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Landscape and Open Space

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### 3.1.1 Introduction

The purpose of the Landscape and Open Space components of this document is to outline the issues relating to the study area and its hinterland in the context of the LAP and the Louth County Development Plan.

Within the plan lands, a range of existing landscape features will provide the basis of an exciting and diverse network of open space that will be linked to open space and landscape features outside the plan lands. These provisions are essential if Drogheda is to remain a green and attractive place in which to live as it expands, and also if the new residential development is to be integrated with other parts of Drogheda in terms of pedestrian and cyclist access.

Notably, there is potential for linkages between the plan lands to Beaulieu House and the Boyne Estuary to the east, to Killineer House to the north, to the disused quarry lands and the Boyne Valley to the south-west and to the existing open space network to the south. The open space network proposed as part of this Master Plan is designed to facilitate these links as well as service the proposed development.

The basic principle governing the provision of open space is that there should be a clear distinction between 'active' and 'passive' open space. Accordingly, the proposed open space network is organised along a 'passive' Linear Park, with local 'active' open space, as well as school facilities and community services, located close to or along the Linear Park. The most intensively used 'active' facilities, demanding higher specification in terms of construction, management and maintenance will be located outside the plan lands. These facilities will be located to the north of the site, and may form part of a wider campus or network of second and third level institutions and public open space



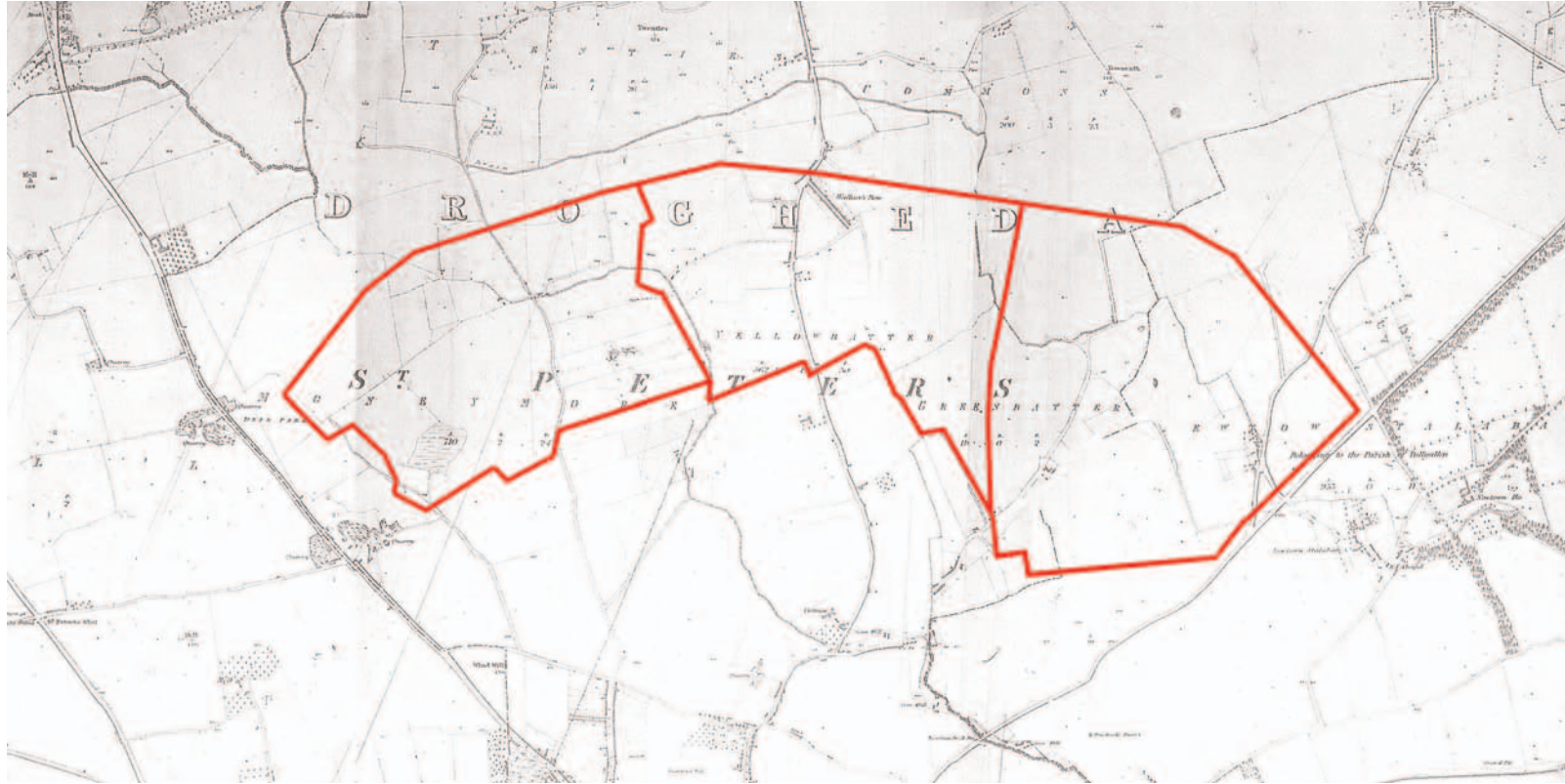
▲ North Drogheda Environs circa 1777

### 3.2.1 Landscape History Of The Plan Lands

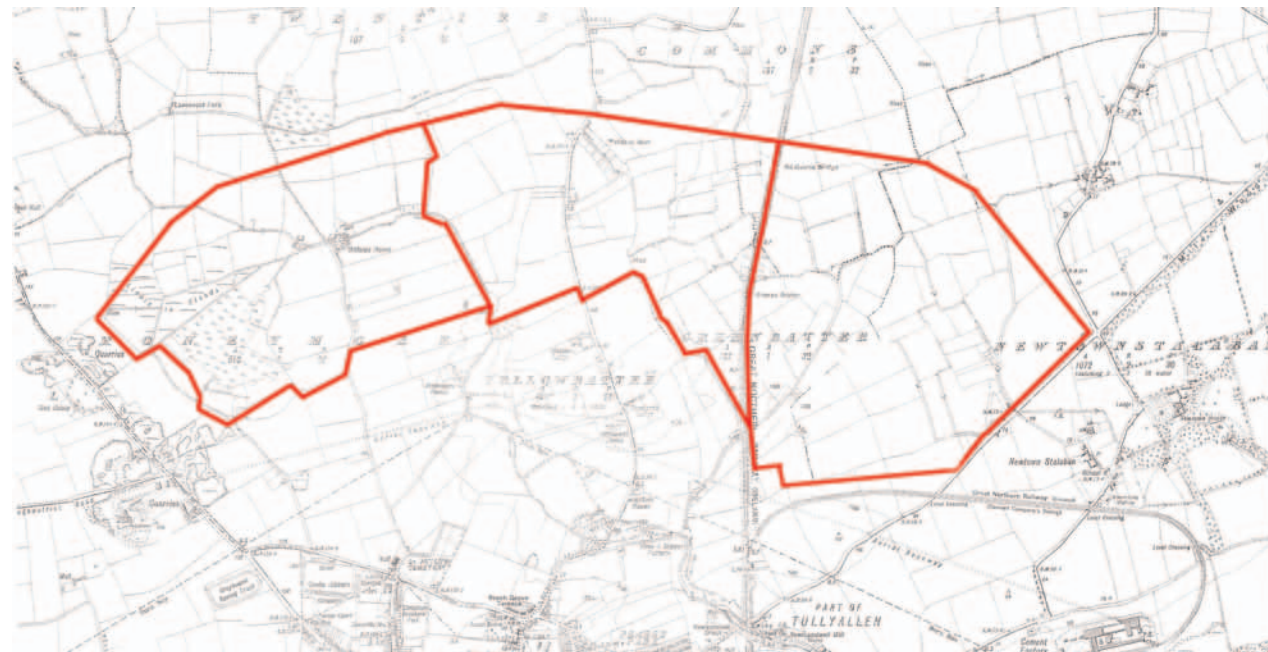
Beaulieu House, which dates from 1660, as well as Newtown House and associated landscape features and planting, are illustrated on the 1777 map. Both lie outside the plan lands but in the near vicinity.

By 1835, Killineer House, to the northwest of the plan area, had been constructed. The Termonfeekin Road was aligned as it is today, forming the eastern boundary to neighbourhood three.

The 1920 Map illustrates the comprehensive development which had occurred during the second half of the 1800s including the construction of the railway, the expansion of the quarries and the construction of aerial ropeways between the quarries and the cement works at the north side of the Boyne Estuary.



▲ North Drogheda Environs circa 1835



▲ North Drogheda Environs circa 1920

A number of features within the plan area are identified, such as 'Hillside House' on Twenties Lane.

All the historic maps feature references to flood plains, streams and drains, which remain largely intact today.

Terms such as 'bleachyards' refer to the process of bleaching flax for the production of linen. It is believed that the flood plain in neighbourhood one was used to soak flax prior to the sun bleaching process.



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1. Flat grazing lands with mature alder hedgerow
2. Grazing lands with partial hawthorn hedgerow
3. Ushers Stream, looking south
4. Farm buildings on Twenties Lane
5. Large field size with hedgerows removed
6. 'Moore's Bridge' at railway, looking east
7. Wetlands/drainage to railway embankment
8. Railway looking west

### 3.3.1 Landscape and Visual Assessment Of The Plan Lands

The site is intimately linked to Drogheda and the Boyne Valley by virtue of its geographical location and the visual and hydrological connections from the site to its immediate hinterland.

Most of the lands are currently farmed and include a mix of grazing and tillage farming. Hedgerows range from Hawthorn dominated to Alder dominated and include species such as ash, willow, elder and blackthorn. Many hedgerows have been removed in the past and replaced with wire fencing. An older field pattern with a large number of mature trees and smaller field sizes exists in neighbourhood two adjacent to the railway line. There are a number of working farm complexes and private dwellings within the plan area. Residential units and a neighbourhood centre are under construction to the east of the site, in neighbourhood three.

Usher's Stream and Beaulieu Stream, drain and subdivide portions of the site. The site is further subdivided by the north-south railway axis. A naturally occurring floodplain exists within neighbourhood one.

The lands through the centre of the site are generally flat, falling gently towards the east. Locally extreme topography exists along certain portions of Twenties Lane. High points exist along the northern portion of the site.

Strong views and vistas to the town of Drogheda, the Boyne Valley and beyond are afforded from high points on site.

Demesne landscape features of extraordinary quality are found outside but directly adjacent to the plan area. These include planting associated with Newtown House, Killineer House and, most notably, Beaulieu House.

### 3.4.1 Objectives – Management & Maintenance of Public Open Space

It is proposed that over the development period of this Master Plan, as public open space is 'taken-in-charge' (linear park & sports centre only to be taken in charge), Louth County Council will take on the role of management (rather than maintenance), with the day to day maintenance of public open space reduced significantly and carried out by tendering landscape contractors and property management firms.

The open space network of the Master Plan is designed to facilitate a move away from 'high-input' \* landscape maintenance to 'low-input' \*\* landscape management, and the quantum of Space Left Over After Planning (SLOAP) is minimised across the plan area. The proposed road profiles do not include large grassed margins or reservations. Many of the proposed sports/leisure facilities are located and configured in order to enable their maintenance by the private sector.

The quantum of public open space is fixed by the LAP at 20% of the lands zoned for residential development, allowing for 15% located within the plan area plus 5% located outside the plan area.

A large proportion of the proposed open space network comprises native planting which will, with good management and little maintenance, form viable and diverse native plant communities, invaluable in terms of their contribution to the flora and fauna of the plan area, as well as to long-term educational and community development. The 'Wetland Park' in neighbourhood one and the 'Linear Park' are good examples of 'low-input' landscape types and together they account for approximately 40% of the open space network. The quantity of mown, grassed open space ('high-input') is relatively small and is located in well controlled, well defined areas within the urban design framework, such as pocket parks.

In summary, the main objectives of the Master Plan, in terms of management and maintenance of open space are to:

- Maximise efficiency of landscape types by promoting high proportion of native planting;
- Maximise biodiversity;
- Reduce petro-chemical and human resource inputs;
- Protect existing structural landscape, where possible, to act as 'engine' for development of plant communities;
- Develop neighbourhood one floodplain as native wetland area to act as a park within the plan area;
- Concentrate high-input landscape types such as high specification sports pitches in suitable locations; and,
- Contract work for maintenance of high-input landscape types, with Louth County Council retaining a management role.

*\* High-input refers to landscape types that require ongoing high levels of resources to maintain (and may also require skilled management techniques). Examples are close mown swards and sports surfaces.*

*\*\* Low-input refers to landscape types that require a low level of resources in terms of maintenance (but may require skilled management techniques). Examples are simple woodland matrix planting and meadows.*

### 3.4.2 Objectives – 'Active' and 'Passive' Open Space

The Master Plan recognises the need for leisure, sports and community facilities. In order to deliver high quality facilities, designed and built to a high specification, it is proposed to concentrate or cluster facilities in key locations. By concentrating intensive active uses, the efficient maintenance and long-term management of both active and passive open space is facilitated.

Recent projects in Ireland, developed by local authorities and managed for public use have successfully combined public and private sector management and maintenance skills to provide high quality, value for money facilities.

The main objectives of the Master Plan in terms of active and passive open space are to:

- Cluster active open space facilities;
- Locate some active open space facilities in or close to civic / commercial centres;
- Promote the development of a large centre of active facilities north of the plan area (Sports Park);
- Provide flexible open space adjacent to proposed schools, which can be used to suit the requirements of the schools at particular times or events;
- Develop the Linear Park as a continuous passive open space experience, with connections to active areas; and
- Promote low-input wildlife habitats and urban forestry in passive open space.

### 3.4.3 Objectives – 'Taking in Charge' of Public Open Space

This Master Plan document outlines the general nature, extent and location of the proposed public open space network, most of which shall be taken in charge and managed by Louth County Council; these open spaces are the Linear Park, Wetland Park and Sports Centre. Pocket parks will not be taken in charge by the Council.

The Council will examine various models for the management and maintenance of developments including, where appropriate, management companies and other agreements. The objective is to secure a high level of management and maintenance of public utilities and spaces in the area.

### 3.4.4 Objectives – Private Open Space

The minimum standards for private open space are tabled under Section 2.3.1.3. The standards allow for a variety and mix of private open space, depending on unit type.

The main objectives of the Master Plan, in terms of private open space are to:

- Maximise quantum of useful private open space per household;
- Promote good quality shared private open space for apartment developments;
- Protect existing structural landscape;
- Promote the concept and practice of Urban Forestry. Refer to Section 3.4.5 Objective – Urban Forestry and Landscape and Open Space Policy 1

#### Landscape & Open Space Objective: LOS 1

Louth County Council will promote the concept and practice of Urban Forestry, whereby all trees, in both public and private open space, are considered and managed as one population. This shall be facilitated through the selection of trees for planting in both public and private open space from agreed schedules.

#### Landscape & Open Space Objective: LOS 2

Before open space is 'taken in charge' and to ensure the quality of the various components of the public open space network, developers shall be obliged to satisfy certain quality control mechanisms set down by Louth County Council. All, or a number, of the following quality control mechanisms shall be applied by Louth County Council to individual developments.

1. Conditions attached to granting of planning permission such as:

- Tree species selected from specific schedules of native species
- Minimum quantities and sizes of trees for specific purposes
- Planting of portions of open space prior to building works commencing, and other phasing mechanisms
- Detailed finished levels for open space areas relative to adjoining public roads to satisfaction of the Council

2. Financial bonds to ensure:

- Protection of existing trees, hedgerows, streams and other landscape features
- Proper construction and planting of open space according to conditions

3. Financial contributions.

### 3.4.5 Objectives – Urban Forestry

The benefits of woodland as a landscape type, are numerous and include aesthetic, recreational and economic benefits. However, woodlands require management and the Council will wish to be satisfied that any landscape scheme includes proposals for the proper management of woodland.

In general, the annual cost of maintaining and managing simply designed wooded areas is significantly less than that for close mown amenity grassland.

The Master Plan promotes the development of woodland as a natural and amenity resource and promotes the use of current funding and information mechanisms such as the Neighbourhood Scheme and future schemes that may become available during the Master Plan's development period.

The Neighbourhood Scheme is designed to promote woodlands for public access and recreation. The Neighbourhood Scheme offers support to local authorities, community groups, environmental NGOs and private woodland owners to work in partnership to develop appropriate woodland amenities in and around villages, towns and cities. These 'neighbourhoods' represent a resource for all and form an integral part of the locality and community life. The Neighbourhood Scheme is funded by the Forest Service of the Department of Agriculture and Food under the National Development Plan 2000–2006, supported by the European Union. It is administered by the Forest Service and will operate until the end of 2006.

#### Landscape & Open Space Objective: LOS 3

In submitting detailed landscape schemes for the plan lands to the Council, developers must seek to fulfil the Master Plan's objectives for the management of trees and woodlands.

The main objectives of the Master Plan in terms of management of trees and woodland are to:

- Highlight the concept of Urban Forestry and the need for skilled long-term management;
- Identify and conserve existing structural landscape elements in the plan area;
- Create linkages between landscape elements within the plan area and landscape features beyond;
- Promote the use of native tree species in planting schemes and promote the use simply designed woodland as opposed to complex woodland mixes which require intense management and maintenance;
- Identify areas where particular species mixes are appropriate to ground conditions;
- Promote habitat types as recommended by the Heritage Council to achieve above; and
- Develop funding and procurement of tree planting schemes.

#### Useful Organisations and References

##### Organisations:

The Tree Council of Ireland  
 The Heritage Council  
 Coford  
 The Forest Service, Dept. of Agriculture & Food  
 National Development Plan (NDP) 2000–2006  
 The National Urban Forestry Unit (UK)

##### References:

Trees or Turf? – Best Value in Managing Urban Green Space. The National Urban Forestry Unit (UK)  
 Trees & Woods in Towns & Cities – How to Develop Local Strategies for Urban Forestry. The National Urban Forestry Unit (UK)

#### Landscape & Open Space Policy: LOS 4

One or more of the following planting schedules, as compiled by the Heritage Council, 'A Guide to Habitats in Ireland', shall be used in all developments within the plan area. The planting schedules shall be specific to existing, retained planted features on site, such as tree lines, hedgerows, stream edges and permanently flooded areas.

##### Semi-natural Woodland

###### WN 6 – Wet Willow Alder Ash Woodland

Alnus glutinosa (alder)  
 Salix cinerea (willow)  
 Fraxinus excelsior (ash)

##### Linear Woodland

###### WL 1 – Hedgerows

Crataegus monogyna (hawthorn)  
 Prunus spinosa (blackthorn)  
 Ilex aquifolium (holly)  
 Fraxinus excelsior (ash)  
 Corylus avellana (Hazel)  
 Sambucus nigra (elder)

###### WL 2 – Treelines

Fagus sylvatica (beech)  
 Aesculus hippocastanum (chestnut)  
 Tilia ssp. (lime)  
 Quercus robur (pedunculate oak)

### 3.4.6 Objectives – Open Space & Storm Water

The Master Plan provides for the use of certain open spaces as storm water attenuation areas. The proposed 'Wetland Park' as well as the 'Linear Park', with the potential for altering the profiles of the Beaulieu and Ushers Streams, represents approximately 12 hectares of open space, within which attenuation or management of storm water may be facilitated, subject to there areas being continuously available for public use.

The 'Wetland Park' and 'Linear Park', while facilitating storm water attenuation will also function as wildlife habitats and will facilitate informal play and kick-about areas as well as cycle and pedestrian routes. The functional requirements for these areas shall be the determining factor in considering parts of these areas for attenuation. The eventual surface area of the 'Wetland Park' shall be determined by the extent of the actual flood plain, the nature of the proposed development immediately adjacent, and detailed flood and flow studies.

No other public open space shall be used for attenuation or management of storm water unless otherwise agreed in writing with the Council as part of the required Stormwater Management Strategy for the Plan lands and Environs (Also see LOS 5)

#### Landscape & Open Space Objective: LOS 5

If attenuation is the preferred option, it must occur remotely from the stream courses. The Pocket Parks, due to their locations, are suited to attenuation. It would be reasonable, therefore to allocate a portion of the surface area of the Pocket Parks for attenuation. The following open spaces shall NOT be used for storm water attenuation:

- Railway Park\* (location for play and sports facilities)
- Sports Centre (off site)
- Pocket Park (up to 50% of the total surface area of each individual pocket park)

The following open spaces may be used for storm water attenuation:

Pocket Park (up to 50% of the total surface area of each individual pocket park)

All other open space not listed above.

\* Railway Park may flood anyway, because of its proximity to a restriction in the Beaulieu Stream

### 3.5.1 Public Open Space Quantum

In accordance with National Policy as expressed in the Residential Guidelines, the required public open space provision is calculated on the basis of the gross area of the Plan lands. In the context of this Plan the 'gross area' excludes the Port Access Northern Cross Route, the Railway Line, Termonfeckin Road, Sienna Convent and lands developed/committed to development in Neighbourhood 3. The LAP states that public open space shall be 20% of the total area zoned for residential development. The LAP also states that a quarter of the public open space requirement will be provided outside of the Plan lands.

Plan Lands Currently Under Construction:	32 ha*
Plan Lands Subject to Development:	219 ha**
Total Area Zoned Residential Development:	254 ha

<u>Open Space Components</u>	<u>Required Within Plan Lands</u>	<u>Required Outside Plan Lands</u>
Linear Park	5.44 ha	
Links to Open Space outside plan area	1.92 ha	
Wetland Park	6.80 ha ***	
Ridge Park	1.30 ha	
Hollow Park	0.70 ha	
Railway Park	1.40 ha	
Bridge Park	1.00 ha	
Pocket Parks (Total)	14.29 ha ****	
<b>Subtotal</b>	<b>32.85 ha</b>	<b>12.55 ha*</b>
Existing Open Space	3.20 ha	
Total within Plan lands	36.05 ha	
Total outside Plan lands		12.55 ha
<b>Total Public Open Space</b>	<b>48.60 ha</b>	

Facilities in Addition to the 15% Quantum	
Neighbourhood 1 School	1.20 ha
Neighbourhood 2 School	1.20 ha
Neighbourhood 3 School	1.20 ha
<b>Total</b>	<b>3.60 ha</b>

**Landscape & Open Space Objective: LOS 6**  
 The Reserved Attenuation Area (15.8 ha) shall be considered for development following a detailed Flow & Flood Study over an extended time period (at least 5 years, refer to Section 5 Infrastructure). If the study finds the area is necessary for attenuation purposes, then it shall not be developed and shall be retained as open area in addition to the public open space quantum set out in this Plan.

- \* Neighbourhood 3 comprises 32 ha of land currently under construction with a 10% quantum (3.2 ha) of open space currently allocated within the Plan lands. An additional 5% quantum (1.6 ha) of open space shall be contributed to the Sports Centre. The quantum of open space outside the Plan lands will therefore total 12.55 ha.
- \*\* The proposed quantum of public open space within the Plan lands is calculated independently from the 3 ha of Sienna Convent and the 32 ha of land currently under construction, therefore 15% (32.85 ha) of the remaining 219 ha will be allocated to public open space within the Plan lands and 5% (10.95 ha) of the same remaining 219 ha will be contributed to the Sports Centre.  
 The total quantum of open space within the Plan lands will comprise of the existing 3.2 ha of public open space and the proposed 32.85 ha of public open space for a total of 36.05 ha. The total quantum of open space to contribute to the Sports Centre will comprise of 1.6 ha and 10.95 ha for a total of 12.55 ha of public open space outside the Plan lands.
- \*\*\* The full extent of the Wetland Area in NH 1 is 22.6 hectares, of which 6.8 ha is allocated as open space. The balance of the area (15.8 ha) shall not be developable until a detailed flood analysis is completed over an extended period of time (see Infrastructure Section 5) If the study finds the area is necessary to be retained as part of the floodplain then the balance (15.8 ha) will be added to the overall quantum of public open space in the Plan lands.
- \*\*\*\* Pocket parks comprise three types:  
 Type 1 (close to Linear Park and incorporating existing hedgerows protected)  
 Type 2 (remote from Linear Park, more open characteristic)  
 Type 3 (at boundary of plan area, configured to allow future connecting open space outside plan area).

### Landscape & Open Space Objective: LOS 7

The exact location, size and dimensions of each pocket park shall be agreed in writing with Louth County Council at the planning application stage for each development. The network of pocket parks, when complete, shall provide a composite set of recreational facilities across the Plan lands. In this regard, a 'Park Provision Strategy' shall be submitted for the agreement of the Council prior to development commencing on the Plan lands.

Pocket parks shall be arranged to facilitate the retention of existing landscape features where appropriate, the provision of informal flat 'kick-about' areas and the provision of at least one specific recreational facility such as a playground for a specific age group or a board-games table and seating or such similar facility for adults and/or elderly persons.

For example, one pocket park shall contain a play facility for 4-8 year olds (e.g. a Local Equipped Play Area, or LEAP, as specified by the National Playing Fields Association), while a neighbouring pocket park shall contain a play facility for 8-12 year olds (e.g. A Neighbourhood equipped Area for Play, or NEAP, as specified by the National Playing Fields Association), and so on.

Finished levels for the parks relative to adjoining finished levels, shall be provided with planning applications. In addition, detailed layouts for the pocket parks, including landscaping and active/passive facilities shall be provided with planning applications in the relevant residential area serving the park.

Pocket Parks are intended as informal open spaces benefiting from passive surveillance by adjacent residential properties. They should not be fenced or enclosed and should include pedestrian routes which might be necessary to link to other open spaces or streets; external lighting; some street furniture; planting (mainly trees).

**3.5.1.1 Public Open Space Quantum**

**Proposed Minimum Specification for Sports Centre\***

<u>Item</u>	<u>Quantity</u>	<u>Gross Dims/Pitch (m)</u>	<u>Gross Area/Pitch (ha)</u>	<u>Total Area (ha)</u>
Gaelic Games Pitch	4	148 x 88	1.3	5.20
Association Soccer Pitch	4	118 x 81	0.95	3.80
Rugby Union Pitch	1	150 x 84	1.26	1.26
All-weather/Mini Pitch	4	-	-	1.40
Tennis Court	4	-	-	0.23
<b>Total Area Playing Surfaces (ha)</b>				<b>11.89</b>
Plus:				
Changing/storage/administration facility				
Operational facilities (maintenance etc.)				
Floodlighting to all-weather pitches				
Min. 100 space car park plus miscellaneous external areas for drop-off, service and other facilities				
Associated fencing and boundary treatments and associated landscaping and external works.				
<b>Total Area for Sports Centre (ha)</b>				<b>12.55</b>

\* Indicative and subject to a detailed design specification as agreed with Louth County Council, to ensure the pitches are properly constructed and drained etc. The exact breakdown of sports facilities shall be determined following consultation with existing sports clubs and may be subject to the County Recreational Needs Study which is currently being prepared by Louth County Council.

**Landscape & Open Space Objective: LOS 8**

The Sports Centre shall serve, primarily, the residents of the plan lands and shall be managed by or on behalf of Louth County Council. The range of facilities that it may include are as follows: Sports building with changing facilities; gym; all-purpose sports hall; café; all weather pitches (GAA pitches, soccer pitches and other major sports); informal kick about/training area; tennis courts; athletics facility; parking; maintenance building/yard; warden/security facility; deliveries/unloading area; bus stop/taxi/car drop-off point; playground/play area; and landscaping

The quantum under 3.5.1.1 should be considered as a minimum specification for the proposed Sports Centre which constitutes 5% open space quantum located north of the Port Access Northern Cross Route (PANCR).

The Sports Centre facilities shall be provided at the developers expense in accordance with the Master Plan Phasing Programme (see Section 6 and the minimum specification under Table 3.5.1.1). A detailed specification shall be submitted to the Planning Authority prior to the commencement of any development of the Master Plan lands (Section 6).

**3.5.2 Public Open Space Quantum**

In accordance with the requirements of the Local Area Plan, the Public Open Space requirement is 20% of the Master Plan lands, and accordingly has been calculated on the basis of the gross hectareage of the plan lands, and excluding the Port Access Northern Cross Route, the Railway Line, Termonfeckin Road, Sienna Convent and lands developed/committed to development in Neighbourhood 3.

A minimum of 15% of the open space is distributed throughout the plan area across the three neighbourhoods.

A maximum of 5% is located outside the plan area. This area of land shall be designated for high specification sports facilities and shall be located to the north of the proposed PANCR. The exact boundaries of this land shall be determined by the topography and suitability of the lands for sports facilities.

The public open space quantum outlined in this document are exclusive of roads and associated landscape treatments, additional areas required within individual developments for storm water attenuation, lands owned by or used exclusively by private sporting clubs or other organisations.

The Wetland Park (6.8 ha), while functioning as a storm water attenuation area, shall be included in the 15% open space within the plan area. The exact surface area, which shall not be less than 6.8 hectares, shall be determined by the extent of the actual flood plain and the nature of the proposed development immediately adjacent (see Figure 4.6A on page 42 and Section 3.4.6).

The reserved attenuation area shall act as a buffer zone pending the completion of detailed flow studies of the area, including the Beaulieu and Ushers Streams.



- Main Open Space
- Pocket Parks
- Sports Centre

### 3.6.1 Public Open Space – Main Components

The main proposed open space components are:

#### *Within Plan Area*

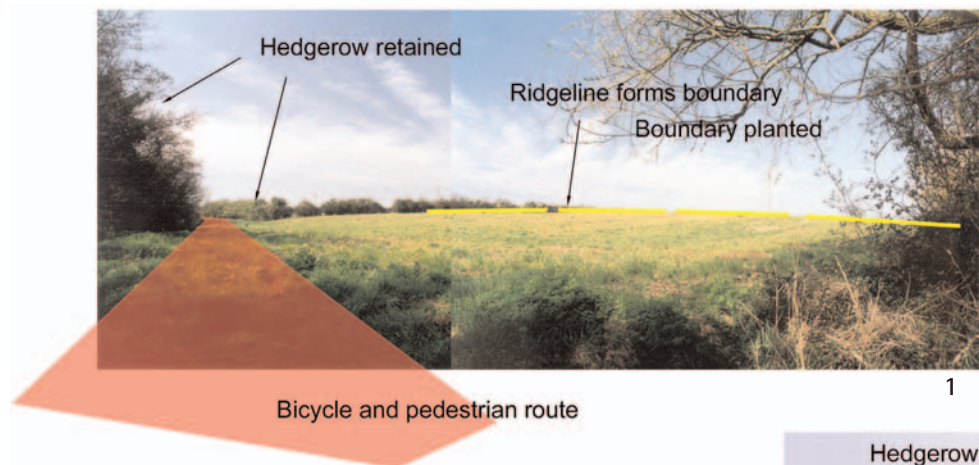
1. Linear Park (Low-input)
2. Secondary Links to other spaces (Low-input)
3. Wetland Park (Low-input)
4. Twenties Lane Farmyard
5. Ridge Park (Med-Low-input)
6. Hollow Park (Med-Low-input)
7. Railway Park (Med-Low-input)
8. Bridge Park (Med-Low-input)
9. Pocket Parks (High-Med-input)
10. Existing Open Space

#### *Outside Plan Area*

11. Sports Centre (High-input)

#### Landscape & Open Space Objective: LOS 9

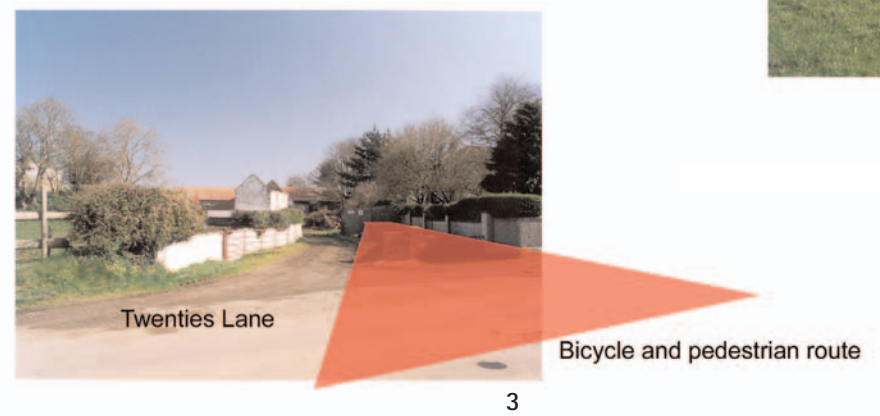
At least three safe and secure pedestrian and cycle links shall be provided to link the Plan lands with open lands north of the PANCR: two under the Port Access Northern Cross Route to the "Greenbelt" on the North, including one to link with the proposed Sports Centre; and, a third pedestrian bridge at Dublin / Belfast Railway.



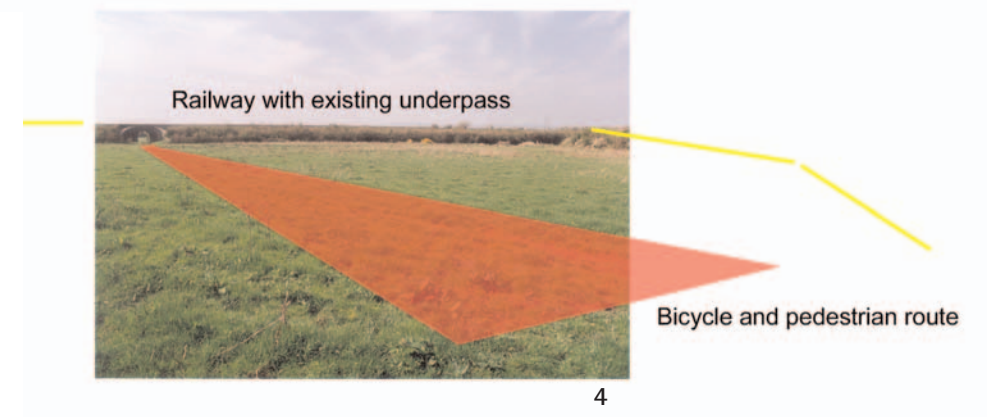
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### 3.7.1 Design Guidelines – Main Cycle & Pedestrian Route

The Master Plan includes a main east-west cycle and pedestrian route designed to link the civic centres, schools, and community buildings and to connect to existing and future links outside the plan area.

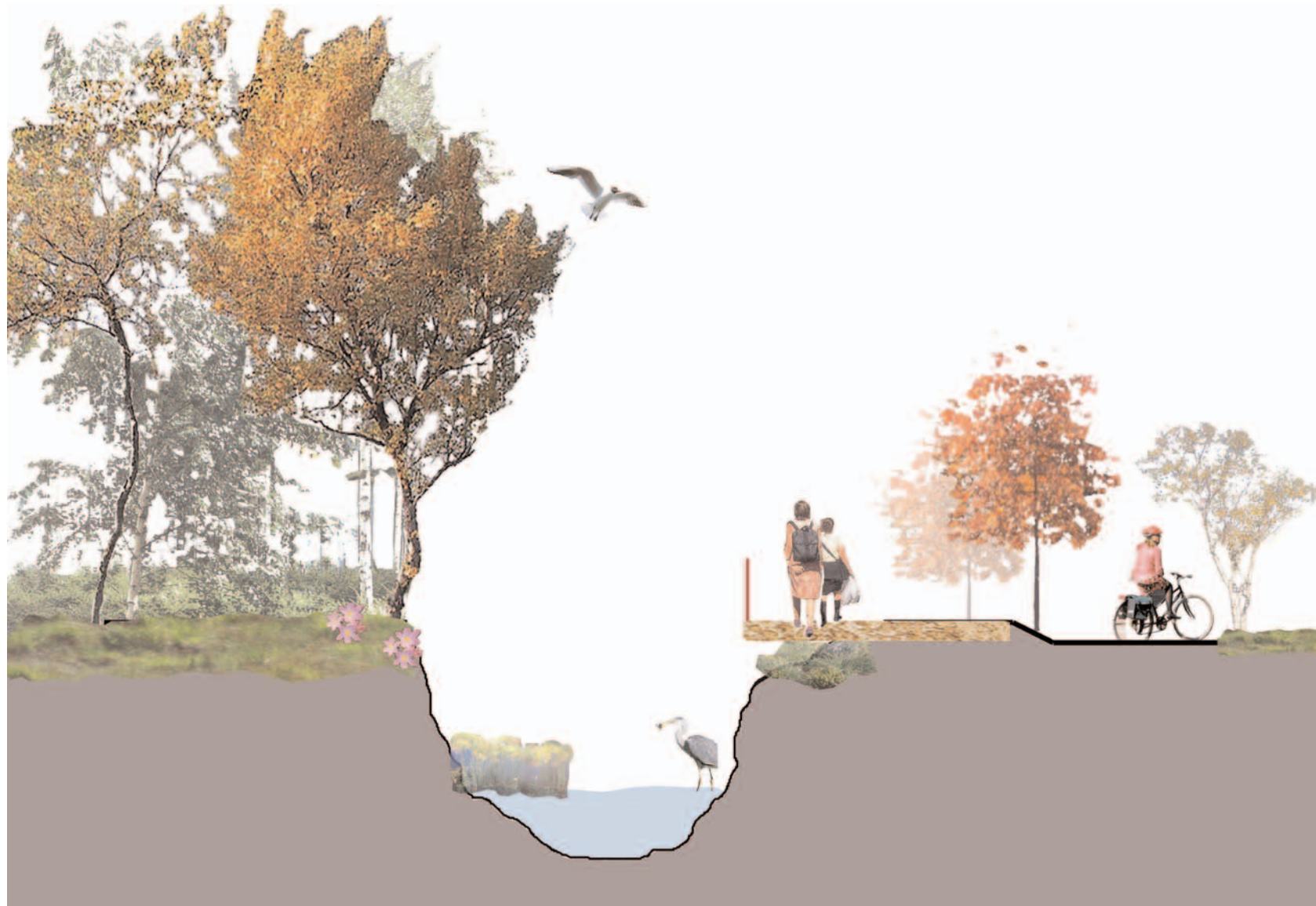
The cycle and pedestrian route continues through the Linear Park which connects the main open spaces below:

- Wetland Park
- Twenties Lane Farmyard
- Ridge Park
- Hollow Park
- Railway Park
- Existing Open Space

The location and morphology of these open spaces is identified on the basis of existing streams, hedgerows, local topography and archaeology.

The images on the facing page illustrate a number of examples where local ridgelines, streams and hedgerows form the boundaries of proposed open space. These are:

1. 'Ridge Park' - looking west to "Twenties Lane Farmyard"
2. 'Hollow Park' - looking east
3. 'Twenties Lane Farmyard' - looking east
4. 'Railway Park' - looking west



▲ Indicative Section AA



### 3.7.2 Design Guidelines – Linear Park

#### Section AA (Indicative)

Both the Usher's Stream and the Beaulieu Stream have been identified as habitats with local importance. In addition, they feed into the Boyne Estuary, and as such, changes to the streams may have an effect at the Estuary. The Linear Park is proposed, where possible, to follow the course of the streams, thereby protecting the streams from development and, where wide enough enhancing the existing habitats.

Section AA illustrates the Linear Park along a tributary of the Ushers Stream, showing the minimum requirement (subject to policy LOS 9):

- Existing hedgerow retained and protected
- Existing stream profile retained
- Proposed pedestrian route
- Proposed cycle route
- Proposed planting

#### Landscape & Open Space Objective: LOS 10

Protect and increase wildlife connectivity through the design of the Linear Park and other wildlife corridors linking North Drogheda Environs with other significant habitat areas such as the adjacent Demesne Landscapes and the Beaulieu Gardens.

Habitat strategies that protect and/or establish wildlife corridors:

- Rooftop gardens
- Increase tree canopy
- Stream preservation and restoration
- On-site storm water treatment
- Use of planting schedules (LOS 4)
- Use of native groundcover species



▲ Indicative Section BB



### 3.7.2 Design Guidelines – Linear Park

#### Section BB (Indicative)

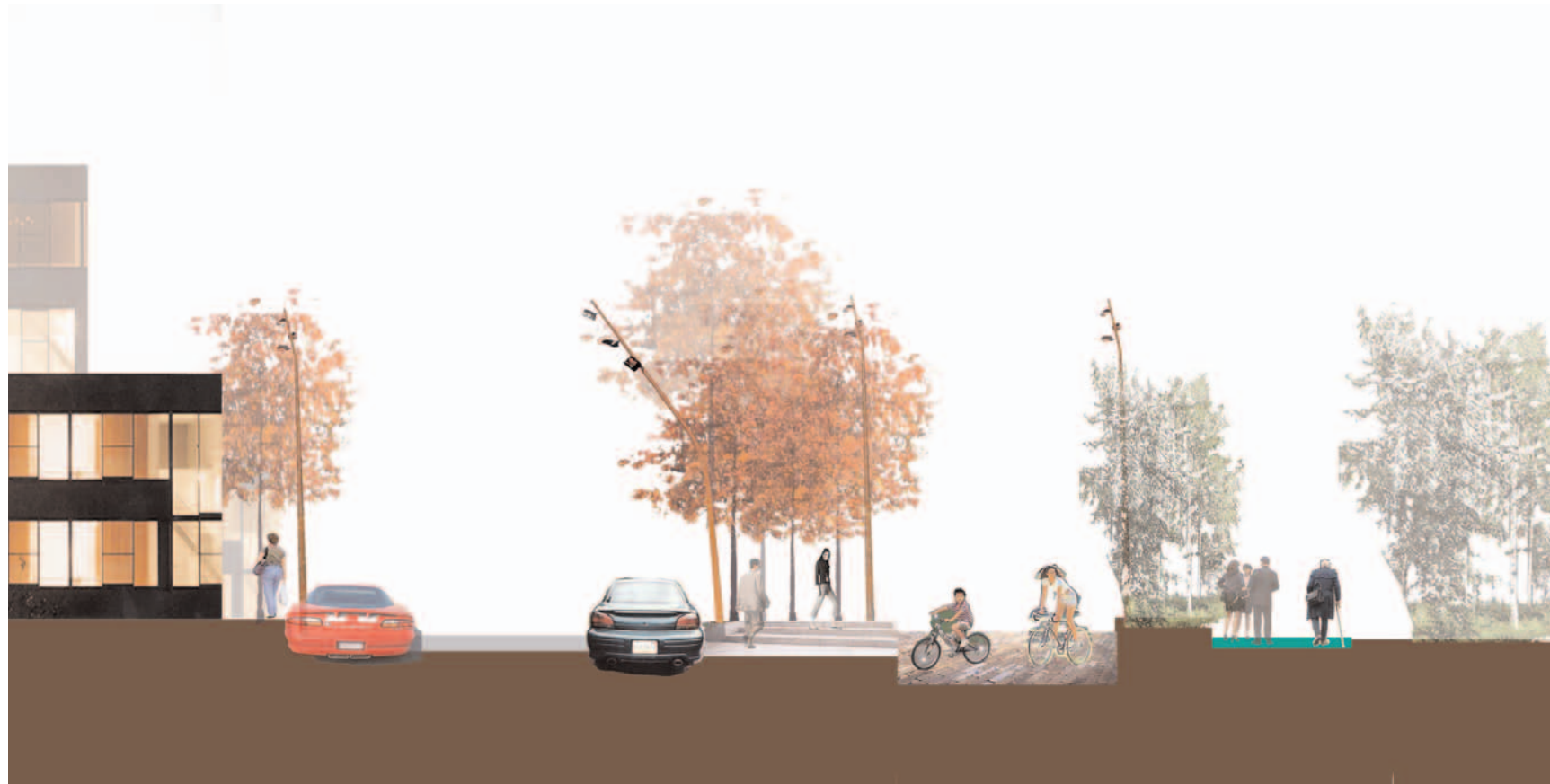
Portions of the streams are currently deep with steep embankments. These may be required to be re-profiled for reasons of safety and accessibility. In addition, although the Master Plan seeks to protect existing streams, there may be a requirement to re-profile portions of streams to enable surface water drainage.

Section BB illustrates the Linear Park along a tributary of the Ushers Stream, re-profiled:

- Existing hedgerow retained and protected
- Existing stream profile widened
- Proposed pedestrian route
- Proposed cycle route
- Proposed planting
- Proposed External Lighting

#### Landscape & Open Space Objective: LOS 11

Where it is necessary to re-profile, widen or deepen existing streams to facilitate drainage or for any other reason, the edge condition shall be re-instated under the supervision of a properly qualified ecologist. Streams shall not be culverted except in the three civic / commercial centres. All proposed works shall be subject to detailed environmental assessment which shall include appropriate mitigating measures to protect and re-instate habitat.



▲ Indicative Section CC



### 3.7.2 Design Guidelines – Linear Park

#### Section CC (Indicative)

The proposed Linear Park does not follow continuously the course of the Ushers Stream or the Beaulieu Stream. In addition, it interfaces with built development at a number of locations.

Section CC illustrates a typical profile of the Linear Park where it has deviated from the alignment of the streams and where it interfaces directly with built development. The typical requirements are:

- Street tree planting and external lighting
- Proposed cycle route
- Proposed planting
- Proposed pedestrian route & existing hedgerow and/or proposed planting

#### Landscape & Open Space Objective: LOS 12

Where the edge of the Linear Park is defined by built development it should be built edge (3 to 4 storeys).

#### Landscape & Open Space Objective: LOS 13

The width and character of the linear park shall alter according to existing conditions on site and the nature of the proposed development. The minimum requirements shall, where possible, include the retention and protection of existing hedgerows; the retention of stream profiles; and shall include pedestrian and cycle routes; and, planting with native species.

### 3.7.2 Design Guidelines – Linear Park

#### Section DD (Indicative)

The proposed Linear Park connects a series of open spaces, at which it widens to accommodate areas of recreation and amenity.

Section DD illustrates an area provisionally entitled 'Hollow Park', located in Neighbourhood 2, where there is an existing hollow of approximately 4000 sqm (1 acre). The ridgeline around the edge of the space is proposed to be planted to emphasise the enclosure. The pedestrian and cycle route continue through the space but are separated as shown.

Section DD shows:

- Existing hedgerows retained
- Ridgelines planted
- Proposed cycle route and external lighting
- Proposed pedestrian route
- Informal active recreation area



▲ Indicative Section DD





▲ Indicative Section EE



### 3.7.3 Design Guidelines – Street Profiles

#### Twenties Lane

##### Section EE (Indicative)

Twenties Lane runs north from Drogheda through Neighbourhood 1.

The character of the existing road in terms of its topography, southern alignment and existing vegetation will be retained.

Section EE illustrates:

- Existing hedgerows retained and protected
- Proposed housing to Twenties Lane
- Proposed footpaths on Twenties Lane

#### Landscape & Open Space Objective: LOS 14

The southern section of Twenties Lane shall be retained for access to existing housing and its character, alignment and existing vegetation shall also be retained.



▲ Indicative Section FF



### 3.7.3 Design Guidelines – Street Profiles

#### Port Access Northern Cross Road

#### Section FF (Indicative)

The Port Access Northern Cross Route, connecting the port and the M1, is to be constructed along the northern boundary of the plan lands. The design comprises a single carriageway in both directions.

Section FF illustrates a typical section including:

- Proposed planting and mounding along the boundary of the plan lands
- Proposed housing and rear gardens to the south of the road
- Cycle routes adjacent

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