

5. The Development Framework

5.1 Introduction + Purpose

The vision for Grandhome stems from the principles of place-making, which promote the design of walkable neighbourhoods, offering a range of house types, as well as community facilities, shops and jobs. This approach seeks to lessen car dependency and promote a sense of wellbeing and community. The purpose of this chapter is to explain how those principles have been applied in the Development Framework for Grandhome.

The Development Framework at right illustrates Grandhome as a completely built community, comprising nearly 6,500-7,000 houses within seven neighbourhoods and 5ha of employment land. These neighbourhoods are connected by a green space network, including parks, squares, sports pitches and other recreational green spaces. In addition, the neighbourhoods will be supported by a range of commercial and community uses that will serve their local population. The design philosophy behind this masterplan, and the aspirations for its delivery, are detailed in this Framework.

This Framework considers the important role played by a small site on the south side of the Parkway, also owned by the Trust. Whilst this site falls outside the OP9 designation, its vital role in creating a pedestrian and cycle access linking the Danestone and

Figure 5.1: The Grandhome masterplan

- Mixed-Use Buildings
- Office Buildings
- Single-Use Commercial
- Indicative Footprints
- Plots
- Schools
- Civic Buildings
- Existing Buildings
- Open Space
- SUDS
- Site Boundary

Grandhome communities means this Framework considers the site in its broader context.



5.2 Transect-Based Design

The Grandhome masterplan is transect-based, meaning that the plan's structure is generated by a tool called the transect. The transect measures the character of an environment, from rural to urban. Grandhome is designed to include many types of environments along the transect, ranging from its urban high street hub through to the lower-density residential neighbourhoods on the settlement edge.

Scottish planner and biologist Patrick Geddes developed the concept of the transect, building from the work of German naturalist Alexander von Humboldt. Several decades later, Scottish landscape architect Ian McHarg further developed the methodology in his most well-known book, 'Design with Nature'. Today, urban designers, including Grandhome designers from Duany Plater-Zyberk, use the transect to analyse the range of human habitats and design settlements which are diverse in building type and neighbourhood character.

The transect can be measured in six zones, which are distributed across a masterplan. These zones include T1 (Natural Zone), T2 (Rural Zone), T3 (Sub-Urban Zone), T4 (General Urban Zone), T5 (Urban Centre Zone), T6 (Urban Core Zone) and T6 (Urban Core Zone). Densities, building heights, building setbacks and other issues then correlate with each zone.

Grandhome includes three of the six transect zones: T3, T4 and T5. Each neighbourhood features a range of zones, to reflect the variety of urban environments and housing types within the settlement. T5, however, features more prominently in the higher-density town centre and the neighbourhood centres. Grandhome also includes a zone called 'Special District' – a specialised area that does not comply with the typical rules of the urban-rural transect. In Grandhome, the business park is a Special District.

The requirements for these zones – such as densities, thoroughfare scales, building setbacks and building footprints – are calibrated locally. In each case, the transect should reflect a locally appropriate range of densities and neighbourhood characters. For Grandhome, many of the proposals reflect the character and urban proportions of well-known Aberdeen neighbourhoods, including Old Aberdeen and Rubislaw Den.

Accordingly, the transect zones, and the precedents that inspired them, can be introduced as follows:

Grandhome includes three of the six transect zones: T3, T4 and T5. Each neighbourhood features a range of zones, to reflect the variety of urban environments and housing types within the settlement. T5, however, features more prominently in the higher-density town centre and the neighbourhood centres. Grandhome also includes a zone called 'Special District' – a specialised area that does not comply with the typical rules of the urban-rural transect. In Grandhome, the business park is a Special District.

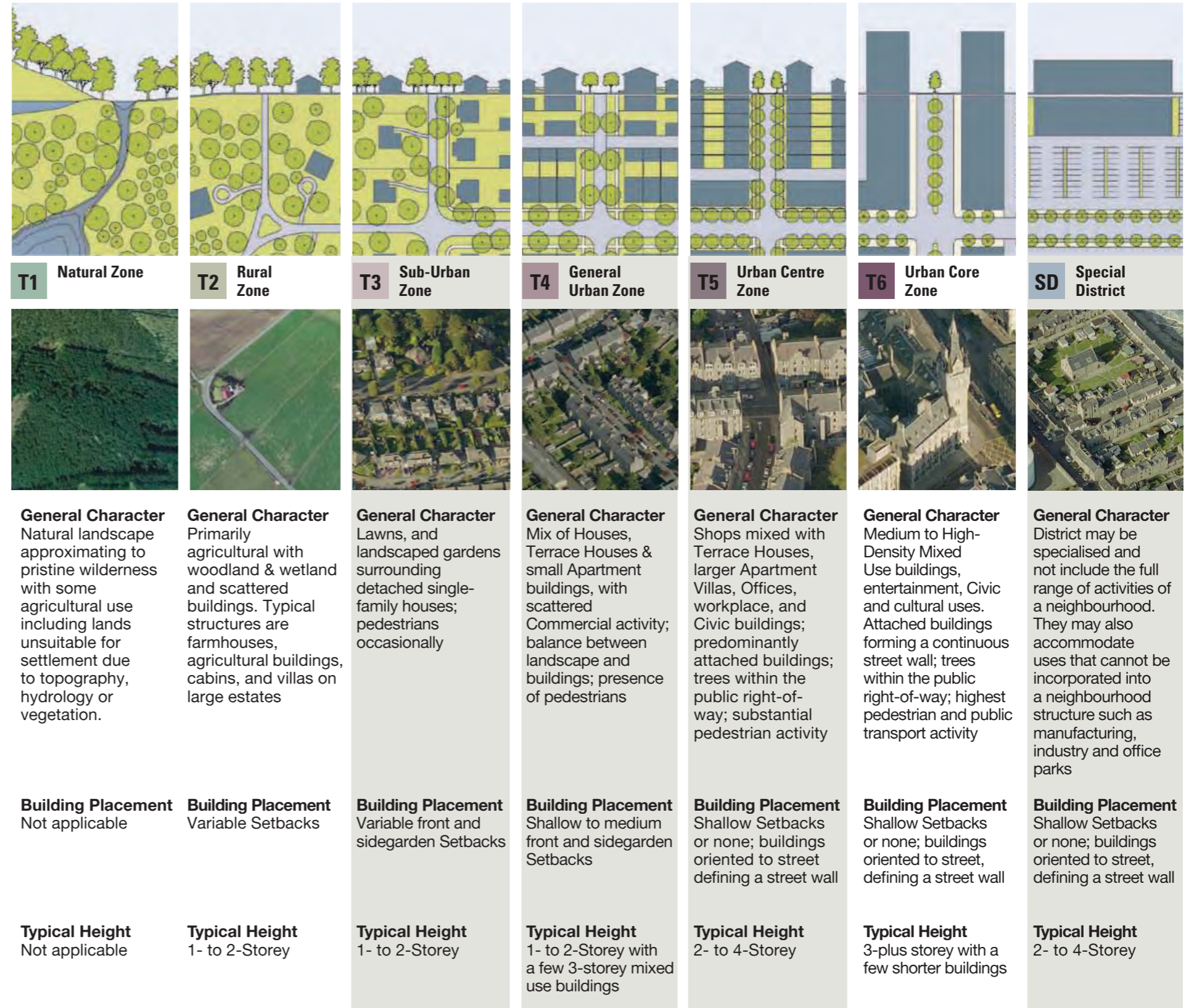


Figure 5.2: An introduction to the transect zones, with those in Grandhome highlighted (T3, T4, T5 and SD)

T1 (Natural Zone):

The first transect zone is for natural settings such as wild areas, countryside landscapes and woodlands. The Grandhome masterplan does include an extensive network of green spaces including parks and woodlands, but these are not T1 as such. Rather, they must relate to the urban character of the surrounding development, and so are incorporated into the adjoining, more urban, T zones.

The Green Belt to the north and the riverfront area to the west are both authentic T1 zones and are well-connected to the green network within the site. Residents will be able to readily take advantage of these natural landscapes for visual enjoyment and recreational uses.

T2 (Rural Zone):

T2 features low-density development, seen in rural landscapes dotted with farmsteads, or on the quiet edges of traditional towns. Development of this type is plentiful near the Grandhome site, in Aberdeenshire and further afield. However, there is no T2 development within the boundaries of the Grandhome site, given the need to achieve a higher density to sustain mixed uses in a neighbourhood framework. To provide residents with access to T2, the masterplan is designed to preserve long views of the nearby countryside, with views available from several public spaces and prominent civic complexes such as the school.

T3 (Sub-Urban Zone):

T3 features lower density residential development, including occasional retail, office and civic uses. Detached and semi-detached houses are typically most prominent, often set back from the street with private gardens. Rubislaw Den offers an example of T3 within Aberdeen City, with its larger houses on wide, elegant streets. T3 will also feature prominently in Grandhome, particularly on the edge of neighbourhoods.

T4 (General Urban Zone):

T4 features an urban mix of residential, retail and office development, often featuring corner shops, retail and slightly higher density development such as live/work units. T4 features in Grandhome, particularly in the areas adjacent to the retail hubs of the town and neighbourhood centres. Many of the T4 parts of Grandhome feature mixed-uses on corner sites. Roads in Aberdeen that inspired the proportions and housing mix of T4 include Fountainhall Road, Beaconsfield Place and Albert Terrace. These areas range in approximate density from 25 to 34 units to the hectare, with a mix of housing types including detached houses, terraces, semis and flats. Grandhome follows this precedent in its urban areas.

T5 (Urban Centre):

T5 is an urban centre: an active area featuring a medium to high-density concentration of retail and community uses, such as a high street serving an extended local area. Grandhome is T5 in its town centre and in the core of its neighbourhood centres. T5 often features live/work buildings as well as larger buildings of ground floor retail with flats or offices above. In line with this higher density development, public spaces can be substantial in size, including plazas, parks and squares. Grandhome's T5 follows local precedents noted at Rosemount Place and elsewhere.

T6 (Urban Core):

T6 is the urban core, the highest density transect zone, generally found in city centres. T6 typically includes blocks of flats, retail and high-density office buildings. There is no T6 in Grandhome, as this type of development is not well suited to the site's Bridge of Don location.

SD (Special Districts):

Special Districts are areas which do not follow the Transect Zone methodology: often, these areas are intended to serve particular purposes and thus may be dominated by one use, as opposed to balanced in a mixed-use context compatible with a rural-urban identity. In Grandhome, the business district on the site's southeast tip is one Special District: this area is business dominated and designed to accommodate a corporate headquarters, as opposed to the residential-led, mixed-use development seen elsewhere across the settlement in T3, T4 and T5.

The Grandhome Transect

The design team sought to calibrate the transect system to a scale and character appropriate for the Grandhome site. The analyses above, and on the following pages, study

urban environments within Old Aberdeen and other north Aberdeen neighbourhoods, aligning various conditions with the Grandhome transect.

Grandhome includes transect zones T3 (Sub-Urban), T4 (General Urban) and T5

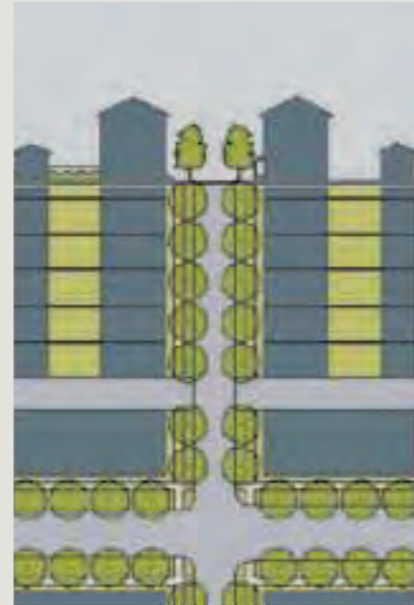
(Urban Centre), which are the primary focus of these analyses. The drawings below show how these zones correlate with street design; the following pages also explore other elements of urbanism, such as public space design.



T3 Sub-Urban Zone



T4 General Urban Zone



T5 Urban Centre Zone



Figure 5.3: Transect planning can also be applied to street design. The analyses above consider different street environments in Aberdeen and align these with the transect zones. Similar urban and street proportions can then be used within Grandhome's transect-based system.

5.2.1 Contextual analysis

The Grandhome design team began the SSCI Charrette by studying mixed-use neighbourhoods in Aberdeen, including Old Aberdeen, Victoria Street, Rubislaw den North and Rosemount Place. Since then, the team has continued to return to these historic precedents, studying not only the architecture, but also the densities, setbacks and other components of urbanism.

The following studies indicate the type of lessons that the designers gleaned from studying these streets and urban spaces closely. Much of these standards may later be incorporated into transect analyses, to be used for a Design Code or Pattern Book.

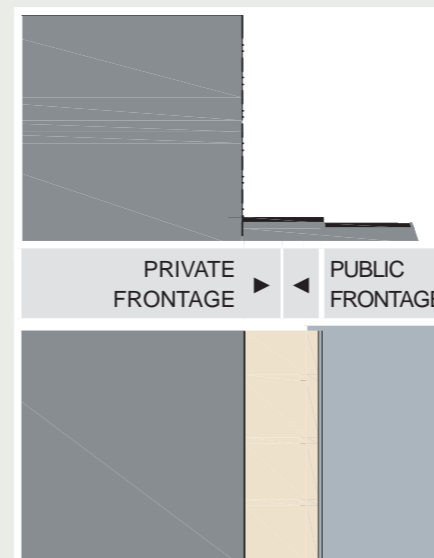
The studies are organised according to transect zone, as the transect methodology has driven the development of the masterplan. These are included as follows:

- T5 type
- T4 type
- T3 type
- Paths and lanes
- Mix of types
 - High street (T5/T4)
 - Don street (T4/T3)
 - Lane

Rosemount Place (T5 Type)

Rosemount Place offers a model for town centre and neighbourhood centre development in terms of density and sensitive incorporation of a mix of uses. It consists of higher density mixed use buildings that accommodate retail, offices, terrace houses and apartments. It has a tight network of streets with a spatial width that averages 14.5 metres; wide paths up to 3.5 metres and buildings up to 4 storeys set close to the paths.

Housing units vary in size and sit in roughly 50 units per hectare; this higher density is achieved at Grandhome in the main commercial area in Phase 2. The generic building types are very flexible and truly urban; they consist of a commercial ground floor topped by one or several storeys of dwellings or workspace. They sit right up against the path, with any parking located at the rear.



Public Frontage

Public Frontage Type	Commercial street
Spatial Width	14.5 m
Moving Lanes	1 lane each Way
Parking Lanes	1 Lane
Carriageway Width	9.25 m
Kerb Type	Raised
Kerb Radius	3.25 m
Median	None
Footway	2m - 3.25m
Planter Type	None
Planter Width	None
Planter Pattern	None
Tree Type	None

Private Frontage

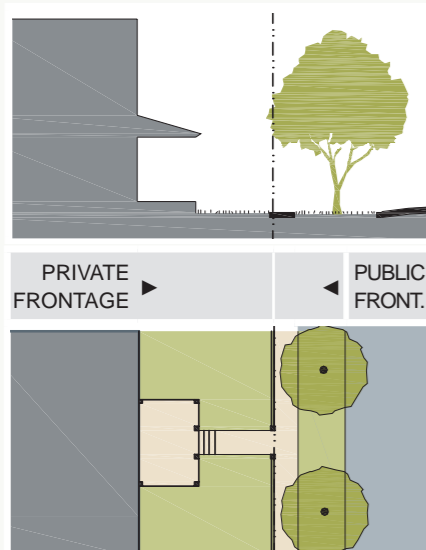
Private Frontage Type	Shopfront
Building Height	up to 4 Storeys
Outbuilding Height	1 Storey
Floor above Grade	0m min.
Building Typical	Rear yard and terrace
Plot Width	11m - 15m
Plot Depth	20m - 24m
Build-out at Setback	100%
Front Setback	0m min.
Side Setback	0m min.
Front Encroachment	None
Ground Level Function	Office, retail, residential
Upper Level Function	Residential

Victoria Street (T4 Type)

Victoria Street is largely comprised of terraced houses with minimal setbacks, with different building heights on either side of the road. The street offers a model for T4 development: high density housing, typically situated in close proximity to the mixed-use nodes of the town and neighbourhood centres.

The street comprises an interesting mix of front conditions, including some homes with front gardens and others entered off the street. The street features some plantings, including street trees, with car parking on one side. In total, the density is roughly 21 units/ha.

This approach is similar to that taken for the T4 residential streets of Grandhome.



Public Frontage

Public Frontage Type	Terrace
Spatial Width	18m
Moving Lanes	1 Lane Each Way
Parking Lanes	1 Lane
Carriageway Width	8m
Kerb Type	Raised
Kerb Radius	Various
Median	No
Footway	2m
Planter Type	Tree Base
Planter Width	600mm Sq
Planter Pattern	At Tree Base
Tree Type	Thin + High

Private Frontage

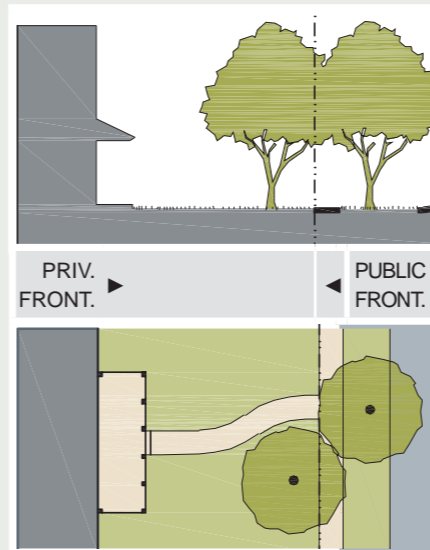
Private Frontage Type	Terrace
Building Height	1.5 - 2.5 Storey
Outbuilding Height	1 - 2 Storey
Floor above Grade	Two Steps
Building Typical	Rear Yard
Plot Width	8 - 12m
Plot Depth	50 - 62m
Build-out at Setback	100%
Front Setback	5m max.
Side Setback	No
Front Encroachment	No
Ground Level Function	Residential
Upper Level Function	Residential

Rubislaw Den North (T3 Type)

Rubislaw Den North offers another approach to residential development, which achieves a lower density, due to its comprising largely detached houses on plots able to accommodate substantial back gardens. Although the homes have varied facades and proportions, they follow a similar materials palette and scale: roughly 2-2.5 storeys.

These homes have front setbacks of 7 to 37 metres, with front gardens heavily landscaped and sometimes featuring a driveway. The carriageway is roughly 10 metres wide, with paths on either side of the road.

Grandhome's lower density streets – primarily in the T3 transect zone – feature areas with similar compositions.



Public Frontage

Public Frontage Type	Street
Spatial Width	17m
Moving Lanes	1 Lane Each Way
Parking Lanes	2 Lanes
Carriageway Width	10m
Kerb Type	Raised
Kerb Radius	Various
Median	None
Footway	3.5m
Planter Type	Broken / Paving
Planter Width	1m
Planter Pattern	TBD
Tree Type	TBD

Private Frontage

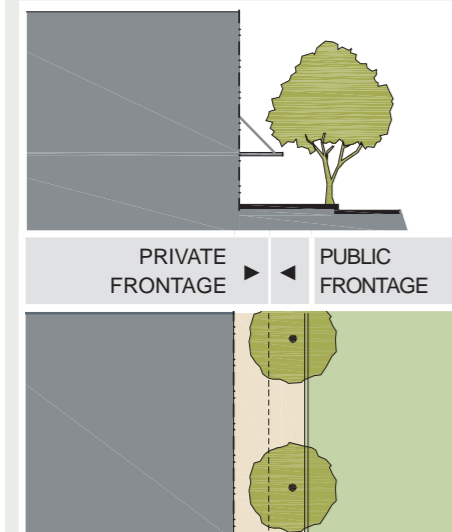
Private Frontage Type	Common Yard
Building Height	2 -2.5 Storey
Outbuilding Height	1 Storey
Floor above Grade	50 - 60cm
Building Typical	Detached Rear Yard
Plot Width	16 - 80mm
Plot Depth	46 - 86mm
Build-out at Setback	100%
Front Setback	7 - 37m
Side Setback	1m Min
Front Encroachment	None
Ground Level Function	Residential
Upper Level Function	Residential

Wrights' and Coopers' Place (Pedestrian Street)

Wrights' and Coopers' Place features houses that front onto a shared green, designed for pedestrian access and shared community use. This design strategy creates a safe and pleasant space, suitable for casual meetings or children's play. Parking and vehicular access is then provided via back streets and shared parking courts shielded from view.

The Place features varied planting, and shared street furniture such as benches. Terraces are set back from the pedestrian path by about 3 metres. Character varies along the duration of the street, from quiet green spaces to an intimate plaza. The spatial width also varies, from 8.5 metres to 15 metres, at the plaza.

Grandhome incorporates several streets of this type, offering residents a private green space, with good visibility from their homes.



Public Frontage

Public Frontage Type	Terrace
Spatial Width	18m
Moving Lanes	1 Lane Each Way
Parking Lanes	1 Lane
Carriageway Width	8m
Kerb Type	Raised
Kerb Radius	Various
Median	No
Footway	2m
Planter Type	Tree Base
Planter Width	600mm Sq
Planter Pattern	At Tree Base
Tree Type	Thin + High

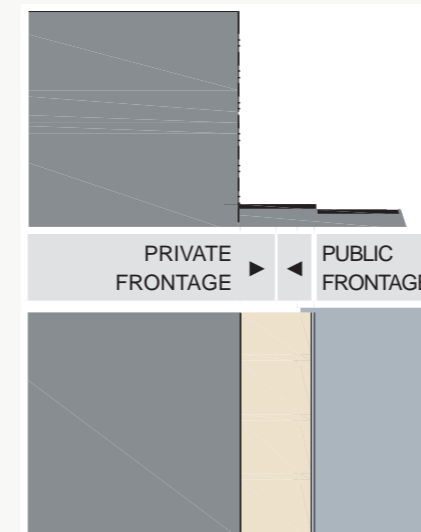
Private Frontage

Private Frontage Type	Terrace
Building Height	1.5 - 2.5 Storey
Outbuilding Height	1 - 2 Storey
Floor above Grade	Two Steps
Building Typical	Rear Yard
Plot Width	8 - 12m
Plot Depth	50 - 62m
Build-out at Setback	100%
Front Setback	5m max.
Side Setback	No
Front Encroachment	No
Ground Level Function	Residential
Upper Level Function	Residential

Lower High Street, Old Aberdeen (Paths and Lanes)

The lower end of Old Aberdeen's high street has spaces of a range of characters, adhering to both the T4 and T3 condition. Pedestrian connections link the high street with the other parallel streets. This results in a variety of setbacks and turning conditions, creating an interesting frontage.

Notably, the homes have front greens of different sizes and dispositions, which contribute greatly to the visually stimulating streetscape. Although the street lacks public street trees, the many private greens and planting enable it to retain a green character throughout. The incorporation of stone walls into the street also add further character.



Public Frontage

Public Frontage Type	Shopfront / Street
Spatial Width	
Moving Lanes	1 Lane One Way
Parking Lanes	Part 1 Lane
Carriageway Width	5.5
Kerb Type	Raised
Kerb Radius	Various
Median	None
Footway	2m
Planter Type	None
Planter Width	None
Planter Pattern	None
Tree Type	None

Private Frontage (High St)

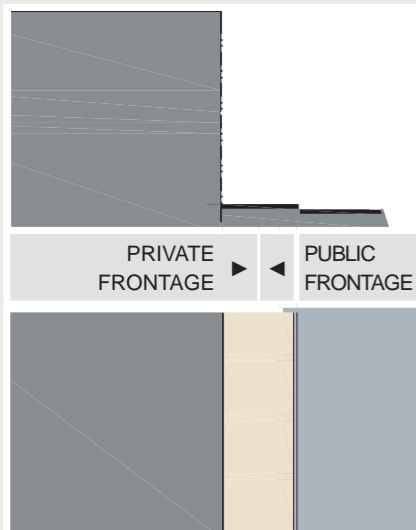
Private Frontage Type	Terrace / Shopfront
Building Height	2 - 2.5 Storey
Outbuilding Height	1 Storey
Floor above Grade	Level to 1 Step
Building Typical	Terrace / Rearyard
Plot Width	6 - 22m
Plot Depth	6.3m - 35m
Build-out at Setback	80%
Front Setback	12.5m to 25m
Side Setback	1m
Front Encroachment	None
Ground Level Function	Shop, Office + Residential
Upper Level Function	Office + Residential

Don Street, Old Aberdeen (T4/T3- Mix of Types)

Don Street also shows a variety of conditions, representing both T4 and T3. Setbacks are varied and the carriageway condition changes from a tight one-way street into a broad one-way street with parking on one side.

Houses front the street closely in its tightest condition, and gradually increase in setback with the widening of the street. Larger houses are celebrated as having the widest setback with a large garden fronting the street.

Although there is no street planting, front gardens soften the space and provide visual variety. Like the lower portion of Old Aberdeen's high street, walls of varying heights also contribute to the streetscape.



Public Frontage

Public Frontage Type	Commercial street
Spatial Width	14.5 m
Moving Lanes	1 lane each Way
Parking Lanes	1 Lane
Carriageway Width	9.25 m
Kerb Type	Raised
Kerb Radius	3.25 m
Median	None
Footway	2m - 3.25m
Planter Type	None
Planter Width	None
Planter Pattern	None
Tree Type	None

Private Frontage

Private Frontage Type	Shopfront
Building Height	up to 4 Storeys
Outbuilding Height	1 Storey
Floor above Grade	0m min.
Building Typical	Rear yard and terrace
Plot Width	11m - 15m
Plot Depth	20m - 24m
Build-out at Setback	100%
Front Setback	0m min.
Side Setback	0m min.
Front Encroachment	None
Ground Level Function	Office, retail, residential
Upper Level Function	Residential

Rubislaw Terrace Lane (Lane- Mix of Types)

Alongside these residential streets, the design team studied Aberdeen's lanes, such as Rubislaw Terrace Lane. Grandhome also features numerous lanes, which are designed to accommodate parking and access for houses which front onto green spaces without a main vehicular access. These conditions are featured within Grandhome's T4 and T3.

The spatial width of the lane is 8 metres. Frontage includes not only garages, but also some mews homes.

This example shows a significant amount of car parking on the south side of the lane, servicing the offices on Rubislaw Terrace. On the other hand, the houses fronting Albert Terrace, on the north side, benefit from a rear garden, private garages and home offices.

It constitutes a good example to consider as it shows the impact that office and residential uses have in the character of the rear lanes.



Public Frontage

Public Frontage Type	Terrace
Spatial Width	18m
Moving Lanes	1 Lane Each Way
Parking Lanes	1 Lane
Carriageway Width	8m
Kerb Type	Raised
Kerb Radius	Various
Median	No
Footway	2m
Planter Type	Tree Base
Planter Width	600mm Sq
Planter Pattern	At Tree Base
Tree Type	Thin + High

Private Frontage

Private Frontage Type	Terrace
Building Height	1.5 - 2.5 Storey
Outbuilding Height	1 - 2 Storey
Floor above Grade	Two Steps
Building Typical	Rear Yard
Plot Width	8 - 12m
Plot Depth	50 - 62m
Build-out at Setback	100%
Front Setback	5m max.
Side Setback	No
Front Encroachment	No
Ground Level Function	Residential
Upper Level Function	Residential

**High Street, Old Aberdeen
(T4/T5- Mix of Types)**

This intimate high street offers a model for town centre or neighbourhood centre development, in terms of density and sensitive incorporation of a mix of uses. The design and proportions of the street greatly influenced the design team, who considered this street when crafting Grandhome's T5 urbanism.

The street includes homes, some retail and public space in the form of a plaza, in front of the University of Aberdeen's old town house at the top of the high street. This terminated vista characterises the space and calls attention to this grand civic building – a design approach also used in the Grandhome masterplan, including in the approach to the town centre's primary school.

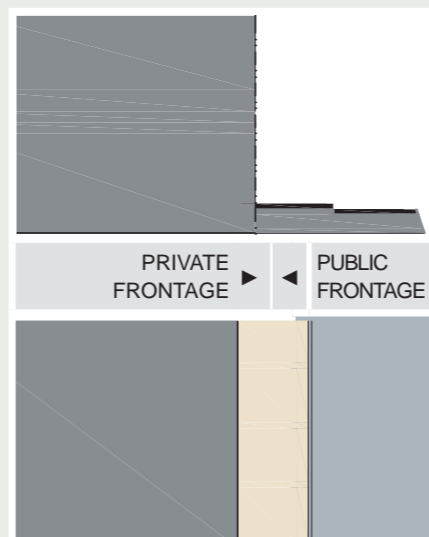
A study of the public and private frontages illuminates the proportions that create the street. The buildings are up to

three storeys tall, set back anywhere from 0 to 3.5 metres. Meanwhile, the spatial width varies from 9.5 metres to 23 metres, shaping a variety of spaces of different characters. Housing units then vary in size, and sit at roughly 34 units/ha (net). This higher density development is achieved at Grandhome in some of its commercial areas, which feature flats and terraced houses in close proximity to a high street or neighbourhood centre.

Tucked behind the high street are several courts, such as Greenlaw Court. Grandhome also features several rear courts, featuring shared car parking space and sometimes greens or landscaped areas for a small number of houses.

Grandhome also follows the high street's precedent in terms of the incorporation of outbuildings: several buildings in the high street vicinity have one storey accessory units, used as garages, granny flats or storage space.

T5 T4



Public Frontage

Public Frontage Type	Shopfront / Street
Spatial Width	
Moving Lanes	1 Lane One Way
Parking Lanes	Part 1 Lane
Carriageway Width	5.5
Kerb Type	Raised
Kerb Radius	Various
Median	None
Footway	2m
Planter Type	None
Planter Width	None
Planter Pattern	None
Tree Type	None

Private Frontage (High St)




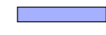


Private Frontage Type	Terrace / Shopfront
Building Height	2 - 2.5 Storey
Outbuilding Height	1 Storey
Floor above Grade	Level to 1 Step
Building Typical	Terrace / Rearyard
Plot Width	6 - 22m
Plot Depth	6.3m - 35m
Build-out at Setback	80%
Front Setback	12.5m to 25m
Side Setback	1m
Front Encroachment	None
Ground Level Function	Shop, Office + Residential
Upper Level Function	Office + Residential

5.2.2 Density

Grandhome was designed using the transect-based planning system, which ensures that a diverse range of urban environments will develop across the site. Grandhome will not feature a single density across the entire site. Neighbourhood centres will accommodate higher density development, typically T5-T4 zones, whilst T3 neighbourhood edges will be home to larger plots. Figure 5.2 sets out the locations of the T Zones.

On average, the entire Grandhome site will be developed at approximately 30 units/ha, with the town centre featuring a much higher density and the neighbourhood edges featuring a much lower density. The majority of the community will be scaled at 2-3 storeys with four storey accent buildings. There may also be scope for occasional single storey development in certain limited locations. This will add to the character of the development and is appropriate considering the regional context.

Figure 5.4: Grandhome's Regulating Plan, indicating the distribution of Transect Zones

-  T3- Sub-Urban, 1-2 storeys
-  T4- General Urban, 1-3 storeys
-  T5- Urban Centre, 2-3 storeys
-  SD- Special District, 2-3 storeys
-  CS- Civic Space
-  CB- Civic Buildings



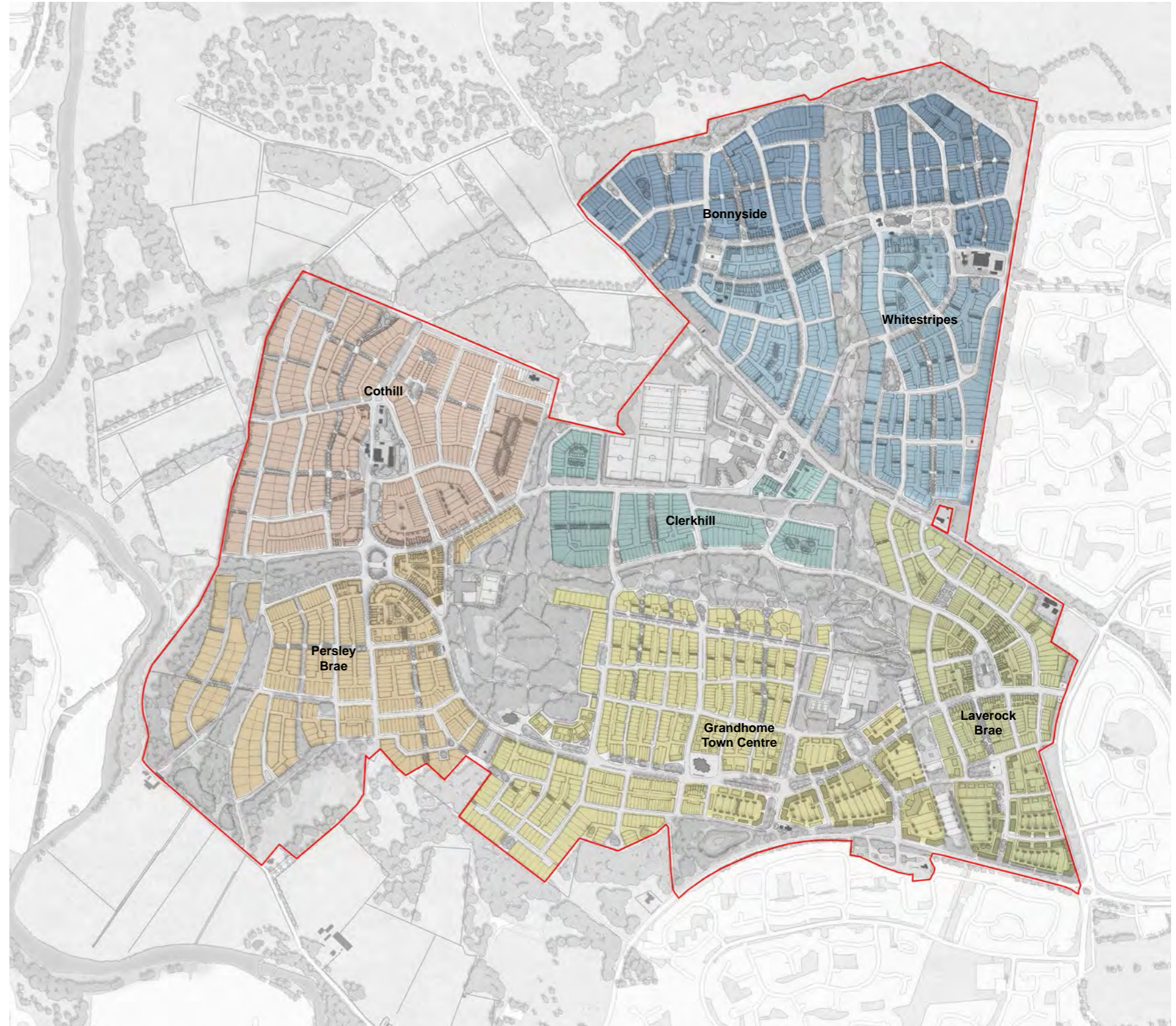
5.3 Neighbourhood + Block Structure

The Grandhome masterplan proposes the phased development of seven neighbourhoods, including a vibrant town centre and business park. Each of these areas is designed to be traversed in 5-minutes by foot, from centre to edge, with the town centre itself spanning a 10-minute walk. Shops, offices and bus stops are then located within each neighbourhood centre, providing residents with ample facilities in walking distance of their homes. Aside from the town centre, these neighbourhoods are known as Laverock Brae, Whitestripes, Bonnyside, Persley Brae, Clerkhill and Cothill – all names that correspond with historic features on the site.

These neighbourhoods' concentrations of local facilities should not only lessen residents' dependence on their cars, but also engender a sense of community. Schools and community buildings are also located within each neighbourhood, often in close proximity to shops to provide convenience for parents.

Figure 5.5: Proposed Grandhome neighbourhood structure

Each neighbourhood is also likely to develop its own character over time, given that each will be built at a different time span, and with a differing composition of architects and builders involved. However, all parts of Grandhome will follow the aspirations set out in this Framework, as well as the transect-based design regulations, meaning that their street frontages, heights and massings will be visually compatible and appropriate to the context of the region. More information on each neighbourhood is available within the Character Areas chapter of this Development Framework.



5.4 Mixed-Use Development

5.4.1 Commercial and Retail Uses

The Grandhome masterplan features shops and community facilities within a town centre intended to cater to the needs of the Bridge of Don community at large. The area will therefore provide a range of jobs for local residents and as such minimise out-commuting. This will be further enforced by the provision of live/work units alongside a range of business/retail opportunities, ranging in size and cost. Smaller scale facilities will also be provided in the individual neighbourhood centres.

The character of the town centre embodies a traditional high street with a mix of commercial uses, mainly though mixed-use buildings with smaller retail shops on the ground floor and residential units above. A number of buildings have been identified within the town centre for specific commercial, retail and leisure uses. These include but are not limited to 25,000m² of mixed use retail potentially including convenience shopping, local supermarket, gym, cinema and hotel.

- A Retail Impact Assessment will be prepared to support the Town Centre masterplan.

In accordance with the LDP allocation, the masterplan also features a 5ha Business Park, located on the south-eastern boundary of the site. This space is intended to facilitate integration

with the Energetica corridor, and is also linked to the other Science Park activities on-going within the wider Bridge of Don vicinity. The provision of high-quality retail space, within close proximity of potential employee housing and amenity facilities, as well as the substantial existing transportation network makes the site ideal for businesses looking to move to the area.

5.4.2 Community Uses

The focus of community activity within Grandhome will be the community-use school network. However, additional sites have been identified to allow the community to bring forward specific buildings in support of its needs, including religious buildings.

Education

The current masterplan accommodates the provision of three primary schools and one secondary school, built to Scottish Futures Trust standards. The indicative masterplan places these four schools across the Grandhome site, embedded into different neighbourhoods:

- Grandhome Primary School
- Cothill Primary School
- Clerkhill Primary School and Academy (Community Campus)

Each primary school will include a sports pitch, or in some cases, two sports pitches for wider community use. The Academy is located in the centre of the

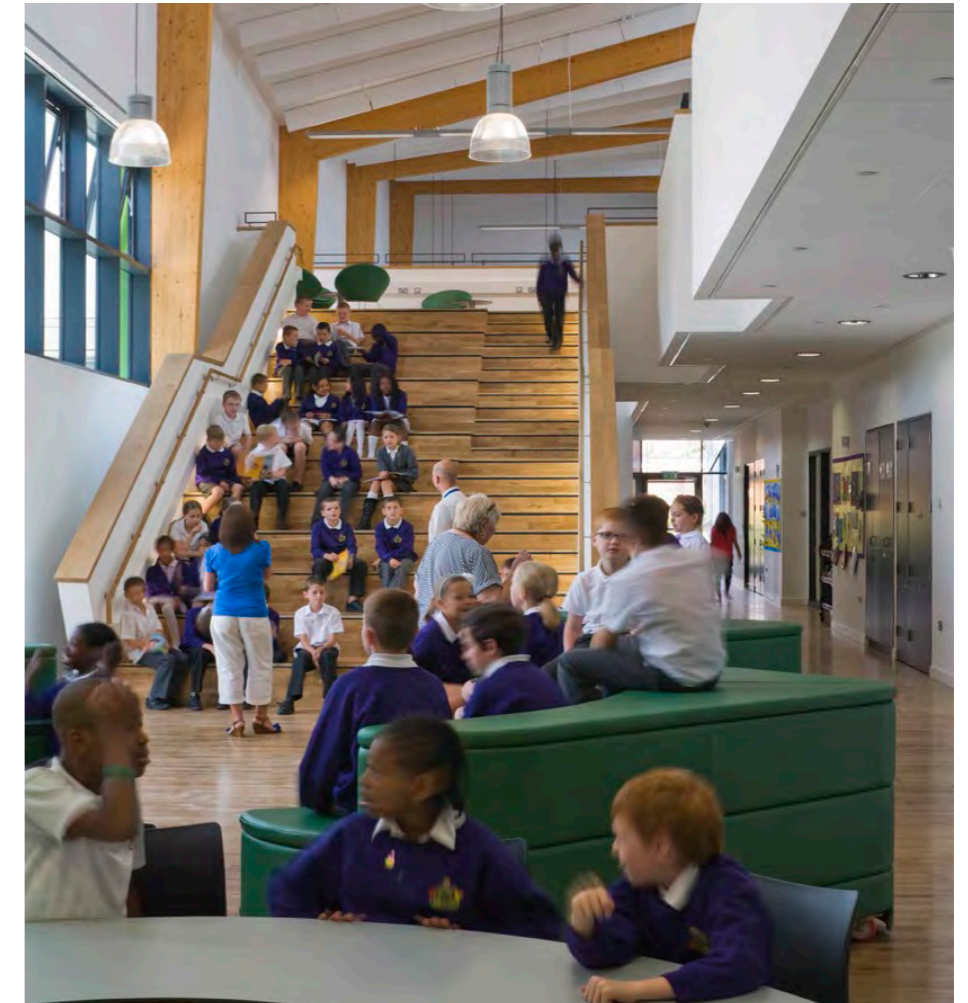


Figure 5.6, 5.7: Modern primary design: functional yet highly attractive buildings to inspire learning and enhance delivery of the curriculum. Images courtesy of Walters & Cohen Architects ©Dennis Gilbert/VIEW.

site for ease of access, with the community campus and sports pitches located adjacent to the Green Belt beyond.

The final strategy for education provision will be dependent on external discussions with the education authority.

Related Community Uses

The community schools will include a range of community services such as an early years/day care public facility, a public

library, a leisure centre with numerous sports pitches, youth provision and a family centre. These facilities will draw residents into community life and ensure that school buildings are used efficiently, both during the school week and at evenings and weekends.

Notably, the secondary school will sit on a community campus designed for use by both students and residents.

Health

Health facilities will include suitable NHS provision, as well as pharmacies and dentists within selected neighbourhoods. The majority of health provisions will be delivered at the neighbourhood scale, to accommodate demand from the new residents of Grandhome. Eventually, the population will support a purpose-built health centre, for which land has been reserved within the eastern edge of the town centre to facilitate early delivery if required.

Sustainability and Recycling

The need to move towards more low carbon economy is recognised. Future development of the site will incorporate sustainable energy practices in development such as promoting energy efficiency through building orientation, design and materials.

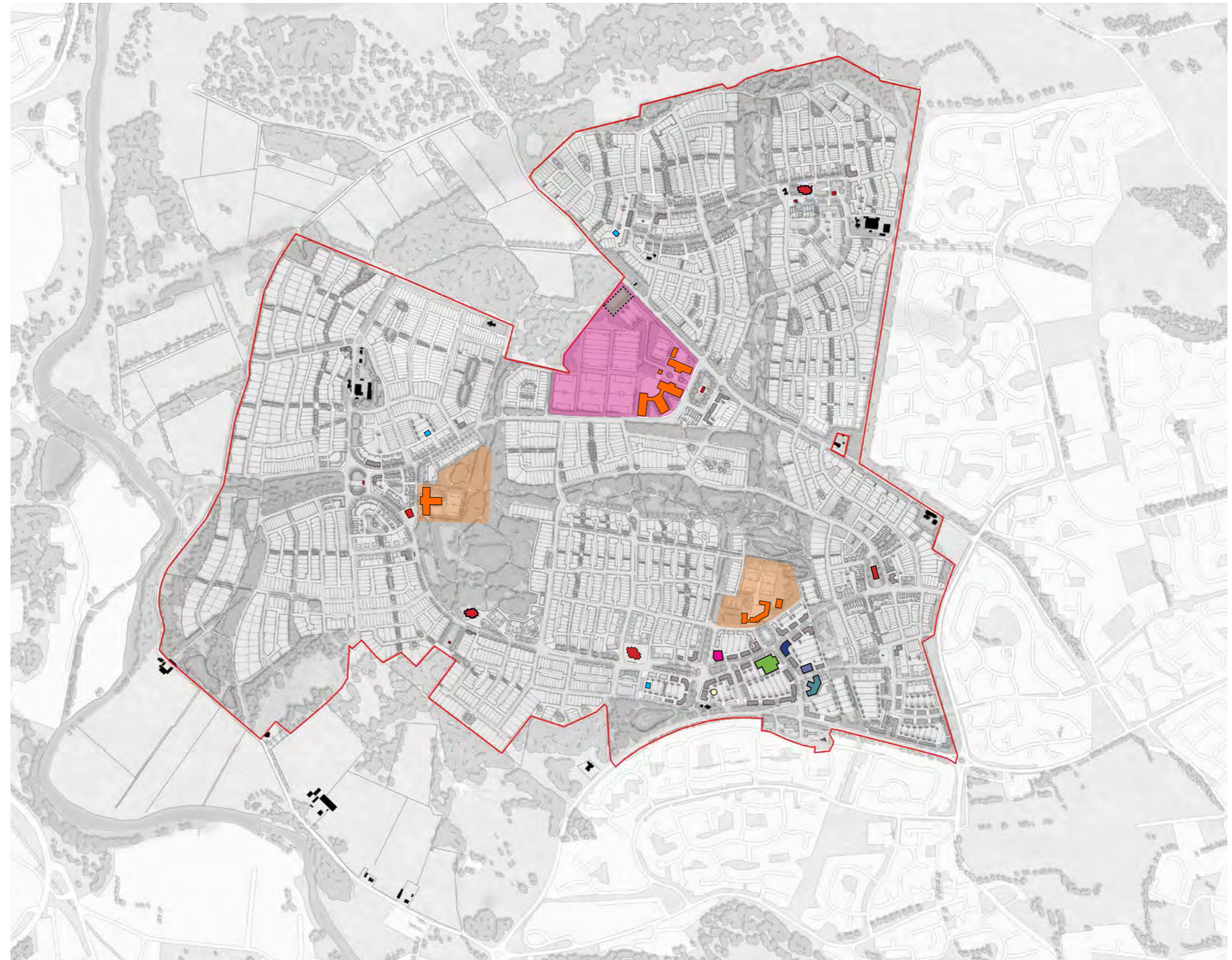
Recycling will be promoted through the provision of recycling facilities with recycling stations situated at convenient locations across the site.

Figure 5.8: Proposed Indicative Locations of community facilities

- Existing Buildings
- Community Primary School & Sports
- Academy, Library, Community Campus, & Sports
- Civic Buildings:
 1. Religious Building
 2. Covered Market
 3. Sites for Community Use
 4. Civic Structure / Monument
- Mixed-Use: Retail Ground Floor
- Supermarket
- Hotel
- Gym
- Small Cinema/ Theatre
- Health Centre
- LDP required Gypsy and Traveller site
- Neighbourhood Recycling
- CHP Facility

Education Facilities	Delivery	Area (ha)
Grandhome Primary School	PH. 2	3.58
Clerkhill Community Campus Primary School and Academy • includes community sports facilities	PH. 3-4	11
Cothill Primary School	PH. 6	3

NHS	Delivery	Area (ha)
Health Centre , Pharmacies & Dentists 16 Chair - GP	PH. 2-5	0.33



5.5 Access Strategy

The Grandhome street network will be integrated and well-connected, providing ease of movement for pedestrians, cyclists and vehicles. Scottish Government policy document Designing Streets has greatly informed the design of the street network. A residential Travel plan and travel packs will be developed and sent out to every resident.

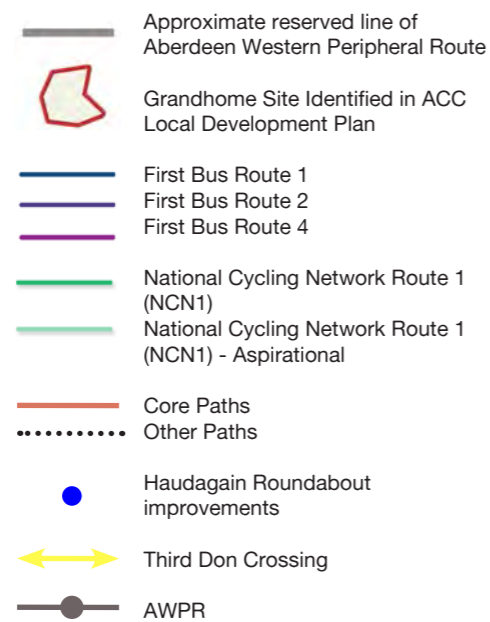
5.5.1 Context

The implementation of strategic infrastructure projects is key to the delivery of Grandhome. These include the AWPR, the Third Don Crossing, and the upgrade of key junctions including the Haudagain roundabout. Together these projects will alleviate current pressures on the city's transport network including localised pinch points such as Parkway and Persley Bridge.

It is expected that once the AWPR is in place this will alleviate traffic pressures along Parkway while opening links north of the site to the strategic road network via Whitestripes Road.

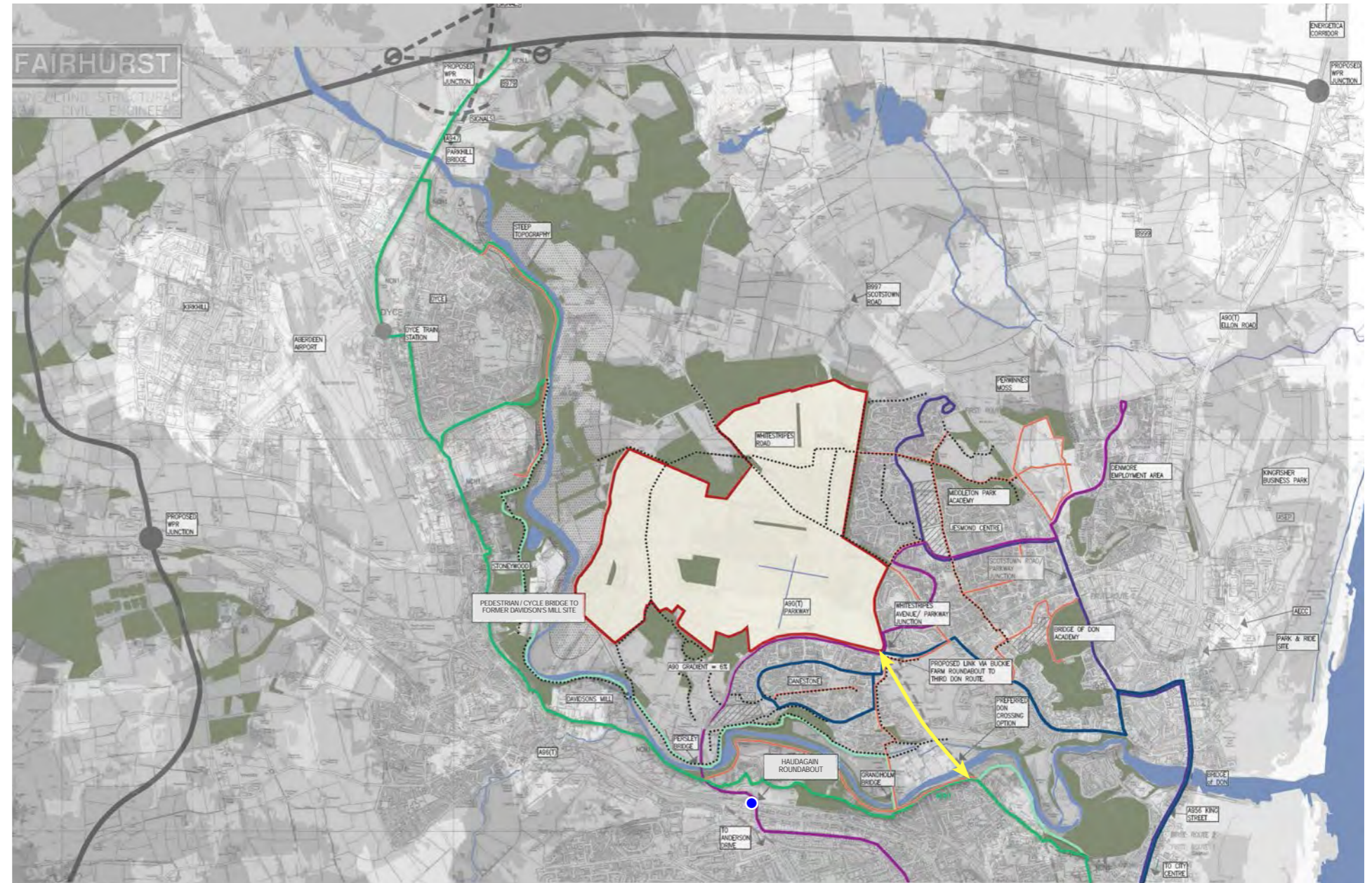
A Transport Assessment is being carried out which will consider the potential traffic impact of the new settlement, and how the first phase of homes could be accommodated on the existing road network ahead of the AWPR and 3rd Don Crossing. This

Figure 5.9: Grandhome in regional context, including proposed regional infrastructure



will include assessing impact at key junctions serving the site and how potential impact could be accommodated. This may require local road improvements as well as contributions to strategic transport improvements.

Preliminary discussions with Aberdeen City Council as local roads authority and Transport Scotland have confirmed that some of the initial development can be accommodated on the existing transport network, subject to the findings of a detailed Transport Assessment to be prepared in support of the planning applications. This may require localised road improvements to facilitate access to the site for Phase 1.



5.5.2 Movement Strategy

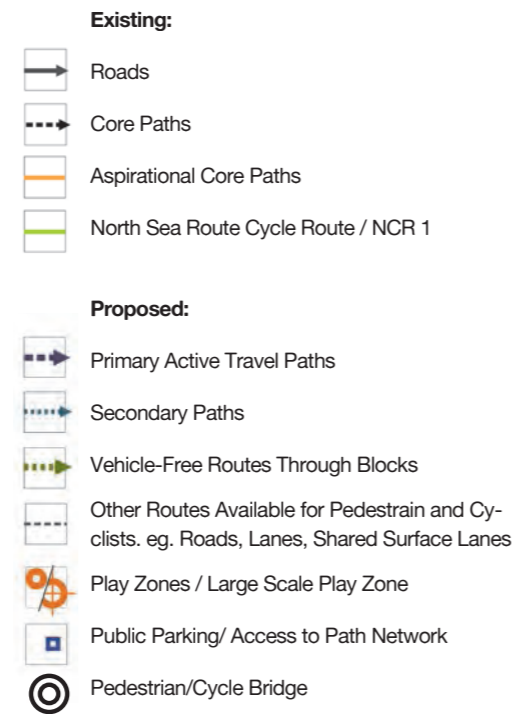
Pedestrians

The modular pattern of the masterplan is designed to ensure a high degree of pedestrian access within each neighbourhood and beyond. This is reinforced by a network of streets intended to optimise connections between the neighbourhoods, the town centre and the surrounding area. It is anticipated that residents will live within 5-minute walking distance of neighbourhood centres, ensuring ease of access to all essential amenities, as well as public transportation nodes.

Pedestrian and cycle links will ensure a high degree of permeability within the development, providing connections to the existing and aspirational core path network in the surrounding area. Essentially, all streets will be designed to accommodate pedestrians as the prime user, ensuring the optimal pedestrian experience. This will involve providing a range of street typologies to enhance legibility and curtail visual monotony, whilst also ensuring street design that calms traffic speeds and increases pedestrian safety.

Safe routes to school will also be reviewed through the masterplan and a consideration in the Transport Assessment.

Figure 5.10: Proposed key paths network



Non-motorised Vehicles

As mentioned at left, a pedestrian and cycle network, linking to the surrounding core path network is considered a priority. The core path network reaches into surrounding built-up areas, such as Middleton Park, Danestone and Dyce, and along a section of the River Don to the west of the site, and there is an aspiration to extend it further along the river. The masterplan also connects with the existing Regional Cycle Network to ensure site permeability and accessibility.



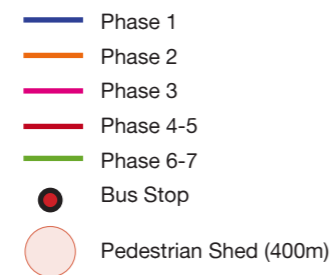
Public Transportation

The identification of a public transport strategy which provides connectivity from the development to principal employment centres, transport nodes and other attractions in the City Centre and at other locations across the city such as Dyce and Aberdeen Airport as part of the Development Framework in line with current Policy is required. The strategy requires to accommodate development phasing, and is anticipated to take advantage of the Third Don Crossing once completed.

The A90, A96 and A947 corridors all support frequent bus services, with First Aberdeen services in the vicinity of Grandhome terminating in the established residential areas of Danestone (service 1), Ashwood (service 2) and Dubford (service 4). It is anticipated that initial phases of development can be served by a variant of First service 1 which will operate via Whitestripes Avenue to the development. Initial discussions with First Aberdeen and Aberdeen City Council Public Transport Unit, and also with Stagecoach Bluebird, have informed the strategy for phased expansion of services to serve the development. Both operators have expressed interest in the provision of services and further discussions are anticipated.

Aberdeen railway station and the adjacent Union Square bus station, where connections can be made to regional and long distance rail and bus services, are approximately 5 miles from the development. Aberdeen Airport, which is served by both domestic and international flights, is approximately 6 miles west

Figure 5.11: Potential public transport bus route examined by phase

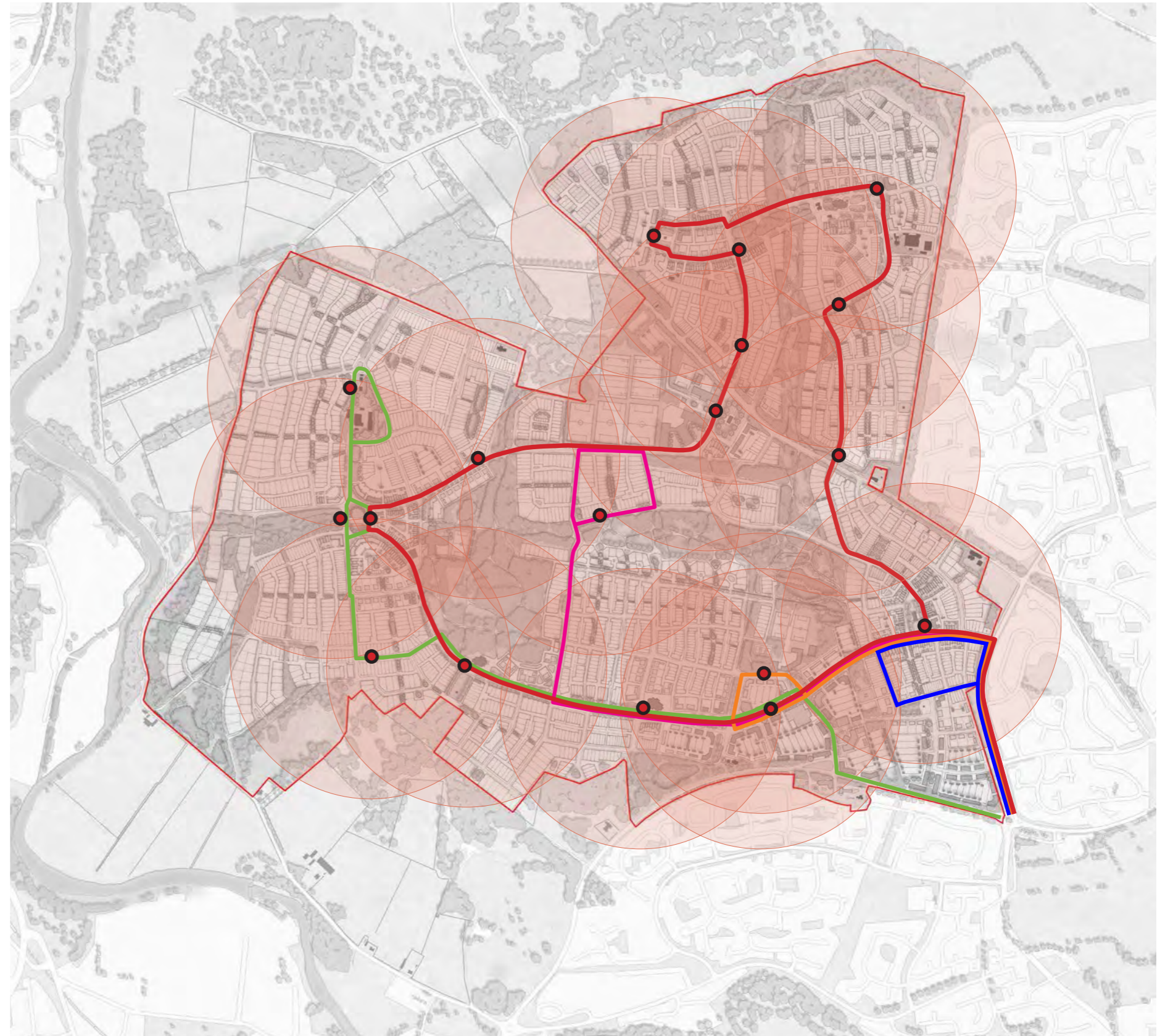


of the site.

Bus routes have been identified for phased implementation, with an initial loop serving Phases 1 to 3 which links the town centre to the western neighbourhood centre and community campus. This loop is expanded to serve Bonnyside and Whitestripes, north of Whitestripes Avenue at Phases 4 and 5. A further route is anticipated to be required to serve Phases 6 and 7. Bus stops are located within a short walk of all homes in line with Policy which requires access to bus services within a 400m walk distance. The location of stops within neighbourhood centres will allow passengers access to shops and other facilities as an integral part of their journey.

The scale of development proposed is anticipated to support provision of services at a high frequency, particularly from Phase 3 onwards, further increasing the attractiveness of this mode of travel.

The strategy identifies routes via 3DC towards Aberdeen City Centre. There is also potential for the development of an orbital route from the Exhibition Centre and the Bridge of Don area via the development and the Mugiemoor development area towards Dyce, Kirkhill and Aberdeen Airport, and



a connection via the Third Don Crossing and Tillydrone towards Aberdeen Royal Infirmary.

Vehicular Access

Following comprehensive development of the settlement the main vehicular access will be provided from the A90 / Parkway with secondary accesses on to Whitestripes Avenue to the east and Whitestripes Road to the north.

The Access Strategy for the site proposes that initial access will be taken from Whitestripes Avenue to serve the first phase of development with a potential second access from Whitestripes Road. As the settlement continues to expand northwards further accesses will be provided on to Whitestripes Road. Future phasing after the implementation of the AWPR anticipates access taken from the Parkway which will then form the main access point to the development and provide a more direct access to the town centre.

The exact location, form and detailed layout of the junction required at each access will be determined through the TA process.

Grandhome Parking Strategy

The development framework includes a mixed neighbourhood parking strategy within residential areas, allowing for on-street, on-site (side/rear garage),



Figure 5.12: Indicative junction arrangement from the Parkway.

courtyard, and mews parking arrangements.

The following principles will underpin the parking strategy for Grandhome:

- Minimising the impact of car parking on public realm, for instance locating car parks behind high-

density mixed-use blocks to create more attractive streetscapes.

- In mixed-use areas, ensure car parking provision is shared when the demand for different uses varies over different times and days.
- Garages shall be counted towards the overall parking



Figure 5.13: Proposed access point on Whitestripes Avenue

provision for residential units.

This approach will act to calm traffic, add character and variety to the streetscape, and provide active frontages to the residential areas.

These principles will be developed further by the Transport Assessment and applied by each masterplan, specific to the issues

that the different parts of the site will generate.



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

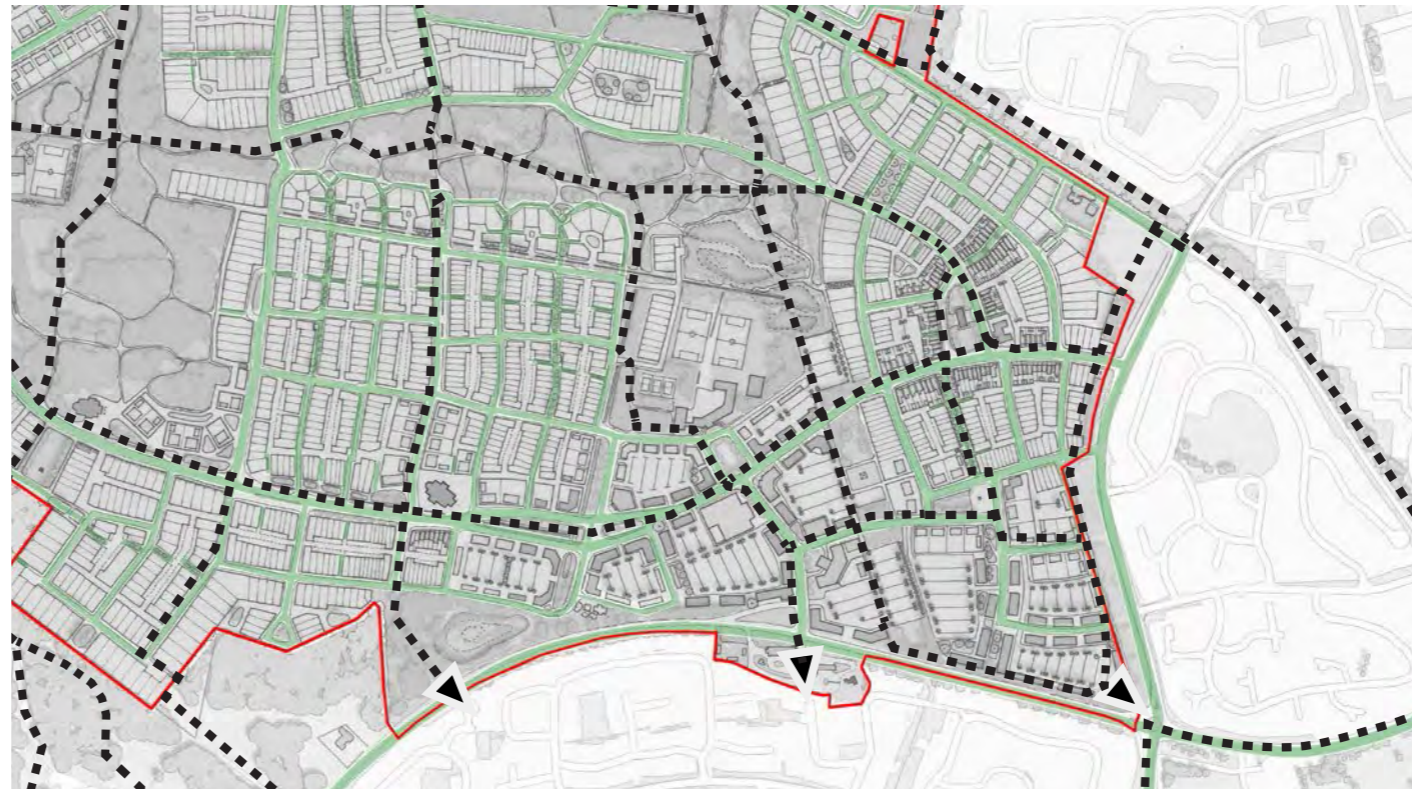


Figure 5.14: Easy to move around - pedestrian connectivity within and to/from the site

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.

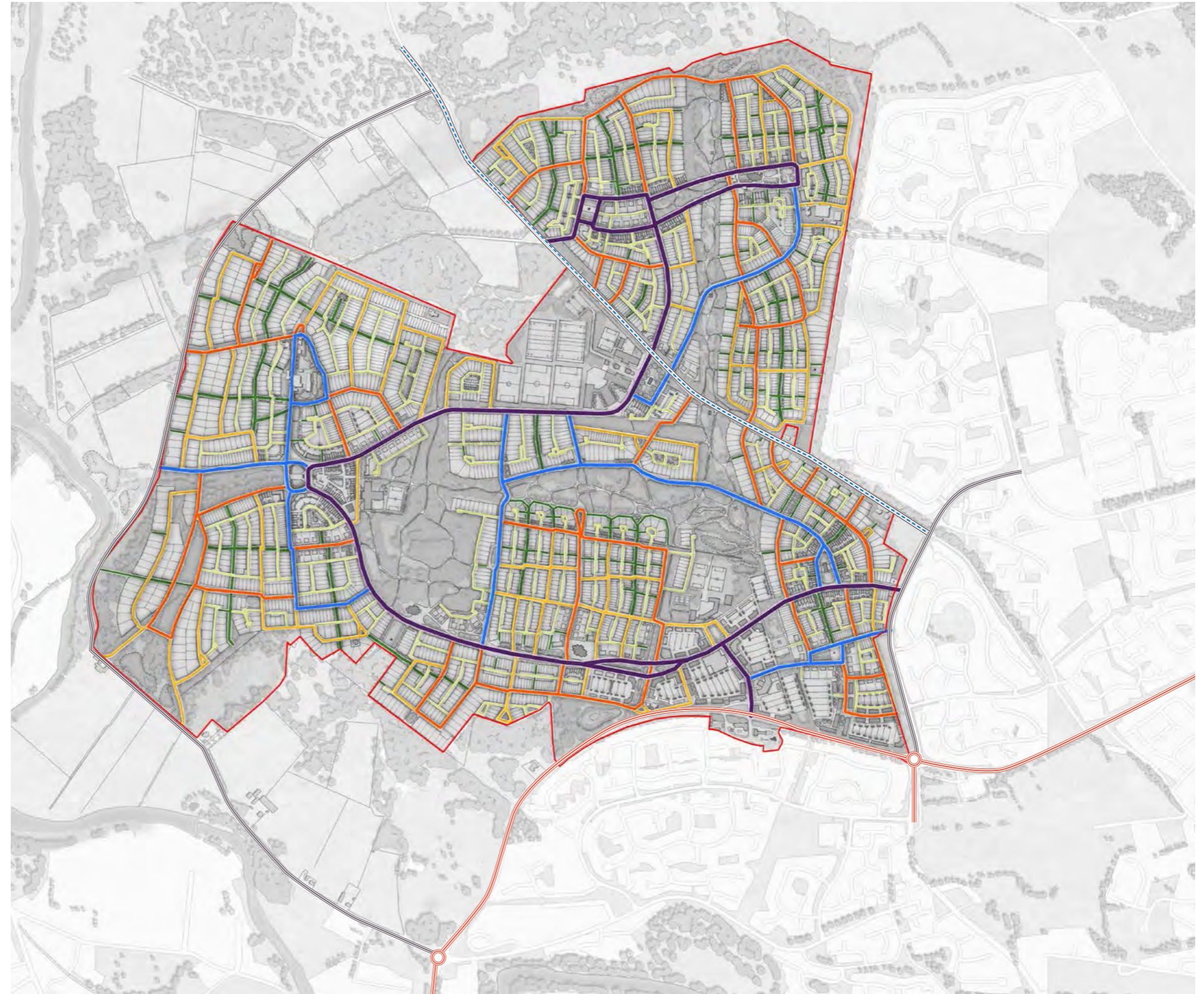
Street tree species will be selected to suit the street type. Larger tree species will be accommodated in major streets or squares while smaller or more narrow-growing species will be used in minor streets, lanes or courts.

Where the development engages with existing roads, these have been

Figure 5.22: Proposed Grandhome street types

-  Existing Bordering Thoroughfares
-  Whitestripes Road (Preferred AWPR Connection Strategy)
-  High Street (Capable of being bus route)
-  Main Street (Capable of being bus route)
-  Street
-  Minor Street
-  Lane / Court
-  Pedestrian Path
-  A90 Parkway

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.



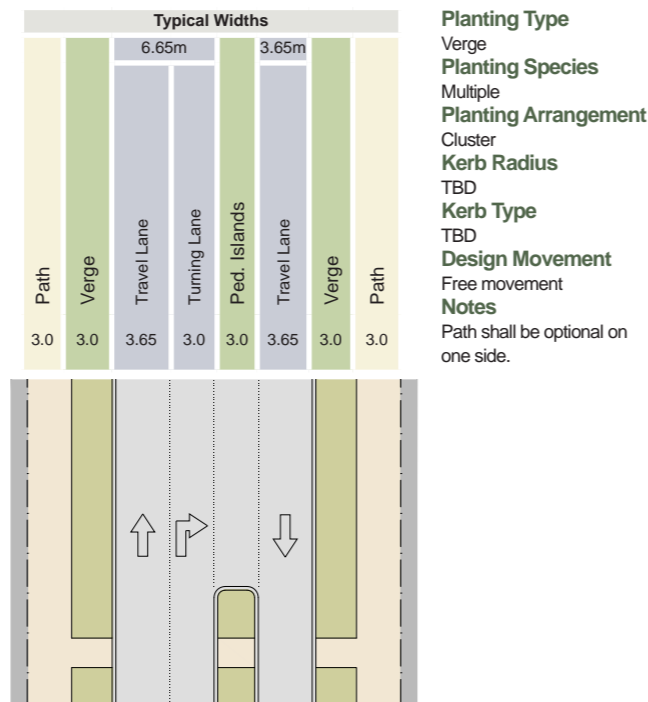
Proposed Sample Street Types

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

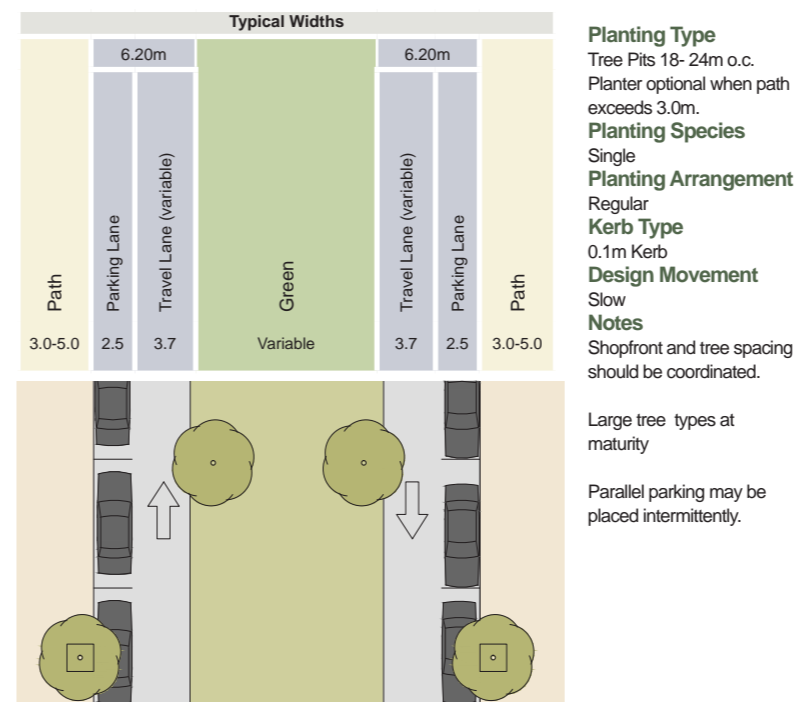
T5 T4

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.

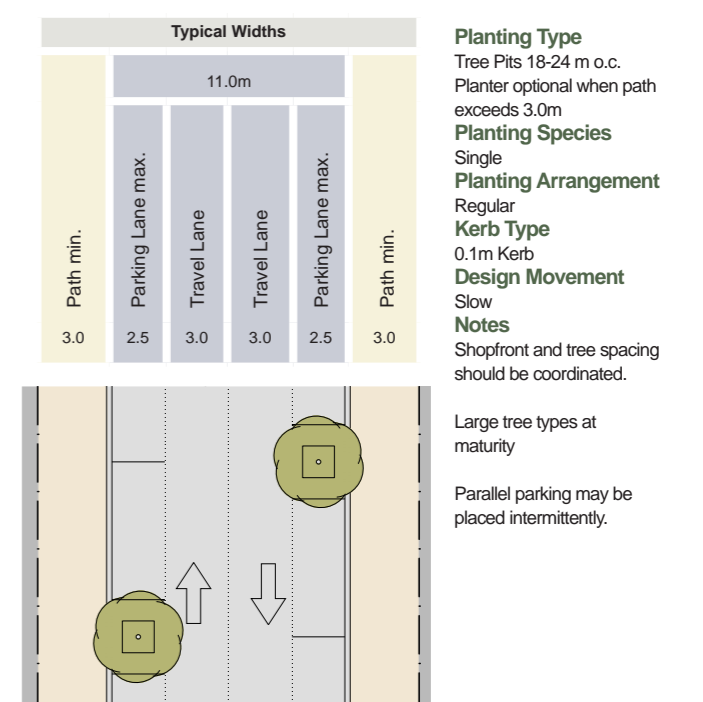
Main Street

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	2.5	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.

