NORTH STANEY HILL MASTERPLAN, LERWICK, SHETLAND

EXECUTIVE SUMMARY

BOOK 1: EVOLUTION OF MASTERPLAN

BOOK 2: MASTERPLAN FRAMEWORK

BOOK 3: DETAILED DESIGN GUIDANCE

APPENDICES

IAIN MALCOLMSON

MALCOLMSON ARCHITECTS

PAUL MORSLEY

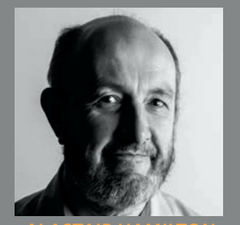
IGLU STUDIO

GEORGE ANDERSON

MOTT MACDONALD

DANIEL JEFFS

IGLU STUDIO



ALASTAIR HAMILTON

ABA ASSOCIATES

ANDREW BLACKADDER

ABA ASSOCIATES

DESIGN TEAM

STANEY HILL

In order to provide clarity and assist in the understanding of the three design books the following content is repeated across the three books. The contents of **Book 3: Detailed Design Guidance** is set out below giving a clear breakdown of the design codes and parameters for the design of the Staneyhill masterplan site and each of the four neighbourhoods.

1. Introduction
2. Understanding the Brief
3. Understanding site and context
4. Analysis of Lerwick Housing Design
5. Constraints and Opportunities
6. Design Journey
7. Design Principles
8. Masterplan Framework
9. **Detailed Design Guidance** Setting out a series of codes and parameters for each of the masterplan character areas, including street types / hierarchy, open space provision, edge treatment and frontages, amongst others.

Coding Introduction 4
Four Neighbourhoods 5
Streets 6
Landscape 7
Boundary Treatment 12
i Bowl 14
ii Plateau 18
iii Escarpment 22
iv Terrace 26

10. **Delivery** Indicating the key deliverables, timescales and milestones for a phased delivery of the development. **28**

11. **Detailed Design for Roads and Drainage** **30**

Hjaltland Housing Association
Malcolmson architects
MOTT MACDONALD
iglu
ABA

9. DETAILED DESIGN GUIDANCE

The design coding and parameters should set the design rules and principles for the new Staneyhill, guidance to which the design of the masterplan and new development areas must adhere. The framework and coding will form part of the planning process as supplementary guidance, as a mechanism to control future detailed design and to ensure that the vision established within this document is realised and delivered.

Coding Introduction

9.1 The coding will set out design rules and requirements which instruct and advise on the physical development of the site or area, typically through graphic and written components. As Staneyhill will be realised over a minimum 10 year timeframe the coding will provide the 'lodestone', benchmark, for the new neighbourhoods as they are established over time..

9.2 Throughout the masterplan framework the character, history, natural assets and positive elements of the site have been identified and utilised in the design process. This approach is reflected in the coding and should be at the forefront of the second stage of the masterplanning process and carried forward to the detailed design and implementation of the new development. The coding for Staneyhill also identifies common elements and features of the site and proposed masterplan which provide coherence to the site, while bringing to the fore the individual characteristics of each development area.

9.3 The coding has distilled the key requirements into this short summary section of the written guidance and illustrative diagrams which can only set out the fundamental and potential requirements of the whole Staneyhill site and each character zone. To ensure the vision and code have been understood and fully expressed within the next stage, the development should be subject to a rigorous review process involving a design review panel.

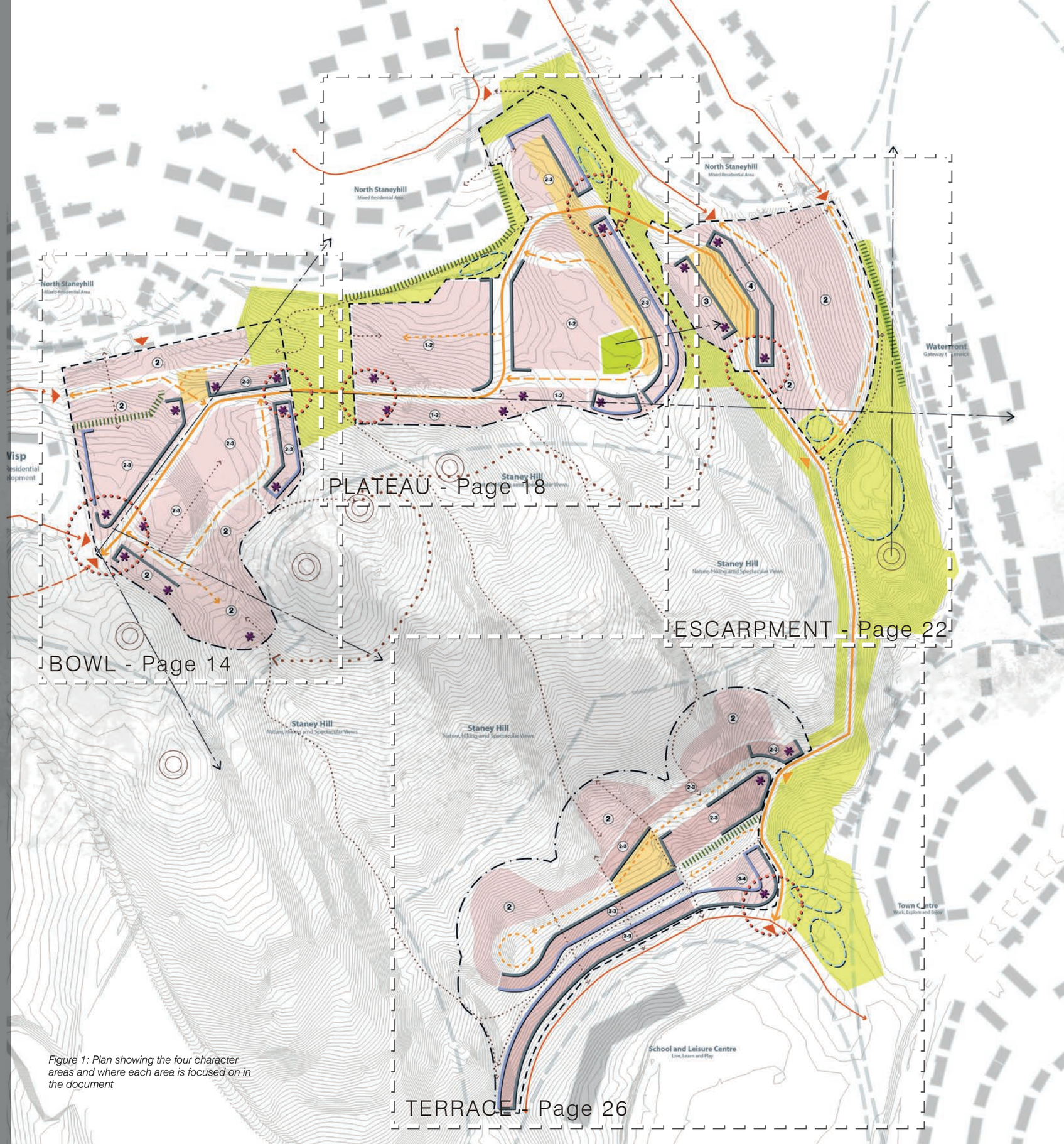


Figure 1: Plan showing the four character areas and where each area is focused on in the document

9. DETAILED DESIGN GUIDANCE

Staneyhill & New Neighbourhoods

9.4 This chapter provides an introduction to the Staneyhill Masterplan coding, to the general coding and paramters applicable to elements of the wider site (streets, landscape, boundaries etc) as well as the more specific coding of the four proposed development areas within the masterplan framework.

9.5 The general site coding builds on the masterplan framework set out in Book 2, providing additional information in respect of aspects of design principles and materiality, expressed in greater detail through a sequence of diagrammatic images, sketches and sections.

9.6 Each area's coding section first sets out the broader design rationale, contextual constraints and opportunities and key movement and access parameters. From there a number of characteristics, which define each of these development areas, are summarised within two categories, **fundamental** and **potential** requirements.

- A **fundamental** requirement must be protected through the design evolution.
- A **potential** requirement highlights a key principle or opportunity within the masterplan which will be expected to be expressed in some form within the design solution. This will also present opportunities for unique and innovative design.

i Bowl

9.7 Area in the north western corner of the site, incorporating the Public Transport Corridor's (PTC) northern gateway into the site. Contained within a shallow bowl landform, with the potential to provide a central public community space along the PTC while connecting and integrating with neighbourhoods to the immediate north. The area's development would provide linkages between these existing neighbourhoods and the ridgeway corridor to the south.

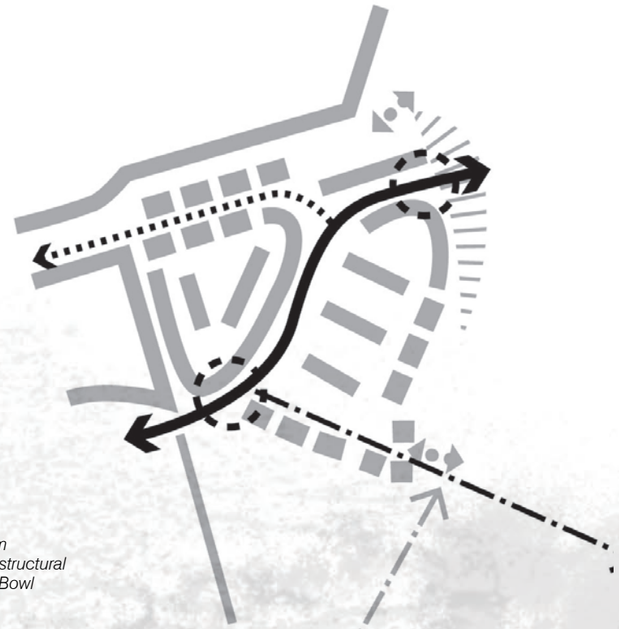


Figure 2: Diagram showing the key structural elements for the Bowl

ii Plateau

9.8 Area situated north and central within the site. Nestled between the Bowl and Escarpment areas along the PTC, this area's landform varies greatly; however, there is a large plateaued section that could accommodate a large area of housing and a community focal space. This area extends north to provide links with existing neighbourhoods and, along with the Bowl is bound to the north by areas of tree planting and vegetation.

Figure 3: Diagram showing the key structural elements for the Plateau

iii Escarpment

9.9 This area occupies a large section of land sloping eastwards. The public transport corridor provides a western boundary to this area while the east and west arms of Staneyhill provide seamless links into existing housing to the north and offer improved access into landscape areas and across the site.

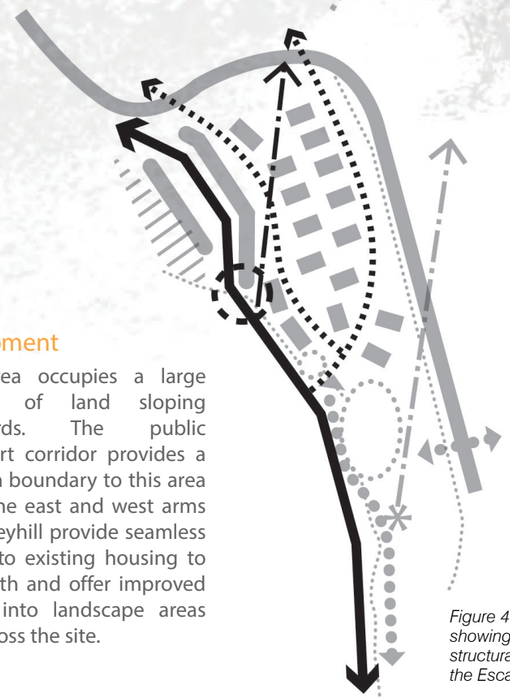


Figure 4: Diagram showing the key structural elements for the Escarpment

iv Terrace

9.10 This area will provide a terraced development of mixed density and use that improves linkages and enclosure to the education and sports hub to the south of the site. It will incorporate routes along the site's shallow valleys down into the new hub. The Terrace will define a new, northern, built edge for the hub. It will incorporate two to three storey development with active frontage development.

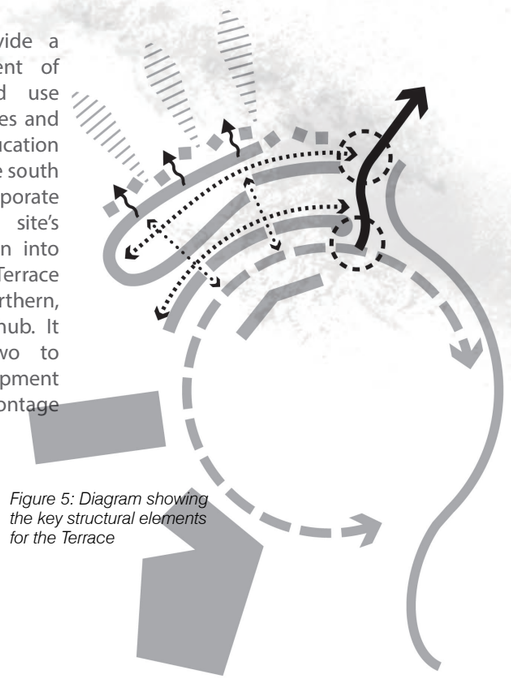


Figure 5: Diagram showing the key structural elements for the Terrace

9. DETAILED DESIGN GUIDANCE

Streets: General Principles and parameters

9.11 The main access road of the masterplan is the primary element that sets out the structure and subsequent evolution of the design for Staneyhill and its proposed development areas. The road is thus a key aspect of the coding and parameter guidance. The main route runs through all areas of development, and in conjunction with the wider network of proposed streets at Staneyhill, is one of the common elements which will create a cohesive and well-integrated community. Whilst the geometry of the streets can vary there will be a number of elements which are consistent across the masterplan area.

9.12 The streets within the Staneyhill masterplan have been developed to maximise connections to the neighbouring development and wider Lerwick community, and within the masterplan area, creating a network of places to walk, cycle, play.

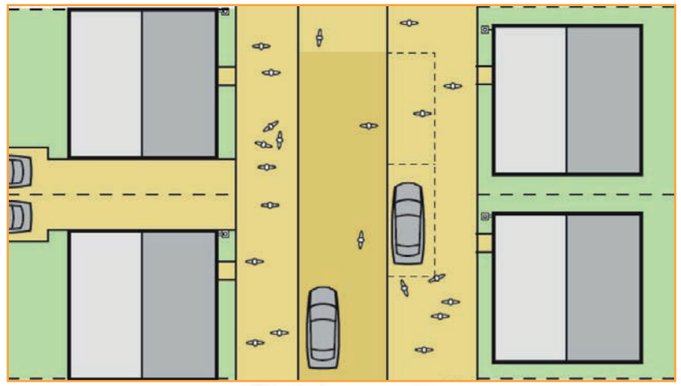
9.13 Through a strong hierarchy of streets, the masterplan framework provides vehicular and pedestrian connections throughout the area. These are complemented by a network of dedicated footpaths and cycleways. Through a considered design development and integration in to the Staneyhill site, the street network should be easily defined and recognisable as Staneyhill.

9.14 A primary aspect of the design development was the requirement to ensure all roads are designed and controlled to a maximum of 20 mph. As a consequence the horizontal alignment of the roads, the use of built and landscape forms and the incorporation of various design devices such as material changes to surfaces and at nodal points have been key principles in the design of the masterplan and should continue to be in the next phase of the masterplan development. Varied geometries along the streets have been used to slow vehicle speeds as well as establish character and realise positive public spaces that give pedestrians priority. The speed of vehicular traffic should be further controlled by the introduction of soft landscape elements (street trees, Green Corridor, woodland edges etc), positive boundary treatments and a varied building line. With the majority of the parking located within courtyards and to the rear of the properties there will be more flexibility to create a varied building line with properties located closer to the carriageway.

9.15 Material changes, such as slabs and paviours, should be integrated in to the street profile to help provide visual demarcation to drivers, helping to define the pedestrian focused streets and lanes. Higher quality materials such as stone setts or cobbles are more appropriate within public areas such as at gateways and local hubs. Whilst each development area will have a unique identify and design coding, it is important that a consistent palette of materials is adopted across the entirety of the masterplan area, so design teams for the second stage development of the masterplan should coordinate and cross-reference during the detailed design and implementation stages of the scheme.

9.16 Parking is an important part of any new housing development but particularly at Staneyhill where the topography of the site will require a considered and robust parking strategy that offers choice of on-street and off-road options, all agreed with and to council standards. Parking should not dominate frontages, but should be a considered combination of on-street parking, as well as to the side or rear of the building line, within courtyards and within built structures as required. The impact of car parking must be mitigated with careful planting and landscape strategies.

Figure 6: Images extracted from the Scottish Government's Designing Streets, showing the prefered approach to the streets through the site, from more formal traditional arrangement to breaking the street up into a sequence of spaces that service community life above movement functionality



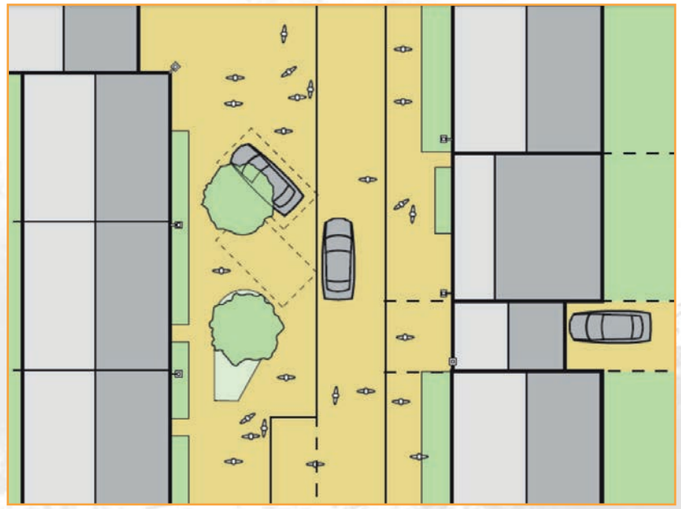
More dominant pedestrian area

Low kerbs

Common material for footway area carriageway

Reduction in vehicle parking impact

PRIMARY

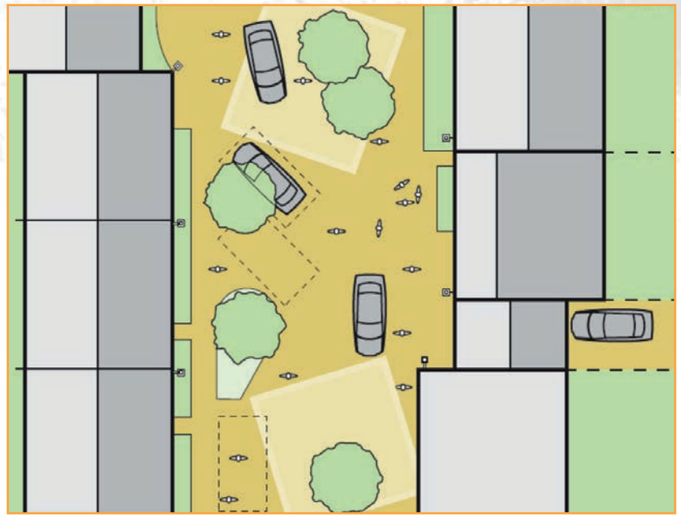


Reduced carriageway width

More informal street compositioning

Sensitive soft landscaping

SECONDARY



Level surface – no deliniation between street user zones

User hierarchy favours pedestrians

HOUSING

9. DETAILED DESIGN GUIDANCE

Landscape: General Principles and parameters

AIM

9.17 The aim of landscape design guidance is to achieve a high quality setting for development at Staneyhill through a consistent approach in design and detail across the whole masterplan area as well as within the four main development areas

CONSTRAINTS:

9.18 The principal issue with Staneyhill is the need to provide shelter and other facilities to allow the planting to thrive, and to provide a suitable and pleasant micro-climate and experience for residents and visitors alike. During the second stage of the masterplan development, the detailed design phase, the designers need to familiarise themselves and take local advice on what plant species are suitable for the site and locale as well as techniques appropriate to help new and existing planting to establish and thrive.

OBJECTIVES:

9.19 The objectives of the landscape design guidelines are:

- to achieve a robust and healthy landscape;
- to have regard to growing conditions on site to obtain optimum growth performance;
- to create a hierarchy of external spaces which provide opportunities for healthy living and lifetyles.
- To create a landscape structure that helps the proposed development blend with its natural hillside / moorland setting whilst also providing a legible place and creating an ordered appearance;
- to ensure that existing landscape assets and spaces such as the Moorland are protected and appropriately managed.

STANDARDS:

9.20 The specifications which form part of these guidelines are the acceptable standard and quality of design and materials for fi nished works. The planning authority will consider proposals to vary these standards provided that clear additional public benefi t will arise, and that the variations are consistent with the objectives of the guidelines and the intentions of the masterplan.

GROWING MEDIUMS:

9.21 All landscape areas should incorporate adequate growing medlum to promote sufficient root development to sustain healthy plant growth and stability. Staneyhill is a unique environment, a challenging environment, and where an adequate depth and form of growing medium is not available, alternative, innovative growing regimes may be considered by the council. This may include building up profiles, planting packed in to rock crevices and open rock facades exposed through excavation.

9. DETAILED DESIGN GUIDANCE

LANDSCAPE PLANTING:

9.22 The minimum standards for the main types of planting will be:

- Structure planting shall consist of a core mix and an edge mix, planted as a matrix including pioneer and climax species in mixture and shall be established using transplanted nursery stock. Woodland areas should not be less than 15m in width.
- Specimen trees will be used for avenue planting, within communal / public parks and spaces within residential streets and development areas.
- Ornamental planting should be limited in extent and chiefl y confi ned to private garden areas or at the interface with existing residential areas at the northern and eastern boundaries where the use of small scale ornamental species is appropriate.
- Hedge planting is encouraged as an effective means of defi ning spaces and providing shelter within residential areas, either single species of `mixed hedges as appropriate. Beech hedges are preferred in residential areas and parks.
- Grass should be considered at interfaces between moorland and residential development, and as a ground cover where machine access is needed for maintenance. Wildflower planting may be appropriate as supplementary ground cover within grassland areas.
- Marginal planting is limited to SUDS basins , channels and wetland areas which will be planted and seeded with native marginal species.
- Moorland is a primary landscape type at Staneyhill and the protection and reinstatement of the appropriate mix and character will be required where new development proposals will affect it.
-

Note: For all landscape planting, environmental conditions are a key factor and provision should be made to protect from and filter wind. This may be through the use of buildings and built layout, or through the provisions of permanent or temporary screens, wind breaks, sacrifical planting, or earth works.

9.23 The plan and tables opposite and in the following pages provide more detailed guidance for the wider masterplan area outhwith the four main development areas.

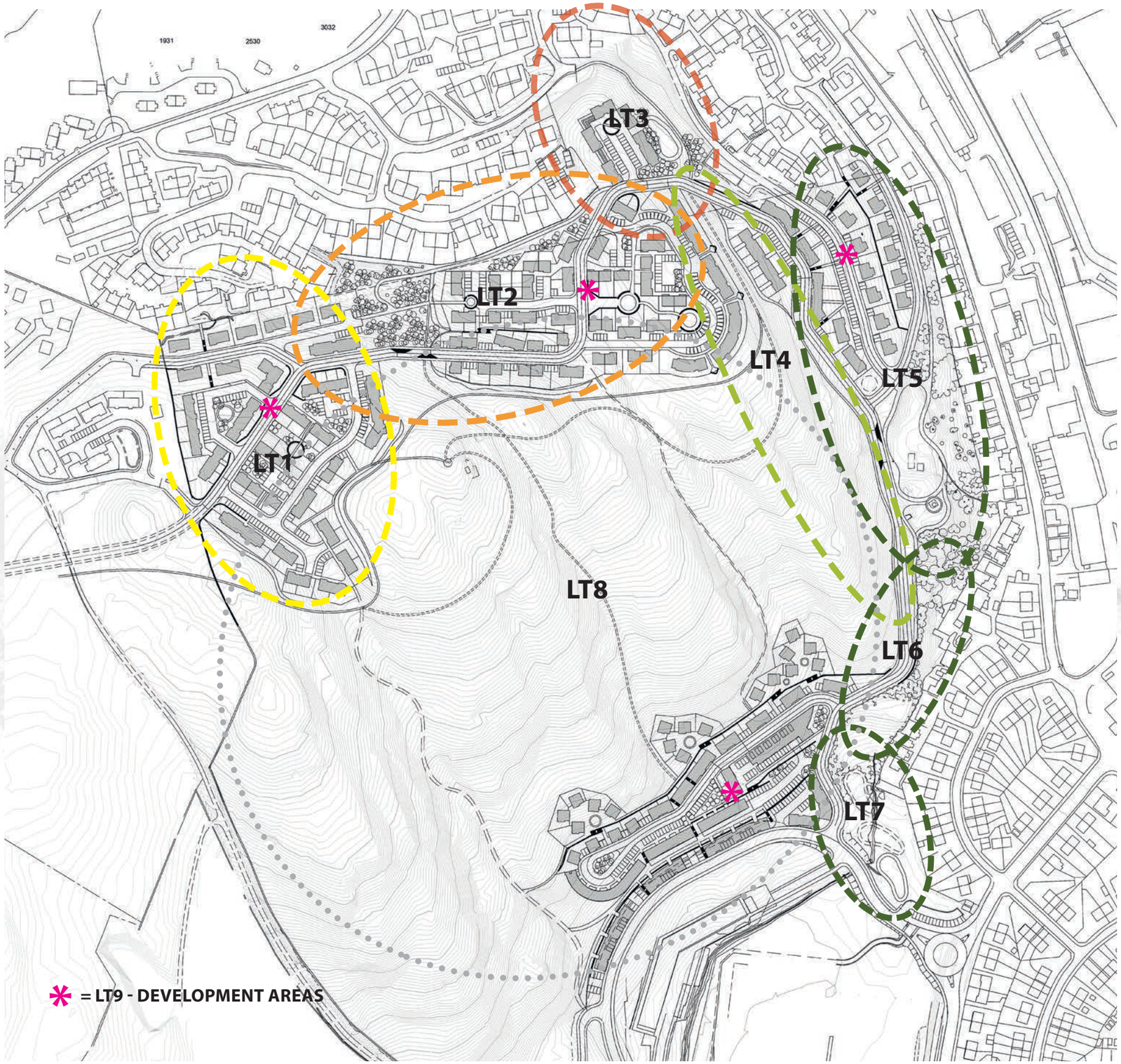


Figure 8: Plan showing landscape types across site

9. DETAILED DESIGN GUIDANCE

Landscape Type	Existing landscape character	Proposed function	Proposed landscape character	Masterplan requirement / Treatment controls
LT1 – Residential Edge West	Hard landscape edge to new residential development / heather moorland	Interface with new residential edge of 'Bowl' area of masterplan	Transitioning from hard edge defining boundaries to residential fringe, grassland / moorland character	• Use (referencing) of natural drystone stone walls from boundary in to heart of development. • Wall ends and detailing to identify and reinforce 'Gateway' in to site • Where boundary is not formed by residential property, inclusion of features such as pedestrian gates or stiles. • Potential for inclusion of 'artistic' references and forms
LT2 – Residential Edge North	Semi-ornamental landscape transitioning in to grassland fringe and heather moorland at southern edge	Providing a buffer to existing residential but also accommodating SUDs and footpaths / cycleways.	Reinforcing residential interface, providing enhanced shelter, access, connections (east-west / north-south) whilst making transition between new residential and main moorland landscape. Transitional profile retained from semi-ornamental suburban fringe at the northern edge through to grassland and moorland at the southern fringe.	• Continuation and expansion of existing semi-ornamental species within proposed plant palette • Long grasses to steep slopes as potential transition to moorland • Management of type important to achieving form and character. Need to include community management. • SUDs landscape requirements to be incorporated and managed, including SUDs Train features such as wetland / bog / swales etc • Hard materials to be primarily natural stone outwith residential areas. Consideration will be given to appropriate use and detailing of man-made materials and natural material elements.
LT3 – Residential Edge – Transition between Zones 2 + 3	Small transitional spur of landscape jutting in to existing residential dominated by grassland with some heather cover	No current function. Potential connector with existing housing and SUDs accommodation. Potential to include residential activities including informal play,	Simple but bold landscape character with fusion of three landscape elements, SUDs / waterside planting, Grassland (long grasses, wildflowers etc) and feathering in of moorland	• Simple but bold landscape treatment to provide a strong landscape form that makes transition between Plateau and Escarpment, accommodates various proposed uses and elements, as well as contributing to overall richness of landscape • Maintenance to be considered through community management company • Formal and informal routes to be designed for alternative uses and functions • Seasonal interest (local wildflowers) to be incorporated through combination of new planting and management regime.
LT4 – Moorland – Escarpment Transitional Edge	Steeply sloping landscape transitioning from upper moorland to eastern escarpment and 'Green Corridor'. Vegetation mainly heather moorland but dominated by extent of exposed rock	An interface between the upper Plateau and the inclined landscape of the escarpment development. Area will be dominated by infrastructure road, and the engineering that will be required to incorporate the road.	Potential to create a striking landscape through the exposure of the underlying geology of Staneyhill. Utilisation and integration of natural mechanical processes of the landscape capturing the water egress from the underlying rock to establish a riparian strip running north - south.	• Exposed rock to be assessed for suitability of exposure. Where possible use inherent patterning of rock formation, folds, fissures etc as backdrop to escarpment development and visual tie between Plateau and Escarpment. • Where applicable reveal and utilise natural water egress / watershed from rock to create interest and emphasise underlying processes of Staneyhill, movement of water, profile of geology and surface vegetation. • Accommodation of SUDs and potential Bio-remedial strip at base of excavated rock face. • Where agreed selective planting of 'natural' pockets in exposed rock to be used to soften edges, particularly in close proximity to residential development. Existing plant profile, heather, moss, reeds to be utilised • Accommodation of pedestrian routing away from road, and dramatization of site scale, striking landscape form and landscape marker. • Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images.
LT5 – 'Green Corridor', Escarpment Eastern Edge	Eastern edge of site, constrained to the west by a steep rock face and to the east by existing houses along Old North Road (ONR). (Existing issues with movement of water in to gardens along ONR identified in community conversations). Landscape is a mix of moorland, grassland and exposed geology, but most significantly identified by the remnants of former WWII structures and a belt of tree and shrub planting.	A landscape of interest with the WWII elements and only stand of tree planting on the site. In to this landscape will be fitted the Escarpment development area along with key infrastructure and connectors, road, SUDs (transmitters and containers) footpaths and cycleways.	Accommodation of road and Escarpment development will dramatically change the character of this area. As a consequence the reinforcement of the 'Green Corridor' landscape will be key to the success of this area of Staneyhill. The existing 'Green Corridor' was identified in community conversations and could be an iconic landscape element of Staneyhill development.	• WWII archaeological elements to be recorded and removed but reference to be made through artwork, memory pieces etc. • Accommodation of a network of infrastructure, road, pathways, cycleways and pedestrian connection to the ONR to be accommodated. • Reinforcement of existing tree planting to be a priority. • Considered design of planting in relation to road and rock, to assist in controlling road speeds. Also identified as an important element in creating gateway on approach to Escarpment, and spatial structure • Management and maintenance of proposed planting will be key to ensure integrity of soft landscape proposals. • Accommodation of SUDs required, transmitters and containers. Key connector between northern and southern SUDs structures and conduits. • Importantly a key aspect of the SUDs provision will be the incorporation of measures to catch water ingress in to the gardens along ONR. • Accommodation of pedestrian routing alongside and away from road, and dramatization of site scale, striking landscape form and landscape marker, integrating views of harbour and across Lerwick. • Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images.

9. DETAILED DESIGN GUIDANCE

Landscape Type	Existing landscape character	Proposed function	Proposed landscape character	Masterplan requirement / Treatment controls
LT6 – 'Green Corridor' Southern Fringe	LT6 is part of the Green Corridor but is a key 'knuckle point' with a different understanding when viewed from the south or the north	A small but tight landscape transitioning from the southern Terrace area to the steep Escarpment further north. Road will be a primary feature of this landscape but it will also need to convey SUDs southwards as well as accommodate footpaths and cycleways. Importantly it also needs to provide a smooth transition between the new road and development and the existing housing along	Accommodation of road and Escarpment development will dramatically change the character of this area. As a consequence the reinforcement of the 'Green Corridor' landscape will be key to the success of this area of Staneyhill. The existing 'Green Corridor' was identified in community conversations and could be an iconic landscape element of Staneyhill development.	• Accommodation of a network of infrastructure, road, pathways, cycleways and pedestrian connection to the ONR to be accommodated. • Reinforcement and extension of existing tree planting in section LT5 to be a priority. • Considered design of planting in relation to road and rock, to assist in controlling road speeds. Also identified as an important element in creating gateway on approach to Escarpment, and spatial structure • Management and maintenance of proposed planting will be key to ensure integrity of soft landscape proposals. • Accommodation of SUDs required, transmitters and containers. Key connector between northern and southern SUDs structures and conduits. • Accommodation of pedestrian routing alongside and away from road, and dramatization of site scale, striking landscape form and landscape marker, integrating views of harbour and across Lerwick. • Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images.
LT7 – 'Green Corridor' SUDs sector	LT7 forms the lower section of the Green Corridor but is also an interface with the existing SUDs provision at the south eastern corner of the site. At present this area is a mix of landscape types with moorland fringe, grassland and ornamental planted edge to existing residential properties	A small but tight landscape transitioning from the upper Green Corridor to the wetland / SUDs (existing and proposed) at the south. This landscape also has to provide screening to existing residential properties as well as accommodate proposed footpaths and cycleways. Finally this landscape needs to address the new road layout providing control of speeds through visual enclosure.	Accommodation of road and associated earthworks will dramatically change the character of this area. Reinforcement of the 'Green Corridor' landscape will be key to both the success of this as a transitional area, as well as providing screening to existing properites and assistance in controlling road speeds . The introduction of large areas of tree / shrub planting will provide screening, address the road edge and provide a back-drop / setting to the SUDs provision.	• Accommodation of a network of infrastructure, road, pathways, cycleways and pedestrian connection to the ONR to be accommodated. • Reinforcement and extension of existing tree planting in section LT5 / 6 to be extended as a priority, with a more wetland tolerant palette • Considered design of planting in relation to road and rock, to assist in controlling road speeds. Also identified as an important element in creating gateway on approach to Escarpment, and spatial structure • Management and maintenance of proposed planting will be key to ensure integrity of soft landscape proposals. • Accommodation of SUDs required, transmitters and containers. Key connector between northern and southern SUDs structures and conduits. • Accommodation of pedestrian routing alongside road. • Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images.
LT8 – Moorland	LT8, the Moorland, constitutes the main, predominant, coverage of Staneyhill. The Moorland is a core element in the character and identity of Staneyhill, as well as a key asset.	The core landscape character of the Staneyhill site provides the main identifier for the masterplan area. The moorland is a connector, a passageway and the most significant recreational resource. It is also a community asset for grazing, fitness and well-being. These qualities and functions should be retained and maintained.	The principal core of the moorland at the heart of the site to remain as current. At the fringes with the new development the moorland should be dominant, feathering in to gardens public spaces and the edges of infrastructure. Transitional landscape forms such as grassland and semi-ornamental shrub and scrub can be used (as identified above) to assist in the feathering process. Should routes and desire lines develop through the Moorland these should be subservient to the moorand character, whilst maintaining safe and suitable routes for pedestrians.	• • Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images. The use of ecavated materials from site and in-situ elements and features such as rocky outcrops should be utilised where available. • Management of the moorland landscape should be considered on a community basis and with local livestock farmer who currently graze sheep on the site. A watching brief should be in place to monitor the use and funcationality of the moorland during the development process with a need to accommodate a potential increase in use with the maintenance of the existing moorland character. • The introduction of any structures or features should be considered in respect of the guidelines in this framework and coding document including views from the Broch etc. Any structures should be light touch as illustrated by the images opposite.
LT9 – Development Areas	LT9 is a single category, Development Areas, but is currently constituted by a varied range of landscape and environments.	The landscape of the development areas will vary according to need but should provide public space for meeting and gathering, for communal growing spaces and for events	Landscape character can be varied to reflect the development forms but should take reference from the site and local Shetland landscapes and cultural traditions, eg inclusion of plantycrubs	• Hard landscape materials to be combination of natural material excavated from site and man-made. See exemplar images. • Inclusion of shelter and structures / planting to enhance the local microclimate and environment within the development areas

9. DETAILED DESIGN GUIDANCE

LANDSCAPE MAINTENANCE

9.24 A key objective of this guidance is to establish adequate management for plant establishment and sustained growth as well as to ensure that landscape works within development plots are maintained to consistent standards. Designers of the next detailed stage of the masterplan should prepare a Landscape Management Plan which specifies the operations to be carried out each year for a five year period following completion of the planting works to ensure that the intended planting performance is achieved.

LANDSCAPE MATERIALS / MATERIALITY:

9.25 The materials forming the Staneyhill landscape are fundamental to the development and establishment of character for the whole site and the individual development areas. The landscape materials should take reference from the site, be appropriate to the setting and context, yet simultaneously they should be both fit for purpose and appropriate to the future development and longevity of the scheme. This includes materials that are robust, suitable for the climatic conditions of Staneyhill and their anticipated and future use.

9.26 Natural stone should be a core material, in various forms, units sizes and designs, as illustrated by images **a - e.** The use of stone excavated from the development of the site would be a key goal. Stone can be utilised to provide spatial and ownership division, retaining structures, surfaces and materials for landscape features such as the planticrub in image **e**.

9.27 Where suitable man-made and natural materials can be used together to provide transitional landscapes between natural and urban spaces as images **i, k, l & n.** Combining natural and man-made materials can work in more formal spaces as image **f** but care and attention needs to be given to detail and appropriateness of form.

9.28 In more rural situations the vernacular use of natural materials, as images **h** and **m** should be considered as a fundamental part of the design process.

9.29 Sensitive landscapes such as the moorland habitats should be treated with an appropriate level of design sensitivity and consideration, including raised walkways, viewing platforms and seating areas, as illustrated by the 'light toch' approach illustrated in image **j.**

9.30 The appropriate selection and use of materials is also vital in housing design, not only in the design of the built form but also in the connecting elements such as walling and pathways. Image g shows the use of existing rock base as foundations for new housing, whilst images **a** & **b** illustrate options for walling at interfaces between housing and landcapes

9.31 Images **b & c** show how careful detailing of materials can also provide an artistc aspect to materials and elements across the site.

9.32 Variations in building forms by different designers will be the main means of achieving visual diversity, but could also create a place of disparate character. The intention of the guidelines is to create a connected, ordered, appearance which relates each part of the development to its immediate surroundings, whilst realising a wider sense of community and place - Staneyhill.

NOTE: Reference should be made to the earlier housing study in Book 1 for level transitions and retaining structures.

9. DETAILED DESIGN GUIDANCE

Boundary Treatment

General

9.33 Another common element is the treatment of boundaries within the new neighbourhood. The provision of positive boundaries throughout the masterplan area will serve to create a sense of place and identity which will be instantly recognisable as Staneyhill.

9.34 Positive boundary treatments must be incorporated in all areas of the new masterplan. This is particularly important along important frontages such as the primary route and at edges between new residential and existing landscape (e.g. Moorland), but also along secondary streets and within housing streets.

9.35 Positive boundary treatments will serve to define boundaries between the private and public realm and also help to mitigate the impact of cars on the street environment. By incorporating a mix of hedges, rural fence types and walls which will be located at the back of footpaths or shared surfaces, gardens can be enclosed and cars and drives can be screened. With the inclusion of tree and shrub planting, the provision of positive boundaries adjacent to shared surfaces will also help to reduce forward visibility for motorists and therefore reduce vehicle speeds.

9.36 Rear and side boundaries onto the public realm should be avoided wherever possible. Where this cannot be designed out these boundaries must be formed in appropriate materials such as block and render or stone / cast stone and to an appropriate height to provide privacy. Divisions between private gardens should be as far as possible post and wire fences with supplementary shrub planting. Timber fences within the public realm are not an acceptable solution and will not help to create the quality public realm envisaged at Staneyhill.

9.37 Boundaries should reflect the materials of local or neighbouring development .e.g at Area 4 – Bowl, positive boundary treatment to express natural drystane walls in the local area (See image opposite)

DEVELOPMENT AREAS

9.38 Within development areas the following boundary treatments should be used as guidance

- Area 4: Drystane walling (specific locations), masonry / blockwork – public
- Low timber, larch – internal, shrubs / hedging where shelter allows
- Area 3 – Solid timber retaining structures including larch, and open boundaries, as well as public stone planticrubs
- Area 2 – timber retaining structures and natural stone from on-site excavation
- Area 1 – public areas and terrace section use excavated stone, Rylock between plots stepping up hillside

Strong positive boundaries to public interface - Drystone walling, block and render wall, and hedge

Open transition edge to moorland and green spaces through post and wire fencing with supplementary shrub / grass planting

Low hedge, post and wire and shrub planting, rail and wall (timber / concrete as images opposite)

Figure 9: Showing boundary treatments / conditions that should be applied to the Bowl

9. DETAILED DESIGN GUIDANCE

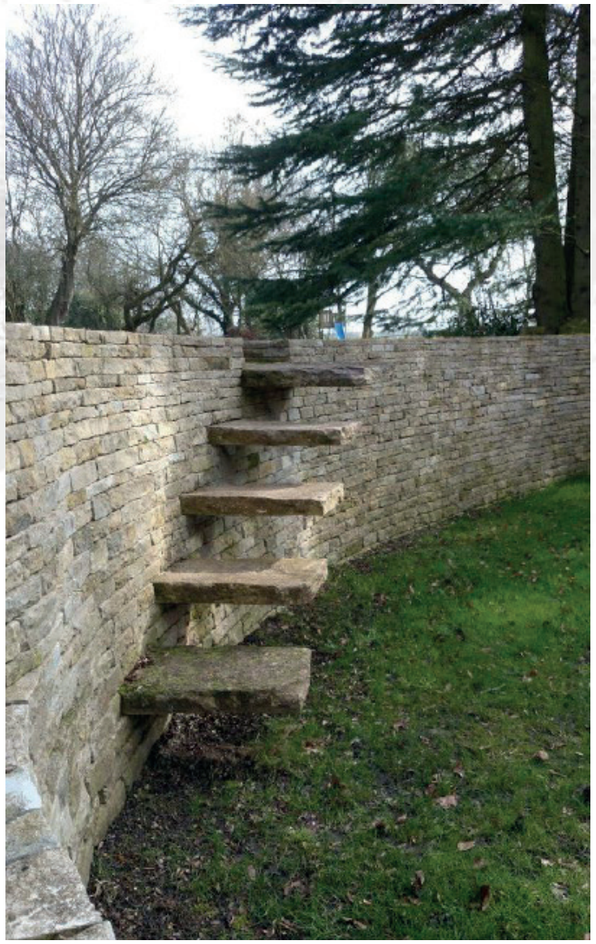
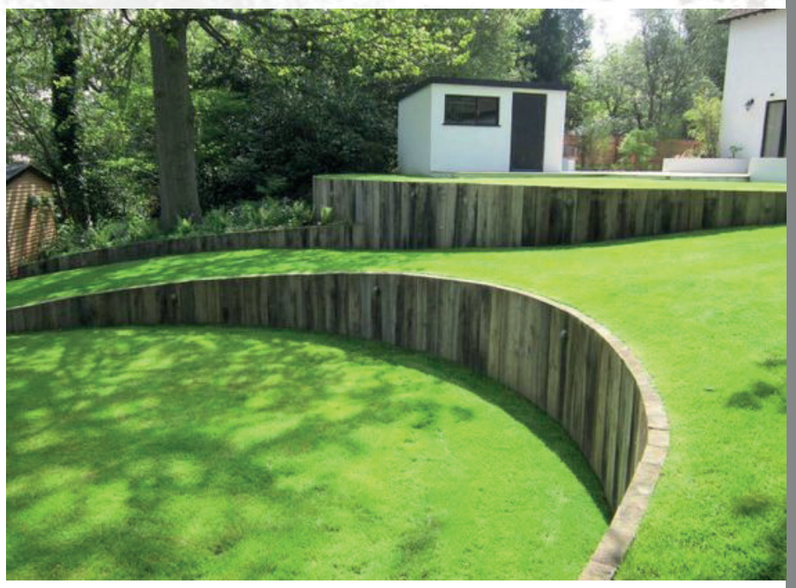


Figure 10: Range of photos showing boundary treatments, from historic stone walling to more visually permeable treatments such as wire fencing



MOORLAND EDGE

9.39 Edge treatment to heather moorland to be Rylock stock-proof fence or similar. (Sheep may be grazed on moorland). Transparent edge, wind permeability – can be mixed with shrubs, earth mounding and existing rock outcroppings.

PUBLIC REALM FRONTAGE

9.40 Rear and side boundaries on to the public realm should be avoided wherever possible. Where this cannot be designed out these boundaries must be formed in appropriate materials such as natural stone walling, or concrete walling (possibly block and render subject to council review) to an appropriate height to provide privacy.

STREET

9.41 Street frontage should provide a strong and appropriate response to the interface between public space and private gardens. Stone walling, in character with local on-site drystane walling, or block and render. Within the core of development areas the integration of alternative materials may be appropriate including solid timber or concrete walling as images left

ACCESSIBLE GREEN EDGE

9.42 Accessible green edges should provide as seamless a transition as possible between home and garden, and the rural landscape within which the housing sits. The use of post and wire fencing, with supplementary shrub and hedge planting, should be used as far as possible to identify and demarcate boundaries and provide privacy to households. Excavated rock face and earth mounding can be used where housing is located on steep sloping or undulating landscapes.

PLOT BOUNDARIES

9.43 Plot boundaries at edges to moorland and greenspace should be as far as possible post and wire fences with supplementary shrub and hedge planting.

9. DETAILED DESIGN GUIDANCE

i Bowl

EXISTING CONDITIONS

9.44 This is the most elevated area of the site, sitting at the north-western corner. The area again is highly exposed and open to climatic conditions from north west and east in particular. The western boundary is characterised by an existing dry stone wall which runs from the road at Pegasus Place to the Old North Road track to the south. At present the area contains the only modern man-made structure currently in use on the site which is a large water reservoir owned by Scottish Water. This tank is to be removed during the imminent redevelopment of the Scottish Water infrastructure. The topography is relatively flat around the tank area and it is proposed to remove a small hillock between the tank and the wall to create a relatively free area for a housing platform. There are archaeological remains that will have to be addressed during the detailed design phase of the development. The eastern boundary or this area sits at the edge of a steep drop in the topography.

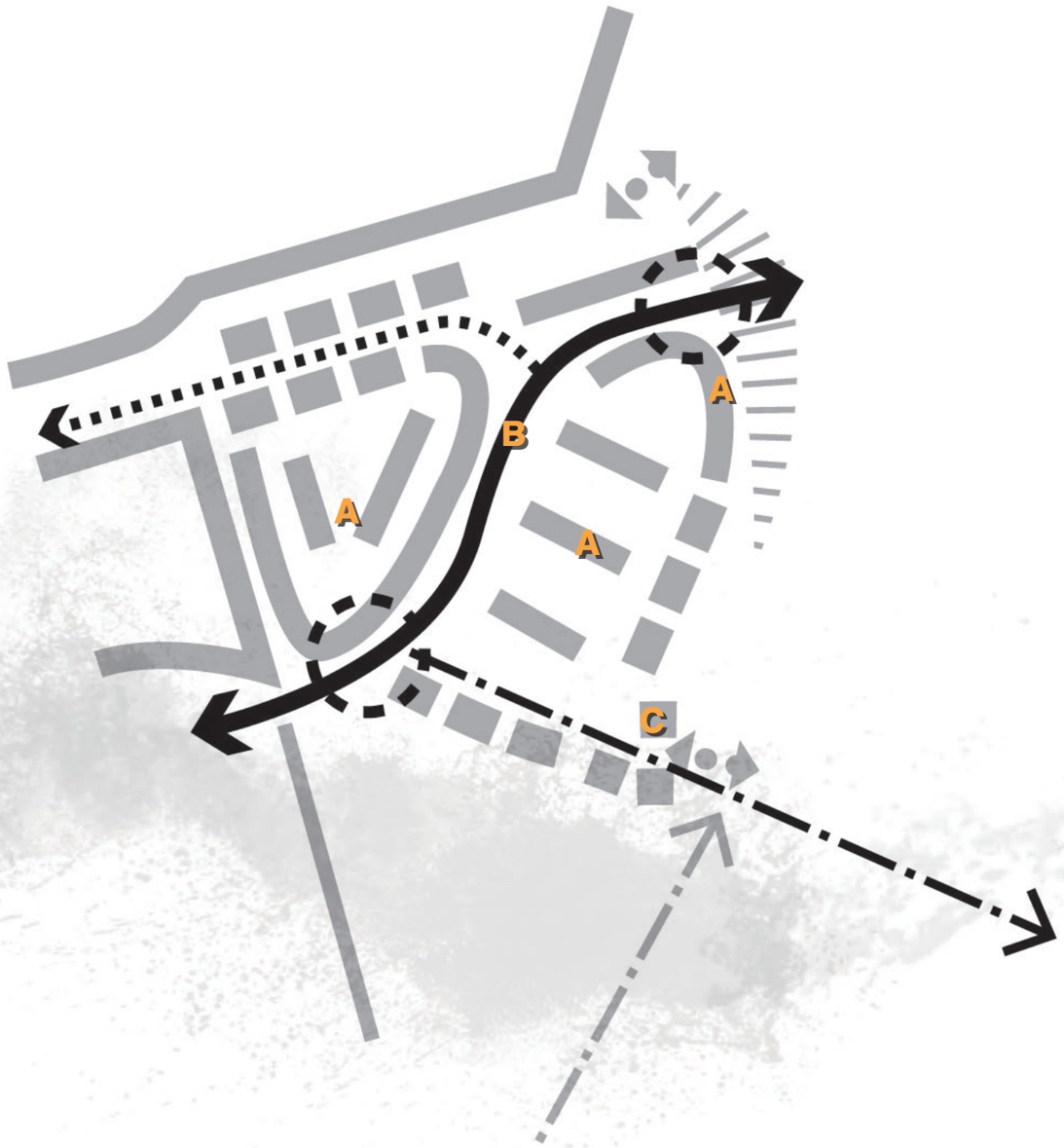
Figure 11: Bowl's Existing Conditions

DESIGN CONCEPT

9.45 It is proposed to incorporate the stone wall into the development to give a distinct character to the area. These walls form the western gateway at the top of the hill but also define and contain garden areas whilst retaining hard edge around the spine road which, again, runs through the middle of the area. The eastern gateway is marked on either side of the road by more densely massed terraced housing which sits at the top of the change to the steep topography. The centre of the development is characterised by buildings containing sheltered gardens, both private and public. These are gable end onto the road to enforce an urban feel to the street. To the southeast the hard boundary of the site breaks down and allows the buildings to sit within the landscape, allowing the spectacular view back down into the town to be expressed.

Figure 12: Bowl's Design Concept

Figure 13: Bowl's Access and Movement



FUNDAMENTAL REQUIREMENTS

A Use of existing landscape features; walls create shelter (the planticrub principle)

B Low speed road central to development

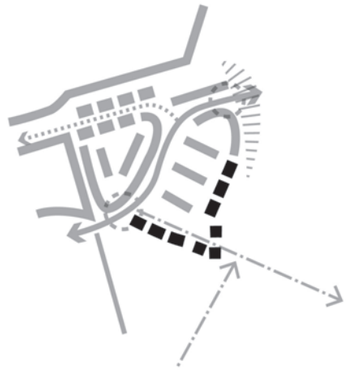
C Housing within sheltered gardens

9. DETAILED DESIGN GUIDANCE

AREA 1: GATEWAY DEVELOPMENT

POTENTIAL REQUIREMENTS

- These buildings form the gateway to the Bowl area when approaching from the east through the landscaped buffer between the Bowl and the Plateau.
- The buildings should be 2/3 storeys in height and form a strong edge which the main spine road penetrates.
- The terraced buildings should be properly considered with each end articulated to indicate an end stop.
- The two end stops either side of the road opening should be considered together and form the definitive gateway to the development.
- There should be some reference to the characteristic dry-stone walling in terms of material, texture or colour.



AREA 2: PERMEABLE EDGE

POTENTIAL REQUIREMENTS

- The housing to the southeast corner of the site can break free of the stone walls and is expressed as individual detached or semi-detached units which follow the contours of the 'valley' which opens out to form a view back to the town below.
- To allow parking relatively close to these houses a turning area is required at the road end.
- Around this road the gardens should be semi private with no defining fences to encourage ownership of the external space between the houses by the community that live in them.
- During the detailed design phase designers must ensure that these houses will not be visible from the Broch of Clickimin.
- To enhance the intervisibility between the Staneyhill area and the existing town, this area should be visible from North Lochside. We feel this is important to avoid the northern end of the town feeling cut off from the southern end.

AREA 3: ENCLOSED GARDENS

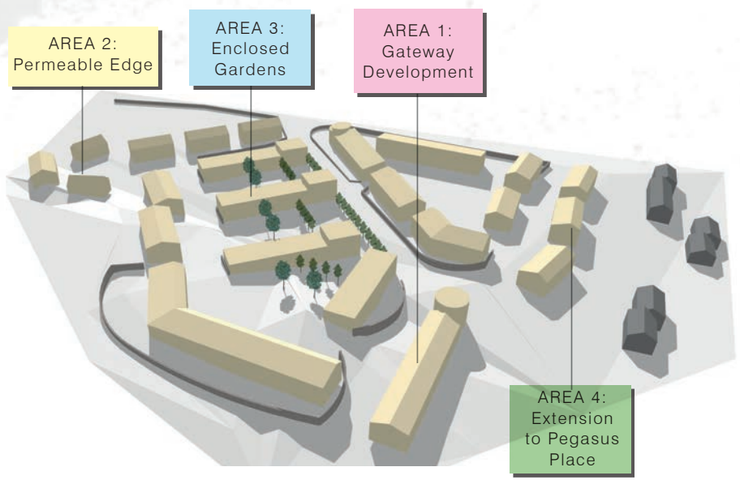
POTENTIAL REQUIREMENTS

- As per the Plateau area the development core within the centre of the character area incorporates a mixture of two and three bedroom detached and semi- detached houses of single, one and a half and two storeys.
- Buildings are to be orientated along the main street to provide strong frontage; in internal courtyard spaces, the aim is to provide added shelter to areas of parking and shared garden space.
- The boundary treatments along the street should incorporate the character of the existing stone wall that runs along the western edge of the site. This will:
  - create continuity between this area and the materials of the wider landscape.
  - strongly define the gateway into the site from the north west.
  - provide additional shelter for the internal spaces within the area.

AREA 4: EXTENSION TO PEGASUS PLACE

POTENTIAL REQUIREMENTS

- The existing road at Pegasus Place is to be extended into the new character area. At present the plots along this road have not been developed probably due to the steep topography on the north side. This however will lend itself to an 'upside down' house with bedroom accommodation at the lower level.
- This approach should be carried on into the new character area offering the opportunity for private sites for sale or development by the housing association.
- Extension to Pegasus Place will also provide an additional access into the site, creating a key focal junction within the area.
- New development should back onto existing housing to the north off Burnside but designers should consider incorporating a footpath link to the existing area of green space at the end of one of the roads that branch off Burnside.



9. DETAILED DESIGN GUIDANCE

MATERIALITY

- The Bowl forms the northern entrance to Staneyhill and provides an opportunity to create a strong arrival / gateway in to the neighbourhood. The buildings that sit within the gardens should be coloured in a similar fashion to those at Grodians, brightly and individually coloured, and contrasting with neighbouring properties. Buildings facing the main road and public space should be predominantly stone.
- Appropriate materials for this area will include:
  - Timber as primary material – including coloured finishes
  - Natural stone
  - Slate
  - Glass
- Possible use of smooth render to ground floor?

BOUNDARY TREATMENTS

- Use of natural outcroppings of stone or stone walling from excavation process to form primary basis for external boundary.
- Planticrubs to be incorporated and used to realise divisions within public areas.
- Timber as low level divisions between plots and buildings at the northern most edge
- Rylock stock proof fencing to heather moorland edge

KEY FEATURES

- Distance between buildings should be less than 18m
- Parking / Communal open space, intimate courtyard character, within central sector of area - Planticrubs.

KEY BUILDINGS

- Buildings at western entrance . Important to consider treatment of building where primary road punctures building – 'Gateway'.

LEGIBILITY / CONNECTION

- Important to consider treatment of primary road as it moves through the core garden sector to realise a pedestrian priority within heart of the development.
- Opportunities to be provided, for pedestrian access to and through the moorland, creating informal routes south connecting to Anderson High School and Clickimin.

HEIGHT / DENSITY

- Buildings should be 2/3 storeys in height and form a strong edge to the main road and where it addresses the western edge adjacent to Pegasus Place.

PARKING

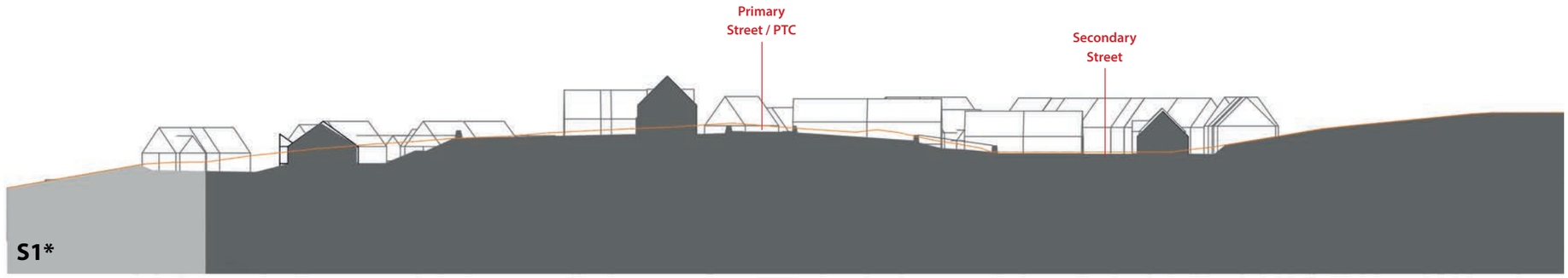
- Option 1 – parking between or underneath buildings on lower terrace
- Option 2 - potential to accommodate parking on mid-level terrace
- Upper terrace – On-street parking. Possible consideration of parking below public piazza.
- Valley Housing – car free

Figure 14: Parameter plan, showing location of sections located on page 17

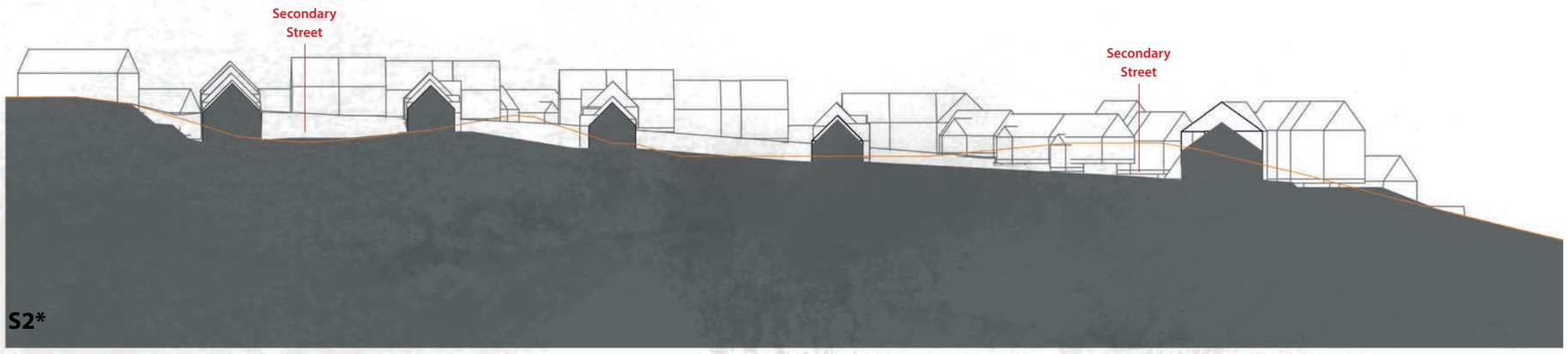
Figure 15: Example sections giving an idea of how buildings and spaces (both private and public) could be arranged across the area

- Platform Boundary - Fixed
- Platform Boundary - Subject to further assessment
- Primary Street / Public Transport Corridor
- Secondary Street
- Local Access
- Primary Frontage - Access
- Primary Frontage - No Access
- Formal Pedestrian Route
- Existing Vehicular Route
- Proposed Vehicular Route
- Key Viewpoints
- Potential Access
- Gateway / Transitions / Nodes
- Feature Building
- Important Public Viewpoint / Public Art
- Green Structural Blocks
- Internal Communal Gardens / Open Space
- External Open Space
- Internal Hard Landscape Space
- Potential SUDs Pond / Basin
- Number of Storeys

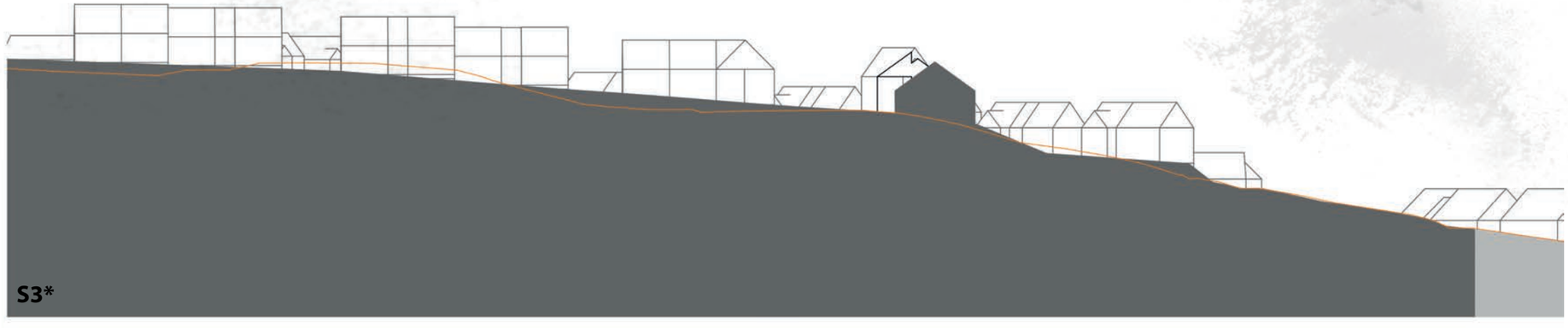
* Refer to diagram on page 16 for section slice through Bowl area



PROPOSED SITE SECTION
1:750



PROPOSED SITE SECTION
1:750



PROPOSED SITE SECTION
1:750

9. DETAILED DESIGN GUIDANCE

ii Plateau

EXISTING CONDITIONS

9.46 Highly exposed area of site open to climatic conditions from north west and east in particular. Steep topography on the east and northern edges defining edges of character area. Southern edge defined by ensuring development does not encroach on views from the Broch. North western boundary defined by backs of houses.

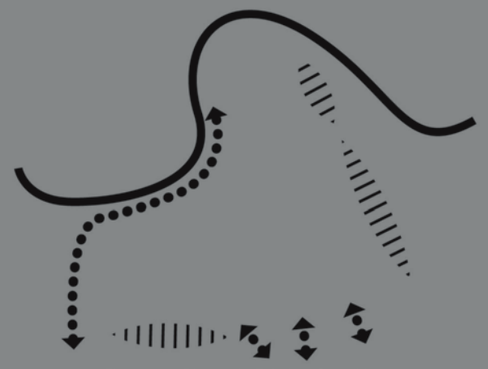


Figure 16: Plateau's Existing Conditions

DESIGN CONCEPT

9.47 The design of the plateau has been influenced by the concept of a citadel where a fortification provides protection to an internal settlement. In the plateau character area a protective wall of new development will be created along this area's eastern edge, on top of the steep embankment. This will provide shelter for smaller scale houses within sheltered gardens set within the development core. As this development reaches the western and southern fringes of the area development will permeate into the landscape, creating a plateau mesh between the existing landscape and the proposed landscape. The character of the northern edge will be determined by a new linear parkland that acts as a movement corridor for water, with new SUDs provision and people, with a foot and cycle path.

Figure 17: Plateau's Design Concept

Figure 18: Plateau's Access and Movement

FUNDAMENTAL REQUIREMENTS

A Landscape buffer

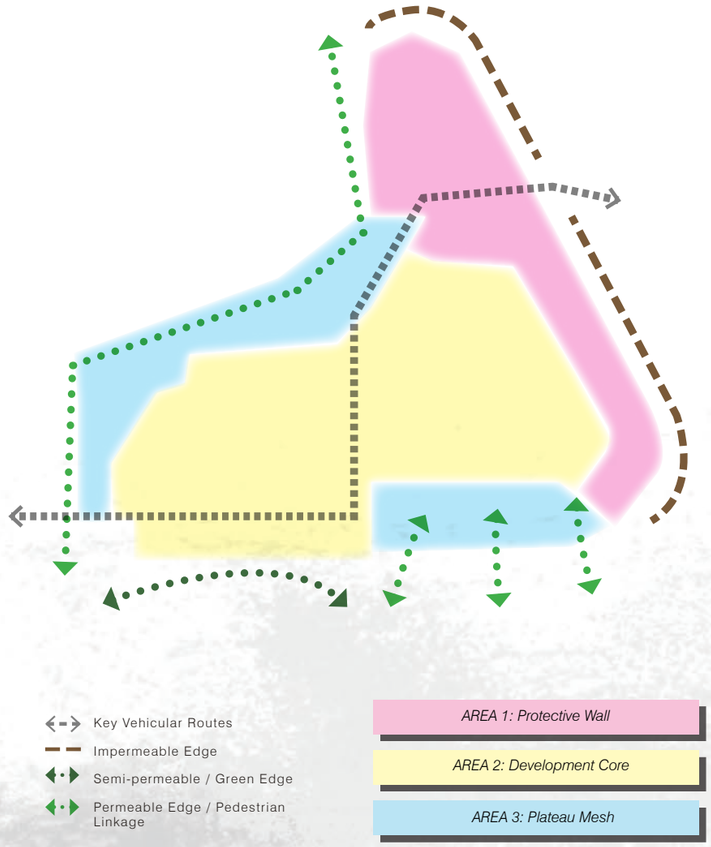
B Housing forms protective barrier creating shelter

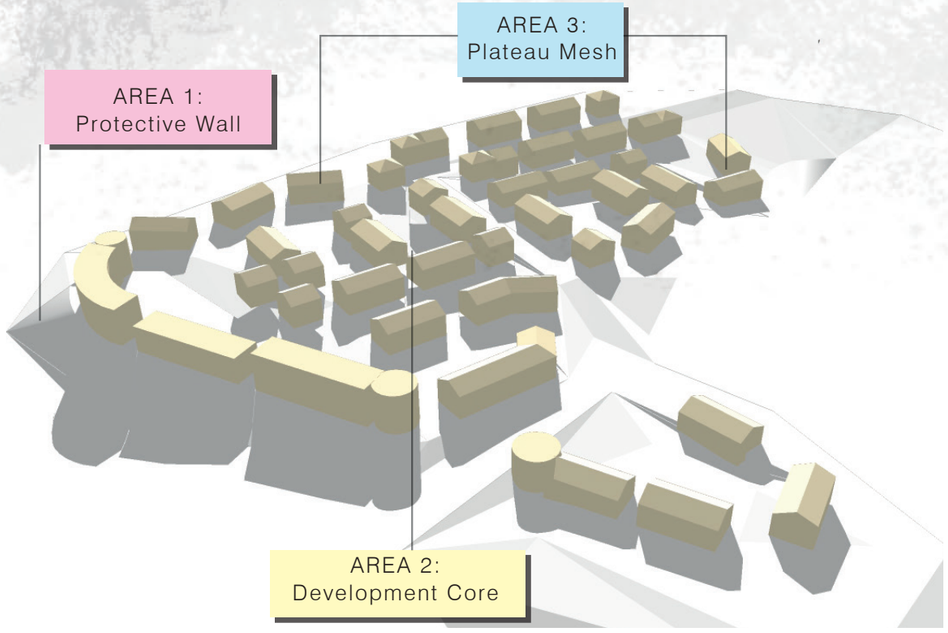
C Barrier opens up to landscape

D Housing within sheltered gardens

E Low speed road central to development

9. DETAILED DESIGN GUIDANCE





AREA 1: PROTECTIVE WALL

POTENTIAL REQUIREMENTS

- Protective wall of development along eastern edge of development area to incorporate one-bedroom flats 2/3 storey in height; all development orientated along edge of steep embankment.
- Parking to include on-street, both adjacent and slightly remote, within a well-considered streetscape that uses high quality materials (see material / planting palette).
- Utilise existing embankment as boundary treatment to backs of properties, providing frontage onto internal streets.
- Terrace form of development has to be well considered with a clear distinction between central row and end elements, circular in form for example.
- Where main street punctuates the wall adjacent building elements must be considered as gatepost buildings, creating a sense of arrival to character area.
- Introduce several breaks in wall to allow views out to the west
- The massing should feel like a defensive wall that has broken down over time and allowed nature to take over to an extent and soften any austerity. This will be a strong element within the landscape when viewed from below or from the harbour.

AREA 2: DEVELOPMENT CORE

POTENTIAL REQUIREMENTS

- Development core within centre of character area incorporates mixture of two and three bedroom detached and semi- detached houses of single, one and a half and two storeys.
- Buildings to be orientated to create sense of enclosure and protection from elements. Alongside the Main street housing to provide strong frontage, while internal courtyard housing will be arranged to provide added shelter to areas of parking and shared garden space.
- Introduce boundary treatment where it is deemed appropriate to create sheltered internal spaces, opting for softer, natural materials such as timber. Where development fronts on to the main street provide boundary treatment that maintains strong urban frontage (see material palette).
- Introduce natural stone walling to separate public and private garden space within internal spaces, providing further shelter to internal courtyard spaces.
- The treatment of boundaries for gardens and semi-private spaces should consider the contribution these spaces can make to the community and civic life of the area. Where appropriate physical boundaries should not be introduced to gardens and semi-private spaces to ensure this.
- It is considered that to create an urban character to this area houses may need to be closer than the existing SIC planning guidance permits, so further discussion with SIC will be needed prior to detailed application submission.
- Parking to include on-street, both adjacent and slightly remote and off-street, within hard landscape courtyard space. Parking to also include off street in short rows of bays for development fronting onto Main Street.
- Internal courtyard spaces should incorporate areas for both parking and semi-private garden space, parking should be broken up by landscape while access to households should be via soft landscape setting houses back from hard landscape parking areas.

AREA 3: PLATEAU MESH

POTENTIAL REQUIREMENTS

- Mesh development on periphery of character area incorporates two and three bedroom detached and semi-detached houses of one, one and a half and two storeys.
- Development's orientation should response to particular condition and topography of landscape considering the creation of a natural edge transition.
- Boundary treatment will be minimal to maximise the intervisibility between edge housing and the wider landscape, creating a graded transition between existing and proposed landscape areas.
- Parking will include either private parking or off street in short rows of bays.

9. DETAILED DESIGN GUIDANCE

MATERIALS

- The Plateau area reads and sits within the landscape as a separate entity, and should be treated in a different manner to the Bowl. Key is the establishment of the perimeter wall to the east which shelters and encloses the core of the development. Colour is seen as key to realise the character of this area.
- The buildings that sit within the gardens should be coloured in a similar fashion to the fashion to the Grodians, brightly and individually coloured and contrasting with neighbouring properties.
- The 'Garden Wall' should be masonry to the base of the coastal side with brightly coloured timber above. Wall building should not appear austere, therefore careful articulation, expression and detailing of materials is important.
- Appropriate materials for this area will include:
    - Timber as primary material – including coloured finishes
    - Natural stone
    - Slate
    - Glass
- Possible use of smooth render to ground floor?

BOUNDARY TREATMENTS

- Use of natural outcroppings of stone or stone walling from excavation process to form primary basis for external boundary.
- Planticrubs to be incorporated and used to realise divisions within public areas.
- Timber as low level divisions between plots and buildings.
- Rylock stock proof fencing to heather moorland edge

KEY FEATURES

- 'Garden Wall' is transition element that establishes visual marker between development areas whilst providing shelter to Plateau.
- Distance between buildings should be less than 18m
- Parking / Communal open space, intimate courtyard character, within central sector of area - Planticrubs.

KEY BUILDINGS

- 'Garden Wall' building, emphasised by treatment of ends of the terrace. Important to consider treatment of building where primary road punctures building – 'Gateway'.

LEGIBILITY / CONNECTION

- Important to consider treatment of primary road as it moves through the core garden sector to realise a pedestrian priority within heart of the development.
- Opportunities to be provided for pedestrian access to and through the moorland, creating informal routes south connecting to Anderson High School and Clickimin.

HEIGHT / DENSITY

- 'Garden Wall' 2 – 3 storeys. Individual residential units 1 – 2 storeys

PARKING

- All parking to SIC guidance / regulations. Off-road or in courtyard or in-curtilage.

Figure 19: Parameter plan, showing location of sections located on page 21

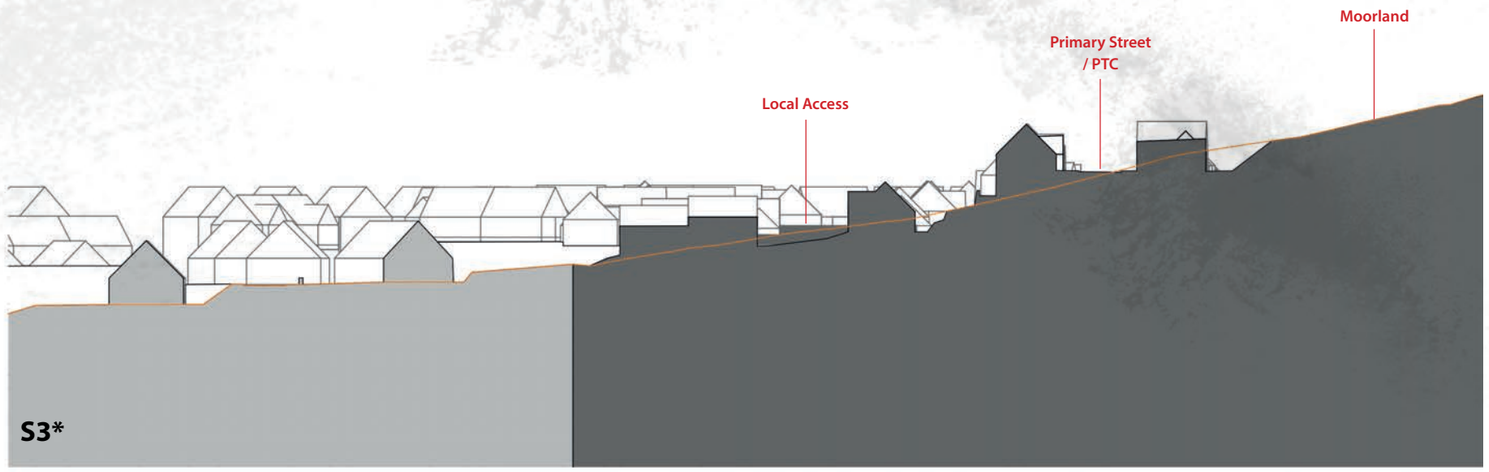
9. DETAILED DESIGN GUIDANCE

Figure 20: Example sections giving an idea of how buildings and spaces (both private and public) could be arranged across the area

- Platform Boundary - Fixed
- Platform Boundary - Subject to further assessment
- Primary Street / Public Transport Corridor
- Secondary Street
- Local Access
- Primary Frontage - Access
- Primary Frontage - No Access
- Formal Pedestrian Route
- Existing Vehicular Route
- Proposed Vehicular Route
- Key Viewpoints
- Potential Access
- Gateway / Transitions / Nodes
- Feature Building
- Important Public Viewpoint / Public Art
- Green Structural Blocks
- Internal Communal Gardens / Open Space
- External Open Space
- Internal Hard Landscape Space
- Potential SUDs Pond / Basin
- Number of Storeys

PROPOSED SITE SECTION
1:750

PROPOSED SITE SECTION
1:750



PROPOSED SITE SECTION
1:750

** Refer to diagram on page 20 for section slice through Plateau area*

9. DETAILED DESIGN GUIDANCE

iii Escarpment

EXISTING CONDITIONS

9.48 The escarpment area forms the eastern boundary to the site and falls within the area identified by SIC Planning as the 'Green Corridor'. The southern end of this character area has also been identified as requiring special attention due to the topography and existing trees. Access through the eastern boundary is almost completely restricted by the properties of the North Road and Burgess Street which back onto the boundary fence with no public access points. HHA are considering buying properties when they become available to solve this problem. To the west the topography is extremely steep and would be very difficult to build on especially to the rear of Burgess Street where there is a pinch point. The community have planted trees in this area which have become established in most places. Also within this area there are WWII remains which in themselves may seem insignificant; however, our feedback from the public consultation indicated that the gun emplacement is important to the local community. There are run off drainage issues on the eastern boundary which require careful attention. On the northern boundary, there is the possibility of vehicular access into the existing road network around Staneyhill Road.

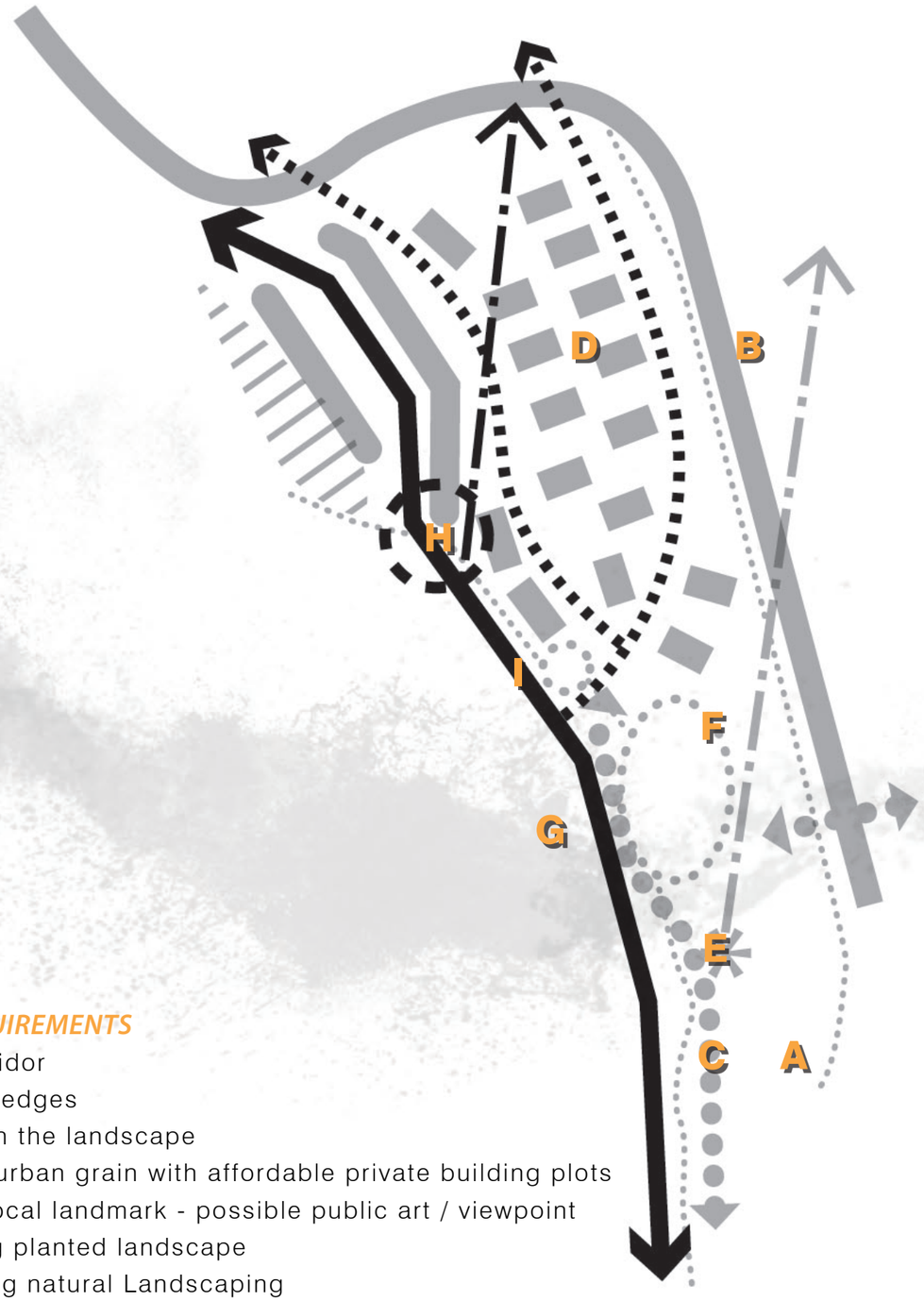
Figure 21: Escarpment's Existing Conditions

DESIGN CONCEPT

9.49 The green corridor begins at the Clickimin Broch, continues through the leisure facilities and new school and connects to the existing community planting scheme at the back of the existing housing. It is our intention to expand and develop the planting. This does not mean that there can be no buildings within the green corridor but they have to be considered in design terms. The green corridor can be defined as 3 distinctive character areas. These areas will be connected by the new spine road which has only one possible alignment through the space. The character of this road should reflect the character of the areas in design and materials.

Figure 22: Escarpment's Design Concept

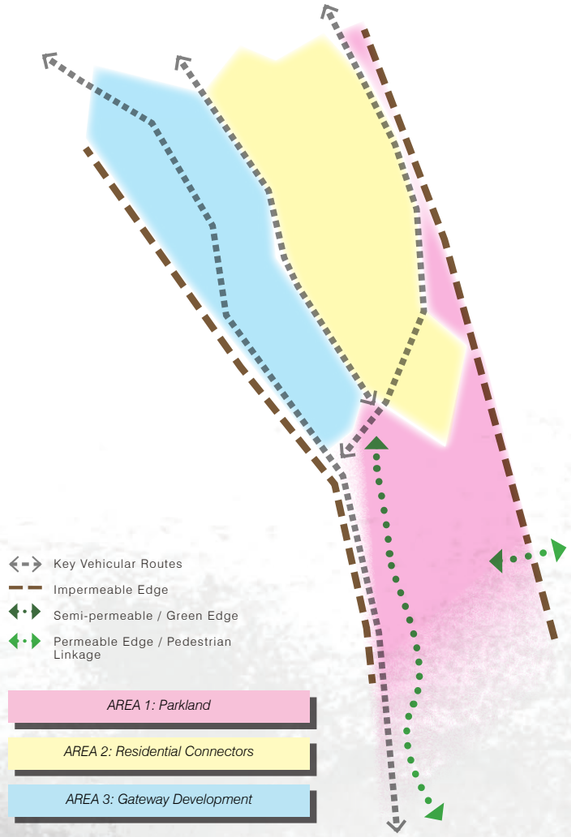
Figure 23: Escarpment's Access and Movement

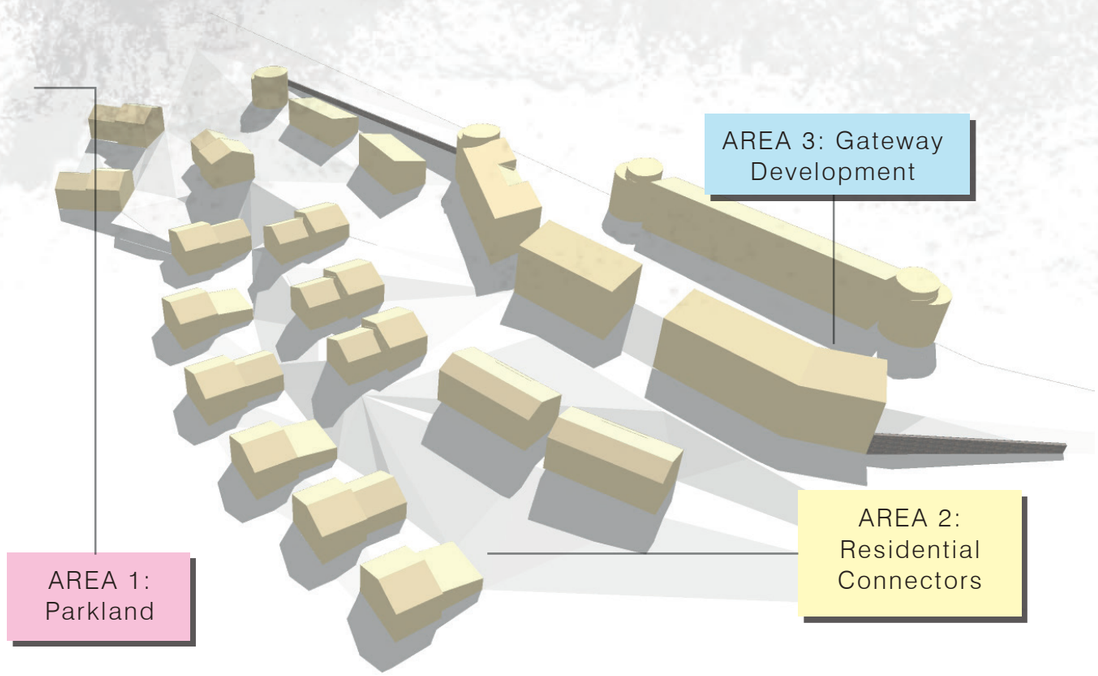


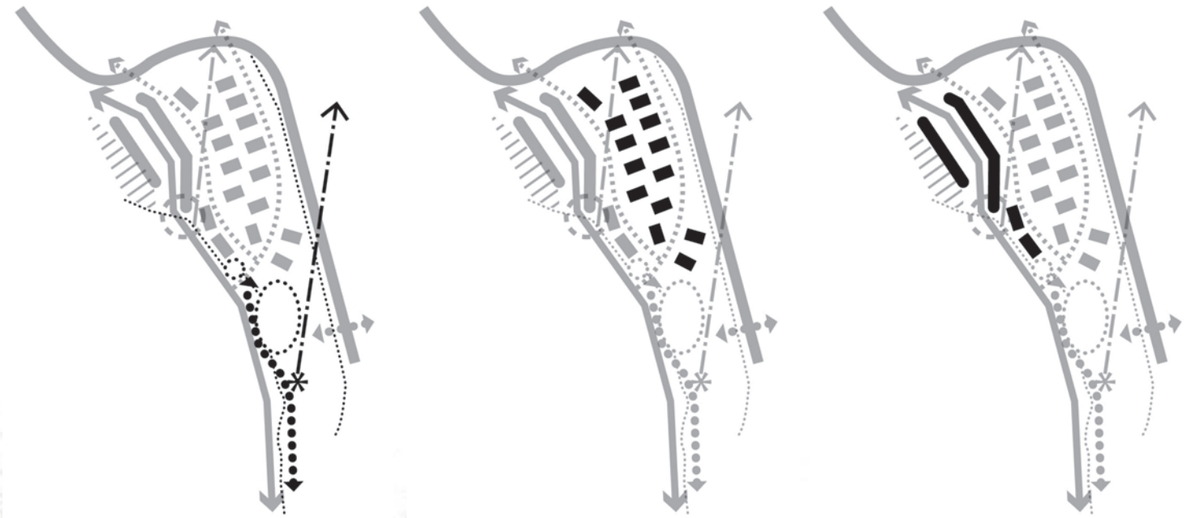
FUNDAMENTAL REQUIREMENTS

A The green corridor
B Existing urban edges
C A route through the landscape
D Extending the urban grain with affordable private building plots
E An important local landmark - possible public art / viewpoint
F Extend existing planted landscape
G Manage existing natural Landscaping
H Urban gateway
I Road to reflect character of landscape

9. DETAILED DESIGN GUIDANCE







AREA 1: PARKLAND

POTENTIAL REQUIREMENTS

- The southern part of the escarpment area will be green landscaped space expanding the efforts of the local community.
- Central to this area is the viewpoint at the old gun emplacement which we have identified as a place for public art. This place should be an installation of sufficient quality to command respect from the community.
- All drainage requirements such as a suds basin should be designed with this in mind and should not preclude the provision of such a place.
- This should take advantage of a possible pedestrian connection to the North Road. There should be pedestrian and cycle paths remote from the road.
- The road design should reflect the green nature of the space and may include road narrowing to keep vehicle speeds low.

AREA 2: RESIDENTIAL CONNECTORS

POTENTIAL REQUIREMENTS

- This area has a constant gentle slope down to the old North Road. This area will contain road connections into the existing network along Staneyhill Road.
- This area is designated for private sites which can be accessed from the two new road connections. The upper sites lend themselves to 'upside-down' housing with living accommodation on the upper levels.

AREA 3: GATEWAY DEVELOPMENT

POTENTIAL REQUIREMENTS

- This area is a gateway development to the housing areas above and the green space below.
- The density should be high and 2/3 storeys minimum. Each terrace should be designed with carefully considered end stops especially where they signal the gateway to the development.
- The road finish should change when entering and leaving the development to give the area a character of its own.
- There should be breaks in the eastern building to allow glimpses of the harbour beyond from the western block.
- It will be possible to access the eastern block from the road below, reducing the parking requirement on the spine road.
- The feeling should be of an enclosed sheltered street.

9. DETAILED DESIGN GUIDANCE

MATERIALITY

- The materials within the Escarpment area should realise a relationship between the public built development at the top and the self-build plots further south (no differentiation). There is no intention to restrict the invention or ideas of the development forms but there is a benefit to the development as a whole if there is a restricted palette of materials for both public and private housing.
- Appropriate materials for this area will include:
  - Timber as primary material – including coloured finishes
  - Natural stone
  - Slate
  - Glass

BOUNDARY TREATMENTS

- This area forms part of the green corridor and should reflect its position sitting back in to the hillside using natural outcroppings of stone or stone walling using site excavated material (rock armouring) for retaining walls and low level divisions between plots and buildings.
- Division of housing between plots to be Rylock stock proof fencing / post and wire fence to assist in intergrating the plots within the green corridor. Potential to consider perforated timber fencing

KEY FEATURES

- Self-build to all have gable end on facing east to sea / harbour. Terraces to try to reflect this feature.
- Continuation of green corridor realised through planting between plots. Encourage through detailing of same principle within self-build plots.
- Public open space, intimate courtyard character within central sector of area.

KEY BUILDINGS

- Key corners at southern and northern ends of terraces creating gateway

LEGIBILITY / CONNECTION

- Important route for primary road emphasising changes in level, character and form of development.
- Pedestrian routes north to south, and west to east are key for integration in to wider residential setting and connections to new Anderson High School and Lerwick Town Centre.

HEIGHT / DENSITY

- Self-build 2 – 2.5. Upper terrace houses to be upside-down houses and lower terrace units to be conventional access. Important to achieve consistency of ridge line – level and guidance to be provided.
- HHA build to be 2 – 3 storeys

PARKING

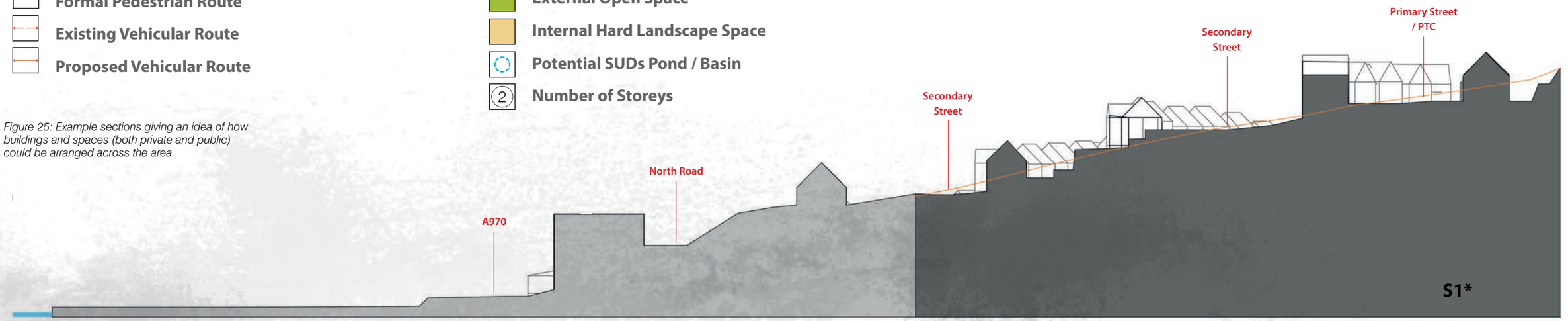
- All parking to be to SIC guidance / regulations. Self-build to be in curtilage. HHA parking to be off-street

Figure 24: Parameter plan, showing location of sections located on page 25

9. DETAILED DESIGN GUIDANCE

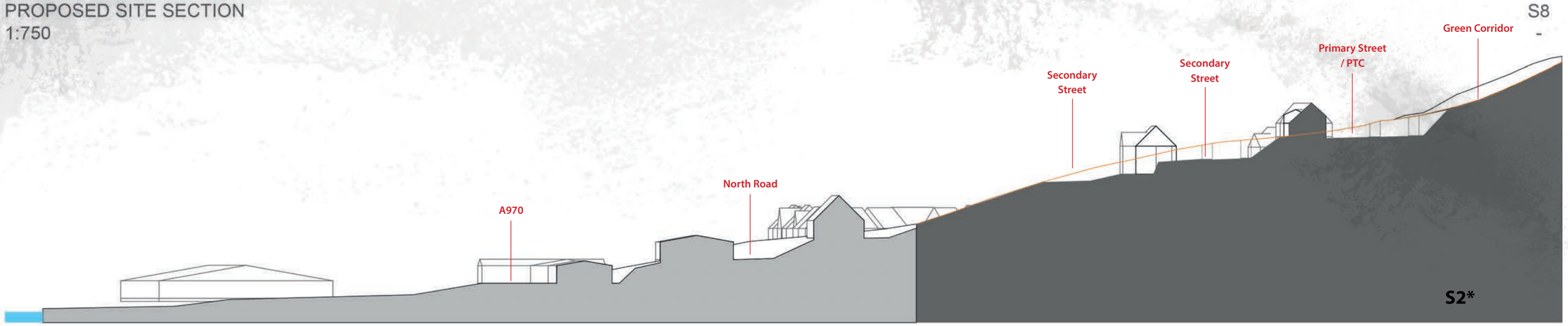
- Platform Boundary - Fixed
- Platform Boundary - Subject to further assessment
- Primary Street / Public Transport Corridor
- Secondary Street
- Local Access
- Primary Frontage - Access
- Primary Frontage - No Access
- Formal Pedestrian Route
- Existing Vehicular Route
- Proposed Vehicular Route
- Key Viewpoints
- Potential Access
- Gateway / Transitions / Nodes
- Feature Building
- Important Public Viewpoint / Public Art
- Green Structural Blocks
- Internal Communal Gardens / Open Space
- External Open Space
- Internal Hard Landscape Space
- Potential SUDs Pond / Basin
- Number of Storeys

Figure 25: Example sections giving an idea of how buildings and spaces (both private and public) could be arranged across the area



PROPOSED SITE SECTION
1:750

S8
-



PROPOSED SITE SECTION
1:750

S7

** Refer to diagram on page 24 for section slice through Escarpment area*

9. DETAILED DESIGN GUIDANCE

iv Terrace

EXISTING CONDITIONS

9.50 This area sits behind the new access road to the Anderson High School and the hostel building, which overlooks the playing fields of the Clickimin Leisure Centre. The southern boundary is the new road itself where at present no buildings are planned. Shetland Islands Council are open to buildings off the northern side of this road. To the east the area is defined by the extent of the land in HHA ownership. The Western boundary is contained by the proposed new road. To the North the extent is more open and will be determined by the extent of housing visible from the broch, whether car free housing is considered and the topography of the site.

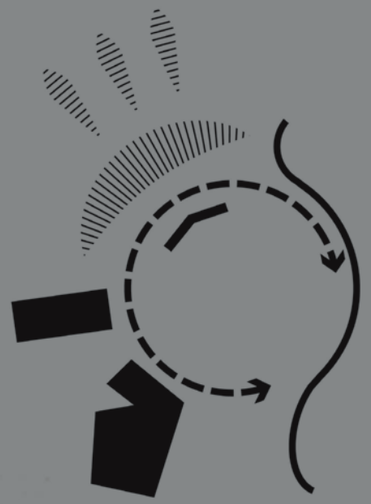


Figure 26: Terrace's Existing Conditions

DESIGN CONCEPT

9.51 There is a different approach for this area from the other zones. The site can only be accessed in one direction from the proposed new road therefore it is more self-contained. The housing will also be of a different character and this is determined by the topography, the location and economic viability. A denser massing is therefore more appropriate in this area. We see the built form completing the 'bowl' formed around the playing fields by the new hostel, the new AHS, the Clickimin Centre and the housing to the east of North Lochside. It will develop a strong urban edge with higher density housing along the existing road and a new access road at the upper level. The site will be terraced with horizontal circulation along these terraces. Buildings can be accessed at various levels with circulation linking the terraces north to south.

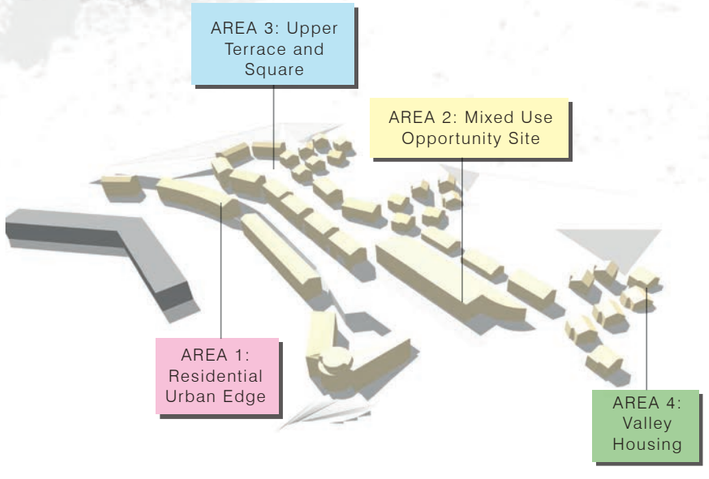
Figure 27: Terrace's Design Concept

Figure 28: Terrace's Access and Movement

FUNDAMENTAL REQUIREMENTS

A Extending the town around the leisure facilities
B Hard urban edge
C Permeable landscape buildings in landscape
D Prominent building as end stop marker
E Urban blocks create public space
F Terracing creates horizontal pedestrian movement
G Pedestrian movement between levels and blocks

9. DETAILED DESIGN GUIDANCE



AREA 1: RESIDENTIAL URBAN EDGE

POTENTIAL REQUIREMENTS

- There is a wall of development incorporating mainly single bedroom flats 2/3 storeys in height. It forms a backdrop to the hostel building and access is from the road to the school.
- To the east, the start of the development is a prominent building which marks the junction between the main spine road and the school access road.
- This group of buildings should read as one terrace; however, there will be gaps to allow parking and visual and physical access to the upper terrace area. The site will have to be dug into the hillside and will be terraced. This terracing may be on one or two levels depending on the rock encountered during construction. The retaining walls will be constructed from the rock face itself or rock slabs created during the construction process. The materials will be masonry or smooth coloured render (white) to contrast but complement the hostel building.

AREA 2: MIXED USE OPPORTUNITY SITE

POTENTIAL REQUIREMENTS

- The eastern access point of the upper road will be marked by a prominent building. It is envisaged that this will contain office accommodation on 2/3 levels with parking at the mid terrace level. The eastern elevation of this building will be important and should be articulated to acknowledge this importance. The northern elevation faces directly off the new access road. The southern elevation opens out to the rear of the prominent building which will feature in Area 1 onto the mid terrace level which contains parking and pedestrian access. These pedestrian access paths are hard landscaped, softened by planting at its edges. Consideration should be given to the design of the parking area which should be broken up with soft landscaping and varying road materials.

AREA 3: UPPER TERRACE AND SQUARE

POTENTIAL REQUIREMENTS

- The middle row of buildings follows the line of the new upper access road which connects to the main spine road. This road has a turning point at the western end which the buildings wrap around to contain the space and create shelter.
- This central wall of buildings follows the same pattern as area 1 but at a higher level and develops the layers of the hard urban edge of the eastern edge to the 'bowl 'when viewed from North Lochside.
- The upper side of the road will be cut into the hillside and accessed from road level.
- The buildings on the lower side of the road can be accessed from the road level or from the lower terrace level which is created by terracing the existing rock face.
- The road widens at the heart of the Terrace development to create a public space which is contained by the housing and the prominent building identified in area 2.
- It is very important that the surrounding buildings form a sense of sheltered enclosure to this public space but also offer access to the lower level housing and terrace walkways to the south and the open hill to the north.
- The public space identified above should feel enclosed by the surrounding buildings.
- The surface of the road should be shared with the public space and drivers should feel they have to slow down when passing through it.
- The space should afford access to the surrounding buildings but also provide a space where the public feels comfortable to either stop and sit or pass through.
- The space should offer the possibility for public art.
- This space could offer the opportunity for small business units at road level if a demand is identified.

AREA 4: VALLEY HOUSING

POTENTIAL REQUIREMENTS

- To the north of the Terrace area we have identified the possibility of developing into the valley areas.
- The topography is steep enough to rule out compliant road access therefore we are proposing car free housing within this area.
- Detached houses sit within the landscape of the hillside blurring the boundary between the hard urban edge and the existing natural landscape.

9. DETAILED DESIGN GUIDANCE

MATERIALITY

- The materials within the Terrace will reflect the immediate surroundings of the new Anderson High School, Lochside. So each layer of terracing should have the same materials to give a strong 'wall' of buildings.

- Appropriate materials for this area will include:
  - Strong masonry construction (white smooth render or stone construction (White wet dash / textured render)
  - Off white wet dash / textured render
  - Natural stone
  - Slate
  - Concrete tile (Grey)
  - Glass walling
  - Larch cladding to reflect High School and Hostel Building
  - Cast stone could be used in less prominent locations.

BOUNDARY TREATMENTS

- The boundary treatments should also reflect its important location, back in to the hillside. As a consequence natural stone walling should use site-excavated stone (rock armouring) for retaining walls, parapets and low level divisions between plots and buildings.
- Division of housing plots stepping up the hillside will be by Rylock stock proof fence.

KEY FEATURES

- Simple forms; no roof over-hangs; strong architectural form to sit alongside and transition from the large-scale forms of the new Anderson High School and Hostel. Terraces should be considered as a single entity, one building, with expressed ends and simple articulation / fenestration. A sense of monumentality.
- Also identified is a key public piazza on the upper terrace enclosed by the office building immediately east.
- Continuation of green corridor realised through pedestrian terrace which sits between upper and lower terraces
- Car free residential development extending in to valley areas primarily defined by detached houses

KEY BUILDINGS

- Key buildings identified are firstly at the corner of the lower residential block and the junction with the start of the new primary access road; and secondly the office building on the upper access road

LEGIBILITY / CONNECTION

- Of key note is the importance of pedestrian connections, along and between terraces. Reference Lerwick Town Centre Lanes and Bergen (see photos)

HEIGHT / DENSITY

- Lower terrace to be 3 / 4 storeys. Upper terrace (front) 3 / 4 storeys. Upper terrace (rear) 2 storeys. Valley Housing 1 / 2 storeys.

PARKING

- Option 1 – parking between or underneath buildings on lower terrace
- Option 2 - potential to accommodate parking on mid-level terrace
- Upper terrace – On-street parking. Possible consideration of parking below public piazza.
- Valley Housing – car free

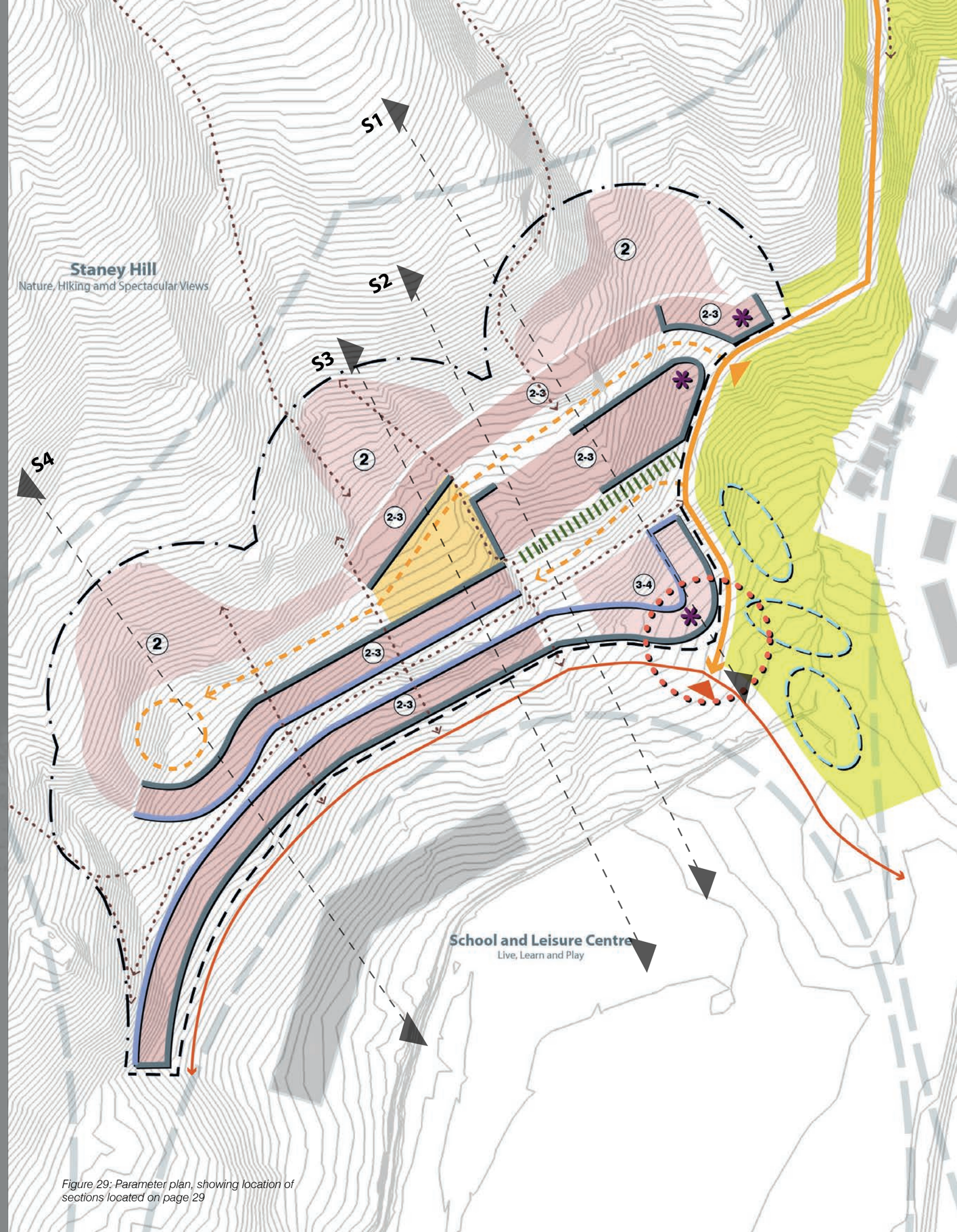
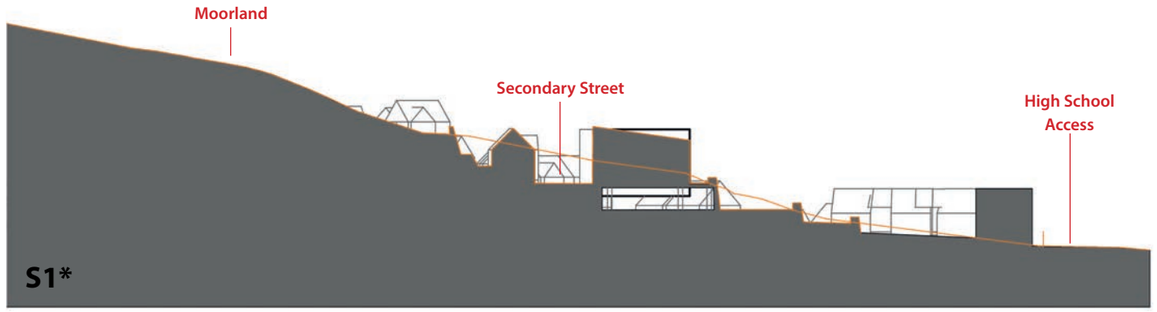


Figure 29: Parameter plan, showing location of sections located on page 29

Figure 30: Example sections giving an idea of how buildings and spaces (both private and public) could be arranged across the area

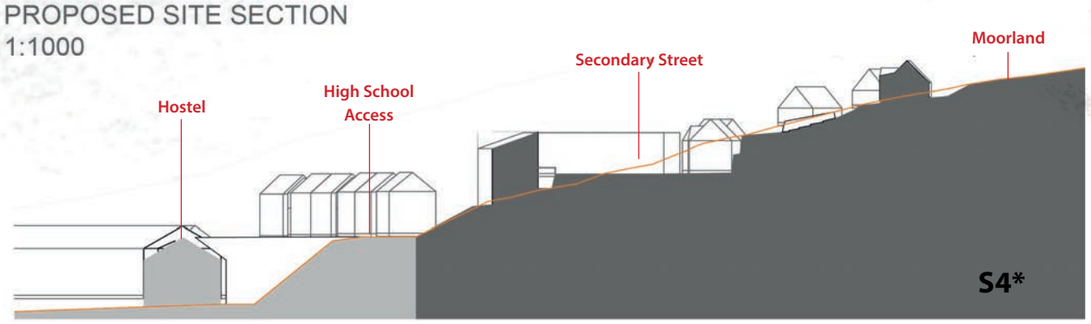
- Platform Boundary - Fixed
- Platform Boundary - Subject to further assessment
- Primary Street / Public Transport Corridor
- Secondary Street
- Local Access
- Primary Frontage - Access
- Primary Frontage - No Access
- Formal Pedestrian Route
- Existing Vehicular Route
- Proposed Vehicular Route
- Key Viewpoints
- Potential Access
- Gateway / Transitions / Nodes
- Feature Building
- Important Public Viewpoint / Public Art
- Green Structural Blocks
- Internal Communal Gardens / Open Space
- External Open Space
- Internal Hard Landscape Space
- Potential SUDs Pond / Basin
- Number of Storeys



PROPOSED SITE SECTION
1:1000

PROPOSED SITE SECTION
1:1000

PROPOSED SITE SECTION
1:1000



PROPOSED SITE SECTION
1:1000

** Refer to diagram on page 24 for section slice through Escarpment area*

10. DELIVERY

This section provides an indication of the site's phased delivery, identifying key timescales and milestones. The phasing plan is intended to accommodate maximum flexibility, thereby allowing the site to be developed as effectively as possible. However, the phasing cannot be regarded as fixed, because the progress of the development may be affected by factors outwith the control of the applicant or local authority, which may need to be taken into account during the approval of this masterplan as supplementary guidance or in the consideration of future planning applications.

Phasing

10.1 The proposals for the design and construction phases for the development have been discussed with Hjaltland Housing Association. They are influenced by the topography, logistics, how the housing association is funded and the capacity of the local building industry.

10.2 HHA will not be able to fund the whole development as one project therefore it must be broken down into smaller phases. These phases are also broken down into the design phase and construction phases. To have continuity of design it is envisaged that each character area will be designed by one design team. The construction of each character area will be broken down into phases of 40 or so houses. This is dictated by timescale and funding streams and may change over the years.

10.3 We have identified 5 different design phases which relate to the character areas and the road infrastructure.

10.4 If funding can be secured from the Scottish Government to construct all the road infrastructure this would be the preferred path for the development. However, the possibility still exists that this funding stream may not be possible and HHA will have to default back to their current funding system where the road is included in each construction phase. Assuming the funding for the road infrastructure is available the design phases are as follows:

PHASE 1 - The primary road infrastructure including all connections into the existing road infrastructure. This phase will also include most of the Suds scheme and the landscaping within the green corridor area including paths and planting. When the infrastructure is in place the private house sites can be released for sale.

PHASE 2 - The Terrace

PHASE 3 - The Escarpment

PHASE 4 - The Plateau including the landscaping and pedestrian and cycle link to Voderview. It may be that the same design team carry out phases 3 and 4.

PHASE 5 - The Bowl

10.5 Each design phase can either be constructed in one construction phase or groups of approximately 40 housing units. There are a limited number of local contractors who would be able to construct each design phase as one construction phase; however, developments of this size could interest construction companies from the mainland.

Potential Strategy For Servicing Self Build Plots

10.6 The access and utility servicing strategy for the area for self build plots shall be incorporated within the wider site access and utility servicing strategy and phasing. In particular the access junctions, utility layouts and capacities shall be allowed for within the design for the wider plot servicing in order to ensure that adequate infrastructure capacity is provided for the self build plot area.

Future Land Acquisition

10.7 The framework and masterplan allow for future connections into adjacent sites which are not currently able to be developed, due to ownership. This will ensure that future connectivity within the area is not sterilised by the current development at Staneyhill and help to avoid the problems within other areas of the town which have resulted in poor connectivity. Most notably connections are shown to the area west of the Terrace Character Area, where there is an opportunity to provide a future link to the high school access road.

Planning considerations

10.8 Notwithstanding the wording of Condition 4 in the planning permission, this masterplan is being submitted in advance of any application relating to Matters Specified in Conditions. It is hoped that it can be adopted by the Planning Authority as Supplementary Guidance, thus providing a degree of certainty for the client, Hjaltland Housing Association, and whichever design teams are appointed to design the first phase of the development.

Consistency in implementation

10.9 If the site is to realise its potential, the opportunities identified in this masterplan are to be captured and the finished development is to be coherent, a disciplined approach to the implementation of these proposals, probably over a decade or so, is required.

10.10 The adoption of the masterplan as Supplementary Guidance will greatly assist in this but it will also be important that all the design teams appointed to work on successive phases of the development are fully acquainted with, and are required to abide by, the guidance that the masterplan contains. This principle obviously also applies to the Planning Service and to all affected stakeholders, such as utility providers.

Summary

10.11 Whilst the phasing plan has been developed to accommodate maximum flexibility to allow the site to be developed effectively, it is not a fixed element. Factors outwith the control of the applicant or local authority may require a different strategy and this can be considered as the area develops and through future planning applications.

10. DELIVERY

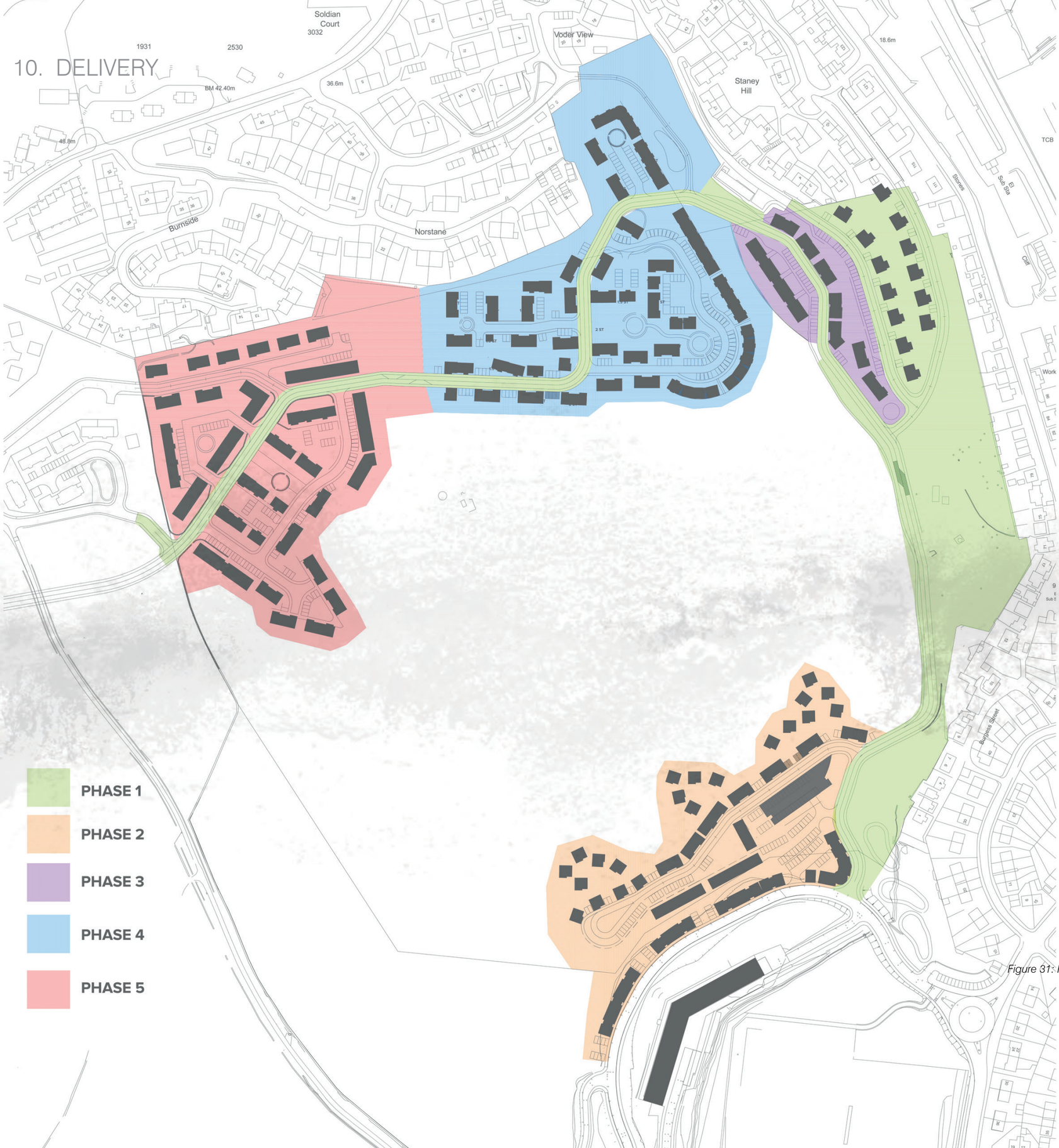


Figure 31: Phasing Plan

11. DETAILED DESIGN FOR ROADS AND DRAINAGE

Staney Hill Masterplan - Roads

MOVEMENT AND CONDUCTIVITY

Due to the topography of the Staney Hill and the requirement to have a public transport route through the development, housing will concentrate on the eastern and northern areas of the site.

A principal bus route will transverse the site commencing from the junction off the access road to the new Anderson High School at North Lochside and passing along the eastern slopes of the site up to North Staney Hill area joining the existing road at either Wista or near Cunningham Way at Hill Grind.

The public transport route will be designed in accordance with the National Roads Development Guide and with reference to the Shetland Islands Council National Road Development Guide variations for the Shetland Islands Council Area, dated November 2015.

The desired speed on the road is 20mph. This low speed is to be encouraged through design by introducing a combination of bends, reduced forward sight lines and surface textures to reduce the natural speed of vehicles going through the development.

The construction makeup of all roads will be designed in accordance with the Design Manual for Roads and Bridges, Vol. 7, Pavement Design and Maintenance. Footpaths makeup will be designed as per BS 7533-2:2001 requirements.

As per the design guidance, minimum carriageway width on the bus routes through the site shall be 6.0m, with a minimum bend radius of 20m and a maximum gradient of 8%.

Four spur access roads will be provided off the public transport spine route to provide links to several of the small local roads on the northern slopes of the Staney Hill. This shall provide connectivity between the existing housing schemes and the proposed new development and help to integrate the area into a single housing scheme. The link roads proposed are to connect into the existing upper and lower roads of the Staney Hill Housing scheme, the lower Norstane housing scheme road and the upper Pegasus Place private housing development road. As with spine roads, the maximum gradients on these spur link roads will be 8% and road widths will be a minimum of 5.5m.

7.5 MOVEMENT, CONNECTIONS AND INFRASTRUCTURE

Access to the four character areas will be provided primarily by the public transport route spine road which would link North Lochside to Cunningham way Lane.

The spine road starts at the junction of the new Anderson High School road at level +11.1m AOD and ends at the Wista housing access road at level +82.3m AOD. With the current preliminary design layout, the spine road has an overall length of 1,114m and will rise an overall height of 71.2m. This gives an average gradient of 6.4% (1 in 15.7). The overall flexibility in the vertical alignment from the maximum gradient along the entire length of road is therefore only 17.9m.

The road will generally follow the topography of the hillside going up the eastern face of the hill. This is done to minimise the overall quantity of earthworks and to balance the amount of cut and fill and therefore reduce the amount of material to be taken off or brought onto site.

The preliminary vertical geometry of the road highlights that this is achievable. The preliminary alignment shows the road centreline is at the maximum allowable gradient of 8% between chainages 170m and 400m, 570m and 650m, and ch770m to ch940m. This means that 43% of the spine road is at maximum gradient. The vertical gradient is slightly less than the allowable maximum at the start of the spine road, through the escarpment housing zone and at the end of the spine road going through the bowl housing zone before linking into the road at Wista housing estate. The road centreline has been positioned so that it is close to the existing ground level (allowing for the initial strip of peat and unsuitable material below the peat). This is also intended to have the effect of minimising the overall earthworks volumes and reducing the construction cost of the development.

An alternative option to terminate the new main spine road into the existing road network further to the west near the Hill Grind housing estate was investigated. This option is also suggested as it could provide a better route to integrate the new housing schemes into the existing housing schemes and also link better into the existing public service bus route. An outline design has been done and the vertical geometry indicates that this route option is possible. This option would add approximately 200m to the length of the spine road. The spine road could terminate at either point with the lower section of road between chainage 0 and 1,075 remaining unaltered.

The preliminary design highlights potential issues with large road cut and fill embankments at certain points along the spine road route. The potential large embankment issues occur between ch140 and ch260, ch 290 and 330 and between ch450 and ch580. These issues shall need to be addressed at the project detailed design stage and there are a few options available to optimise the design and therefore reduce the visual impact of any large road embankments. Potential solutions to resolve the embankment issues at detailed design could be to move the horizontal alignment slightly further to the west into the hillside or alternatively to construct retaining structures to reduce the size of the down slope embankment. A combination of both the above options could also be considered. The optimised detailed design solution should aim to reduce construction costs and visual impact.

Similar embankment issues occur on the link roads and this will require adjustment and finalisation at detailed design stage. Potential large embankments occur on the eastern slopes of the link roads along the following chainages:

- Link road 1 Lower Staney Hill ch 30-180
- Link road 2 Upper Staney Hill ch 10-140
- Link road 3 Lower Norstane ch 10-120
- Link road 4 Pegasus Place ch 40-110

Consideration should be given to installing retaining structures along the lower embankment slopes of the link roads. Detailed design considerations could reduce the extent of retaining structures indicated by the current outline design.

11. DETAILED DESIGN FOR ROADS AND DRAINAGE

Staney Hill Masterplan - Drainage

SUDS PROVISION

Existing Drainage

The site of the proposed Staney Hill housing development is located on the Staney Hill north of Lerwick. The existing hill side is covered in a layer of peat with heather and rough grass vegetation and contains a network of shallow surface drainage ditches channelling surface runoff down the slopes to existing watercourses.

Surface Water Drainage

The proposed storm drainage strategy for the site is to provide on-site attenuation for a minimum 1 in 30 storm event with no flooding of adjacent properties as a result of a 1 in 200 storm event on the new development, in line with SEPA guidance. The attenuated discharge rate will be restricted to the equivalent greenfield release. Based on a site area of 10.3ha, annual rainfall data and soil characteristics the discharge rate shall be restricted to 197.59l/s.

Storm Attenuation

Storm attenuation for the development will be achieved using Sustainable Drainage Systems (SUDS). There are various types of SUDS that can be used to manage and control the runoff from developed areas, as detailed below.

1. Infiltration – the soaking of water into the ground. This is the most desirable solution to runoff management as it restores the natural hydrological processes. Infiltration rates will vary with soil type and condition.
2. Detention/attenuation – the slowing down of surface flows before discharge off-site. This is achieved by the use of storage systems such as basins or subsurface structures.
3. Conveyance – the transfer of surface runoff from one place to another. Uncontrolled conveyance is no longer considered sustainable, but controlled conveyance can provide links between various SUDS components.
4. Water Harvesting – the direct capture and use of runoff on site. Rainfall is extracted for domestic use such as flushing toilets or irrigation of urban landscapes.

As the rock profile is relatively close to ground levels, there is limited potential for the use of infiltration through soakaways. The outline proposal is to provide storm water attenuation utilising two SUDS detention ponds located on the east and south areas of the site. Storm flows from roofs, roads and hardstandings will be collected by filter drains designed to convey flows to the main attenuation ponds.

For onsite attenuation, approximately 850m^3 of storage is required to accommodate the 1 in 30 storm event including allowance for climate change (+30%). The site drainage and SUDs systems shall also be designed to protect properties against flooding for 1:200 rainfall events.

The outline SUDs proposal is to divide the site into two zones. Zone one serves the Bowl, Plateau and Escarpment developments. Zone two serves the Terrace development. Zone one is 74% of the total developed area and Zone two is 26% of the total developed area. The storage volumes for each zone is currently estimated at around 630m^3 for Zone 1 and 220m^3 for Zone 2. The indicative sizes of the detention basin on the preliminary layout plans suggest that these storage volumes could be accommodated however further basin modelling will be required to confirm that it is possible within the topography of the selected site area.

The Greenfield runoff was calculated using the mean annual flood flow rate equation as per CIRIA C697 The SUDS Manual. The rainfall depths for 1:10, 1:30, and 1:200 return periods for various durations were calculated. From this the storage volumes required per m^2 was calculated and then multiplied by the total drainage area to find the total volume of storage for each return period. These figures are summarised in table below:

Return Period	Critical Storm Duration (mins)	Attenuation required (m^3)
1:10	30	590
1:30	30	850
1:200	30	1,400

Drain Down Time of Proposed SUDS Arrangement

Based on the total design storage volume and post-development peak runoff flow rate, as identified above, the time to half empty was found to be approximately 2 to 3 hours.

Water Quality

To ensure appropriate treatment of run-off, the contamination risk for each surface type has been considered, and an appropriate level of SUDS treatment assigned.

Building roofs – the contamination risk of the roofs is considered to be low therefore one level of SUDS treatment would be sufficient. This is achieved at source via the downpipes discharging directly to filter drains providing temporary attenuation before conveying flows the main drainage.

The road network within the site- vehicles using the site roads will be mainly light duty (i.e. cars and vans) with occasional HGV's and local bus service. Roads will be used for access and not parking, loading or unloading. The contamination risk for roads, predominantly from silt and hydrocarbons, is considered to be moderate. We therefore propose two levels of SUDS treatment for the road network within the site. It is proposed to achieve the first level of treatment using filter strips along the road edge discharging to filter drains. While the filter drains may provide some treatment then it is intended to achieve the second level of treatment within the SUDS detention basin.

Detention basins are to be vegetated to enable interception of pollutants during small rainfall events. A forebay should also be included to contain accumulating sediments and Low flow discrete channels could be created through the basin. Final design of the detention basins are to be in accordance with The SuDS Manual 2015 chapter 22 to ensure adequate hydraulic and treatment performance.

Foul Drainage Strategy

A Foul drainage network will be provided throughout the site to serve the anticipated 300 new homes in the development. The sewer network shall discharge to the existing foul drainage network at north Lochside via the branch line laid along the first 135m of the newly constructed access road into the new Anderson High School.

For estimation for foul drainage flows the following mix of housing has been assumed: -

- 2 Person Flats 40%
- 3 Person Houses 35%
- 4 Person Houses 15%
- 5 Person Houses 7%
- > 5 Person Houses 3%

The development will therefore accommodate in the order of 900 persons. Allowing for 150l/head/day the average flow within the network is 1.56 l/s. This equates to a peak flow, or 6 times dry weather flow, of 9.36l/s.

Scottish Water, Sewers for Scotland technical specification for the design and construction of sewerage infrastructure 3rd edition recommends a peak design flow of 4,000 litres/unit dwelling. Using this method, the peak flow would be 13.89l/s.

At detailed design stage the peak flow value can be more accurately calculated in accordance with BS EN752 using the discharge unit method in BS EN 12056-2 system type III. For this stage of the development at preliminary outline design stage assume an average of the above rates i.e. 11.6 l/sec peak flow will be discharged to the existing foul sewer system in North Lochside.

The design of the foul drainage system will be in accordance with the requirements of the Sewers for Adoption Scotland and to the British Standards. Hydraulic calculations will be carried out using the Colebrook White Equation.

The trunk sewers for the development is anticipated to follow the main spine road. All drainage networks will be designed to gradients and invert levels to minimise the depth below ground of the sewers but also to achieve self-cleansing velocities. Keeping sewer lines to the minimum depth is anticipated to be particularly important for the Staney Hill site due to the likelihood of rock excavation in trenches for a large part of the sewer lengths.