

5.6 Street Type and Design

5.6.1 Designing Streets

Grandhome is designed following the policies contained within 'Designing Streets'. The Charrette thus focussed on incorporating these principles into the Grandhome masterplanning process, with the design team working alongside stakeholders to explore the policy document and the opportunities presented by it.

Since initially engaging with the policy document at the Charrette, the design team have continued to prioritise the policies contained within 'Designing Streets'. Moreover, the design team have endeavoured to consult with the Scottish Government whenever possible, to ensure a design solution aligned to the policy's aims and aspirations. The design team is committed to following 'Designing Streets' as closely as possible, in order to create a vibrant, walkable community which can become a model for Scotland.

'Designing Streets' proposes that new communities should adhere to a series of qualities. All of these have been considered by the Grandhome design team and addressed within the masterplan:



Distinctive:

Street design is an important element of each neighbourhood's distinctive identity, given the differing combinations of streets, mews, alleyways and thoroughfares of other sizes and characters. The use of block layout and character areas will allow greater orientation and navigation within the settlement.

Easy to move around:

Grandhome is designed to have a well-connected street network, in which it is very easy to move from one destination to another, whether by foot, cycle or public transport. The masterplan ensures this by proposing a legible network of thoroughfares including gridded blocks, and by avoiding cul-de-sacs and separated uses. The central road around Grandhome, connecting the principle neighbourhood centres and all primary schools, will also provide a clear and logical path for a local bus route.



Figure 5.13: Distinctive - example of indicative commercial streetscape



Figure 5.14: Easy to move around - pedestrian connectivity within and to/from the site

Safe + pleasant:

With most streets designed to 20mph, Grandhome will be pleasant, safe and conducive to pedestrian and cycle activity. Landscaping will also be used to facilitate traffic calming while long straight streets will be avoided to discourage speeding.

The site is characterised by variant gradients which bring challenges to connectivity and development. Several areas on the site with more substantial gradients, such as the ridge in the centre of the site, have been identified as steep and thus incorporated into the masterplan as parks rather than parts of the street network. This approach ensures that cut and fill is kept to a minimum and the site's natural contours are preserved. The topography plan on page 10 highlights areas with slopes greater than 8%. How topography will be addressed in street design will be dealt with at the Masterplanning/statutory planning application stage.

Well designed and positioned signage, street furniture and street lighting will be applied to ensure safety and functionality.



Figure 5.15: Safe + pleasant - relationship with site topography and road layout



Resource efficient:

By including substantial employment land, retail, schools and community uses alongside shops, Grandhome offers residents a chance to access more of their daily needs by foot and thus lessen their petrol consumption. The aspiration is to provide for residents' daily needs within a five minute walking distance of all homes. The Development Framework is also designed to accommodate cycle paths and efficient local and regional bus routes, which will again ensure that residents only use their cars when absolutely necessary.

Existing natural features will be incorporated into the design of streets to create natural and distinctive areas. This includes incorporating existing trees, wooded areas and stone dykes where possible to create attractive streetscapes.

Where possible building materials will be sourced locally, and selected and detailed to minimise long term maintenance obligations.



Figure 5.16: Resource efficient - example of street drainage



Figure 5.17: Resource efficient - existing stone dykes and trees will be incorporated as key features

Adaptable:

The Grandhome masterplan is designed to be implemented in phases which can be built in line with the demands of the housing market. These phases are designed as self-sufficient neighbourhoods which can flourish regardless of the status of the settlement as a whole. Street design is a key element of the composition of each neighbourhood and streets are designed to be adaptable by allowing, where appropriate, a variety of vehicle movement and car parking opportunities which do not compromise pedestrian/cyclist accessibility and do not detract from the sense of place. Connections to the existing roads network respond to the current junction arrangement where appropriate. The proposed street layout allows for potential future junctions onto Whitestripes Avenue but is not reliant on these connections.

Allowance has been made in the layout for the potential future widening of parts of The Parkway and Whitestripes Road.



Figure 5.18: Adaptable - car parking to the rear of properties



Figure 5.19: Adaptable - opportunities to provide connections from the Parkway access to Danestone



Welcoming:

Grandhome is designed to be a unique community, comprised of homes responding to the best of the contemporary and vernacular architectural traditions. The community will be fundamentally welcoming due to its high-quality design and the provision of neighbourhood and town centres uses within walkable distances. In short, the community will be home to residents of many ages, family sizes and aesthetic preferences. The settlement's memorable public spaces and safe streets will also encourage residents to spend time outdoors in their neighbourhoods and thus foster a welcoming community spirit.

By focusing on these place-based objectives, the Grandhome design team has proposed a masterplan which is sensitive to the site and its context and which achieves Designing Streets' objectives in terms of street network design.



Figure 5.20: Welcoming - indicative view of traffic-free streets will be a key feature



Figure 5.21: Welcoming - the plan features many public green spaces, designed for community events and gatherings



5.6.2 Street Types

Grandhome's masterplan features a permeable, hierarchical street network, ranging from regional roads to quiet residential streets to pedestrian-only passageways. This hierarchy also follows the transect, with different types of streets proposed for each zone. Indeed, different types of roads will be designed in line with the varying densities, uses and building dispositions of each transect zone. All of these roads will be designed to provide a pleasant pedestrian experience and accommodate pedestrians and cyclists alongside drivers as appropriate.

The plan at right indicates the different types of streets within this hierarchy. Both the high street and main street road types are able to accommodate buses, and are thus used for the proposed bus route. Streets and minor streets then primarily access residential roads, whereas lanes and courts are designed for shared vehicular and pedestrian use, and may feature car parking. Paths scaled exclusively for pedestrians are indicated within this plan as well, although all roads also include provisions for comfortable pedestrian use.

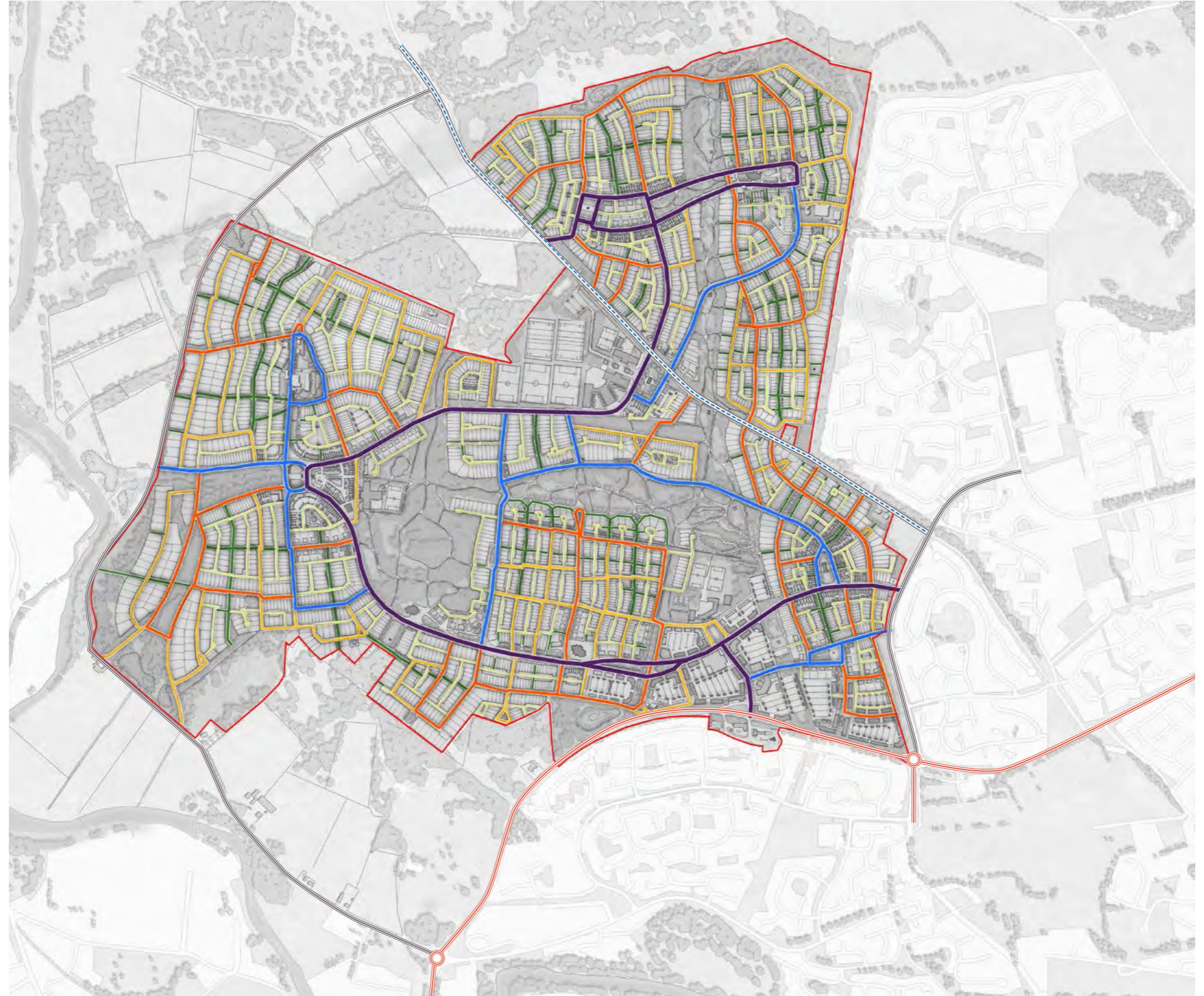
Street tree species will be selected to suit the street type. Larger tree species will be accommodated in major streets or squares while smaller or more narrow-growing species will be used in minor streets, lanes or courts.

Where the development engages with existing roads, these have been

Figure 5.22: Proposed Grandhome street types



included within the hierarchy so the urban design response to these existing features can be determined at the earliest stage. These include Whitestripes Road and Grandhome Road.



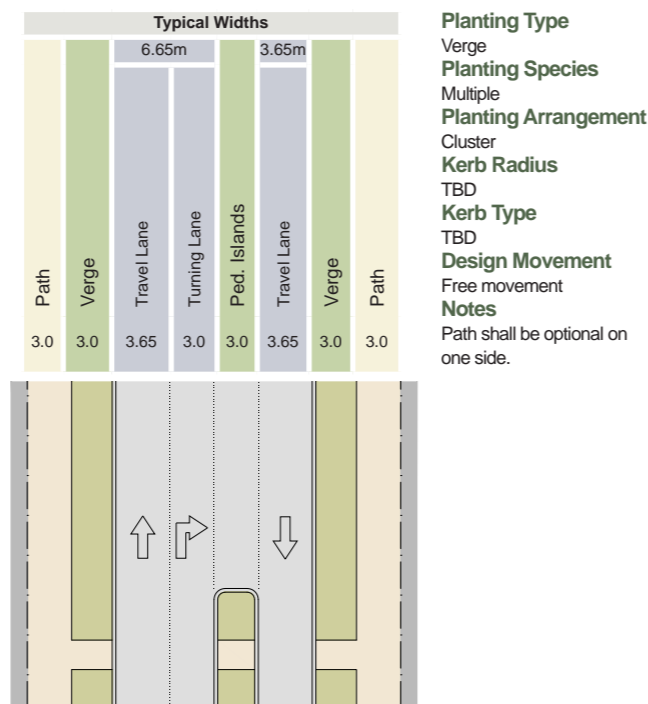
Proposed Sample Street Types

The street hierarchy developed for Grandhome includes a range of street types reflecting those typical of the Aberdeen neighbourhoods studied by the design team. All of these street types are designed to carefully manage traffic, incorporating traffic calming measures to ensure the safety of pedestrians and cyclists. The design process has included engineers, urban designers and landscape specialists, all working together to achieve a good outcome. Each of Grandhome's streets will be designed to best suit its local topography, so it is unlikely that any two streets will be identical in design. However, a few potential street types, which are prevalent in the masterplan, can be described as follows:

Existing Thoroughfare Upgrade

T5 T4

Existing Thoroughfare Upgrade: a rural and suburban thoroughfare of medium vehicular speed capacity. Its public frontage consists of landscaping drained by percolation and a walking path or bicycle trail along one or both sides.



Urban Road: Whitestripes Road and Whitestripes Avenue accommodate higher volumes of traffic owing to their potential connection to major routes such as the AWPR. Although design speeds have yet to be determined, the masterplan aspires to 30mph to ensure street activity and movement across these routes is not curtailed to the disadvantage of cyclists and pedestrians.

High Street

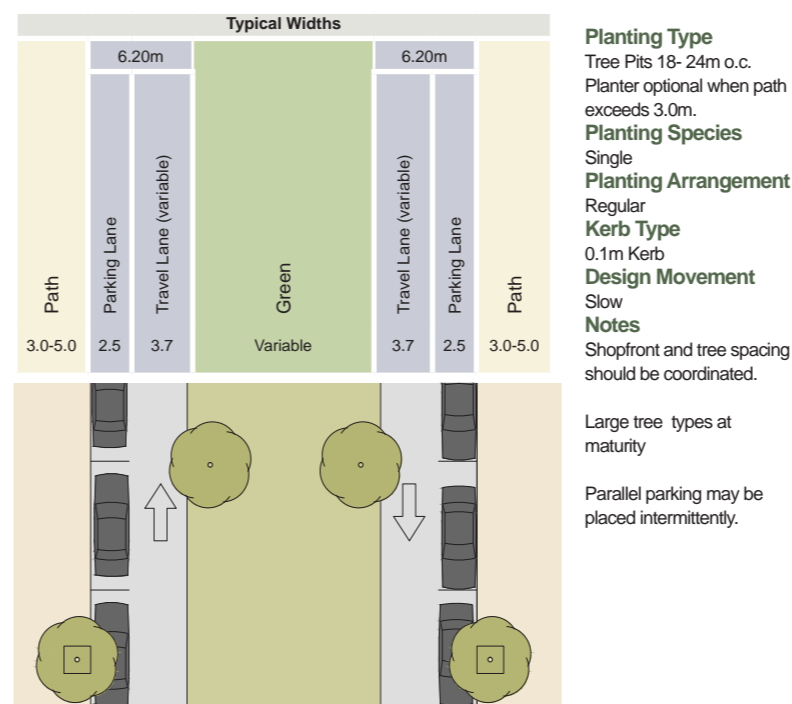
T5 T4

High Street: a local, slow-movement thoroughfare suitable for the Centre Zone, providing frontage for higher density mixed-use buildings such as live-work units, shops, and offices. It is urban in character with raised curbs, storm drain inlets, and striped on-street car parking.

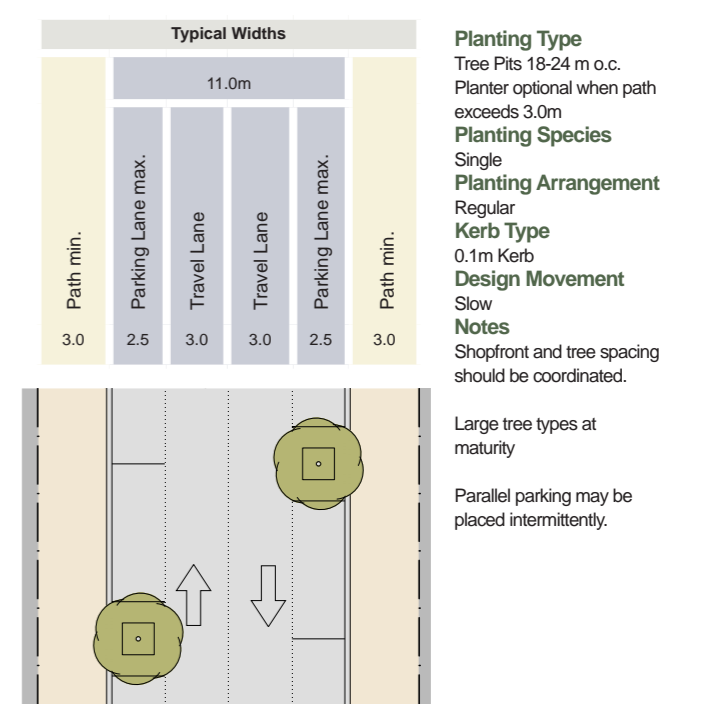
Main Street

T5 T4

Main Street: a local, slow-movement thoroughfare suitable for traversing different zones, providing frontage for higher density residential as well as live-work units, shops, and offices. It is urban in character with raised curbs, storm drain inlets, and striped on-street car parking.



High Street: The town and neighbourhood centres will feature streets with a convivial mix of facilities for drivers and pedestrians. These roads are likely to feature significant street furniture and public spaces such as squares and plazas, and its spatial width will vary along its length. A green median will feature the high street when it connects civic locations within the urbanized areas of the Town Centre, Bonnyside and Whitestripes neighbourhoods, being conceived as an elongated square. The typical section of the High Street will accommodate wide variable paths, street furniture, parallel parking and trees in individual planting pits. Clear trunks will be necessary to avoid interference with shopfronts and awnings. At Grandhome, all high streets are scaled for use by buses and are thus included within the



proposed bus route. Cycle routes or shared paths will be provided as appropriate.

Main Street: Areas throughout the development have been designated for higher capacity movement similar to the High Street, for servicing. These street frontages are envisaged to serve as complimentary to the High Street but secondary in character. Main Streets also serve phasing development access for the proposed bus route as well as assist in traversing different zones in conjunction with the High Street.

Street

T5 T4 T3

Street: a local, slow-movement thoroughfare suitable for General, Centre, and Core Zones. Streets provide frontage for higher density buildings such as offices, shops, apartment buildings and terrace houses.

Typical Widths

Path min.	10.5m				Path min.
	Parking Lane max.	Travel Lanes	Parking Lane max.		
2.0	2.5	5.5	2.5	2.0	

Planting Type
Tree Pits Optional 12-18m o.c.
Planter optional when path exceeds 3.0m

Planting Species
Single

Planting Arrangement
Regular

Kerb Type
0.1m Kerb

Design Movement
Slow

Notes
Shopfront and tree spacing should be coordinated.

Paralell parking may be placed intermittently.

Tree Pits and planters optional and may be placed in between parking spaces.

Smaller tree types planted at maturity

Residential Street: Most residential streets in Grandhome will feature traffic in two directions and car parking on either side of the road, along with landscaping and paths. This on-street parking will be used by both Grandhome residents and their visitors. These streets will be designed for speeds up to 20 mph.

Minor Street

T5 T4 T3

Minor Street: a local, slow-movement thoroughfare suitable for General, Centre, and Core Zones. Streets provide frontage for higher density buildings such as offices, shops, apartment buildings and terrace houses.

Typical Widths

Path min.	7.5m			Path min.
	Travel Lanes	Parking Lane max.		
2.0	5.0	2.5	2.0	

Planting Type
Tree Pits Optional 10-18m o.c.
Planter optional when path exceeds 3.0m

Planting Species
Single

Planting Arrangement
Regular

Kerb Type
0.1m Kerb

Design Movement
Slow

Notes
Shopfront and tree spacing should be coordinated.

Paralell parking may be placed intermittently.

Tree Pits and planters optional and may be placed in between parking spaces.

Smaller tree types planted at maturity

Minor Street: Based on the Street, these are intended for slow, localised residential movement in Grandhome. These streets provide for access in addition to servicing units. Additionally, Minor Streets accommodate on-street parking designated on one side. Like Streets, they will work through all T-zones in Grandhome.

Lane / Court

T4 T3

Rear Lane: A shared surface providing access to the rear of plots. A Rear lane is designed for vehicular and pedestrian use and may be lined with housing units, in addition to garages and other car parking provisions.

Typical Widths

Verge	8.20m		Verge
	Travel Lanes (variable)		
2.0	4.2	2.0	

Planting Type
N/A

Planting Species
N/A

Planting Arrangement
Regular

Kerb Radius
TBD

Kerb Type
0.1m Kerb

Design Movement
Slow

Rear Lane: Some properties in Grandhome will feature rear lanes, to access garages and back car parking bays.

Pedestrian Path

T5 T4 T3

A pedestrian way providing access to plots within a block. A pedestrian way is connected to the street network.

Synonymous with Close

Typical Widths

Permitting Encroachment Zone	Path min.	Permitting Encroachment Zone
2.5	3.0	2.5

Planting Type
N/A

Planting Species
N/A

Planting Arrangement
Regular

Kerb Radius
TBD

Kerb Type
0.1m Kerb

Design Movement
Slow

Pedestrian Passageway: Pedestrian passageways are designed across the entire masterplan, to ensure that pedestrians are always able to efficiently travel from one destination to another, following typical 'desire lines'. These pleasant pedestrian environments, which will typically feature landscaping and intimate squares or seating areas, will complement the pedestrian network in place across the rest of the Grandhome street network.

Grandhome thus responds to ‘Designing Streets’ by incorporating a variety of thoroughfare types, designed to be well-connected and pedestrian-friendly. The masterplan features both a rectilinear grid/lattice of short streets, and more picturesque roads designed to follow the contours of the natural landscape. All of these streets will be designed to reduce traffic speeds using measures which double as public realm improvements. This offers a clear contrast to the design style of previous suburban development in the Bridge of Don, including the cul-de-sac development to the south and east of the Grandhome site.

Grandhome’s streets will also be designed to work with the topography and therefore be as inclusive as possible. However, where gradients exceed 6%, rather than relying on unsustainable cut and fill, the design team will look to provide alternative routes where possible through the detailed masterplanning process. Several areas on the site with more substantial gradients, such as the ridge in the centre of the site, have been identified as steep and thus incorporated into the masterplan as parks rather than parts of the street network. This approach ensures that cut and fill is kept to a minimum and the site’s natural contours are preserved.

Safety will be a key factor in designing the street hierarchy

and this will be achieved through a number of vehicle speed management measures including staggered crossroads, structural planting along street verges and avoiding long straight streets with uninterrupted visibility that encourage speeding.

5.6.3 Quality Audit

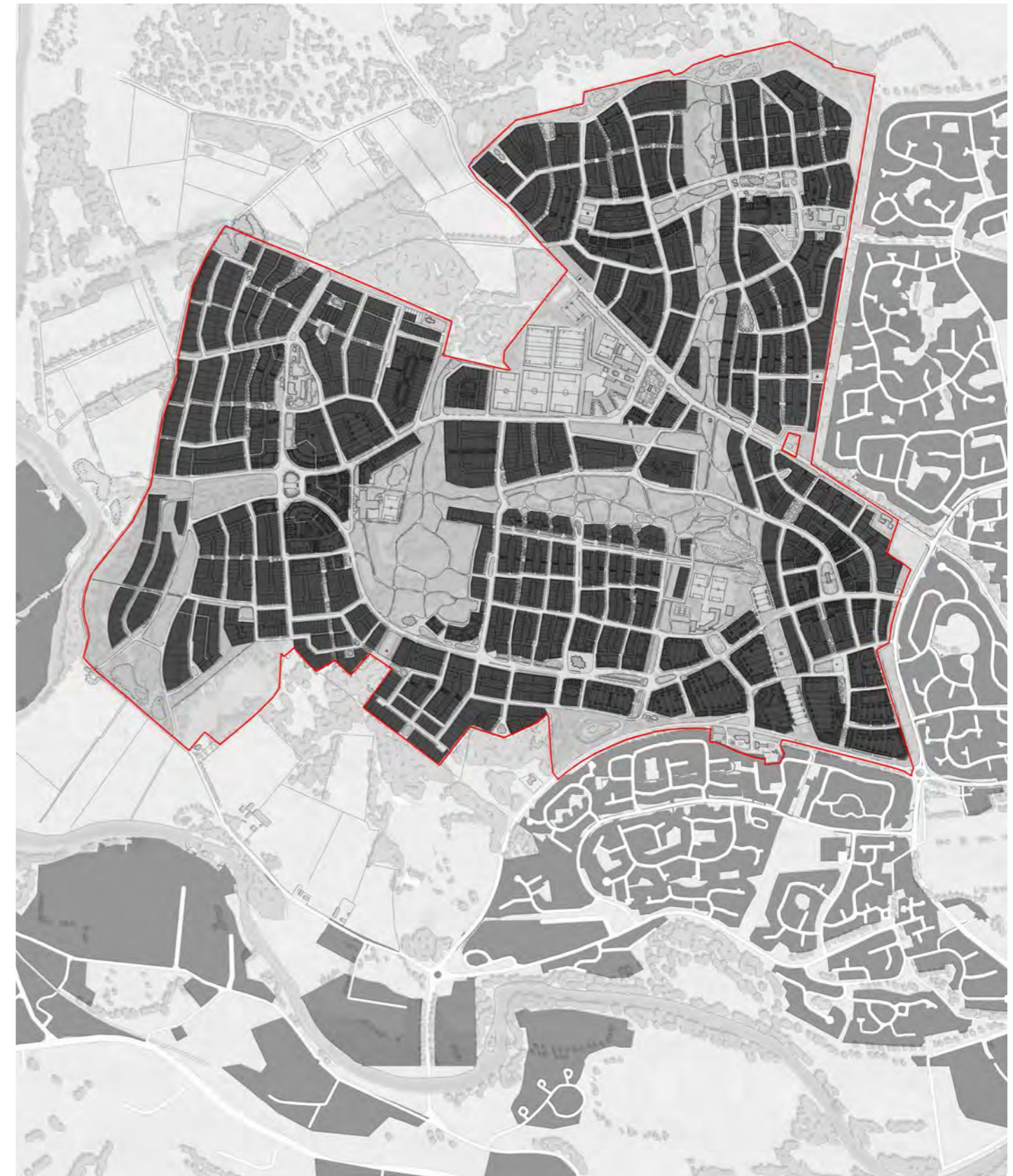
Grandhome’s thoroughfare network design will also be informed by a Quality Audit, focusing on adherence to ‘Designing Streets’. The objective of a Quality Audit is to ensure the principles set out in the document remain the focus of good street design during the detailed masterplanning process. The design team’s architects and engineers work alongside the Council’s engineers to determine detailed streetscape design, in the process addressing accessibility, public transport strategy, car parking, street adoption and many other key issues. This process typically involves a series of workshops, during which the street plans are tested against various requirements and modified to achieve the Council’s desired objectives whilst remaining in line with the Framework.

By undertaking a Quality Audit, the design principles established by that process frame the subsequent Roads Construction Consent procedures and potentially speed up this part of the delivery process. Critically, the group ensures that technical

Figure 5.23: Grandhome masterplan, highlighting the latticed street network connecting the mixed-use neighbourhoods and response to the existing development.

Existing Development
Proposed Development

considerations do not eclipse design aspirations.



5.7 Landscape Strategy

5.7.1 Landscape concept

GSN (Green Space Network) principles illustrated in the LDP have been used to configure an extensive network of greenspace within the developed area and connecting to areas beyond the boundary. The network includes the prime north-south link between Clerkhill Wood, Monument Wood and Persley Wood indicated in the LDP, while more than double that quantity of greenspace has been added, with additional green corridors spreading towards the west and east, and linking to another major greenspace corridor running north and linking to Grandhome Moss.

The landscape concept diagram shown right shows in notional terms the principle of a green web, or matrix, that spans the site. The matrix represents a network of green spaces running through the new development that will have multiple functions. The matrix will, for example, define neighbourhoods, act as a setting for recreational facilities, provide linked up habitats for wildlife, and incorporate a dedicated, connected set of paths to allow people to move freely through the development on foot or by bike.

The configuration of the matrix builds upon existing landscape features such as woodland blocks, tree belts and topographical features that subdivide the site. The distinct character zones that it

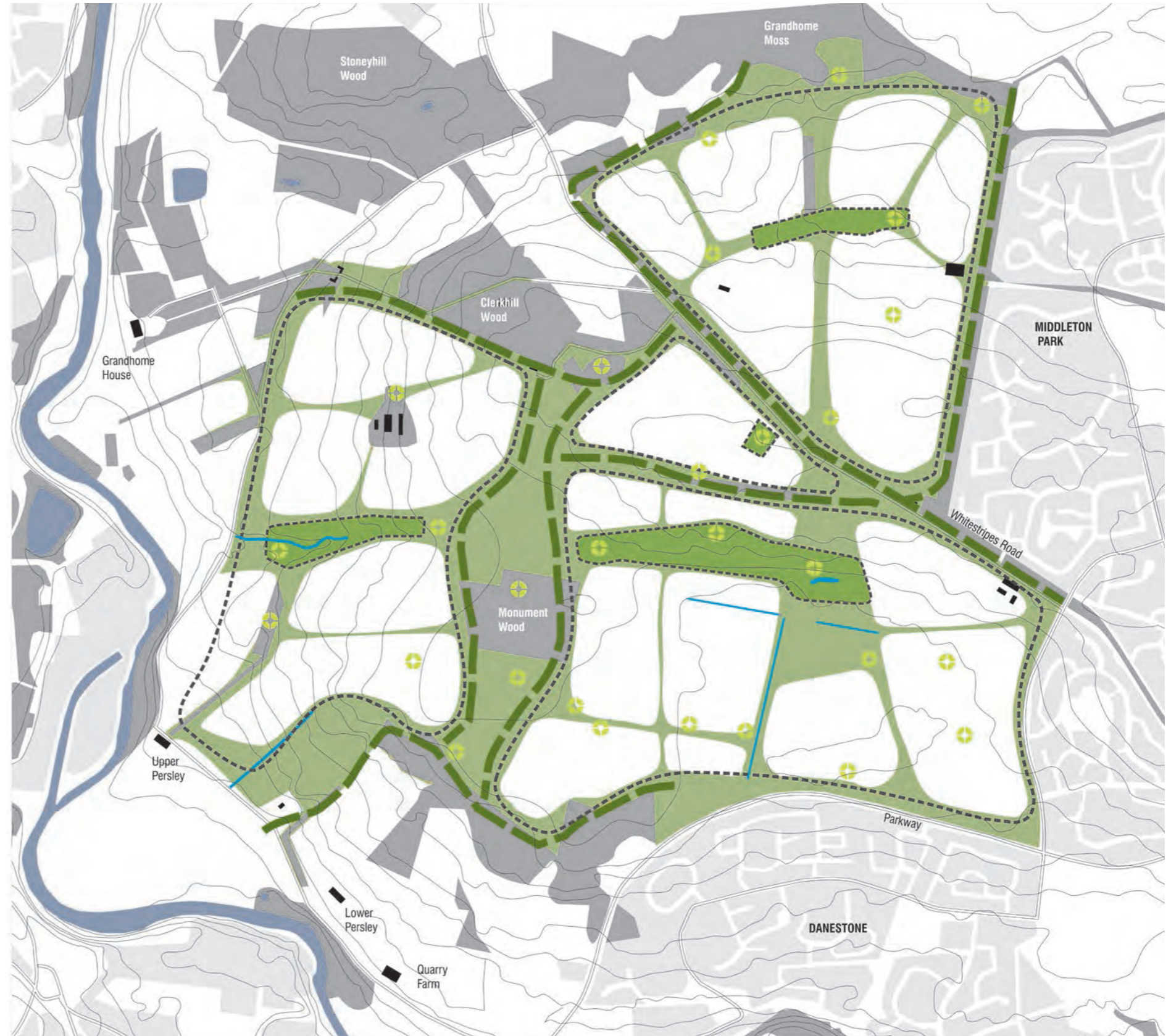
Figure 5.24: Grandhome's conceptual green network



creates, to the west, north and east, will be reinforced in the new development, through a tailored approach to the design of buildings and landscapes in different neighbourhoods.

Important ridge lines and tree belts that contribute to the silhouette of the site when seen from afar and that currently subdivide the site will be retained and enhanced, connected up and reinforced with additional planting. This includes key tree belts in and around the edge of the site as well new planting to connect significant woodland blocks at Persley Quarry, Monument Wood and Clerkhill Woods. The linked woodlands will create an important north-south landscape corridor defining the 'Donside' neighbourhood to the west and the rest of the development facing east.

The green matrix will also incorporate public parks as key social spaces at the heart of each neighbourhood. They will be designed to serve both new and existing communities. There will be a major town park in the east



and two local parks, one in the northern part of the site and one to the west.

There will also be a full complement of social and recreational nodes scattered throughout the green space matrix forming points of interest and focal points. These will include civic squares, village greens, playgrounds, seating areas, viewpoints, sites for public art and the like.

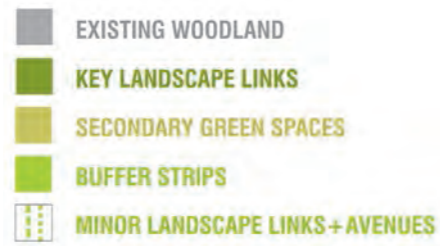
5.7.2 Landscape structure

The green space matrix will comprise a hierarchy of landscape elements based on the type, scale and function of the space:

Key landscape links - large scale spaces and significant blocks of trees connecting to make a green network running through the site; design driven by both habitat and amenity potential.

Secondary green spaces - public green space outside the key landscape links usually accommodating secondary or supporting uses and including school grounds, urban greens or landscape strips subdividing neighbourhoods; design may be formal or informal but design of elements within the spaces will be driven by habitat potential.

Figure 5.25: Grandhome landscape structure



(All elements indicative only)

Buffer Strips - narrow strips of planting used primarily to define boundaries or to screen or filter views to the development.

Minor landscape links and avenues - urban spaces with intermittent greenery including street trees, shrub beds, verges/ areas of lawn, climbers and container planting, for example.

