth Plantation as well as access to the central park. The main route connects through from Character Area 1 and continues on through the centre of this neighbourhood.

The road hierarchy uses residential roads coming from the main route and then into home-zone style streets. Acoustic earthworks and a bund will be installed along the southern boundary of the character area, in order to lessen the noise from the A19.

Housing would mostly be at a very low density and would generally be detached or semi-detached units. Some low density plots are also in this area. Plot sizes vary from mostly 10-12m and have been designed in efficient blocks. Some houses have a rural feel looking over a 40m wide strip of accessible parkland. Other housing faces onto the central park area, providing natural surveillance and enjoying views.

1. Building Heights

Most of the housing with this character area will be built up to an eaves height of 2 storeys, with 3 storey housing built to the east of and along the primary street to reflect the existing urban edge.

2. Average Building Density

The average density for this area is 23 dwellings per hectare. Density has been coded to increase towards the centre of the character area to create a sense of place along the primary route through the site.

3. Boundary Treatment

From the edge of the pavement, the building line must not exceed a set-back of 6m. This allows for a more flexible streetscape, different in nature to character area 1 and responding to the lower density of the character area. Greater

than or equal to 60% of the building will be permitted to be built up to this line.

4. Parking

It is envisioned that parking in this character area will be provided within the curtail of the property, either in front of the house, in a driveway down the side or in a garage.

A number of visitor parking bays will be allocated to on street bays, the positioning of these will help to calm traffic by reducing long stretches of undisturbed roadway.

5. Greenspace

The character area will have direct access to the Silksworth Plantation along the western edge and the central park along the eastern edge. To the north will be the green buffers and drainage basins along Weymouth Road. The primary route through the site will include tree planting and open swales, which will add to the green nature of the site.

The housing density increases along the primary route which creates a natural centre to the character area. Here a small public square could be provided to enhance the feeling of being in the 'centre' of this area.

6. SUDS

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

7. Built Form

RL03A: Streets are designed to end in views of the surrounding green space and wooded areas. The plan to the right identifies properties which should be designed to mark key gateway positions in the character area. These buildings should be designed to add architectural interest to the street scene through the provision of windows on the gable end and architectural detailing on street facing façades.



Illustrative masterplan for Moor Farm

 Key gateway properties



View into Moor Farm



Housing overlooking greenspace at Trumpington Meadows, Cambridge. The building line is set back from the edge of the pavement, with space for a wall and front garden.



Housing is further set back from the edge of the pavement, allowing cars to park in front of houses.

Neighbourhood Character Area 3: Chapelgarth Meadows

Character Area 3: Chapelgarth Meadows

This area would act as the community heart of the scheme with a row of small shops and space for a GP surgery. The area is accessed off the middle roundabout on Weymouth Road, and sits behind the green buffer which runs along Weymouth Road and up towards Blakeney Woods.

The topography of the site which slopes up towards the site, creates a natural edge which differentiates the neighbourhood from character area 4.

The site itself is already a plateau. The housing to the west would be built into the hillside with gardens taking up the slope.

Housing would be of low and medium densities with detached and semi-detached housing. Around the local centre, townhouses and terraced houses would be permitted up to three storeys.

1. Building Heights

All the housing within this character area will be permitted to be built up to 3 storeys in height to reflect the more urban nature of this character area.

2. Average Building Density

The average density for this area is around 30 dwellings per hectare. Density increases towards the local centre to mimic the characteristics of a traditional village centre.

3. Boundary Treatment

From the edge of the pavement, the building line must not exceed a set-back of 1.5m, this allows for a tight streetscape, different in nature to character area 2 and responding to the higher density feel of this neighbourhood. 100% of the building will be permitted to be built up to this line. On streets classified as rises and lanes, these will enable tighter streets to be developed and surface level paving could be provided here to establish more of a homezone character.

30

4. Parking

It is envisioned that parking in this character area will be provided within the curtilage of the property, either in a driveway down the side of the house or in a garage. Parking courts could also be provided to the rear of properties.

A number of visitor parking bays will be allocated to on street bays, the positioning of these will help to calm traffic by reducing long stretches of undisturbed roadway.

5. Greenspace

The local centre overlooks the central park, and the neighbourhood is bounded by green buffers, which will be planted with trees and grassed.

6. SUDS

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

7. Built Form

RL03C: This neighbourhood is more urban than other areas of the scheme in response to its proximity to the existing built edge along Weymouth Road and the nature of the neighbourhood as the community heart. The plan to the right identifies properties which should be designed to mark key gateway positions in the character area. These buildings should be designed to add architectural interest to the street scene through the provision of windows on the gable end and architectural detailing on street facing façades.



This neighbourhood would act as the community heart.



Illustrative masterplan for Chapelgarth Meadows

 Key gateway properties



View into Chapelgarth Meadows



2 storey semi-detached and terraced housing at Telford Millenium Village. The building line is close to the edge of the street.



Higher density housing can accommodate more semi-detached and terraced properties with parking in rear courts.



Housing at Trumpington Meadows, Cambridge. The building line is close to the edge of the pavement, creating a strong frontage onto the street.

Neighbourhood Character Area 4: Thristley

Character Area 4: Thristley

Right in the heart of Chapelgarth, this neighbourhood enjoys views over the city and out to the sea to the east.

A network of streets and home-zones allow efficient house plots and connect through to the open spaces which characterise this sub-neighbourhood. The main route through the development bounds the area to the north and south and residential streets feed off this route. It is hoped when the development is complete this route could become part of the bus network in the area and is being designed with this in mind. Some roads lead to new and existing footpaths to help residents enjoy the natural setting of the site.

The neighbourhood park would become a focus for Chapelgarth with views of the city and sea and the woodland creating a natural enclosure. The existing woodland also helps break the noise of the A19.

Housing would be mixed and would be generally be semi-detached. Plot sizes vary from 10-12min width.

1. Building Heights

As this area covers the more elevated part of the site, most of the housing will be built up to an eaves height of 2 storeys, which enables views out from the panoramic park. 3 storey housing will be permitted along the primary and secondary streets closest to Chapelgarth Meadows.

2. Average Building Density

The average density for this area is 27 dwellings per hectare. Density increases along the primary and secondary routes through the site.

3. Boundary Treatment

From the edge of the pavement, the building line must

not exceed a set-back of 6m, this allows for a more flexible streetscape and allows for properties to have larger front gardens. Greater than or equal to 60% of the building will be permitted to be built up to this line.

4. Parking

It is envisioned that parking in this character area will be provided within the curtilage of the property, either in a driveway down the side of the house, in a garage or in-front of the house. Parking courts could also be provided to the rear of properties.

A number of visitor parking bays will be allocated to on street bays, the positioning of these will help to calm traffic by reducing long stretches of undisturbed roadway.

5. Greenspace

The character area overlooks a neighbourhood park which is elevated toward the centre and offers views out to the sea.

6. SUDS

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

7. Built Form

RL03D: Streets are designed to terminate in views of the Panoramic Park, woodland and appreciate views over Sunderland. The plan to the right identifies properties which should be designed to mark key gateway positions in the character area. These buildings should be designed to add architectural interest to the street scene through the provision of windows on the gable end and architectural detailing on street facing façades.



Illustrative masterplan for Thristley

 Key gateway properties



View into Thristley



2 storey semi-detached and terraced housing at Telford Millenium Village. The properties are on elevated land looking over the greenspace. Public routes extend through to increase access.



The neighbourhood uses the topography of the land to enhance the experience of views.

Neighbourhood Character Area 5: Foxcover

Character Area 5: Foxcover

This is the last character area. Well-connected to character area 4 it will have a similar feeling and character. The south-eastern section of the site enjoys some of the best views to the sea and this neighbourhood's street network reflects this. All streets in the scheme either have a sea view, the city centre aspect or are directed to woodland. This is to maintain the site's connection to the open green space.

Similarly to the rest of the development, all routes connect back to the main route. Housing is accessed from residential roads or home-zone style streets. An existing track next to the woods provides a right of way into the woods and up to Burdon Lane, so the home zones connect into these at natural breaks in the mature hedges.

Housing would be of very low and low density and would generally be either detached or semi-detached. Plot widths are of an average 8m, with some houses enjoying mature hedgerows within their gardens.

1. Building Heights

All the housing with this character area will be permitted to be built up to an eaves height of 2 storeys to reflect the more rural nature of this neighbourhood.

2. Average Building Density

The average density for this area is 20 dwellings per hectare. Density increases along the primary route.

3. Boundary Treatment

This character area does not have a defined building line to provide a flexible streetscape which allows for properties to have larger front gardens. This flexible building line will reflect the more rural nature of this character area.

4. Parking

It is envisioned that parking in this character area will be provided within the curtilage of the property, either in a driveway down the side of the house, in a garage or in-front of the house. Parking courts could also be provided to the rear of properties.

A number of visitor parking bays will be allocated to on street bays, the positioning of these will help to calm traffic by reducing long stretches of undisturbed roadway.

5. Greenspace

The character area is bounded by Blakeney Woods to the north and woodland to the south and streets will be enhanced with street trees and swales. There is space for a small public space at the centre of the neighbourhood.

6. SUDS

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

7. Built Form

RL03A: Streets are designed to end in views of the surrounding green space and wooded areas. The plan to the right identifies properties which should be designed to mark key gateway positions in the character area. These buildings should be designed to add architectural interest to the street scene through the provision of windows on the gable end and architectural detailing on street facing façades.

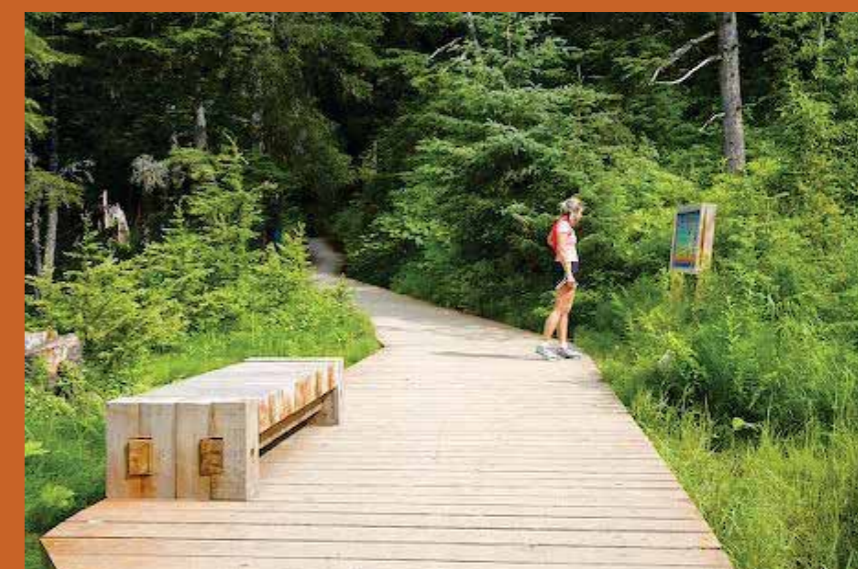


Illustrative masterplan for Foxcover

 Key gateway properties



2 storey housing, Musker Street, Crosby. The properties have large front gardens, and trees are planted along the street.



The neighbourhood is surrounded by woodland, and trees will be provided along streets to reflect this nature.



View into Foxcover

08 Sustainable Urban Drainage

Many Local Authorities request Sustainable Urban Drainage Systems (SUDS) to be delivered as part of large housing developments. These help to better manage and control storm water movement around the site to reduce the risk of flooding and improve water quality, whilst incorporating green space and planting into streets which in turn enhances the public realm.

The SUDS strategy for the site has been designed in line with The Local Lead Flood Authority (LLFA) and Northumbrian Water's (NWL) recommendations for the site.

The installation of a SUDS system will greatly reduce the risk of flooding on the site by storing water in extreme storm events, and will manage the flow of water around the site within underground pipes and swales.

The SUDS strategy requires that within each housing plot or area, no more than 40% of land should be covered with building or paving to be drained (contributing impermeable area) to the site infrastructure drainage system.

Character Areas 1, 2 and 3

Stormwater from Character Areas 1 to 3 is to be conveyed to two detention basins provided off Weymouth Road to deal with excess water in extreme storm events.

The basins are sized to cope with all flows (unrestricted) from Areas 1 to 3 and are interconnected and utilise flow controls for eventual discharge to the Northumbrian Water sewer infrastructure to previously agreed rates.

These will be delivered as part of the Phase 1 Infrastructure Works. Both basins involve significant earth remodelling to the site which is to be sensitively engineered and formed as part of the landscape design of the Weymouth Frontage.

The basins have been designed to have a maximum gradient of 1:4 to allow safe access for maintenance. The basins are to be predominately dry for most of the year.

Character Areas 4 and 5

Areas 4-5 are part of a separate stormwater network that discharge to a watercourse in Blakeney Woods.

Stormwater from Areas 4 to 5 is to be conveyed via swales and underground pipes to a discharge point on the eastern boundary. This outlet will discharge flows to the watercourse in Blakeney Woods where the LLFA have agreed a flow rate equal to greenfield runoff. Attenuation is to be provided to Area 4 and 5 to satisfy the LLFA requirements which include flow restrictions to greenfield runoff. Attenuation should be in the form of ponds or basins with a maximum gradient of 1:4 to allow safe access for maintenance and should be in accordance with the LLFA.

The plan adjacent identifies the location of the basins, and the location of potential swales across the entire scheme. These are designed to be incorporated into certain street types and follow the topography of the land.

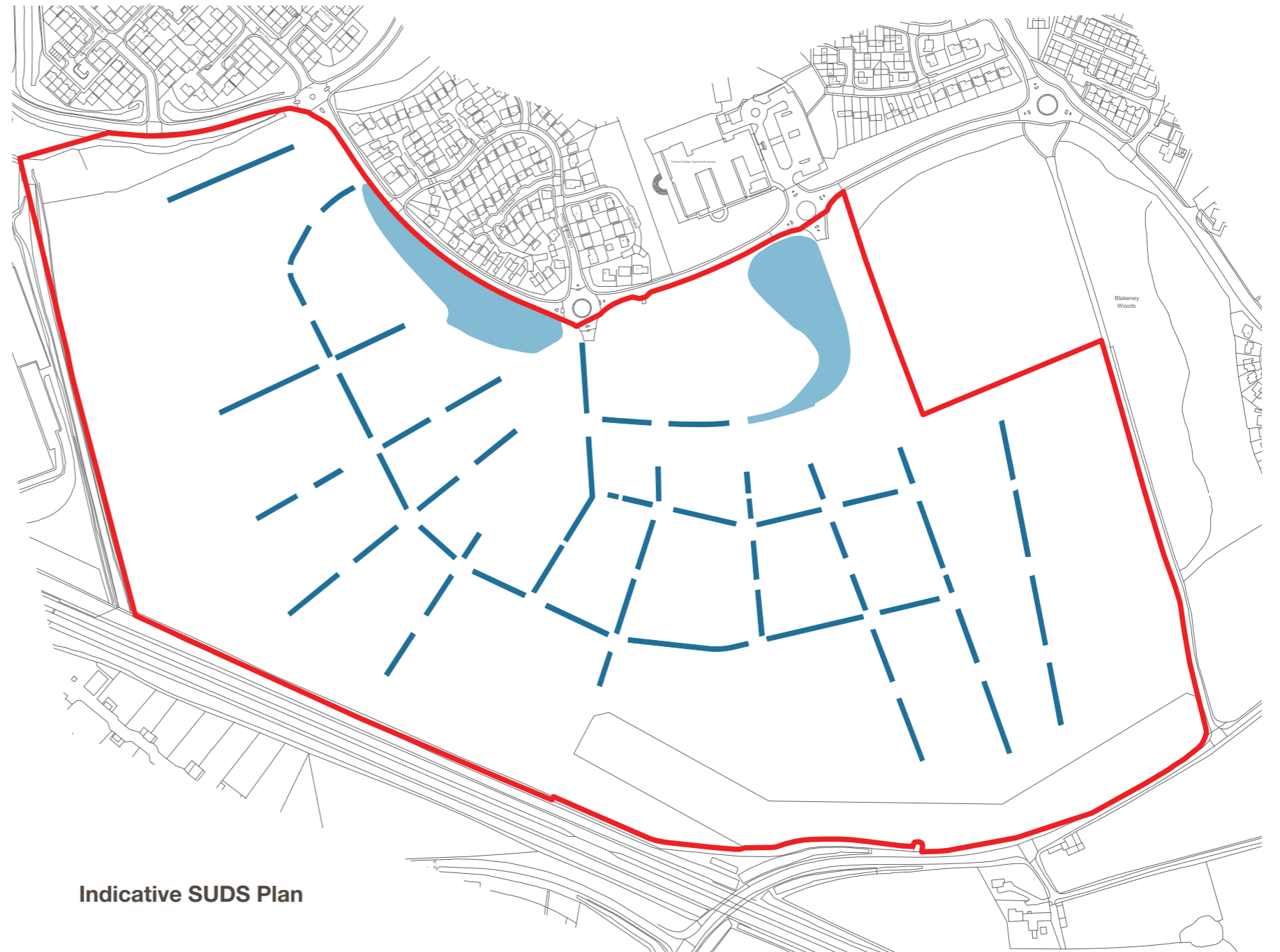


Artists impression of how the drainage ponds could look.

SUDs Rules	
Rule	Details
RL08A	<p>The following street types have been designed to accommodate swales within them:</p> <ul style="list-style-type: none"> • Primary; • Secondary and; • Rises. <p>Where these streets are built, swales must be provided to comply with the SUDS strategy or should be agreed in accordance with the Local Lead Flood Authority.</p>
RL08B	<ul style="list-style-type: none"> • Within each plot boundary, the building and paving area to be positively drained (contributing impermeable area) to the site drainage infrastructure must not exceed 40% of the total plot area.
RL08C	<ul style="list-style-type: none"> • Character Area 1, 2 and 3: As part of Phase 1 Infrastructure Works, two basins will be developed on the southern section of Weymouth Road, in accordance with the detailed plans submitted as part of this planning application. These will act as the attenuation requirements for Areas 1-3 to satisfy the LLFA and NWL and no additional attenuation will be required as part of the development of these areas.
RL08D	<ul style="list-style-type: none"> • Character Area 4 and 5: Flow restrictions and associated attenuation in the form of ponds or basins will be required to achieve greenfield run off for all development within Areas 4 and 5. The final flow restriction for the total area may be required as part of Character Area 5 infrastructure.



Examples of swales



Indicative SUDS Plan

Plan showing where swales and drainage ponds have been designed into the illustrative masterplan.

09 Parking Strategy

The Draft SSGA document states that all residential properties must be provided with at least one allocated car parking space, and executive dwellings should be allocated with at least two off street car parking spaces.

The masterplan accommodates this provision of parking, and possible parking methods for dwellings are detailed below:

- Parking spaces can to be provided within the curtilage of the property. This can be in a garage, car port or driveway.
- Parking can also be provided in parking courts in the locations identified on the plan below. Parking courts should be designed in line with Sunderland City Council’s Residential Design Guide SPD.
- Visitor parking can be provided on-street or in parking courts.



Indicative Parking Court Plan

 Parking court locations



Parking provided in a driveway in-front of the house



Parking provided in garage and drive-way to the side of the house

Parking Strategy Rules	
Rule	Details
RL09A	<p>Parking Provision:</p> <ul style="list-style-type: none"> • At least 1 allocated parking space per dwelling is to be provided. • A least 2 allocated parking spaces per executive dwelling (5+ bedrooms) • At least 1 visitor parking space should be provided on-street or in a parking court per 3 dwellings per character area, i.e. a street with 12 homes will require 4 on-street/ parking court visitor bays.



On-street parking bays created from subtle paving techniques

10 Sustainability

RL10A BREEAM

Applies to:

- All non-residential buildings, for example the parade of shops and facilities in the local centre.

The buildings specified above will have to achieve a BREEAM rating of excellent.

The design criteria are laid out on the BREEAM website.

www.breeam.org – linked under ‘Schemes’

RL10B Secured by Design

Applies to:

- All affordable housing
- All open market housing

The development must meet Secured by Design standards, to create defensible, secure and self-policing environments where empty dead areas are avoided and well-defined streets and spaces are overlooked by residents in adjacent buildings.

Particular regard has to be paid to the design of end-of-terrace buildings by the introduction of specific corner buildings with door and windows within the gable ends and parking courts with natural surveillance from habitable rooms and main entrances to secondary dwellings. The design criteria are laid out on the secured by design website:

www.securedbydesign.com

RL10C Lifetime Homes

Applies to:

- All affordable housing
- 15% of open market housing

The Lifetime Homes standard is the result of careful study and research.

The design criteria forming the Lifetime Homes standard relate to interior and exterior features of the home. There are a total of 16 design criteria. Each is valuable in itself, but a dwelling must incorporate all current criteria to achieve the Lifetime Homes standard.

Wheelchair accessibility was chosen as the benchmark for a good space requirement. Good space requirements benefit most people in a variety of ways and not just wheelchair users – for example, parents with small children and the equipment they require (pushchairs, prams, toys), people carrying shopping or other large items in and out of the house, older people who find it easier not to use stairs, people with a range of temporary or permanent mobility impairments. Good accessibility helps everyone.

For detailed information on requirements, illustrations and answers to frequently asked questions relating to each of the 16 design criteria is laid out on the Lifetime Homes website:

www.lifetimehomes.org.uk

RL10D Building for Life 12

All development on the Chapelgarth site should be attractive, functional and sustainable and should follow the principles set out in Building for Life 12.

<http://www.designcouncil.org.uk/resources/guide/building-life-12-third-edition>

A landscape photograph showing a grassy field with scattered trees and a cloudy sky. The text 'Chapelgarth Landscape Strategy' is overlaid in large white font.

Chapelgarth Landscape Strategy



11 Key Landscape Elements

The plan on the following page sets out the key landscape principles which have influenced the design of the masterplan for the site.

The Design and Access Statement describes the baseline work behind developing these principles in more detail. The following pages of this Design Code describe how the landscape strategy will be delivered with regards to each aspect.

The diagram below details important outward views and visual links to green space, which have largely influenced the layout of the streets detailed in section 03. The elevated position of the site and outward views are part of the essential DNA of Chapelgarth. Maintaining these views forms part of the organisational principals of the site.

Key Landscape Connections



Key Landscape Elements

-  Existing Woodland
- 1/ Blakeney Woods
- 2/ Woodland at Barden Lane
- 3/ Woodland along railway cutting
- 4/ Woodland at Moorside Road
-  SANG (Suitable Alternative Natural Greenspace)
-  Green Links / Amenity Open Space
-  Central Park 'Joe's Paddock'
-  Panoramic Park
-  Community Heart
-  Community Square
-  Pocket Parks (including doorstep play)
-  Play areas
-  Residential Blocks
-  Visuals Connections/Important Views Framed by streets
-  Existing field boundaries to be retained
-  Primary and Secondary Streets with double avenues [Green Spine]



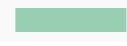



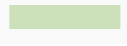
12 Open Space Strategy

The accompanying regulatory plan illustrates the required size and distribution of public open space types for a 750 dwelling development. The existing green infrastructure has also been illustrated to demonstrate how the open space strategy relates to key landscape features around the site.

Part of Chapelgarth’s unique selling point is its location on the City of Sunderland’s city fringe where country meets city. The parameters indicate the type of open spaces to be provided across the scheme.

In line with national and local planning guidance, the masterplan proposes the following areas of open space to be delivered, based on a maximum of **750** units being developed:

- SANG requirements for the site is identified as **8 hectares per 1000 population**. Based on an average household size of 2.25, the minimum SANG area required for 750 homes would be 13.50 hectares. Based on the accompanying regulatory plan, the total area of SANG provided exceeds this figure, achieving 13.74 hectares.
- Amenity Open Space requirements for the site are based on Saved Policy H21 in the Unitary Development Plan. It states that **0.4 hectares should be provided per 1000 bedspaces**. Based on the indicative mix of housing provided in the D&A (75% 3-4 bed, 20% 5+ bed and 5% 2 bed), this generates a bedspace figure of 3096, which would require 1.24 hectares of amenity green space. Based on the accompanying regulatory plan, the total area of amenity greenspace provided exceeds this figure, achieving 2.37 hectares.

Open Space Parameters		
Key	Parameter	Details
	RP12A	SANG: Areas identified as accommodating Suitable Alternative Natural Greenspace. Must adhere to any rules relating to SANG provision.
	RP12B	Amenity Open Space: Areas identified as accommodating Amenity Open Space. Must adhere to any rules relating to Amenity Open Space provision.
	RP12C	Play: Areas identified as accommodating Play spaces. Exact location within amenity open space area can change but must adhere to any rules relating to Play.
	RP12D	New Woodland: Areas identified for native tree planting.
	RP12E	Green Links: Areas identified to provide a link and access between other programmed open spaces and existing green infrastructure. Green links to align with existing green infrastructure buffers to provide onward connectivity between ecological networks and wildlife corridors. Green links should extend the recreational opportunities for fitness circuits

- Equipped Play Space guidance recommends **0.2 hectares per 1000 population**. Based on an average household size of 2.25, the minimum SANG area required for 750 homes would be 0.34 hectares. Based on the accompanying regulatory plan, the total area of equipped play space provided exceeds this figure, achieving 0.36 hectares.
- In addition to this the open space strategy identifies areas as green links which will further contribute to green and open amenity spaces within the development.
- As detailed applications come forward, these figures will require adjustment to take on board actual number of houses being provided.



CHAPELGARTH




REGULATORY PLAN 12: OPEN SPACE STRATEGY

SCALE 1:5000 @ A3

26-05-2016
944/REG12_RevA

KEY





EXISTING GREEN INFRASTRUCTURE

-  EXISTING WOODLAND Retained
-  EXISTING HEDGES Retained
-  EXISTING TREE GROUPS Retained

NEW GREEN INFRASTRUCTURE

-  NEW WOODLAND Native tree planting areas

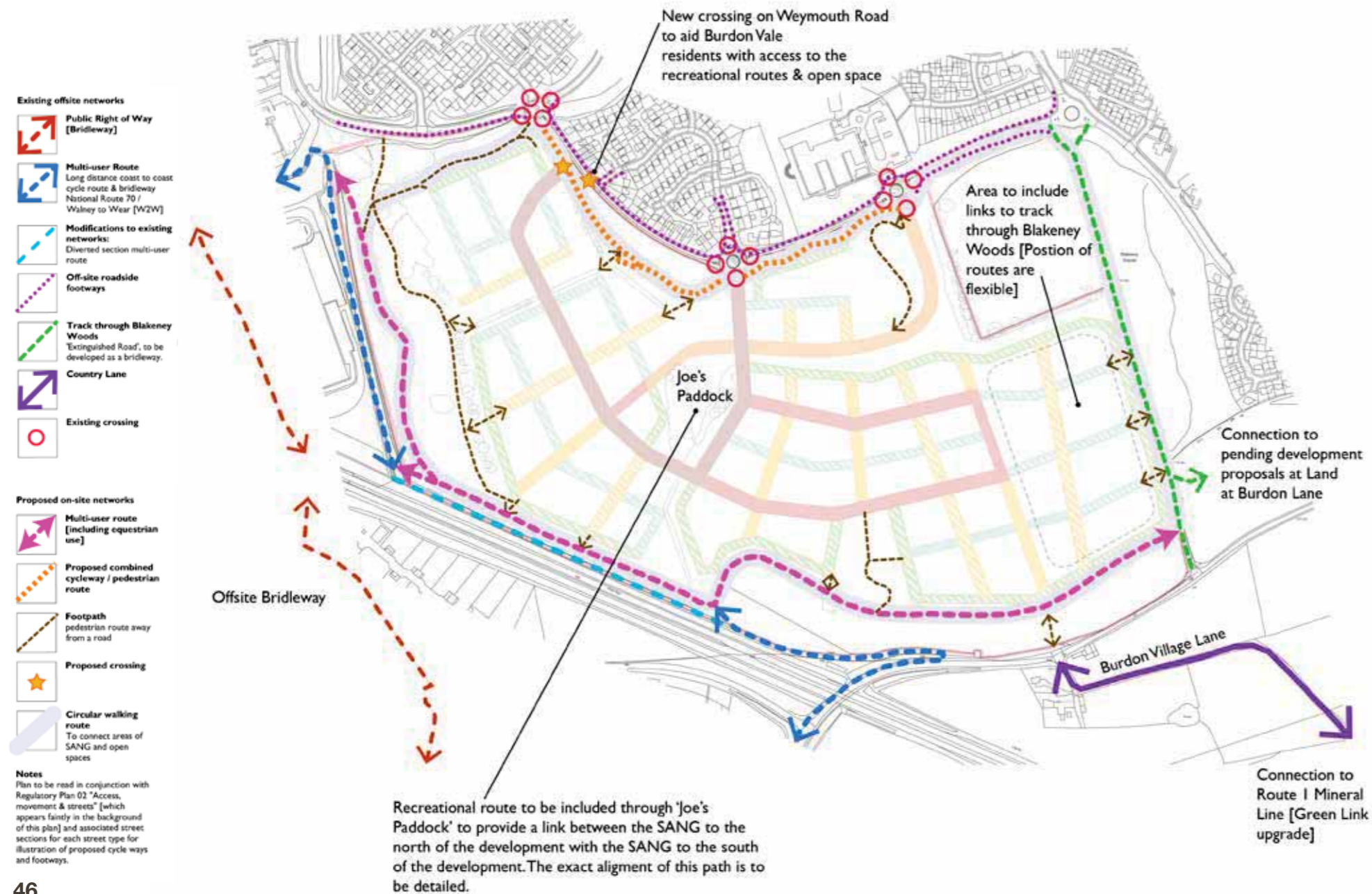
OPEN SPACE TYPOLOGIES

-  SANG Suitable Alternative Natural Greenspace
-  AMENITY OPEN SPACE
-  PLAY
-  GREEN LINKS

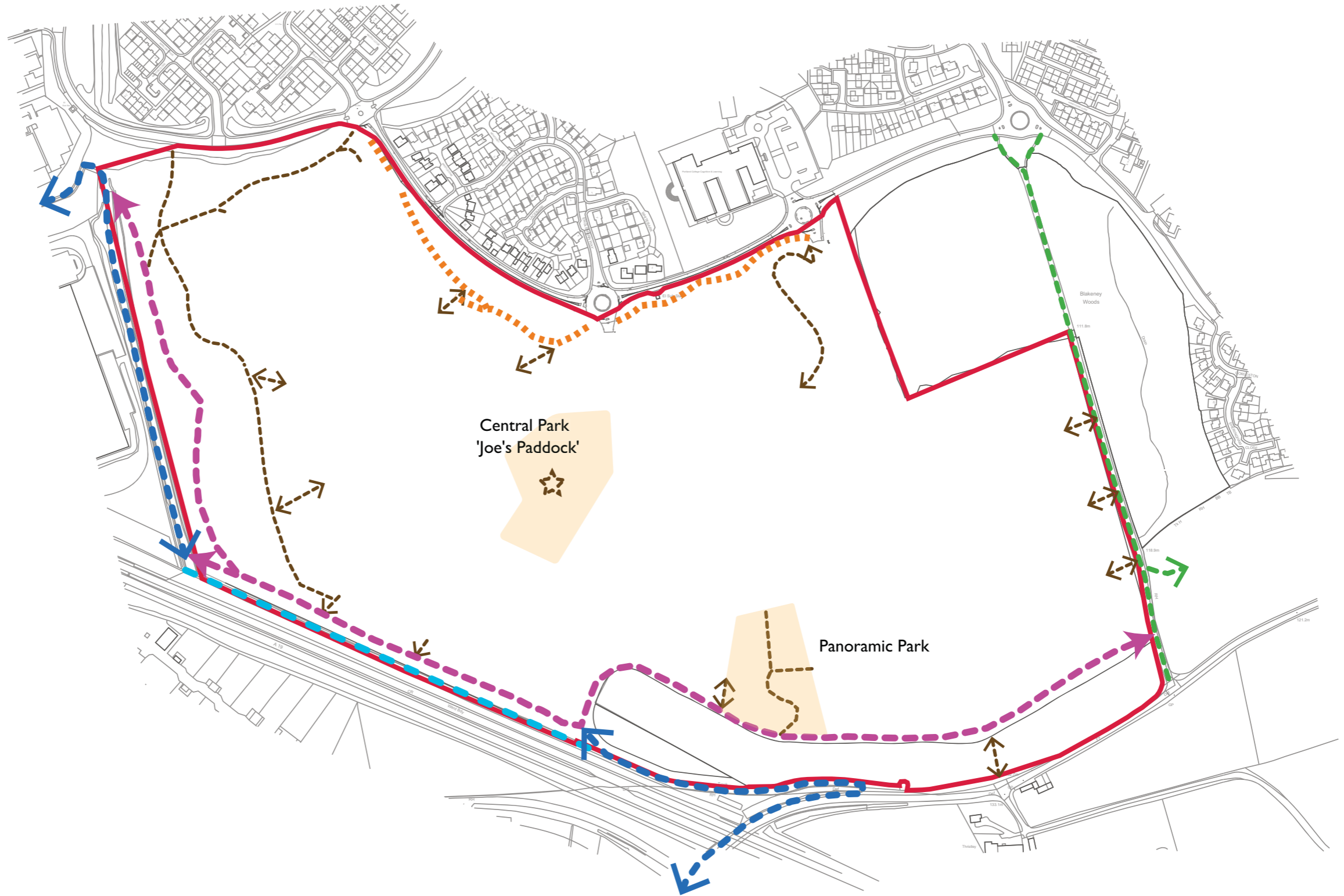
13 Recreational Routes

The accompanying regulatory plan illustrates the key recreational routes which we intend to fix as part of this application to ensure these are provided and connected as envisioned within the masterplan.

The consultation process with local people emphasised the importance of keeping these routes open and circular so they could continue to appreciate and enjoy the countryside. The indicative plan below provides more information on these routes and how they connect from our proposed street network into the wider network:



Recreational Route Parameters		
Key	Parameter	Details
	RP13A	Multi User Route: The route identified on regulatory plan 13 will provide access to the areas of SANG on the sites western and southern boundaries and connect to the existing multi-user route (W2W route).
	RP13B	Footpaths: Footpaths will be provided across the masterplan to connect the residential areas with the green space and SANG. The routes identified on the regulatory plan are flexible to their exact location but must connect the street network with the amenity spaces, SANG and surrounding recreational networks.
	RP13C	Central Park Footpath: A recreational route will be provided through the central park- 'Joe's paddock' to provide a link between the SANG to the north and south of the development. The exact alignment of this path will be proposed at a detailed design stage.



CHAPELGARTH

REGULATORY PLAN 13: RECREATIONAL ROUTES

SCALE 1:5000 @ A3

26-05-2016
944/REG13_Rev0

KEY

PROPOSED ON-SITE NETWORKS

- MULTI-USER ROUTE
- PROPOSED COMBINED CYCLEWAY/ PEDESTRIAN ROUTE
- FOOTPATHS
- CENTRAL PARK FOOTPATH

EXISTING ON-SITE NETWORKS

- MULTI-USER ROUTE
- MODIFICATIONS TO EXISTING NETWORKS
- TRACK THROUGH BLAKENEY WOODS

14 Green Gateways

Green gateways are where the urban areas meet the more natural greenspace and will be important throughout the site to enhance accessibility and connections to green and open spaces around the site.



Precedent images to convey desired character

Green Gateway Parameters		
Key	Parameter	Details
①	RP14A	Include at vehicle accesses onto site
②	RP14B	Include at key recreational accesses onto site
③	RP14C	Include along the green links and either side of the central park

Green Gateway Rules	
Rule	Details
RL14A	To promote green, positive and high quality first impressions
RL14B	Include the planting of semi-mature broadleaved tree
RL14C	To include a welcome message
RL14D	Use of natural materials - stone or 'chunky' timber. Or steel of natural colour.
RL14E	Include a meaningful, high quality gateway feature that strengthens the sense of place
RL14F	Non vehicle gateways to include interpretation aids for recreational trails
RL14G	Could include poetry



Green Gateway Locations



Non-vehicular Green Gateways



Vehicular Green Gateways

15 Suitable Alternative Natural Greenspace [SANG]

The provision of SANG is required to reduce the likely significant effect of the development on both the Northumbria Coast Special Protection Area [SPA] and Ramsar Site and Durham Coast Special Area of Conservation [SAC]. It is to be delivered in phases to meet the allocation ration per dwelling built. Further information on indicative phasing and maintenance requirements are detailed in the later sections of this document.



Precedent images to convey desired character

SANG Rules	
Rule	Details
RL15A	<ul style="list-style-type: none"> Enhancement to existing openspace provision. To have a natural open space feel similar to a country park specification.
RL15B	<ul style="list-style-type: none"> Paths to include a combination of surfaced routes for all weathers and mown grass paths to provide a more natural feel.
RL15C	<ul style="list-style-type: none"> To include supplementary tree planting and species rich grassland and wildflower management proposals
RL15D	<ul style="list-style-type: none"> To include large areas for dogs to be off a lead and signage as to which areas these are.
RL15E	<ul style="list-style-type: none"> Low level lighting to be provided to key routes only
RL15F	<ul style="list-style-type: none"> 1.2m high railings to be included where necessary for safety between dogs off the lead and cars in adjacent areas
RL15G	<ul style="list-style-type: none"> To include a well connected trail and shorted loop walks
RL15H	<ul style="list-style-type: none"> To include markers for fitness trails
RL15I	<ul style="list-style-type: none"> To include equipment for fitness trails
RL15J	<ul style="list-style-type: none"> To include a multi-user route and a diverted section of the W2W
RL15K	<ul style="list-style-type: none"> To include access control which permits, horses, cyclists and pedestrians including double buggies.
RL15L	<ul style="list-style-type: none"> Incorporate public art and interpretation which is in keeping with the country park that references views and the history of the SANG / wider Chapelgarth site including the former railway and industrial use
RL15M	<ul style="list-style-type: none"> Will not incorporate other uses incompatible to dog walking such as sports pitches.

Indicative distribution of SANG

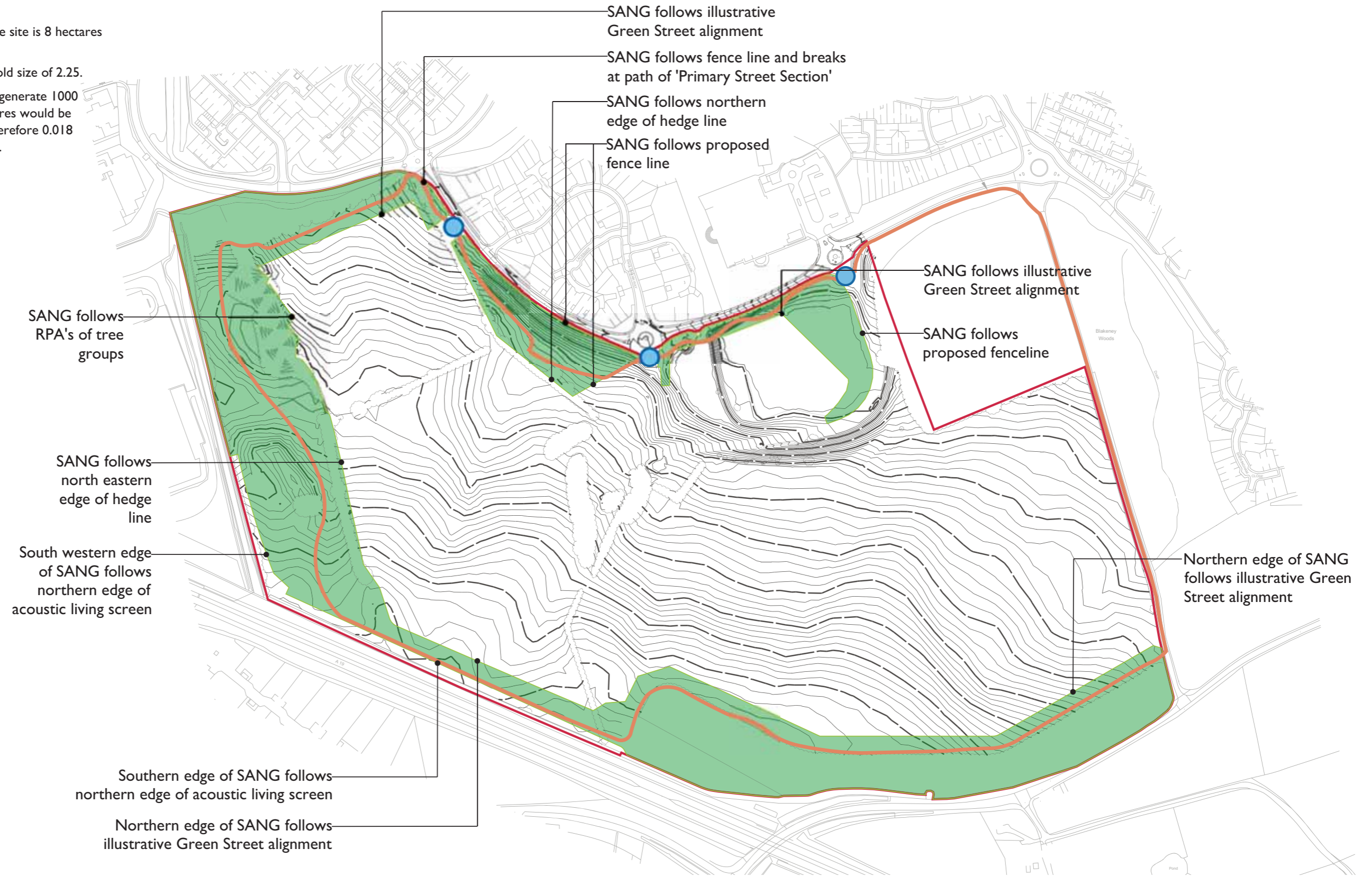
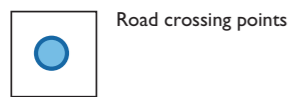
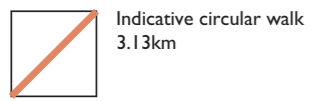


SANG requirements [based on 750 units]	
Min required SANG [Ha]	Illustrative SANG [Ha]
13.5000	13.74

SANG requirement for the site is 8 hectares per 1000 population.

Assuming an average household size of 2.25.

$1000/2.25 = 444$ dwellings to generate 1000 population, therefore 8 hectares would be needed for 444 dwellings. Therefore 0.018 hectares needed per dwelling.



16 Central Park - Joe's Paddock

The Central Park or Joe's Paddock will sit at the heart of the development adjacent to the Community Heart, forming a focus for the development.

Park Parameters		
Key	Parameter	Details
①	RP16A	Retain as many of the mature trees as possible through careful level design to of the developments street structure to retain the levels within the trees root zones
②	RP16B	Explore sensitive tree surgery to crown rise the existing trees where possible and appropriate to the trees for to allow for passive surveillance of the park from the surrounding residential areas.
③	RP16C	Include hard surfaced paths / cycleways
④	RP16D	Include min 0.12Ha of play space, natural / exploratory play encouraged.
⑤	RP16E	Incorporate significant piece of public art that acts as an eyecatcher, captures the history and sense of place of the site, accentuating views
⑥	RP16F	Use of natural stone filled gabion baskets would be acceptable to assist with earth retention if required
⑦	RP16G	Include new tree avenue to follow path and extend from street network. See planting strategy
⑧	RP16H	Incorporate widespread swathes of spring bulb planting
⑨	RP16I	Path network to allow connection to residential areas, community heart, and onwards links up to the multi-user route and the Panoramic Park
⑩	RP16J	Include elements to encourage fitness



Precedent images to convey desired character

17 Panoramic Park

The Panoramic Park is located on an elevated part of land, which allows the park to make the most of views toward the city and the coast.

The park will include natural integration to the SANG and woodland area to the south and paths should link to the multi-user route.

Park Parameters		
Key	Parameter	Details
①	RP17A	Ensure that the relative height of the park, as created from fill material, allows for views over / framed by proposed streets to the sea, Ryhope pumping station and the City of Sunderland
②	RP17B	Include steps on axial route to the summit. Materials to be natural, but could be of National Park / rustic specification
③	RP17C	Axial steps to lead to the focal viewing terrace at the summit of the park
④	RP17D	Sculpt earth in a defined, stepped form - grass reinforcement to be included to maintain earth modelling in a robustly
⑤	RP17AE	Perimeter treatment of advanced standard root balled tree stock
⑥	RP17F	Include min 0.12Ha of play space, natural / exploratory play encouraged.
⑦	RP17G	Sandstone paving surface to the summit space
⑧	RP17H	Incorporate significant piece of public art that acts as an eyecatcher, captures the history and sense of place of the site, accentuating views
⑨	RP17I	Include chunky timber seating in a social arrangement
⑩	RP17J	Use of natural stone filled gabion baskets would be acceptable to assist with earth retention if required
⑪	RP17K	Combination of mown and species-rich meadow grass incorporate widespread swathes of spring bulb planting
⑫	RP17L	Design to encourage passive surveillance of community spaces from adjacent properties



Views north to the City of Sunderland, the Stadium of Light and the coast framed by the new buildings down a 'Rise'

Views east to Ryhope Pumping Station Chimney and the coast, framed by the new buildings along a 'Lane'



Precedent images to convey desired character

18 Pocket Parks and Doorstep Play

Precedent images to convey desired character

Pocket parks and doorstep play spaces will be provided to bring green open space into the housing areas and act as a focus for each of the neighbourhood, providing a social space as well as encouraging activity. The facing page provides outline designs of typical pocket parks.

Pocket Park Rules		
Key	Rules	Details
①	RL18A	Each pocket park should include a minimum 0.03Ha of play suitable for <6 year old children. Playable elements for natural and exploratory play are encouraged. Play areas should be fenced.
②	RL18B	The design of each park should include passive surveillance of community spaces from adjacent properties
③	RL18C	Include equipment for fitness
④	RL18D	Orchard trees of productive size
⑤	RL18E	Raised beds for food growing or community planting, including a water source for irrigation
⑥	RL18F	Chunky timber seating arranged in social formations
⑦	RL18G	Wildlife attracting vegetation
⑧	RL18H	Include a community notice board



Pocket Park 1 - Knockles Square



Pocket Park 3 - Chapelgarth Meadows



Pocket Park 2 - Moor Farm



Pocket Park 4 - Foxcover



19 Green Links & Amenity Open Space

Green links have been incorporated throughout open spaces to formalise recreational routes and encourage healthy activities to promote well-being, for new residents and existing residents in the local area.

These green networks:

- Frame and provide a green setting for development
- Link and provide access between programmed spaces
- Provide onward connectivity between ecological networks and wildlife corridors
- Recreational opportunities for fitness circuits
- A canvas for edible streets



Green Link Rules		
Key	Parameter	Details
①	RL19A	Country park feel specification
②	RL19B	Include surfaced paths and combined cycleways
③	RL19C	Include markers for fitness trails
④	RL19D	Include equipment for fitness trails
⑤	RL19E	Include native tree planting and new planting to gappy hedges
⑥	RL19F	Combination of mown and species-rich meadow grass
⑦	RL19G	chunky timber benches at 100m distances apart

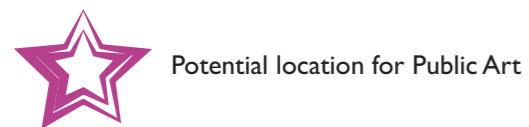


20 Public Art

The use of public art is to be encouraged in the following locations. This will enhance the gateways into the development and aid navigation through the site.



Indicative Public Art Plan



21 Green Buffers and Easements






There are a number of sensitive ecological features and wildlife habitats around and bordering the site, which the masterplan seeks to protect and enhance. The diagram below identifies these areas and the rules in the table determine how these will be safeguarded from development:




An acoustic bund has also been designed along part of the southern section of the masterplan to reduce and deflect noise from the A19, and reduce noise impacts on new housing proposed in this area. These works will also seek to enhance people’s experience of the multi-user route by providing a more elevated route which can make the most of views, which also benefits from the reduction in noise levels from the A19.

Buffers and Easement Rules: Existing Woodland and Hedgerows	
Rule	Details
RL21A	Existing green infrastructure buffers - general: Buffers to each vegetation type should be adhered to as below. <ul style="list-style-type: none"> • Dwellings should face onto, or have their gable ends with activation onto these buffers. • Properties should not back onto or have their back garden boundaries against these edges where possible . • A portion of the buffer may be used as shared surface / recreational routes. • Thus meaning that the easements don’t have to be ‘soft’ spaces so long as they are public spaces.
RL21B	Hedges: <ul style="list-style-type: none"> • A 10m buffer is to be provided to either side of the centre line of the hedge where no development should occur.
RL21C	Woodland (General): <ul style="list-style-type: none"> • A 25m buffer is to be provided to woodland edges where no development should occur. The 25m is measured from the trunk of the trees on the edge of the woodland.
RL21D	Woodland (Blakeney Woods, Local Wildlife Site [LWS]): <ul style="list-style-type: none"> • A minimum 25m buffer is to be provided to woodland edges where no development should occur. The 25m is measured from the trunk of the trees on the edge of the woodland. A greater buffer should be aimed for where possible to maximise the protection given to this designated site



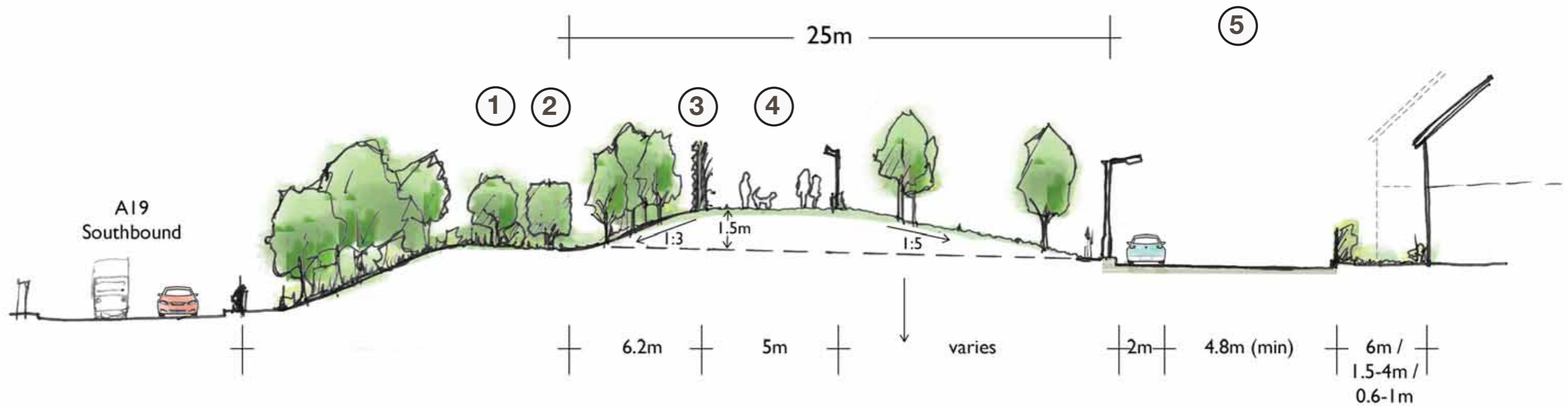
Existing Green Infrastructure and Buffers

-  Existing Woodland [Retained]
-  Woodland buffer 25m
-  Existing Hedges [Retained]
-  Hedge Buffer 10m (either side of centerline)
-  Existing trees & tree groups [Retained]

-  Root Protection Area RPA of existing individual trees and groups of trees
-  Existing trees [Proposed to be felled]
-  Existing Hedges [Proposed to be removed]

21 Green Buffers and Easements: A19 Acoustic Bund

Green Street - Rural edge - Acoustic bund & screen



- ① Existing route of W2W to be planted with native woodland planting
- ② Existing hedge to be retained
- ③ Acoustic mitigation: Proposed 2.5m living screen planted into a 1.5m high raised earth bund. Living screen to include 600mm deep topsoil layer and trickle irrigation
- ④ Proposed multi-user route: to include diverted section of W2W. Route to be 5m wide and divided in two surfaces to suite users. 2.5m wide section coloured tarmac - cyclist and pedestrians + 2.5m wide section of compacted aggregated for equestrian users
- ⑤ Green Street

22 Planting Strategy: Planting Character Areas

General Principles

Following recommendations in the draft SPD (Jan 2016) the over-riding approach to planting at Chapelgarth is the creation of a green and leafy character to this urban fringe development that makes the most of existing woodland areas, trees and hedgerows whilst creating high quality public spaces and movement routes.

This approach will maintain and enhance the character and setting of the SSGA and aid the creation of a high quality open space network throughout it.

It will also provide a strong green infrastructure to the site, linking its development plots together, creating a setting and identity for the new neighbourhood and providing opportunity for new wildlife corridors and the integration of SUDS/ wetlands.

As required in the draft SPD (Jan 2016), buffers will be provided to all existing hedgerows and woodlands within the housing layout.

The general approach to planting will be the use of trees, hedges and grassland areas throughout to minimise maintenance requirements in the long term.

Longer grass and meadow areas will be encouraged as much as possible, with a 2.0m width mown edge being used where these abut footpaths/ carriageways to give a 'kept' impression to the development.

Ornamental shrub planting will be used sparingly to accentuate key features/ character areas or to soften residential areas.

The visual impact of on street parking will be mitigated by the use of alternating parking bays with road verge and street tree/ shrub planting.

Character Areas

The Chapelgarth site can be split into a distinct hierarchy of planting character areas, whose composition can be described as follows:





Existing Woodland

Existing woodland areas to Blakeney Woods LWS and along the southern boundary of the site along Burdon Lane will be retained.

The area along Burdon Lane will be subject to a programme of woodland management works to thin the existing plantation, opening it up and allowing the creation of a better species and age diversity mix within it.

Following these management works it is proposed to carry out new planting works to enhance the plantation, particularly by introducing native ground flora. Species will be chosen from Woodland Mix W8 of the National Vegetation Classification as advised by the project ecologist:

Trees/ Woody Shrubs

Acer campestre (Field Maple), *Acer pseudoplatanus* (Sycamore), *Betula* spp. (Birch), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Prunus avium* (Cherry), *Prunus spinosa* (Blackthorn), *Quercus petraea* (Sessile Oak), *Sambucus nigra* (Elder), *Sorbus aria* (Whitebeam), *Viburnum opulus* (Guelder Rose)

Field Layer

Arum maculatum (Cuckoo Pint), *Asplenium scolopendrium* (Harts Tongue Fern), *Brachypodium sylvaticum* (Slender False Brome), *Circaea lutetiana* (Enchanter's Nightshade), *Geum urbanum* (Wood Avens), *Hedera helix* (Ivy), *Hyacinthoides non-scripta* (Bluebell), *Mercurialis perennis* (Dog's Mercury), *Polystichum setiferum* (Soft Shield Fern), *Rubus fruticosus* (Blackberry), *Viola riviniana* (Dog Violet)

New/ Enhanced Woodland Planting

New areas of woodland will be introduced within the scheme to enhance and extend areas of existing.

Species will be chosen from Woodland Mix W8 of the National Vegetation Classification as advised by the project ecologist (as listed above).

Weymouth Road Frontage

As part of the site's SUDS solution and to provide a green frontage to the development where it faces existing properties in Burdon Vale, it is proposed to form a series of sculptural drainage attenuation basins along this northern site boundary.

Some isolated pools will be permanently wet, otherwise water levels in the area will fluctuate depending on weather conditions.

Mounds and basins will be seeded with grass mixes that are able to tolerate these potential fluctuating water levels. This will be allowed to establish as a grassland meadow, with a 2.0m width mown edge being used where these abut footpaths/ carriageways to give a 'kept' impression to the development. A species rich grassland seed will be used sparingly to increase biodiversity to shallow sloping water edges.

Tree and understorey planting will be introduced to provide further visual screening and greening along this boundary. Species will be chosen from Woodland Mixes W2, W6 and W8 of the National Vegetation Classification as advised by the project ecologist (as listed above) and as appropriate given the predicted levels of ground water.

Trees/ Woody Shrubs

Alnus glutinosa (Alder), *Acer pseudoplatanus* (Sycamore), *Betula pubescens* (Downy Birch), *Crataegus monogyna* (Hawthorn), *Quercus robur* (Pendunculate Oak), *Salix cinerea* (Grey Willow), *Sambucus nigra* (Elder)

Field Layer (W2 and W6)

Calamagrostis canescens (Purple Small Reed), *Calamagrostis epigejos* (Bushgrass), *Carex acutiformis* (Lesser Pond Sedge), *Cladium mariscus* (Sawtooth Sedge), *Dryopteris dilata* (Broad Buckler Fern), *Epilobium hirsutum* (Great Willowherb), *Filipendula ulmaria* (Meadowsweet), *Galium palustre* (Common Marsh-Bedstraw), *Hedera helix* (Ivy), *Iris pseudacorus* (Yellow Flag Iris), *Lonicera periclymen* (Honeysuckle), *Phragmites australis* (Common Reed), *Poa trivialis* (Rough Bluegrass), *Rubus fruticosus* (Blackberry), *Solanum dulcamara* (Bittersweet)

See above for details of Woodland Mix W8.

Grass Seed to Slopes and General Areas

To be a 'neutral to basic' grass mix (as advised by the project ecologist), for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Grass Seed to Shallow Water Edges

To be Mix RE3 (River Plain/ Water Meadow) by Germinal Seeds which includes Slender Creeping Red Fescue 25%, Crested Dogstail 20%, Meadow Fescue 10%, Rough-Stalked Meadow Grass 10%, Yorkshire Fog 5%, Small Leaved Timothy 5%, Ribwort Plantain 3%, Meadow Buttercup 3%, Creeping Bent 2.5%, Sweet Vernal 2.5%, Common Knapweed 2%, Oxeye Daisy 2%, Creeping Buttercup 2%, White Clover 2%, Meadow Sweet 1%, Self Heal 1%, Common Sorrel 1%, Red Clover 1%, Yellow Rattle 0.8%, Marsh Marigold 0.25%, Autumn Hawkbit 0.25%, Rough Hawkbit 0.25%, Ragged Robin 0.25%, Common Mouse-ear 0.1%, Greater Burnett 0.1%





Silksworth Plantation

This area forms part of the Suitable alternative Natural Greenspace Allocation [SANG] to the west of the site. The area will be predominantly meadow/ long grassland, with new tree planting proposed to line the multi-user route. Small areas of new native woodland planting and under storey shrub planting are proposed to the west of the area to merge the raised earth bund in with the existing tree lined edge of the embankment sides of the disused railway cutting.

These existing planting areas will be thinned/ managed to ensure a good mix of species and ages within them.

Species to be introduced to the area will be chosen from Woodland Mix W8 of the National Vegetation Classification as advised by the project ecologist:

Trees/ Woody Shrubs

Acer campestre (Field Maple), *Acer pseudoplatanus* (Sycamore), *Betula* spp. (Birch), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Prunus avium* (Cherry), *Prunus spinosa* (Blackthorn), *Quercus petraea* (Sessile Oak), *Sambucus nigra* (Elder), *Sorbus aria* (Whitebeam), *Viburnum opulus* (Guelder Rose)

Field Layer

Arum maculatum (Cuckoo Pint), *Asplenium scolopendrium* (Harts Tongue Fern), *Brachypodium sylvaticum* (Slender False Brome), (*Circaea lutetiana* (Enchanter's Nightshade), *Geum urbanum* (Wood Avens), *Hedera helix* (Ivy), *Hyacinthoides non-scripta* (Bluebell), *Mercurialis perennis* (Dog's Mercury), *Polystichum setiferum* (Soft Shield Fern), *Rubus fruticosus* (Blackberry), *Viola riviniana* (Dog Violet)

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Central Park

As the central green space to the development, this area is structured around the retention of existing trees in this area which comprise of ash, sycamore, whitebeam and some wild cherries, rowan and elder.

To provide a more open parkland character and improve security/ surveillance to the park it is proposed to crown raise and thin these existing trees to provide better visual permeability.

This existing planting will then be supplemented with new parkland scale tree planting to increase species diversity.

Hedge planting will be used to define spaces within the park and will consist of either mixed native species or single, more ornamental species where greater definition of formality is required.

Grass will be mown to provide multi-functional, recreational space and native/ naturalising bulbs will be introduced within this to provide seasonal displays and accents to this focal space within the development.

Trees

Aesculus hippocastanum 'Baumannii' (Sterile Horse Chestnut), *Prunus avium* 'Plena' (Cherry), *Quercus robur* (Pendunculate Oak), *Tilia platyphyllos* 'Rubra' (Red Twigged Lime)

Native Mixed Hedge

Acer campestre (Field Maple), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Ilex aquifolium* (Holly), *Prunus spinosa* (Blackthorn), *Viburnum opulus* (Guelder Rose)

Single Species Hedges

To be either *Carpinus betulus* (Hornbeam), *Fagus sylvatica* (Beech) or *Fagus sylvatica* 'Purpurea' (Copper Beech).

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Bulbs

Crocus speciosus albus (Autumn Flowering Crocus) and *Narcissus pseudonarcissus* (Daffodil)

Panoramic Park

Designed as an open, grassed, elevated viewing area within the development, planting to this parkland space will be limited and chosen/ placed so as not to obstruct important views (particularly to the north and east).

Avenue trees will be introduced to street edges to create a frame to the space and canopy cover to perimeter footpaths. These will be a single species to provide a strong visual statement to complement the sculptural landform in this park.

Shrub planting will be introduced in a bold statement to the northern boundary of the space to mark the park entrance and create an attractive streetscape.

An area of new woodland will be created to the south of the park to extend the wood at Burdon Lane into the development, and form a backdrop to high level viewing and activity areas.

New Woodland

Species to be chosen from Woodland Mix W8 of the National Vegetation Classification as advised by the project ecologist (as listed above).

Trees

Corylus colurna (Turkish Hazel)

Shrubs

Cortaderia selloana 'Pumila' (Pampas Grass), *Cotinus* 'Ruby Glow' (Smokebush), *Hedera helix* (Ivy), *Kniphofia* 'Royal Standard' (Red Hot Poker), *Pinus mugo* 'Pumilo' (Dwarf Mountain Pine), *Rosa* 'Red Meidiland' (Groundcover Rose), *Viburnum davidii*

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.



Community Greens

Amenity greenspaces will be provided within residential areas to encourage social interaction and to provide opportunities for play.

Street scale trees will be used to soften the greens and create structure, with simple single species hedges being used to define zones within them if needed. Both will be chosen and maintained to provide clear lines of sight throughout the greens, to discourage anti-social behaviour by allowing open views in and out.

Otherwise the greens will be flexible, open areas where grass will be mown to provide multi-functional, recreational space.

Trees may be chosen to provide orchard/ fruiting interest to provide an additional community resource.

Trees

Acer platanoides 'Princeton Gold' (Norway Maple Princeton Gold), *Pyrus calleryana* 'Chanticleer' (Ornamental Pear), *Tilia cordata* 'Greenspire' (Small Leaved Lime)

Orchard Trees

Malus 'Cox's Orange Pippin' (Cox's Orange Apple), *Malus* 'Egremont Russet' (Eating Apple), *Prunus* 'Victoria' (Victoria Plum), *Pyrus communis* 'Conference' (Conference Pear)

Single Species Hedges

To be either *Carpinus betulus* (Hornbeam), *Fagus sylvatica* (Beech) or *Fagus sylvatica* 'Purpurea' (Copper Beech).

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Eastern Boundary

To compliment and enhance the existing hedge along this boundary, new hedging will be introduced to fill any gaps and to extend the hedge to the south to meet the woodland along Burdon Lane.

A new, mixed native tree line will also be introduced along this edge, with medium-large tree species being used to break up and soften views into the development from Burdon Lane (as per mitigation recommendations of the LVIA).

A grass verge will be created along circulation routes within the housing area.

Trees

Acer pseudoplatanus (Sycamore), *Betula* spp. (Birch), *Prunus avium* (Cherry), *Quercus petraea* (Sessile Oak), *Quercus robur* (Pendunculate Oak), *Sorbus aria* (Whitebeam), *Tilia europaea* (Common Lime), *Tilia platyphyllos* (Large-leafed Lime)

Native Mixed Hedge

Acer campestre (Field Maple), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Ilex aquifolium* (Holly), *Prunus spinosa* (Blackthorn), *Viburnum opulus* (Guelder Rose)

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

A19 Buffer Zone

As part of the acoustic treatment along the southern boundary which included a 1.5m high raised earth bund a living 'Green Barrier' will be installed consisting of living willow to one side and woven willow to the other. This is an 'off the peg' system, supplied by Cheviot Trees, which is designed to mitigate noise impacts using an acoustic core in between the willow panels. The living willow panels will be placed to face the new housing where it can be accessed for ongoing maintenance, with the woven willow being on the A19 side where sloping ground will make maintenance access harder.

To further green the boundary within the site a strip of mixed, native tree planting will be introduced.

Grassed areas will be seeded with the same mix as the Silksworth Plantation to provide species continuity.

Trees

Acer pseudoplatanus (Sycamore), *Betula* spp. (Birch), *Prunus avium* (Cherry), *Quercus petraea* (Sessile Oak), *Quercus robur* (Pendunculate Oak), *Sorbus aria* (Whitebeam), *Tilia europaea* (Common Lime), *Tilia platyphyllos* (Large-leafed Lime)

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.



Gateways

At the three entry points to the site from Weymouth Road it is proposed to introduce focal tree and hedge planting to further soften views into the site from Burdon Vale and to provide an arrival marker into Chapelgarth.

Single species specimen trees will provide orientation points/ markers, with single species hedges reinforcing this statement and leading movement into the development.

Grass verges to the hedges will be planted with native/ naturalising bulbs to provide seasonal displays and further accents along Weymouth Road.

Trees

Carpinus betulus (could be pleached to provide greater formality to entrances – to be confirmed in detailed planting design).

Single Species Hedges

To be either *Carpinus betulus* (Hornbeam), *Fagus sylvatica* (Beech) or *Fagus sylvatica* 'Purpurea' (Copper Beech).

Bulbs

Crocus speciosus albus (Autumn Flowering Crocus) and *Narcissus pseudonarcissus* (Daffodil)

Residential Amenity Planting

Throughout residential areas street scale trees and shrub planting will be introduced where appropriate to soften and define spaces and routes.

Species will be selected to be low maintenance and provide seasonal variation.

Allotment areas may be provided, depending on available space within the final housing layouts.

Trees

Crataegus prunifolia 'Splendens' (Broad-leaved Cockspur Thorn), *Malus* 'Evereste' (Crab Apple), *Prunus* 'Kanzan' (Japanese Cherry), *Pyrus calleryana* 'Chanticleer' (Ornamental Pear)

Shrubs

Chaenomeles 'Crimson and Gold' (Flowering Quince), *Choisya* 'Aztec Pearl' (Mexican Orange Blossom), *Cornus alba* 'Elegantissima' (Dogwood), *Escallonia* 'Donard Radiance', *Hedera helix*, *Hypericum* 'Hidcote', *Lonicera* 'Maygreen', *Philadelphus* 'Belle Etoile', *Prunus* 'Otto Luyken', *Santolina virens*, *Skimmia japonica*

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

23 Planting Strategy: Streets

The Chapelgarth site can be split into a distinct hierarchy of streets, whose differing planting composition can be described as follows:

-  PRIMARY / SECONDARY ROAD
-  BOULEVARD (SECONDARY ROAD) WITH CYCLE LANE
-  RISES
-  LANES
-  GREEN STREETS
-  MULTI USE PATH





Primary/ Secondary Road

These circulation routes form the main structure of circulation throughout the Chapelgarth site and will be as green as possible, providing a strong green infrastructure to the site and complementing its location with the SSGA.

They will be tree lined and underplanted with a 2.0m shrub verge to one side of the road and incorporating a 4.5m wide drainage swale to the other which forms part of the SUDS solution for the site.

Swales will either be planted with moisture tolerant plant species or seeded with grass mixes that can tolerate fluctuating water levels. Areas for each treatment will be confirmed in the detailed design of these areas.

Gardens along these routes will include hedge planting to their boundaries to provide further green links and definition to private spaces.

Trees – Swale Side

Alnus incana (Grey Alder), *Alnus incana* 'Aurea' (Golden Alder)

Trees – Shrub Side

Acer campestre 'Streetwise' (Field maple), *Acer platanoides* 'Crimson Sentry' (Norway Maple)

Garden Hedges

Fagus sylvatica (Beech) or *Ligustrum ovalifolium* (Privet)

Shrubs

Chaenomeles 'Crimson and Gold' (Flowering Quince), *Choisya* 'Aztec Pearl' (Mexican Orange Blossom), *Cornus alba* 'Elegantissima' (Dogwood), *Escallonia* 'Donard Radiance', *Hedera helix*, *Hypericum* 'Hidcote', *Lonicera* 'Maygreen', *Philadelphus* 'Belle Etoile', *Prunus* 'Otto Luyken', *Santolina virens*, *Skimmia japonica*

Planting to Swales – list to be confirmed following detailed design of swale and confirmation of anticipated water levels. Detailed planting design will involve zoning the plants depending on anticipated water depths.

Acorus calamus (Sweet Flag), *Agrostis palustris* (Creeping bentgrass), *Calamagrostis canescens* (Purple Small Reed), *Calamagrostis epigejos* (Bushgrass), *Carex acutiformis* (Lesser Pond Sedge), *Carex pendula* (Pendulous Sedge), *Cornus* 'Flaviramea' (Yellow Dogwood), *Iris pseudacorus* (Yellow Flag Iris), *Juncus effusus* (Soft Rush), *Poa trivialis* (Rough Bluegrass)

Grass Seed to Swale Slopes and General Areas

To be a 'neutral to basic' grass mix (as advised by the project ecologist), for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Grass Seed to Shallow Swale Edges

To be Mix RE3 (River Plain/ Water Meadow) by Germinal Seeds which includes Slender Creeping Red Fescue 25%, Crested Dogstail 20%, Meadow Fescue 10%, Rough-Stalked Meadow Grass 10%, Yorkshire Fog 5%, Small Leaved Timothy 5%, Ribwort Plantain 3%, Meadow Buttercup 3%, Creeping Bent 2.5%, Sweet Vernal 2.5%, Common Knapweed 2%, Oxeye Daisy 2%, Creeping Buttercup 2%, White Clover 2%, Meadow Sweet 1%, Self Heal 1%, Common Sorrel 1%, Red Clover 1%, Yellow Rattle 0.8%, Marsh Marigold 0.25%, Autumn Hawkbit 0.25%, Rough Hawkbit 0.25%, Ragged Robin 0.25%, Common Mouse-ear 0.1%, Greater Burnett 0.1%

Boulevard with Cycle Lane

This connecting route from Weymouth Road to the Central Park will be laid out as primary and secondary roads (above).

To strengthen the route and provide direction to the park it is intended that a single species avenue of trees be introduced to the south side of the route. These will be set within shrub planting and chosen for their striking colour, giving a strong contrast to the rest of the development.

Trees

Acer platanoides 'Crimson King' (Crimson Maple)





Rises

These radial routes throughout the site are set out to allow long views along their lengths, capitalising on the site's topography.

To avoid obscuring these views tree planting is proposed to only one side of the road, within a 4.5m swale.

Gardens along these routes will include hedge planting to their boundaries to provide further green links and definition to private spaces.

Trees within Swales

Crataegus laevigata 'Pauls Scarlet' (Hawthorn), *Pyrus calleryana* 'Chanticleer' (Ornamental Pear), *Sorbus* 'Sheerwater Seedling' (Mountain Ash)

Garden Hedges

Corylus avellana (Hazel) or *Escallonia* 'Crimson Spire'

Planting to Swales – list to be confirmed following detailed design of swale and confirmation of anticipated water levels. Detailed planting design will involve zoning the plants depending on anticipated water depths.

Acorus calamus (Sweet Flag), *Agrostis palustris* (Creeping bentgrass), *Calamagrostis canescens* (Purple Small Reed), *Calamagrostis epigejos* (Bushgrass), *Carex acutiformis* (Lesser Pond Sedge), *Carex pendula* (Pendulous Sedge), *Cornus* 'Flaviramea' (Yellow Dogwood), *Iris pseudacorus* (Yellow Flag Iris), *Juncus effusus* (Soft Rush), *Poa trivialis* (Rough Bluegrass)

Grass Seed to Swale Slopes and General Areas

To be a 'neutral to basic' grass mix (as advised by the project ecologist), for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass

Grass Seed to Shallow Swale Edges

To be Mix RE3 (River Plain/ Water Meadow) by Germinal Seeds which includes Slender Creeping Red Fescue 25%, Crested Dogtail 20%, Meadow Fescue 10%, Rough-Stalked Meadow Grass 10%, Yorkshire Fog 5%, Small Leaved Timothy 5%, Ribwort Plantain 3%, Meadow Buttercup 3%, Creeping Bent 2.5%, Sweet Vernal 2.5%, Common Knapweed 2%, Oxeye Daisy 2%, Creeping Buttercup 2%, White Clover 2%, Meadow Sweet 1%, Self Heal 1%, Common Sorrel 1%, Red Clover 1%, Yellow Rattle 0.8%, Marsh Marigold 0.25%, Autumn Hawkbit 0.25%, Rough Hawkbit 0.25%, Ragged Robin 0.25%, Common Mouse-ear 0.1%, Greater Burnett 0.1%

Lanes

These streets generally follow the site's contours, and are characterised by tree and hedge planting to the boundaries of front gardens which will provide a welcoming, green street environment.

Trees

Crataegus laevigata 'Paul's Scarlet' (Hawthorn), *Malus* 'John Downie' (Crab Apple), *Sorbus* 'Cardinal Royal' (Mountain Ash)

Garden Hedges

Fagus sylvatica (Beech) or *Ligustrum ovalifolium* (Privet)



Green Streets

Green streets are formed where there is housing to one side of the road and circulation and woodland/ green space to the other.

They will be characterised by tree planting within grassed verges to the woodland side and the planting of mixed, native hedges to the boundaries of front gardens to enhance the rural/ woodland character.

Trees

Acer campestre 'Streetwise' (Field Maple), *Betula pendula* 'Tristis' (Weeping Birch), *Prunus padus* (Bird Cherry), *Sorbus aria* 'Lutescens' (Whitebeam)

Native Mixed Hedge

Acer campestre (Field Maple), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Ilex aquifolium* (Holly), *Prunus spinosa* (Blackthorn), *Viburnum opulus* (Guelder Rose)

Grass Seed

To be a 'neutral to basic' grass mix (as advised by the project ecologist, for example Mix A4 (Low Maintenance Areas) by Germinal Seeds which includes 40% Strong Creeping Red fescue, 30% Chewings Fescue, 25% Hard Fescue and 5% Bent Grass.

Multi-User Path through SANG

This route along the southern boundary of the site will be lined with native trees to complement and create links to areas of existing woodland and include seeding of flowering meadow areas to either side to give a distinct character and further enhance site biodiversity.

Trees

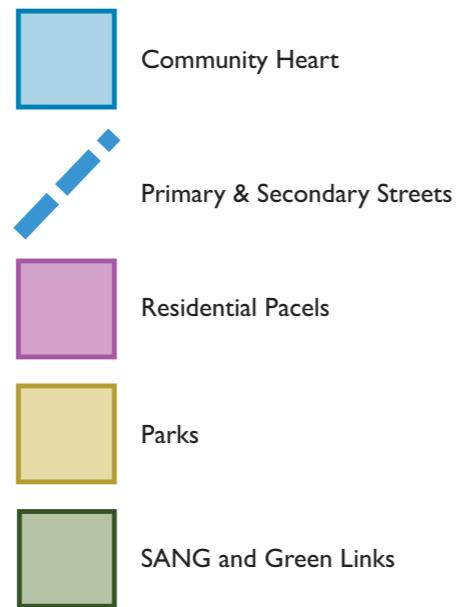
Acer pseudoplatanus (Sycamore), *Betula* spp. (Birch), *Prunus avium* (Cherry), *Quercus petraea* (Sessile Oak), *Quercus robur* (Pendunculate Oak), *Sorbus aria* (Whitebeam), *Tilia europaea* (Common Lime), *Tilia platyphyllos* (Large-leaved Lime)

Meadow Grassland

To be a decorative meadow type suitable to the location of the site, for example WFG2 (Flowering Meadow) by Germinal Seeds which includes Slender Creeping Red Fescue 24%, Hard Fescue 20%, Sheeps Fescue 20%, Crested Dogstail 10%, Small Leaved Timothy 5%, Corn Cockle 4.2%, Oxeye Daisy 2%, Cornflower 1.6%, Corn Poppy 1.6%, Corn Chamomile 1.5%, Corn Marigold 1.5%, Common Knapweed 1.4%, Ribwort Plantain 1.4%, Self Heal 1.2%, Sweet Vernal 1%, Meadow Buttercup 1%, Salad Burnet 1%, Foxglove 0.4%, White Campion 0.4%, Red Campion 0.4%, Birdsfoot Trefoil 0.2% and White Melilot 0.2%

24 Materials Strategy

The following pages describe the public realm and landscaping materials to be used across the site, based on the material character areas defined on the plan below:



The material strategy for Chapelgarth covers:

- Surface materials
- Boundaries
- Lighting
- Street furniture and signage



23 Materials Strategy: Community Heart

Key Principles

This local centre will have a village centre/market place feel achieved with the application of a simple palette of high quality materials in muted tones.

This will be the primary public space within the wider development. It will front on to the Joe's Paddock area as well as adjacent residential pockets and will comprise of the following -

- Flexible community meeting space/Market Square
- Market street with defensible spaces for commercial units
- Areas of bench seating of cycle parking



Note: Rolled asphalt surfacing should feature in this character area except for on the Primary and Secondary Street that are adjacent (see 'Primary and Secondary Street section for details of materiality)

Public Realm Surfacing and Edging:

- Block Paving - High quality textured concrete setts laid in block of various colours to break up extent of paving and demarcate key spaces - Marshalls Conservation Setts (or similar) harvest buff, silver-grey and charcoal.
- Natural Stone Paving - Yorkstone paving to enhance key spaces and thresholds - Marshalls Moselden Yorkstone or similar.
- Edging and kerbs - High quality textured concrete kerbs and edging along carriage ways and to delineate areas of concrete block paving Marshalls Conservation Channel and Conservation Centre Stone in Silver Grey or similar to create minimum upstand.
- Tactile Paving - Concrete tactile pavers within areas of concrete paving - Marshalls Blister Flag Paving in Natural colour, or similar.
Natural Stone tactile pavers within areas paved with yorkstone - Marshalls Moselden Yorkstone or similar.
- Intersections and raised pedestrian crossing - High quality textures block paving - Marshalls Metropolitan in Plum Brown, or similar.



Street Furniture:

- Benches - Robust, contemporary bench seating with reference to railway heritage of the development. To be of timber and powder coated steel construction - Marshalls Tramet Bench or similar. Seating product to include option for back rest.
- Bollards - Sturdy bollards of metal construction combined with hardwood beams, to be used within the residential area - Streetlife R&R Bollard or similar. Metal to be Corten or powder coated galvanised steel.
Natural stone bollard of simple 'needle' form to Community Heart area - Street Pave bollard in silver/grey granite or similar
- Cycle hoops - Provision of cycle parking to Community Heart to comprise of simple stainless steel hoop cycle stands.

Note: Powder coat colour to be of cheery 'heritage' tones - suggested palette below.



24 Materials Strategy: Primary and Secondary Streets

For further detail on street corridors refer to section 03 Access, Movement and Streets

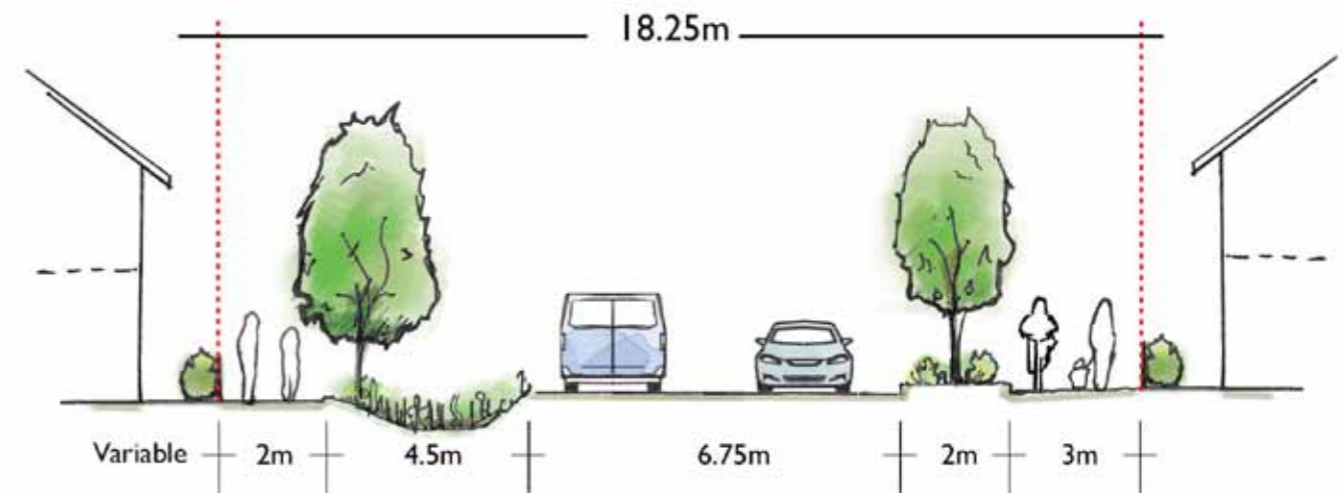
Key Principles

Key features of the development's principle organising spine include:

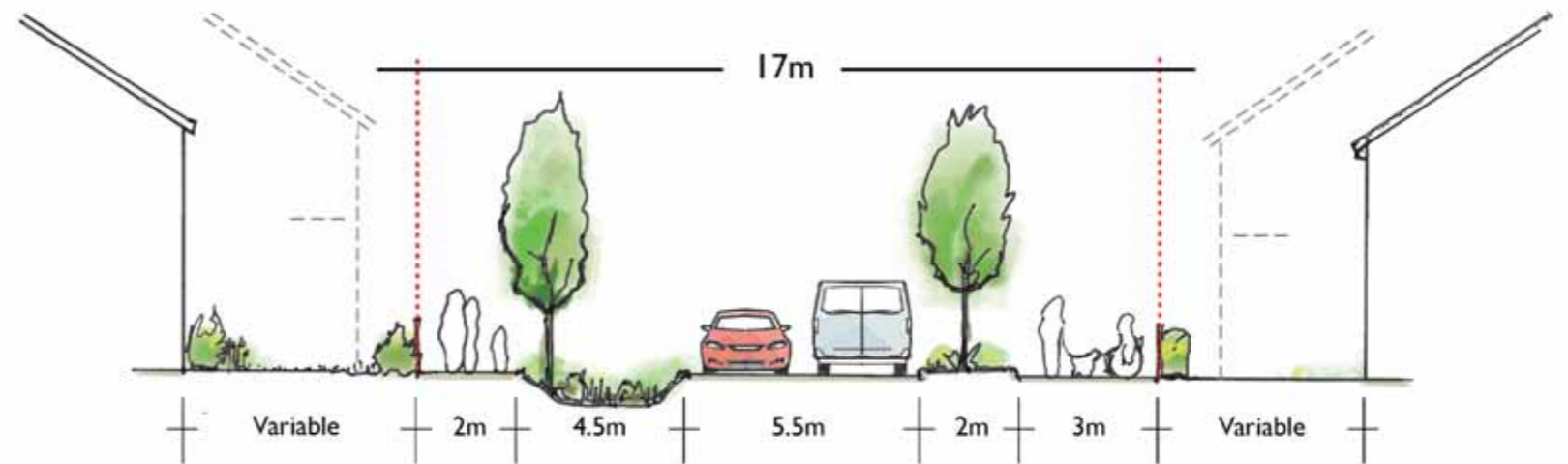
- Primary Street to accommodate local bus route
- To include off carriageway shared cycle / footway
- Natural leafy character
- Integration of blue infrastructure / SUD's.
- Creation of a continuous boulevard with broadleaved street trees as per the planting strategy at centres of maximum 10m. Sizes to be advanced standard for robustness and impact



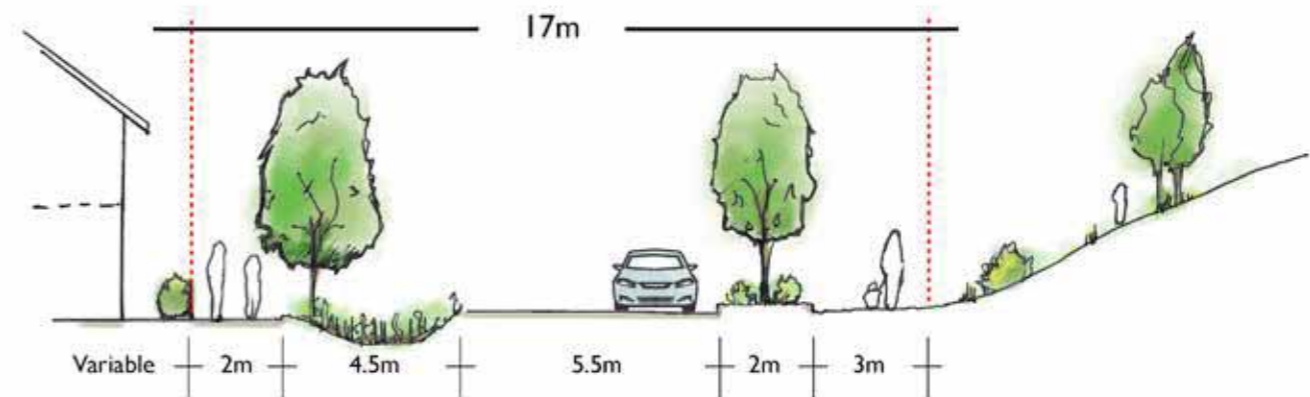
Precedent images to convey desired character



Primary Street - typical section



Secondary Street [Double sided] - typical section



Secondary Street [Single sided] - typical section

Road Carriageways and Kerbs:

- Highway - Hot rolled asphalt with light silver grey coloured chippings
- Kerbs/Channels - High quality textured concrete kerbs and channels - Marshalls Conservation Kerb in Silver Grey or similar
- Swale edge - High quality textured concrete kerbs and channels, to be laid alternately to create a break along extent of swale edge to allow for passage of surface run-off into swale basin (see image below)- Marshalls Conservation Kerb and Channel, or similar, in Silver Grey.
- Street intersections and Raised Crossings - High quality textured rectangular block paving and channel edging - Marshalls Metropolitan in Plum-Brown and Conservation Channel (or similar) in silver-grey.
- Tactile Paving - Concrete tactile pavers - Marshalls Blister Flag Paving in Natural colour, or similar.



Parking Courts

- Parking Bays - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.
- Delineation of bays - Textured concrete edging - Marshalls Conservation Channel Kerb, or similar, in silver-grey.
- Drives to parking courts - High quality textured rectangular block paving and channel edging - Marshalls Metropolitan, or similar, in Plum-Brown.
- Edges and Kerbs - High quality textured concrete edging with minimum upstand - Marshalls Conservation Centre Stone Kerb, or similar, in silver-grey.



Crossings over swales:

'At grade' crossings - Piped connection outlet or headwall [in local stone] to be used as standard for drive crossings

Vehicle bridges - To be used as an occasional feature drive crossing to serve a collection of houses.



Drive ways:

- Block Paving - High quality textured rectangular block paving - Marshalls Tescina, or similar, in urban-grey colour.
- Edges and Kerbs - High quality textured concrete edging - Marshalls Conservation Channel and Centre Stone Kerb, or similar, in silver-grey.

On-street parking:

- Block Paving - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.
- Edges and Kerbs - High quality textured concrete edging - Marshalls Conservation Centre Stone Kerb, or similar, in silver-grey.



Footpath:

- Surfacing - Hot rolled coloured asphalt - Black Tarmac
- Edges and Kerbs - High quality textured concrete edging with minimum upstand - Marshalls Conservation Centre Stone, or similar, in Silver Grey.



Shared footpath/Cycle way:

- Surfacing - Hot rolled coloured asphalt - Tarmac Mastertint in light buff or similar
- Edges and Kerbs - High quality textured concrete edging with minimum upstand - Marshalls Conservation Centre Stone, or similar, in Silver Grey.



24 Materials Strategy: Residential Parcels

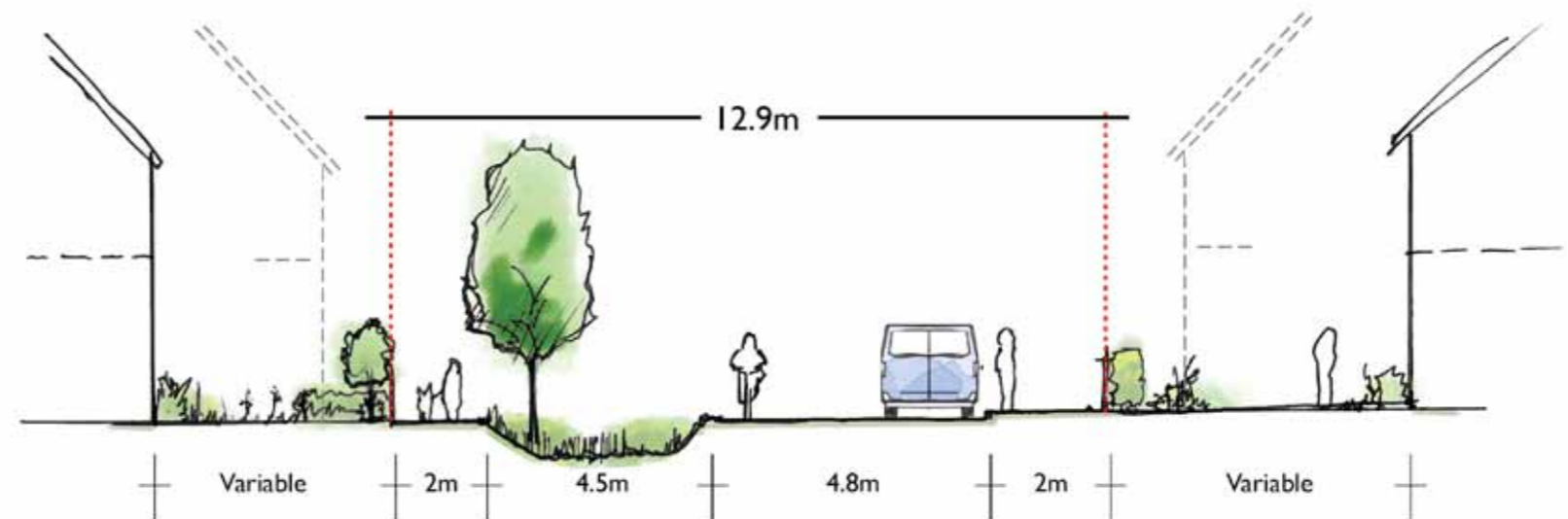
For further detail on street corridors refer to section 03 Access, Movement and Streets

Key Principles:

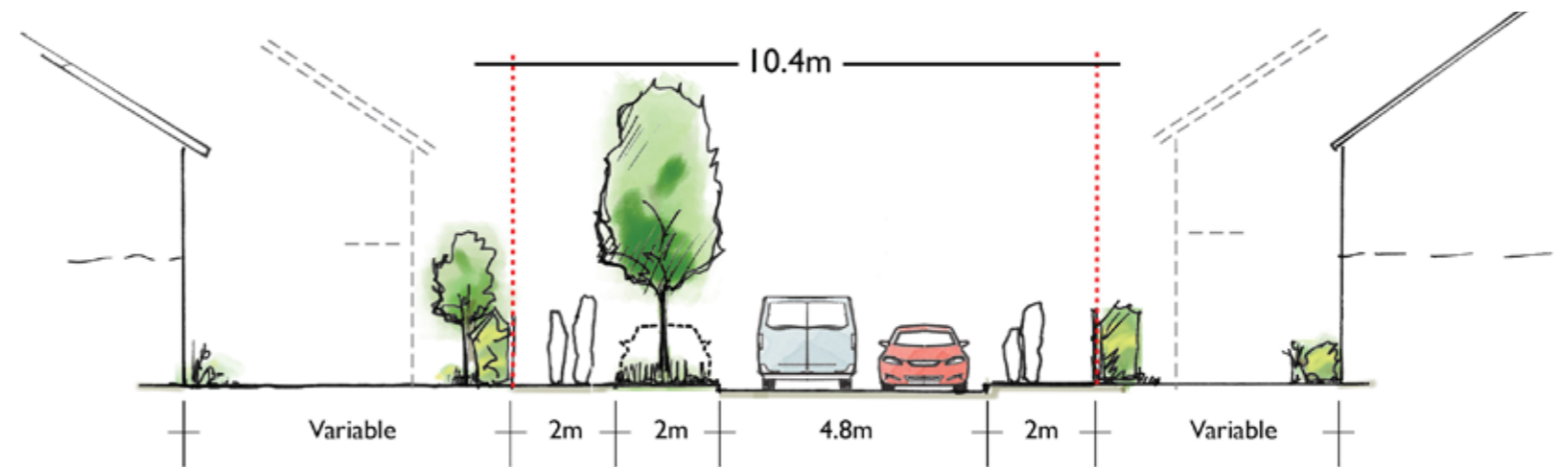
- A network of Rises, Lanes and Green Streets will connect residential parcels, neighbourhood recreational circuits and on to regional and wider established national leisure trails.
- Traffic calmed streets will be achieved using verges, laid out to create speed reducing chicanes, alternating off carriage way parking and significant tree planting.
- Priority will be given to pedestrians and cyclists with routes demarcated clearly at intersections with vehicle routes.



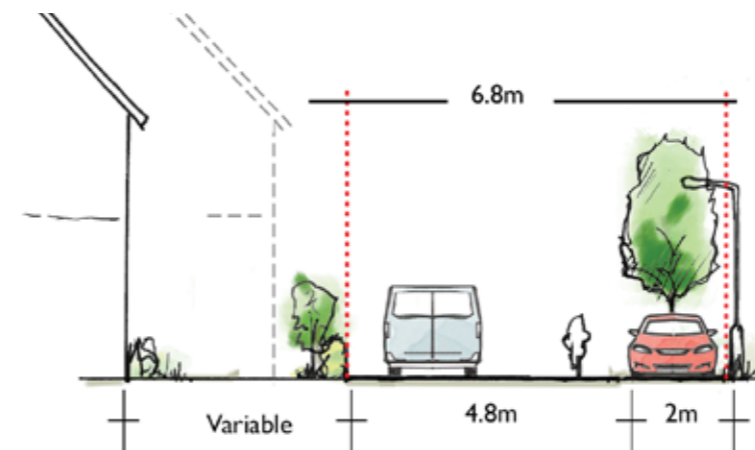
Precedent images to convey desired character



Rise - typical section



Lane - typical section



Green Street - typical section

Rises:

- Carriageway - Hot rolled asphalt with light silver grey coloured chippings.
- Footpath - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.
- Kerbs/Channels - High quality textured concrete edging with minimum upstand - Marshalls Conservation Centre Stone Kerb, or similar, in Silver Grey.
- Street intersections and Raised Crossings - High quality textured rectangular block paving and channel edging - Marshalls Metropolitan in Plum-Brown and Conservation Channel (or similar) in silver-grey.
- Tactile Paving - Concrete tactile pavers - Marshalls Blister Flag Paving in Natural colour, or similar.
- Swale edge - High quality textured concrete kerbs and channels, to be used in an alternating fashion creating break along extent of swale edge to allow for passage of surface run-off into swale basin (see image below)- Marshalls Conservation Kerb and Channel, or similar, in Silver Grey.
- Driveways - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.



Lanes and Green Streets:

- Carriageway - High quality textured rectangular block paving - Marshalls Tescina, or similar, in urban-grey colour
- Footpath - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.
- Kerbs/Channels - High quality textured concrete edging with minimum upstand - Marshalls Conservation Centre Stone Kerb, or similar, in Silver Grey.
- Street intersections and Raised Crossings - High quality textured rectangular block paving and channel edging - Marshalls Metropolitan in Plum-Brown and Conservation Channel (or similar) in silver-grey.
- Tactile Paving - Concrete tactile pavers - Marshalls Blister Flag Paving in Natural colour, or similar.
- Driveways - High quality textured rectangular block paving - Marshalls Tescina, or similar, in natural colour.



Signage:

Street names - Recycled plastic 'engraved' sign, post or wall mounted - Filcris Engraved Street Sign or similar.



24 Materials Strategy: Parks

Key Principles:

All parks within the development will benefit from:

- opportunities for play.
- communal seating areas.
- community growing areas.
- fitness stations.

All materials will be robust and suited to their locality. Street furniture will be contemporary and make reference to the railway and agricultural heritage of the development.

Main footpath/cycleway:

Surfacing - Hot rolled coloured asphalt - Tarmac Mastertint, or similar, in light buff.
Edges and Kerbs - High quality concrete kerb stone- Tobermore Kerbstone, or similar, in Natural colour.



Ancillary footpath/cycleway:

Surfacing - Self-binding gravel - Breedon Wayfarer or similar
Edges - Timber edge.



Viewing platform:

Block paving - High quality block paving in warm tones - Marshalls Conservation Setts in Harvest Buff or similar.
Natural Stone paving - Yorkstone paving to enhance key spaces and thresholds - Marshalls Moselden Yorkstone or similar.
Edges - High quality concrete channel edging use to delineate edge of viewing platform and to throughout extent of paving to allow for surface water drainage.
Stepped access - High quality textured concrete step units - Marshalls Conservation Step Unit in silver-grey or similar.



Play along the way/Fitness Trail:

Play items - Informal, 'natural' play and fixed timber play items.
Fitness Stations - Fixed fitness equipment.
Safety surfacing - Predominately bark chippings. Rubber matting or wet-pour where critical falls



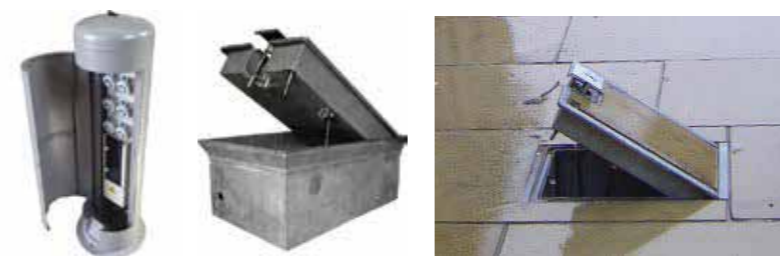
Street furniture:

Seating - Robust, contemporary bench seating - Marshalls Tramet Bench or similar. Seating product to include option for back rest.
Picnic Tables - Robust, contemporary tables, benches and stools - Marshalls Tramet Bench or similar. Seating product to include option for back rest.
Cycle parking - Robust cycle parking timber - Streetlife Valley Bench or similar.



Pop-up power supplies if required:

Pop-up to central park - Simple powder coated steel 'button top' power bollard, colour to be subtle and in keeping with 'green' setting - Pop Up Power PUPS Bollard or similar
Pop-up to panoramic park - Discreet In ground unit with recessed cover to accept paving - Pop Up Power In-Ground Unit or similar



24 Materials Strategy: SANG and green links

Character / Approach

A network of footpaths bridle and cycle ways provide an upper spine to the development and recreational opportunities for fitness circuits.

Multi-user route :

Surfacing - Split provision of hot rolled coloured asphalt - Tarmac Mastertint, or similar, in light buff and self-binding gravel - Breedon Wayfarer or similar. Laid in accordance with Sunderland City Councils recommended specification.

With High quality concrete kerb stone- Tobermore Kerbstone, or similar, in Natural colour delineating the boundary between the two surface materials.

Steps - Timber risers and edging with self-binding gravel surface as above.



Footpath / Cycleway :

Surfacing - Hot rolled coloured asphalt - Tarmac Mastertint, or similar, in light buff.

Edges and Kerbs - High quality concrete kerb stone- Tobermore Kerbstone, or similar, in Natural colour.

Steps - High quality concrete block paving in contrasting colours to complement light buff asphalt - Tegula kerbs and setts or similar



Play along the way/Fitness Trail:

Play items - Informal, 'natural' play and fixed timber play items.

Fitness Stations - Fixed fitness equipment.

Safety surfacing - Predominately bark chippings. Rubber matting or wetpour where critical falls require.



Street furniture:

Seating - Robust, contemporary bench seating - Marshalls Tramet Bench or similar. Seating product to include option for back rest.

Picnic Tables - Robust, contemporary tables, benches and stools - Marshalls Tramet Bench or similar. Seating product to include option for back rest.

Cycle parking - Robust cycle parking timber - Streetlife Valley Bench or similar.



Signage and Interpretation:

Interpretation - Simple, robust plinths with vitreous enamel interpretation panels.

Fitness/distance markers - Simple, robust timber posts. Integrated digital interactive fitness trail via 'smart pavement' technology.

Way-finding - Simple, robust timbre finger posts and directional signage.


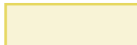


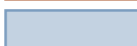








See boundary treatment strategy for details and locations of gated access points



25 Boundary Treatment Strategy

Boundary treatments have been provided as guidelines on the following pages to allow differentiation in the character and feel of each neighbourhood. This section all deals with boundary treatments to the areas of SANG and open space.

Each of the five Chapelgarth neighbourhood character areas will have their own distinct boundary materiality. These are summarised on the diagram below, which also highlights additional key boundaries and gates:

- Boundary Character Areas**
-  Knockles Square
 -  Moor Farm
 -  Chapelgarth Meadows
 -  Thirstley
 -  Foxcover
- Access Gates**
-  3m wide maintenance Access Gate (Vehicular)
 -  2m wide pedestrian gate
 -  Double Buggy Hoop and A Frame
 -  Bridle gate with Integral Double Buggy Hoop and A Frame
- Key Boundaries/ Hedges**
-  Existing Hedgerow to be retained and Trimmed - extent of works to be agreed in detailed design and to include creation of new access points
 -  Custom designed estate railing to SANG with gates to match at access points. (Railings to include intermediate tensioned 'Lamb wires' to lessen the spacing of the railings). Detail design TBC.
 -  Fencing to Play Areas tbc in detailed design
 -  Acoustic Fencing to A19



Boundary treatments within each character area can be summarised as follows:

Character Area	Front Garden Boundaries	Back Garden Boundaries	Other Features
Knockles Square	<p>Square hollow section vertical bar railings to primary, and green streets 1.2m max height.</p> <p>Hedges to provide the property boundaries to other streets types</p> 	<p>Timber close board fencing 1.8m height to comply with Secure by Design</p> 	<p>Front garden boundary hedges to be provided to streets within the area as per the planting strategy (see earlier chapter)</p> <p>Timber post and wire fencing to be provided where no estate fencing (as below)</p>
Moor Farm	<p>Front garden boundary hedges to be provided to streets within the area as per the planting strategy (see earlier chapter)</p>	As above	<p>Timber post and wire fencing to be provided to hedges as protection during establishment</p> 
Chapelgarth Meadows	<p>Square hollow section vertical bar railings to green streets</p> <p>1.0m height brick boundary walling to all other routes</p> <p>One brick type to be used throughout - tbc following detailed design</p> 	As above	<p>Front garden boundary hedges to be provided to streets within the area as per the planting strategy (see earlier chapter)</p>
Thirstley	<p>Square hollow section vertical bar railings to primary secondary routes and green streets 1.2m max height</p> <p>Hedges to provide the property boundaries to other streets types</p> 	As above	<p>Front garden boundary hedges to be provided to streets within the area as per the planting strategy (see earlier chapter)</p> <p>Timber post and wire fencing to be provided where no estate fencing (as below)</p> 
Foxcover	<p>1.2m high black estate style railings with hedgerows to be provided to all streets within the area as per the planting strategy (see earlier chapter).</p> 	As above	N/A

25 Boundary Treatment Strategy

Access Gates

Access into the southern SANG area and use of the multi-user path will be provided via double buggy hoops and A-frames with bridle gates where required.

The form and dimensions of this system is to comply with Sunderland City Councils Rights of Way departments typical detail as above.

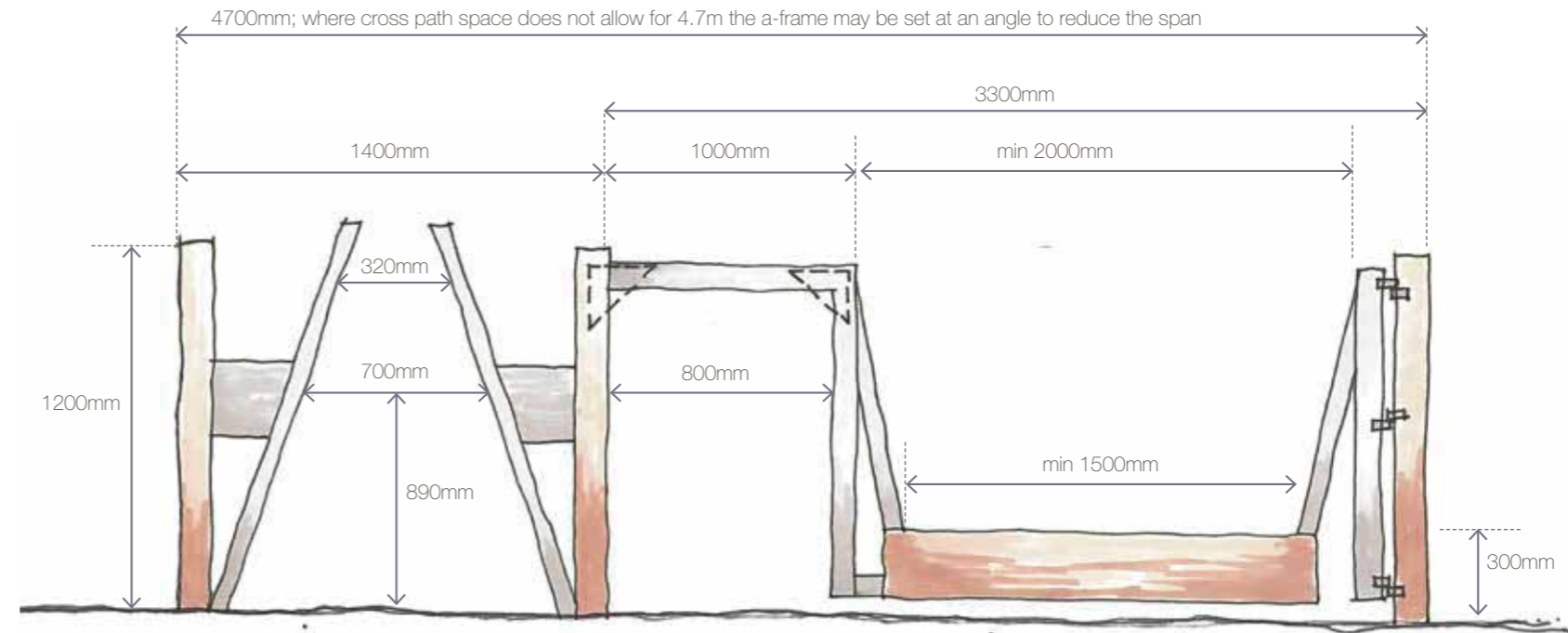
All other access gates should be designed to match adjoining fencing and be fitted with locks/ bolts/ ground fixings where appropriate.

Estate Railings to SANG

Where open spaces run alongside roads within the development it is proposed that custom designed estate fencing be used to provide a safe, secure boundary between the two.

The estate railings are to be 1.2m high and include intermediate tensioned 'lamb wires' between the railing to provide extra protection at low level from dogs escaping between the railings.

Estate railing to be black. Please refer to right-hand image for illustration of integrated tensioned 'lamb wires' between railings.



Key Boundaries/ Hedges

Existing Hedgerows

A number of existing hedgerows throughout the development site are to be retained.

These will be trimmed to suit detailed layout designs - the extent of this trimming should be agreed with the local planning authority prior to implementation of works on site.

There will also need to be localised removal to provide gaps in hedges for access routes etc. Again, these works should be agreed with the local planning authority prior to the implementation.



Fencing to Play Areas

A number of play spaces are proposed throughout the development, the nature and content of which will be confirmed in the detailed design stage for each phase of development.

Enclosure to these should be carefully considered based on the nature of play equipment/ provision within each area and its location within the wider development.

If boundary enclosure is required this should be designed as part of an integrated landscape/ play solution rather than being a generic steel railing solution.

Any gates to play areas should be self closing.

All boundaries should be designed to latest safety and RoSPA guidelines.



Example of a more integrated fencing solution to a play space

Acoustic screen to A19

As part of the acoustic treatment to the southern edge of the site which includes a 1.5m high raised earth bund, a living 'Green Barrier' will be installed consisting of living willow to one side and woven willow to the other. This is an 'off the peg' system, supplied by Cheviot Trees, which is designed to mitigate noise impacts using an acoustic core in between the willow panels. The living willow panels will be placed to face the new housing where it can be accessed for ongoing maintenance, with the woven willow being on the A19 side where sloping ground will make maintenance access harder.



26 Lighting Strategy

A lighting strategy has been developed to ensure open spaces are safe, and to enhance the user experience of the public realm and open spaces. These are categorised by areas based on the diagram on the following page:

Primary & Secondary Streets

The primary & secondary streets will be lit to the Sunderland City Councils Highways department requirements and in accordance with the current editions of the British Standard for Road Lighting BS EN 13201 and the Code of Practice for the Design of Road Lighting BS 5489-1. Lighting will be controlled via a integral Photocell sensor, which will energise as dusk and de-energise at dawn. The design will be typically via the use of 6/8m high lighting columns which utilise flat glass optics with 0% indirect light minimising upward light spill. LED light sources will be used to maximum efficiency control of light.

Community Heart

The Community Heart will be lit to BSEN12464-2 standards and in accordance with the IPL Guidance Notes for the Reduction of Obtrusive Light GN01:2011. The lighting design will be typically through the use of enhanced column style lighting luminaires and low level wall lighting. Supplementary lighting will be provided to denote retail premise entrances.

Neighbourhood Parks, Pockets Parks, SANG and Greenlinks

The neighbourhood parks will be lit to BSEN12464-2 standards and in accordance with the IPL Guidance Notes for the Reduction of Obtrusive Light GN01:2011. The lighting design will be typically via the use of low level bollard lighting centred around the key pedestrian routes. The luminaires will utilise directional optics in order minimise the obtrusion of light and spill onto the natural habitat areas surround the site.

Residential Parcels

The Residential areas will be lit to the Sunderland City Councils Highways department requirements and in accordance with the current editions of the British Standard for Road Lighting BS EN 13201 and the Code of Practice for the Design of Road Lighting BS 5489-1. Lighting will be controlled via Photocell sensors, which will energise as dusk and de-energise at dawn. The design will be typically via the use of 6/8m high lighting columns which utilise flat glass optics with 0% indirect light minimising upward light spill. LED light sources will be used to maximum efficiency control of light.



Example bollard for park areas, could be substituted for a timber product to SANG



Example column for community heart, community square area



Example column for all residential streets

Indicative Lighting Strategy



Delivery and Implementation





CAUTION
HORSES

27 Parcellation Plan, Management and Maintenance

Subject to the approval of the hybrid planning consent, the development will be brought forward by different housebuilders on a parcel by parcel basis. Phase 1 works are to be delivered by Siglion and will include enabling works to access points on Weymouth Road, installation of the drainage ponds and landscaping works.

In order to ensure that the open space strategy is brought forward alongside development, the provision of open space will be attached to each dwelling to be developed. The table below sets out these figures:

Parcellation Plan Rules	
Rule	Details
RL26A	<p>SANG:</p> <ul style="list-style-type: none"> At least 0.018 hectares of SANG to be provided per dwelling within the areas identified on the open space strategy regulatory plan.
RL26B	<p>Amenity Open Space:</p> <ul style="list-style-type: none"> At least 0.0009 hectares of amenity open space to be provided per dwelling within the areas identified on the open space strategy regulatory plan.
RL26C	<p>Equipped Play Space:</p> <ul style="list-style-type: none"> At least 0.00045 hectares of equipped play space to be provided per dwelling within the areas identified on the open space strategy regulatory plan.

As an example, and based on the illustrative masterplan accommodating 744 homes, developing out each character area would generate the provision of the following SANG:



Indicative SANG Phasing Plan

Management and Maintenance

Once the site is developed out, it is envisioned that publicly accessible areas will either be adopted by the Local Authority or be put under control of a Management Company, likely funded by service charges levied on the new residents.

The Local Authority or Management Company would then be responsible for ongoing management and maintenance of that area.

Adopted areas, to be managed by the Local Authority include:

- Publicly accessible streets and highways

Areas under control of a Management Company include:

- SANG Areas
- Drainage attenuation basins and frontage to Weymouth Road
- Parks including pocket parks
- Amenity open space

28 Phase 1 Infrastructure Works

To enable future development on the site, Siglion will bring forward a number of infrastructure works as part of Phase 1 of the development. These include, traffic calming measures to Weymouth Road, a pedestrian crossing over Weymouth Road, work to the vehicular access points into the site and the drainage attenuation basins which will serve character areas 1, 2 and 3. The plan opposite illustrates these works.



Phase 1 Infrastructure Works: Detailed plans have been submitted as part of the planning application package, labelled with the drawing numbers above.

28 Phase 1 Infrastructure Works

Description of Proposed works

Vehicle Accesses

Three vehicle accesses serve the new development from Weymouth Road to the north. The eastern most is from the existing roundabout opposite Portland College. A fourth stub exit exists ready to extend into the site. No further extension works are proposed to this junction under the phase 1 works.

The second vehicle access is central to the northern boundary of the development and would be extended from the existing roundabout opposite Englemann Way. The phase 1 proposals include an extension of this road south into the site by approximately 70m. This road forms one end of the Primary Street section. The Primary Street provides the initial network from Weymouth Road linking together the central and western character areas and key public spaces. The street corridor is 18.25m wide and is designed to accommodate public transport. An off carriageway 3m wide shared cycleway / footway is provided to one side of the street and a 2m wide footpath to the other.

The street will act as a green spine through the development and will have street trees to both sides of the carriage way at a maximum 10m apart so as to create a meaningful leafy boulevard environment. A swale is to be integrated within the verge to the eastern, lower side of the street.

The third vehicle access is proposed as a new junction from Weymouth Road to the west of the development. This junction includes a dedicated right hand turn from Weymouth Road. This road will form the other end of the Primary Road section and is made up of the same components as described above.

Non-vehicular Circulation

Weymouth Road currently does not have a footway to its southern verge. To remedy this the phase 1 works propose to integrate a 3m wide off-carriageway shared footpath and cycleway following the engineering works of the new attenuation basins and winding through new planting. The route has been designed at a maximum 1:21 gradient. New

footpaths will link into this existing crossing points and one proposed crossing point on Weymouth Road. Stepped access from the cycleway provides direct access south up to the top of the embankment and connecting with the existing desire lines to around the field boundaries. A secondary footpath is provided winding down around and up the form of basin 2.

Drainage Attenuation Basins

Two drainage attenuation basins are proposed within the phase 1 works. They are placed to the east and west of the central roundabout. The basin to the west is referred to as basin 1 and the basin to the east is referred to as basin 2. Both basins involve significant earth remodelling to the site which is to be sensitively engineered and formed as part of the landscape design of the Weymouth Frontage. The basins have been designed to have a maximum gradient of 1:4 to allow safe access for maintenance. The basins are to be predominately dry for most of the year.

Existing Vegetation

To aid with delivering the third junction to the west of the development a section of hedge and a few hedgerow trees are proposed to be felled as they are directly impacted by the construction of the new road and re-grading works.

A second section of hedgerow to the top of the embankment area to Weymouth Road is proposed to be felled to allow for new stepped access and regrading works.

A group of young self-set trees are proposed to be removed from the eastern dual plateau and terraced area of the site to assist with re-grading the area to accommodate basin 2. The amount of any trees and hedgerows removed will be fully offset by new planting across the scheme.

Landscape Design

The phase 1 works form the frontage to Weymouth Road and have four key functions:-

- Welcoming frontage for the new residential extension
- Provision of part of the SANG [Suitable Alternative Natural Greenspace] allocation for the development.
- Visual mitigation to lessen the effects of the change on the outlook of this area from residents of Burdon Vale and existing users of Weymouth Road
- Sensitive integration and landscape mitigation for the drainage attenuation basins.

To provide a green frontage to Weymouth Road substantial new planting works are proposed. These include localised areas of trees and under-storey planting which provide visual screening and a naturalised edge to the sculptural mounds.

Further tree lines and groupings follow the new recreational routes. Each basin is to include permanent isolated pools and a channel designed to provide ecological enhancement. Swathes of grass seed mixes are proposed relating to the new topography and the likelihood of the areas being wet.

The shared cycleway / footpath is proposed to be surfaced in a light buff coloured tarmac to blend into the natural setting but provide a robust, cleaner surface for residents. The footpath around basin two will be surfaced in compacted aggregate to provide a natural feel. The footpath which runs up the Primary Street is to be surfaced in textured concrete flag paving.

Timber benches are proposed at intervals along the shared footpath and cycleway and footpath around basin 1 to provide resting points for walkers.

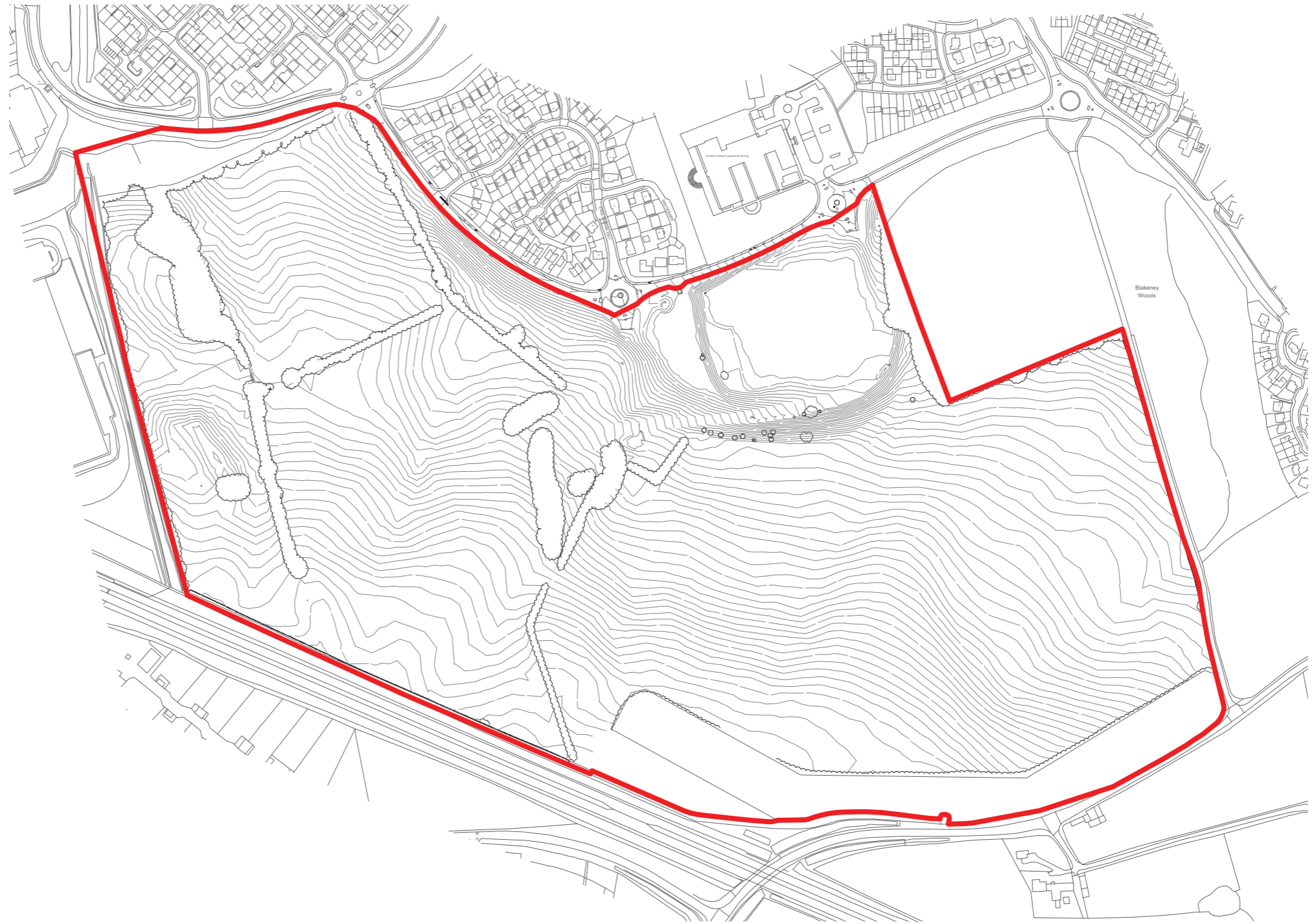
Boundary Edge Treatment

To assist with providing a safe environment for pedestrians and dogs using the SANG facility 1.2m high estate type railings are proposed along the southern verge of Weymouth Road and the eastern edge of basin 2. These would be finished in black powder polyester coating.



The detailed plans for the phase 1 infrastructure works

Appendix: Regulatory Plans



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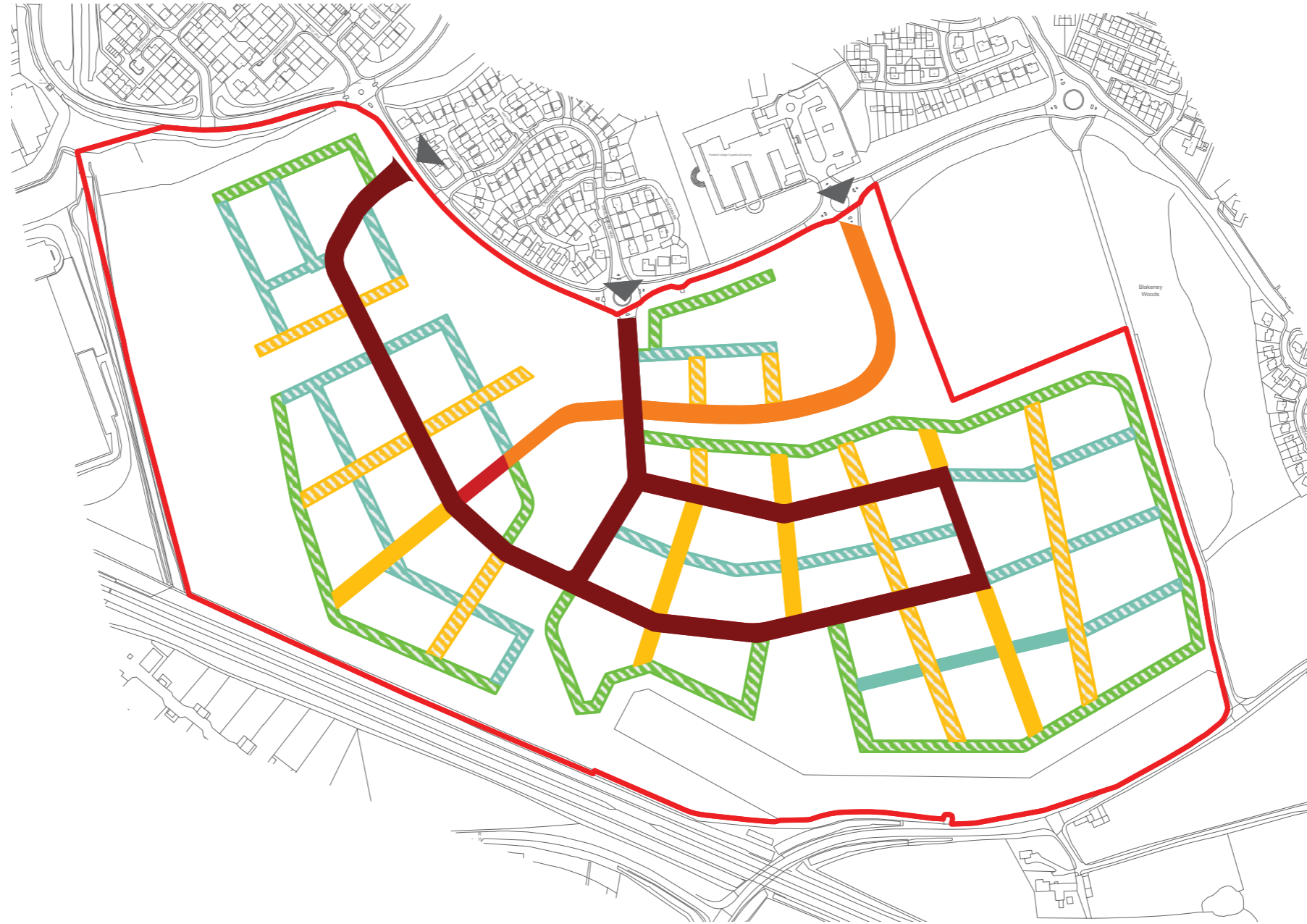
CHAPELGARTH

REGULATORY PLAN 01:
REDLINE

SCALE 1:5000 @ A3

KEY

— RED LINE BOUNDARY








CHAPELGARTH

REGULATORY PLAN 02:
ACCESS, MOVEMENT AND STREETS

SCALE 1:5000 @ A3

26-03-2016
944/REG02_RevA

KEY
FIXED ELEMENTS

-  PRIMARY
-  SECONDARY DOUBLE SIDED
-  SECONDARY SINGLE SIDED
-  RISES
-  LANES

 VEHICLE CONNECTION ONTO WEYMOUTH RD

FLEXIBLE ELEMENTS

-  RISES
-  LANES
-  GREEN STREETS






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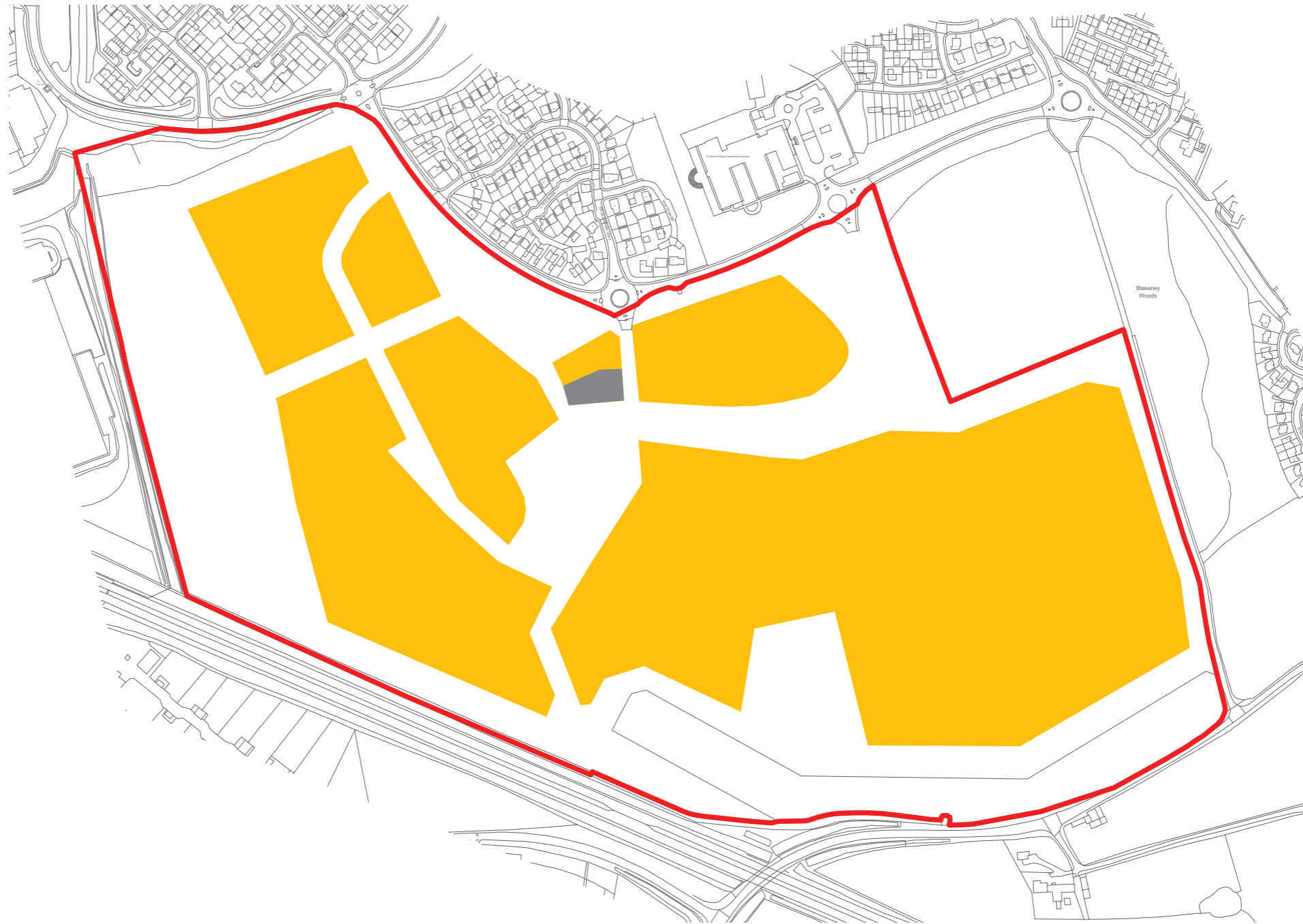
CHAPELGARTH

REGULATORY PLAN 03:
NEIGHBOURHOOD CHARACTER AREAS

SCALE 1:5000 @ A3

KEY

-  CHARACTER AREA 1
-  CHARACTER AREA 2
-  CHARACTER AREA 3



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CHAPELGARTH

REGULATORY PLAN 07:
DEVELOPMENT AREA + LANDUSE

SCALE 1:5000 @ A3

29-03-2016
944/REG07 Rev0

KEY

-  RESIDENTIAL
-  COMMUNITY HEART / RESIDENTIAL MIX
≤ 1,000 sq m Local Centre Space



CHAPELGARTH




REGULATORY PLAN 12: OPEN SPACE STRATEGY

SCALE 1:5000 @ A3

26-05-2016
944/REG12_RevA

KEY





EXISTING GREEN INFRASTRUCTURE

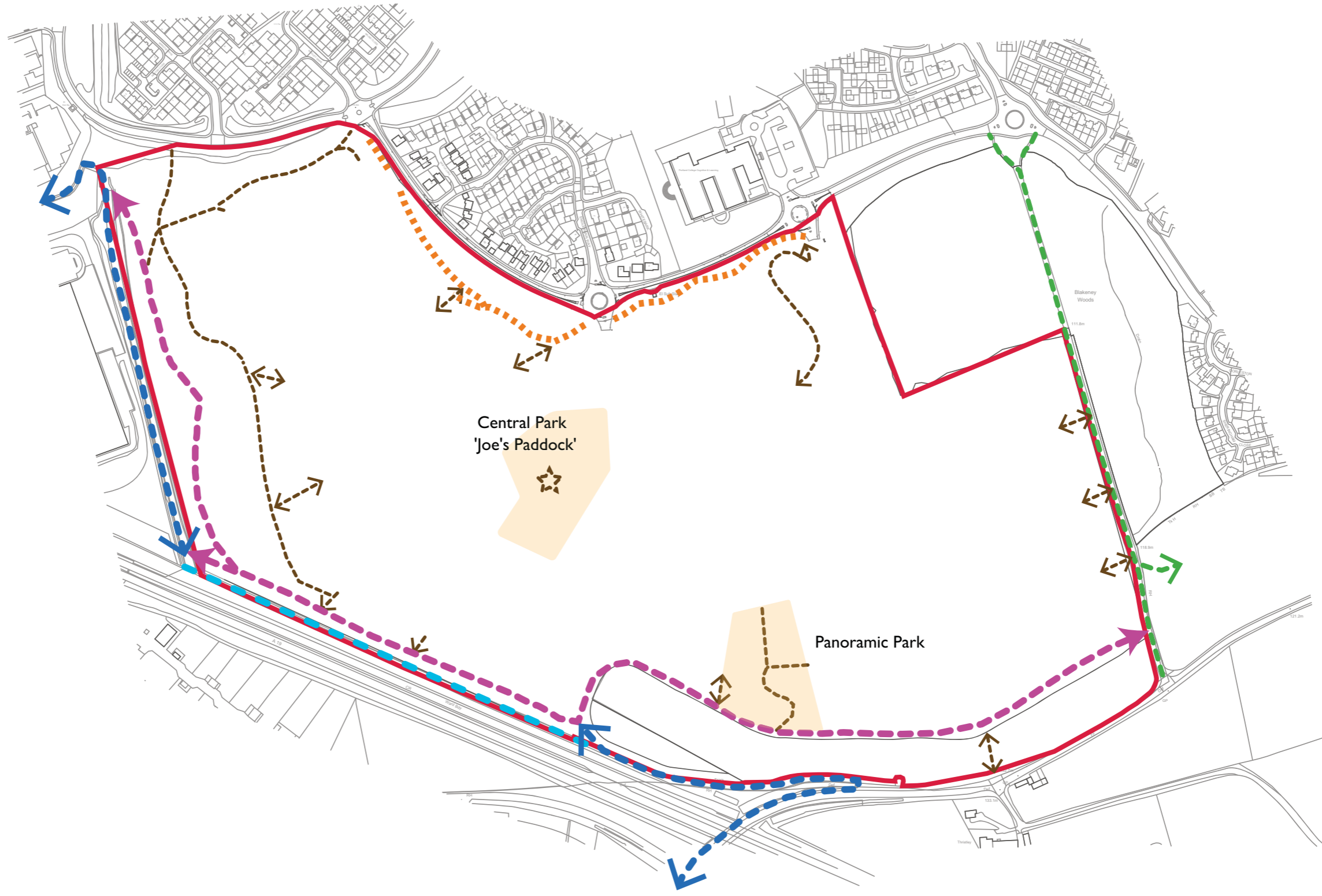
-  EXISTING WOODLAND Retained
-  EXISTING HEDGES Retained
-  EXISTING TREE GROUPS Retained

NEW GREEN INFRASTRUCTURE

-  NEW WOODLAND Native tree planting areas

OPEN SPACE TYPOLOGIES

-  SANG Suitable Alternative Natural Greenspace
-  AMENITY OPEN SPACE
-  PLAY
-  GREEN LINKS



CHAPELGARTH

REGULATORY PLAN 13:
RECREATIONAL ROUTES

KEY

PROPOSED ON-SITE NETWORKS

- MULTI-USER ROUTE
- PROPOSED COMBINED CYCLIST FWAY/ PEDESTRIAN ROUTE

EXISTING ON-SITE NETWORKS

- MULTI-USER ROUTE
- MODIFICATIONS TO EXISTING NETWORKS

