

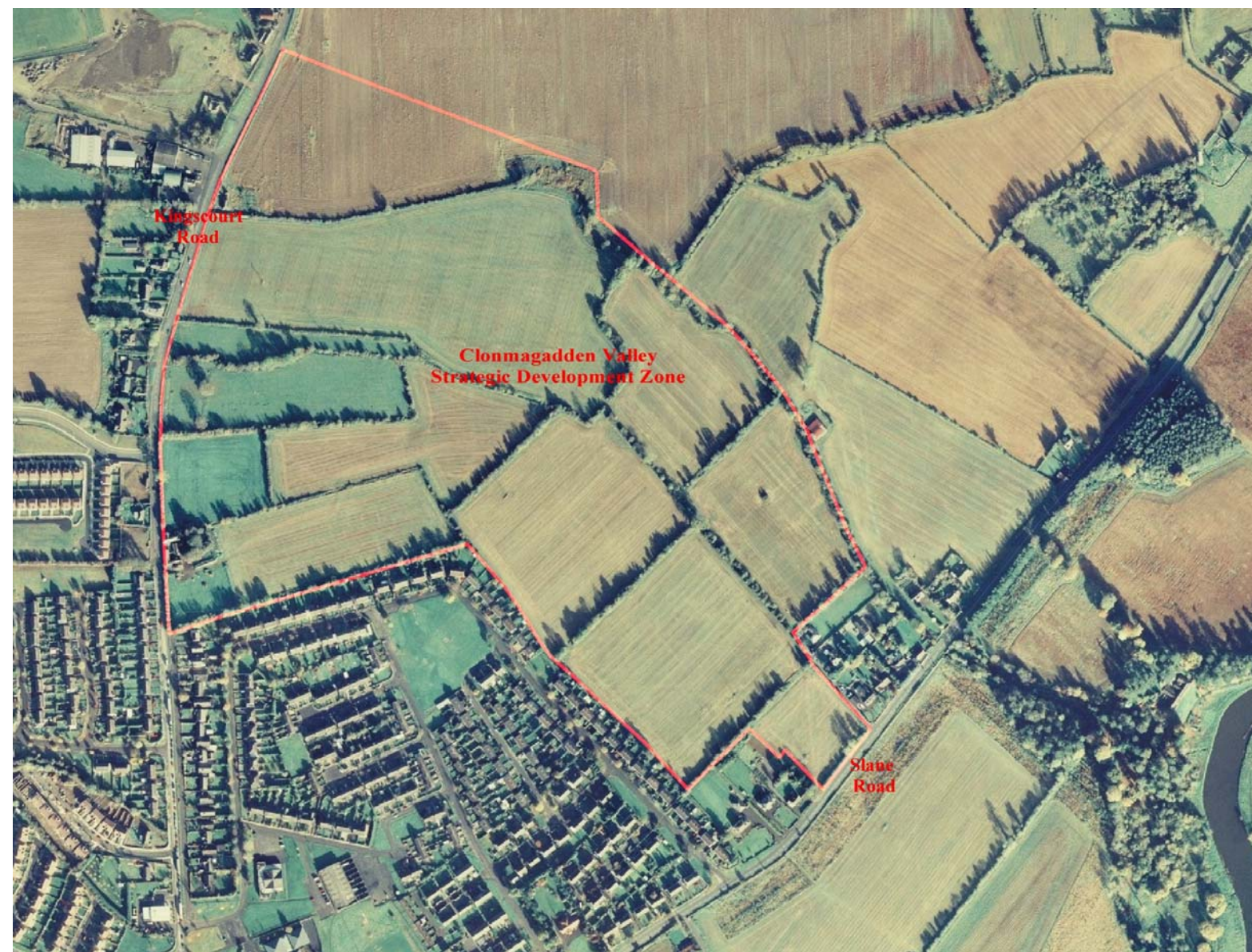
Clonmagadden

Strategic Development Zone Planning Scheme

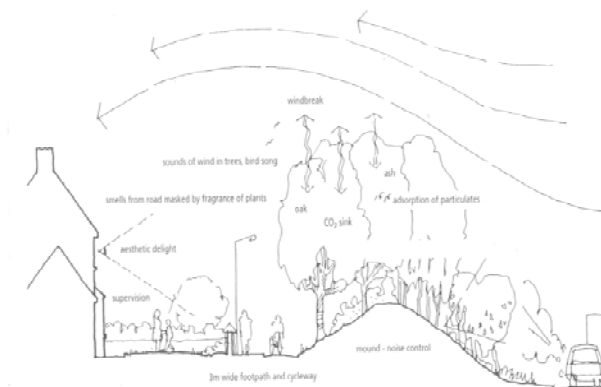


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Inter-Related Functions of Landscaping



December 2004

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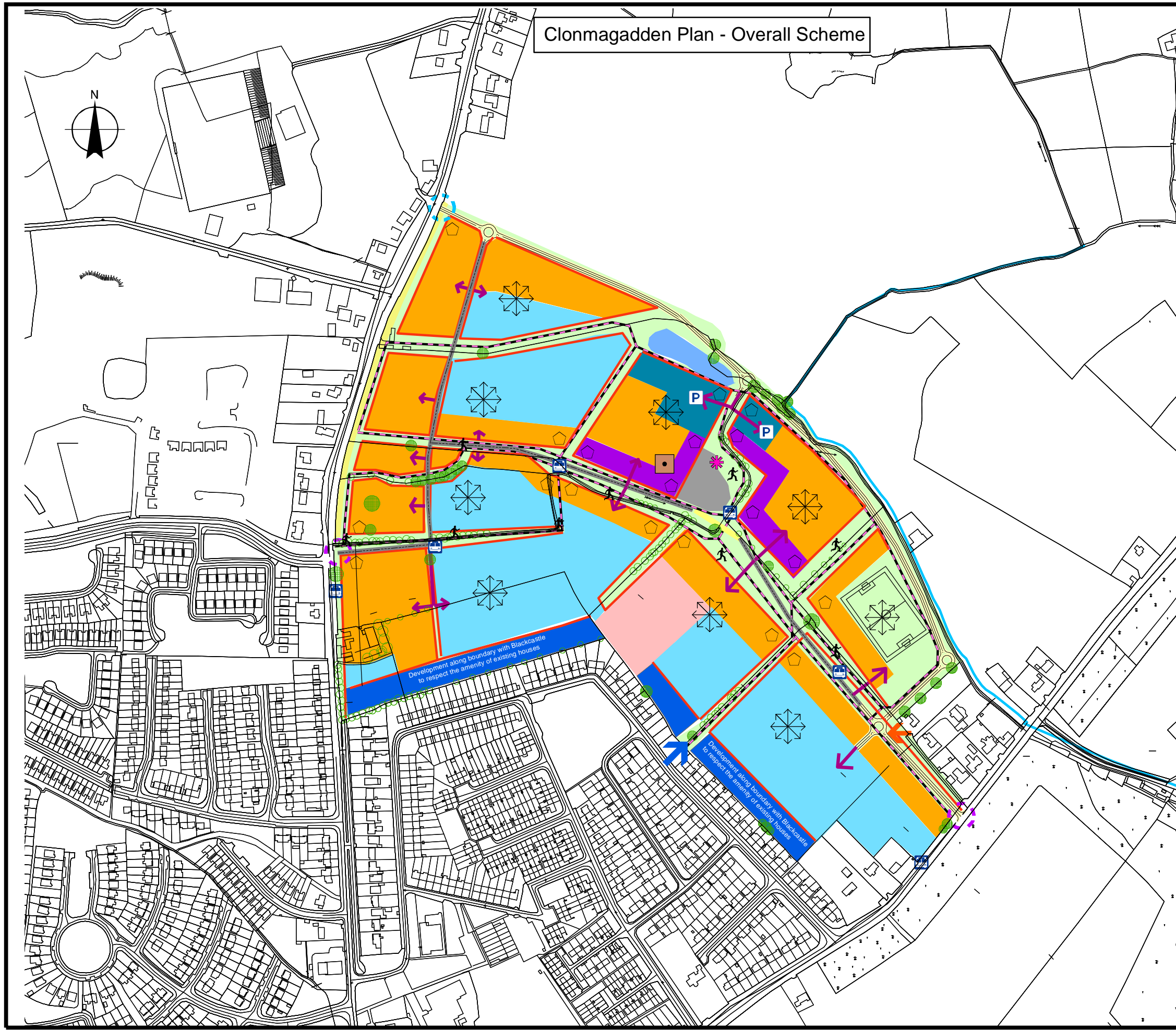
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Clonmagadden Plan - Overall Scheme



- ### Legend
- Diagrammatic Distributor Road
 - Diagrammatic Internal Spine Roads
 - Diagrammatic Bus Gate on Spine Road
 - Diagrammatic Dedicated Internal Cycle/Pedestrian Ways
 - Diagrammatic Access Roads
 - Building Frontage
 - Stream to River Boyne
 - Bus Stop
 - Integrated Community Health Facility, Community Buildin
 - Landmark Building
 - Pedestrian Facility
 - Childrens Play Area
 - Future Pedestrian Link
 - Road closure to N51 and link to distributor road
 - Indicative traffic signals - to be detailed
 - Indicative roundabout/junction to be detailed
 - Pedestrian Movement/Permeability through the Proposed Development
 - No. 1 Multi-storey car park of high quality innovative design
 - Trees to be retained on site
 - Road Setback Along Kingscourt Road
 - Community/Commercial Facilities/Residential Generally 3-5 Storey (Indicative) in Height Landmark Building, 4/5 Storeys (Indicative) in Height as Indicated on Plan Subject to Design and Layout
 - Higher Density Residential - 45-60 per hectare (18-24 to the acre) Generally 3.5 Storey (Indicative) in Height 4 Storeys (Indicative) in Height at Suitable Locations Subject to Design and Layout
 - Medium Density Residential - 37 - 45 to the hectare (15 - 18 to the acre) Generally 2.5 Storey (Indicative) in Height
 - Community/Leisure/Recreational/Service Facilities to serve site and environs Access from Distributor Road Only (Not higher than 5 storey)
 - Medium/Low Density residential 2 storey
 - Public Square/Civic Plaza
 - Primary School Site
 - Pond/Wetland
 - Open Space

Development along boundary with Blackcastle to respect the amenity of existing houses

Development along boundary with Blackcastle to respect the amenity of existing houses

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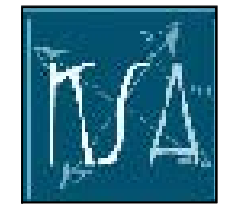
TITLE: CLONMAGADDEN SDZ PLAN

Date: 5th June 2003	Scale 1:5000
Senior Planner: Keith Simpson	Drawn By: Laura Finn

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- KEY**
- COMMUNITY/COMMERCIAL FACILITIES/RESIDENTIAL (TO INCLUDE COMMUNITY BUILDING)
 - LOW DENSITY HOUSING 2 STOREY
 - MEDIUM DENSITY HOUSING 2.5 STOREY
 - HIGH DENSITY HOUSING 3.5 STOREY
 - COMMUNITY/LEISURE/RECREATIONAL SERVICES FACILITIES ACCESS FROM DISTRIBUTOR ROAD ONLY
 - SCHOOL
 - HEALTH CARE CENTRE
 - RETAINED TREES AND SHRUBS
 - DIAGRAMATIC BUS GATE ON SPINE ROAD
 - DIAGRAMATIC DISTRIBUTOR ROAD
 - DIAGRAMATIC INTERNAL SPINE ROADS
 - DIAGRAMATIC DEDICATED INTERNAL CYCLE/PEDESTRIAN WAYS
 - PUBLIC OPEN SPACE
 - MITIGATION PLANTING
 - PROPOSED TREE PLANTING
 - SEMI PRIVATE SPACE



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Client	Meath County Council
Project	Clonmagadden, Navan
Title	Master Plan - indicative
Drg No	Scale 1000 at A0
Drawn	Checked SD

1 LEGAL BACKGROUND

1.1 Planning and Development Act 2000

Strategic Development Zones (SDZ) are addressed under Section 165-171 of the Planning and Development Act 2000. These are zones selected by Government by order (following a proposal by the Minister for the Environment) for a specified type or types of development of economic or social importance to the State.

Under Section 168 of the Planning and Development Act 2000, it states that a draft planning scheme must be prepared by the development agency within 2 years of the making of an SDZ order.

1.1.1 Draft Planning Scheme

The draft planning scheme shall consist of a written statement and a plan which shall indicate how the site is to be developed. The scheme should also state the types of development to be permitted on the site and their extent and give proposals in relation to design, minimisation of adverse effects on the environment and ancillary infrastructural, community and other developments. The draft scheme must include an Environmental Impact Statement (EIS) insofar as it is relevant to the detail of the scheme. The draft scheme must be consistent with the housing strategy prepared by the planning authority.

When the planning authority receives a draft SDZ planning scheme, they must publish a notice in the newspaper.

A public consultation procedure must be undertaken for the planning scheme. The planning scheme must be on display for not less than six weeks. In this time written representations or observations with respect to the draft scheme may be made to the planning authority.

1.1.2 Decision on the Planning Scheme

Not longer than 12 weeks after giving notice in the newspaper, the manager of the planning authority shall prepare a report on any submissions or observations received under that subsection and submit the report to the members of the authority for their consideration.

The draft planning scheme shall be deemed to be made 6 weeks after the submission of that draft planning scheme and report to the members of the planning authority unless the planning authority decides, by resolution, to make, subject to variations and modifications, the draft planning scheme, or decides not to make the draft planning scheme.

Where a draft planning scheme is accepted by the planning authority, it shall have effect 4 weeks from the date of such making unless an appeal is brought to An Bord Pleanala.

1.1.3 Appeals to An Bord Pleanala

The development agency and any person who has made submissions and representation to the draft scheme may appeal the decision within 4 weeks to An Bord Pleanala.

The Bord may approve, vary or amend or refuse to approve the planning scheme.

1.1.4 Adoption of the Planning Scheme

The planning scheme becomes part of the development plan and overrides the development plan where inconsistent.

A planning scheme can be amended or revoked by a planning authority with the consent of the relevant development agency but the consultation process must be complied with.

It is still necessary to apply for planning permission in the normal way for development in the SDZ but the planning

authority must grant permission if satisfied that the proposed development must be consistent with the scheme. Planning permission cannot be granted for inconsistent development.

No appeal lies to An Bord Pleanala against the decision of the planning authority to grant or refuse planning permission in a SDZ.

It may be necessary to amend a planning scheme if the circumstances relating to the scheme have changed, or having regard to the implementation of the scheme. The planning authority can by resolution having received the consent of the development agency concerned, amend or revoke a planning scheme.

1.2 SDZ Guidelines

The planning guidelines prepared by the Department of the Environment referred to as 'Guidelines on Preparing Planning Schemes for Residential Development in Strategic Development Zones' have been taken account of in the compilation of the planning scheme for Clonmagadden. In this regard, the development plans and government guidance in relation to proper planning and sustainable development of the scheme have been considered in the preparation of the scheme for the lands.

In particular, the guidance notes state that:

A draft planning scheme under this section shall consist of a written statement and a plan indicating the manner in which it is intended that the site is to be development and in particular -

- (a) The type or types of development which may be permitted to establish on the site (subject to the order under section 166)*
- (b) The extent of any such proposed development*
- (c) Proposals in relation to the overall design of the proposed development, including the maximum heights, the external*

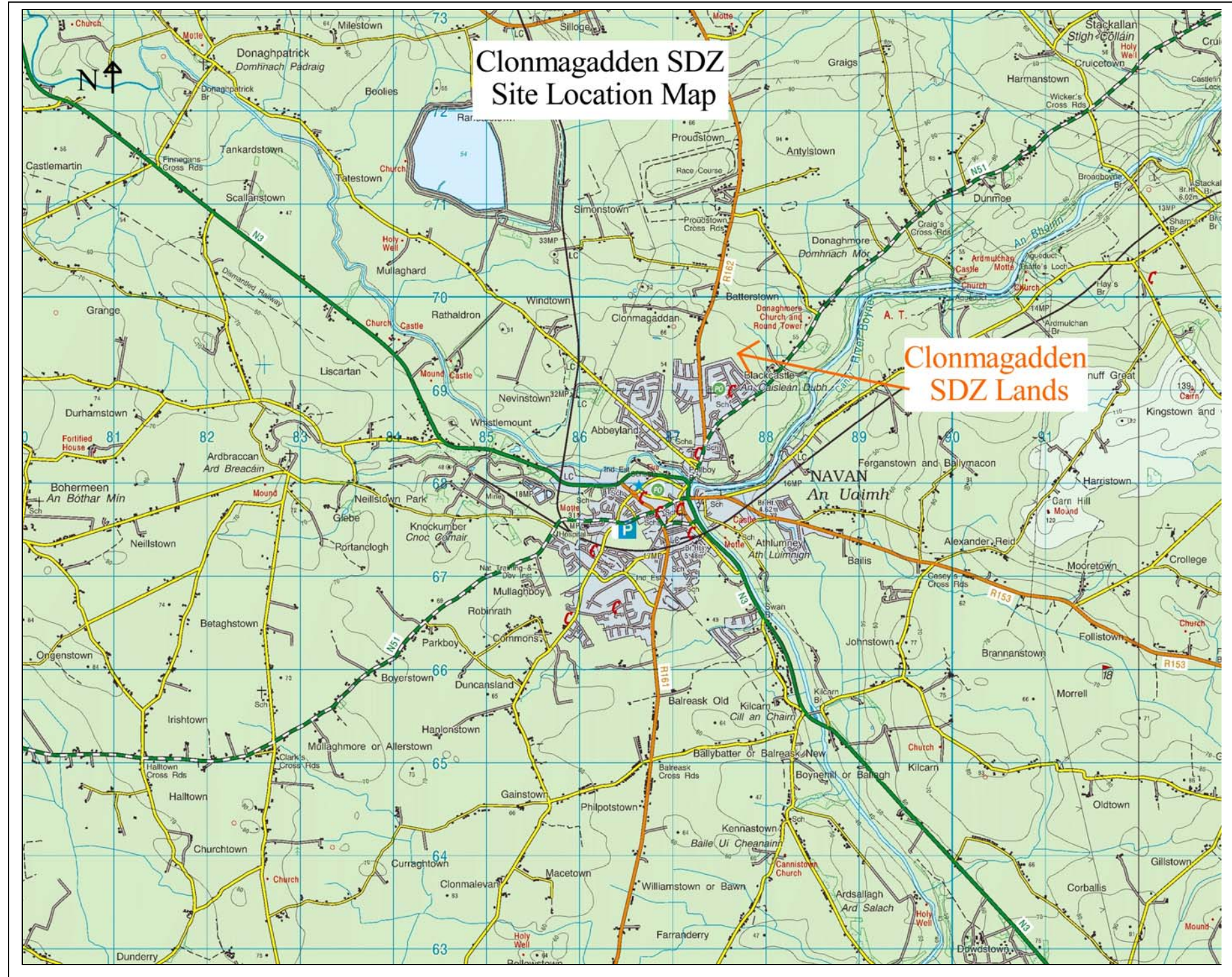
finishes of structures and the general appearance of the design

- (d) Proposals relating to transportation, including public transportation, the roads layout, the provision of parking spaces and traffic management*
- (e) Proposals relating to the provision of services on the site, including the provision of waste and sewerage facilities and water, electricity and telecommunications services, oil and gas pipelines, including storage facilities for oil and gas*
- (f) Proposals relating to minimising any adverse effects on the environment, including the natural and built environment, and the amenities of the area, and*
- (g) Where the scheme provides for residential development, proposals relating to the provision of amenities, facilities and services for the community, including schools, crèches and other education and children services*

The planning scheme shall also contain information on any likely significant impacts on the environment of the implementing the planning scheme in so far as it is relevant to the detail contained in the scheme.

1.3 Government Order for Clonmagadden

The Government, following proposals made by the Minister for the Environment decided to designate Clonmagadden Valley, Navan as a residential SDZ under Part IX of the Planning and Development Act, 2000. The Government Order designating the site at Clonmagadden came into force on 1 July 2001.



1.4 Making of Planning Scheme

The Draft Planning Scheme was on public display for a period of eight weeks from 7 July to 5 September 2003. In total, 704 submissions were received by the planning authority relating to the Draft Planning Scheme. A Manager's Report was prepared and submitted to the members of Meath County Council for their consideration on 3 November 2003 including a number of modifications and amendments as proposed by the Manager. It was resolved at a meeting held on the 1 December 2003 to make the Draft Planning Scheme subject to a number of further modifications and amendments.

This decision to make the Draft Planning Scheme was subsequently appealed to An Bord Pleanála and a two day oral hearing was held in March 2004. On 18 May 2004, An Bord Pleanála decided to approve the making of the scheme, subject to a number of modifications and amendments set out in their decision. Modification No. 11 of the An Bord Pleanála decision required that a copy of the consolidated planning scheme hereby approved, incorporating the Draft Planning Scheme June 2003, the modification adopted on 1 December 2003 and the further modifications included in this approval shall be drawn up prior to the publication of the notice of the approval of the scheme.

This document is the consolidated Clonmagadden Strategic Development Zone Planning Scheme. The Planning Scheme complies with statutory requirements and provides for the development of the site in accordance with the nature and scale required under the SDZ designation and for the comprehensive planning and development of the site and in accordance with the proper planning and sustainable development of the area.

2 PLANNING CONTEXT

2.1 National Policy

2.1.1 National Development Plan 2000 – 2006

The specific strategies and objectives of the National Development Plan are:

- Continuing sustainable national economic and employment growth
- Consolidating and improving Ireland's international competitiveness
- Fostering balanced regional development
- Promoting social inclusion

2.1.2 An Economic Assessment of Recent House Prices – Bacon Reports

As part of the Government's ongoing review of the housing market, Peter Bacon and Associates were commissioned in March 2000 to undertake an up-to-date assessment of short and medium-term projections on the demand and supply of housing and to make further recommendations for action required to bring supply more in line with demand and improve housing affordability, especially for first-time buyers.

The findings of the consultant's review, which was published on 15 June 2000, suggests that the current supply-demand imbalance and the expected increase in prices is fuelling demand and leading to housing market instability. There is also evidence of a significant element of speculative demand - i.e. investors seeking to make short-term capital gains, and demand is being brought forward to avoid anticipated future price increases. The report concludes that a significant increase in supply will be required to meet rising demand and gradually reduce the rate of

price increases, e.g. around 55,000 private houses per annum in the six years to 2005, after taking account of measures to reduce speculative demand.

2.1.3 Residential Density Guidelines

The Planning Guidelines on Residential Density give effect to government policy of encouraging more sustainable urban development through the avoidance of excessive suburbanisation and the promotion of higher residential densities in appropriate locations, especially in conjunction with improved public transport systems.

In the context of outer suburban and greenfield sites, the guidelines suggest that to ensure the greatest efficiency in land usage, net residential densities in the general range of 35-50 dwellings per hectare (14-20 per acre), should be encouraged.

Development at densities less than 20 dwellings per hectare should generally be discouraged in the interests of land efficiency, particularly on sites in excess of 0.5 hectares. On lands proximate to existing or proposed public transport corridors, densities in excess of 50 dwellings per hectare should be permitted.

The guidelines also indicate that where greenfield sites are to be served by existing or improved public transport corridors, as in the case in Clonmagadden, targets should be set for increased density yields.

2.2 Strategic Planning Context

2.2.1 National and Regional Context

Navan has been identified as a Primary Development Centre in:

- The National Spatial Strategy
- The Strategic Planning Guidelines for the Greater Dublin Area
- and, in the 2001 Meath County Development Plan

The National Spatial Strategy suggests that an ultimate population horizon of up to 40,000 people for Primary Development Centres.

2.2.2 Navan Integrated Development Framework Plan 2002

The key recommendations of the Navan Integrated Development Framework Plan include the following:

2.2.2.1 Transportation

Rail

- The reservation of a rail corridor and re-instatement of the rail line to Dublin with a central station located to the south of the town centre.
- A major public transport interchange will be created around the new central station to include local feeder buses.

Bus

- Existing local bus services are to be improved as a matter of priority with bus services to new developments to be provided from the outset.
- These proposals include the provision of two bus routes up both the Kingscourt Road and the Slane Road at either side of the Clonmagadden SDZ lands.
- Regional bus services will be provided for at the central station and proper pedestrian accessibility will be provided to public transport.

Cycling and Walking

- Proper cycling and pedestrian routes are to be integrated into all new developments and into existing and new green areas.
- Walking and cycling connections to the new central station and the town centre will be prioritised.

2.2.2.2 Land Use

Development Layout and Density

- Increased densities should be provided on new development land with a mix of residential type.
- New residential layout must incorporate pedestrian and cyclist accessibility between residential areas and linking to the town centre.
- Provide ancillary services within new large-scale residential developments. This should be in the form of local centres providing basic services and the planning authority should ensure that all residences are within easy walking distances of a local shop.

2.2.2.3 Urban Design

Environment and Ecology

- Open the town towards the rivers by implementing good quality design layouts in future developments.
- Link green features by proper cycle/pedestrian connections gateway sites.
- Develop identified sites with modern urban design solutions.

Specific proposals in relation to Clonmagadden include:

- Identification of two local bus routes, (Clonmagadden – Johnstown and Clonmagadden – Commons) which can be extended to serve the Clonmagadden SDZ.
- Identification of a gateway site within the Clonmagadden lands on the Slane Road frontage.
- Identification of Clonmagadden as Phase 1 of residential development in the town.
- Extension of the Distributor Road through Clonmagadden.

2.2.3 DTO – A Platform for Change

The final strategy consists of an integrated set of infrastructural and transport policy initiatives, involving a change in emphasis

towards public transport in the form of Light Rail (LRT), Quality Bus Corridors (QBCs), upgrading of suburban rail services, and development of park and ride facilities.

The aim of the DTO strategy is to reduce the attraction of commuting to work by private car and increase the modal share for public transport, cycling and walking.

2.2.3.1 DTO Proposals for Navan

The DTO proposes the reservation of a rail corridor and re-instatement of the rail line from Navan to Dublin with a central station located to the south of the town centre.

2.2.4 GDA Retail Planning Strategy

The Retail Planning Strategy proposes the adoption of a retail hierarchy reflecting the different needs of the GDA - Metropolitan and Hinterland Areas. In Meath, short-term growth potential is recommended for concentration in Navan, as the County Retail Centre. The guidelines require that planning authorities prepare a retail strategy for inclusion in the development plan for the area which in the case of Meath has been adopted (Refer to Para. 2.3.2).

2.2.5 Population Statistics for Navan

The population of County Meath has been growing steadily, as has the national population of Ireland, especially the province of Leinster. The population of Meath was recorded as 133,936 persons in 2002. This was an overall increase of 22% from the 1996 census of population and an 86.7% increase since the 1971 census. County Meath was one of the counties that registered the highest rates of population growth over the last 6 years.

Population growth in Navan Urban District and Environs has varied over the past 15 years but has showed a marked increase over the last 5 years. From 1986 to 1991 population actually fell from 11,929 to 11,706, a decrease of 2%. The downward trend was reversed by 1996 when the population grew to 12,810, an

increase of 9.5% between 1991 and 1996. The current resident population of Navan is estimated at in excess of 22,000.

Based on the current patterns and strong demand for housing in the town, Navan is likely to continue to grow rapidly if allowed. Navan has a very high capacity for housing development and for population growth.

2.3 Local Planning Context

2.3.1 Meath County Development Plan 2001

The County Development Plan identifies three prime development corridors in the County, one of which is focused around Navan/Trim/Kells, the core of the County. Objectives to be pursued in this corridor are:

- *Maintenance of each centre's distinct identity with particular emphasis on the heritage and special urban character of both Trim and Kells. It will be critically important to ensure that the direction of development into these centres is on the basis of balance i.e. expanding the residential and employment sectors.*
- *The provision of new and/or upgrading of existing road links such as the N2, N3 and regional roads that link these towns to each other and to the county at large.*
- *The provision of high-quality public transport links including the re-instatement of a direct rail link from Dublin to Navan.*
- *The development of Navan as a regional shopping node.*
- *The protection of transportation corridors between centres from inappropriate development and to direct housing into designated development centres.*

The key role for Navan as the primary growth and self-sustaining centre in County Meath can be identified as:

- *Navan is the administrative, retail/commercial and transportation hub of the county. It is proposed that it continues and develops in this role with a particular emphasis on expanding its employment base.*
- *Navan can accommodate the most significant share of future residential development in the county having regard*

to sustainability issues such as the availability of services and its central location on existing and potential rail lines.

- *The development area for the town will largely be dictated and influenced by future bypass alignments and water catchments.*
- *The development of both active and passive amenity resources utilising natural assets such as the River Boyne will be critical in attracting investment and residency of employees in an expanded employment base.*
- *Given the scale of population growth envisaged, the availability of central sites and its future potential role as a rapid transit hub, Navan should be developed as the primary retail centre in the county.*

In Meath, 28% of zoned lands lie in Navan (Town Council and Environs) with services available or in train. There is a developing shortage of water supply due to a constriction on the maximum abstraction rate possible from the River Blackwater at the Liscarton works. This will be addressed through provision of a new supply on the River Boyne.

2.3.2 County Meath Retail Strategy

In relation to Navan, the strategy identifies the significant retail potential due to the town's expansion and attraction. Its findings show that approximately 93% of convenience expenditure by the resident population is spent in retail outlets located in Meath. The adopted retail strategy continues to emphasise and promote Navan's role at the top of the county's retail/shopping hierarchy.

2.3.3 Navan UDC Development Plan 1996

It is the intention of the planning authority to facilitate the development of Navan as the county's principal administrative, service, commercial and cultural centre. Sufficient land will be zoned in this and succeeding plans to satisfy primarily long term commercial needs of the town. Other land uses such as residential and industrial will be mainly catered for on lands outside the UDC boundary and thus will be the subject of the Environs Plan for Navan.

2.3.4 Navan Environs Development Plan 1997

The SDZ lands lie within the area identified as Navan Environs. The Navan Environs Development Plan relates to the area directly outside of Navan Urban District Council. The residential zoned lands at Clonmagadden lie within the Navan Environs Development Plan.

It is the policy of the development plan to ensure that adequate serviced lands are available for housing development in both public and private sectors. In the 1997 plan for Navan Environs, a further 280hectares of lands were zoned residential in addition to the 480hectares zoned residential in the 1989 plan. This level of provision is geared towards facilitating the expansion of Navan within and beyond the five year period of the plan.

In relation to estate type development, the planning authority intends to implement the policies outlined below:

- To ensure a high standard of design and layout facilitating pedestrian movement and controlling vehicular traffic
- To co-ordinate and facilitate the development of an efficient road network system within and between residential areas (existing and proposed)
- To ensure the linkage of adjoining housing estates by pedestrian access ways. Where possible such links should run through public open space, and avoid the use of long narrow alleys
- To encourage the provision of shared open spaces
- To avoid a monotonous pattern in house type through diversity and variations. Such variations should be within an overall theme

Public Open Space: It is the policy of the planning authorities to ensure that public open space provides visual amenity and is overlooked for supervision reasons by as many houses as possible. It is policy that open space shall be integrated into the overall design of the housing layout and form part of a

hierarchical framework, ranging from children's playlots to larger active areas.

Roads: In order to facilitate the anticipated growth of the town, it is the policy of the plan to improve the urban road network and to establish a road system designed to serve the projected land use pattern.

An important consideration in land use planning and decision-making for the Navan area will be the minimisation of the need to travel by car so as to moderate future traffic growth and minimise the environmental impacts of transport. The proportion of pedestrian and cycle routes will form part of this policy.

2.3.5 Review of Navan and Environs Plan 2003

The review of the Navan UDC 1996 Development Plan and 1997 Navan Environs Development Plan was substantially underway when the Draft Planning Scheme was placed on public display. The Navan Draft Development Plan was placed on public display in late July 2003. The Navan Development Plan was adopted on 27 November 2003 just before the planning authority made the Draft Planning Scheme on 1 December 2003. The SDZ Draft Planning Scheme was prepared in a manner consistent with the draft, and subsequently adopted, Navan Development Plan 2003. This was acknowledged in the reasons and considerations of the An Bord Pleanála decision whereby the Draft Planning Scheme had regard to the Navan Development Plan 2003 - 2009.

2.3.6 General Planning and Other Statutory Requirements

2.3.6.1 Social/Affordable Housing

All planning applications for the site will comply with the County Housing Strategy under Part V of the Planning and Development Act 2000. The housing strategy for Meath County Council was adopted on 3 November 2001. In respect of the Navan area, Part V housing requirements were reviewed as part of the development plan process and as such any SDZ planning

application will comply with any future adopted amendments to the housing strategy.

The guidelines state that the planning scheme should include objectives such as:

- To provide for an appropriate mix of dwelling types and sizes to cater for the range of housing needs
- To encourage mixed and balanced communities in order to counteract undue social segregation
- To provide for the provision of social and affordable housing as allowed for under Section 96 of the Planning and Development Act

2.3.7 Development Plan Standards

The provisions of the Clonmagadden SDZ Planning Scheme shall apply to consideration of applications for permission in the SDZ. Where matters are not directly covered in the Clonmagadden SDZ Planning Scheme itself, the provisions of the Navan Development Plan shall apply.

3 DESCRIPTION OF LANDS

3.1 Location and Extent of Lands

The planning scheme covers approximately 38 hectares (94 acres) of lands zoned for a residential Strategic Development Zone (SDZ) located to the north of Navan between the Kingscourt Road and the Slane Road. The lands lie directly to the north of the existing Blackcastle housing estate.

The northeastern boundary of the lands is delineated by a hedgerow and stream, which runs to the River Boyne. The northern boundary to the west cuts through an existing field.

The southern boundary of the site comprises back gardens of an existing and well established housing estate named Blackcastle.

The western boundary that runs along the Kingscourt Road, comprises of one existing farmhouse. On the opposite side of the Kingscourt Road, there are a number of detached dwellings and some existing business. The eastern site boundary has a road frontage onto the Slane Road of 100 metres.

This portion of the site is surrounded on both sides by detached dwellings.

Currently, the lands within the SDZ are predominately under

agricultural use.

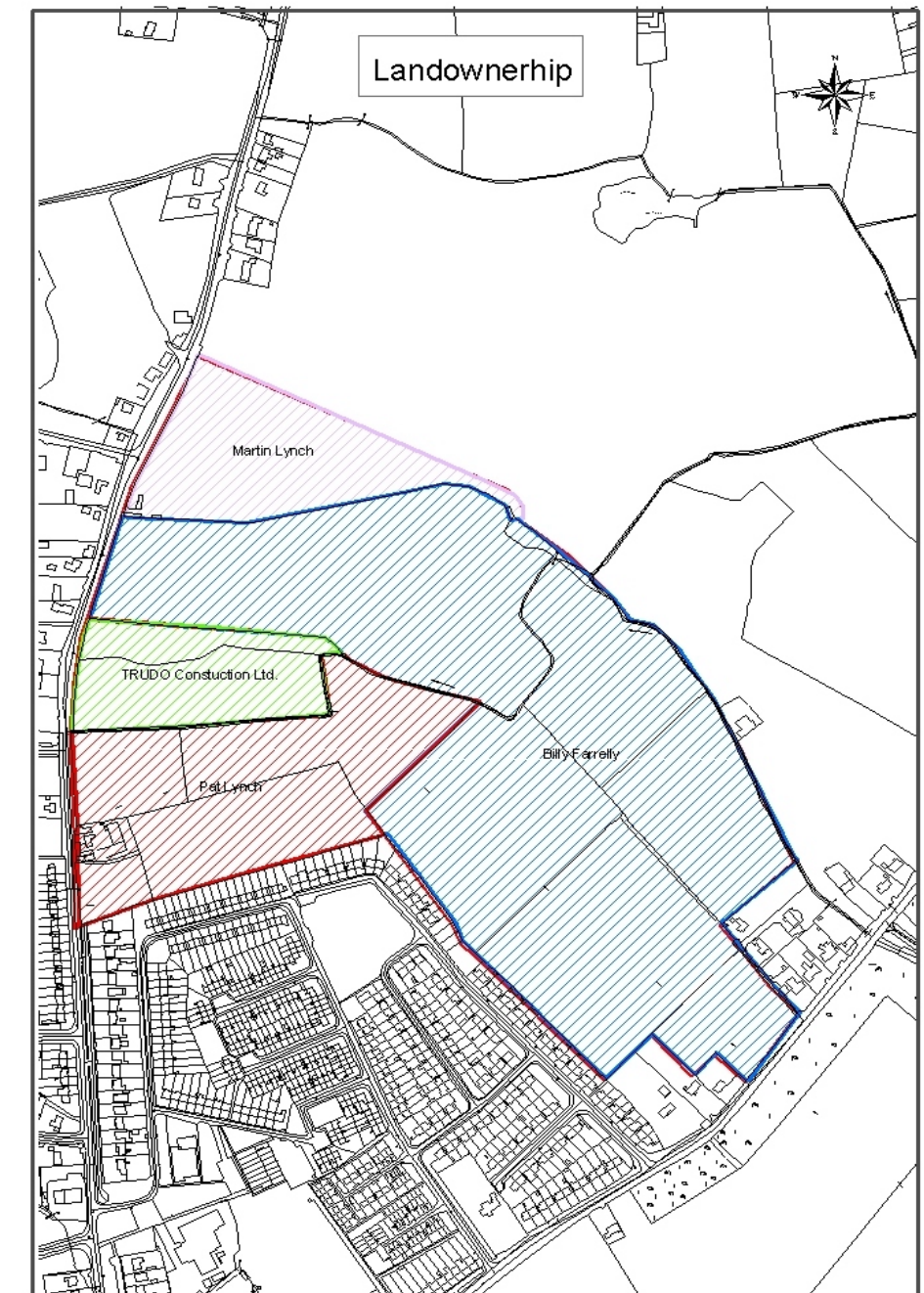
The natural features on the site are indicated on the Ecological Site Characteristics Map.

3.2 Land Ownership

The lands are in the ownership of four landowners - see Map below.



Aerial Photo of Clonmagadden SDZ lands



4 NATURAL ENVIRONMENT

4.1 Biodiversity and Ecology

The natural features on the site are indicated on the Ecological Site Characteristics Map.

Biodiversity is a global term, referring generally to all aspects of biological diversity especially including species richness, ecosystem complexity and generic variation. It is generally accepted that the ‘precautionary principle’ should apply in cases of loss of biodiversity. Quite apart from the risk that the potential value of different species for human use may be lost, we simply do not know the long-term effects of such damage on our own environment. The impoverishment of human environment and risk of malfunction within the whole ecosystem must also be considered with regard to the damage being more of less permanent in human time-scales. On this basis the more significant ecological areas identified within the SDZ will be retained as far as possible.

4.1.1 Habitat

Habitat is the name given to the living place of an organism, or community of organisms. The objective of the Clonmagadden SDZ is to ‘conserve the extent and variety of habitats’. This emphasises the need to consider flora in terms of plant communities, which have symbolic relationships with each other, and with the fauna, that all together make up a viable system. Loss of a single species may have implications for all the others. Similarly, the extent of an animal’s habitat may be very significant in terms of there being sufficient space and resources for feeding and breeding.

4.1.2 Development

Nature conservation is not contentious in principle, but when ‘balanced’ against need for development, tends to be

marginalised in reality. Sustainable development takes more account of the intrinsic value of the natural capital, and requires that any proposed development - one justified in terms of actual human need - respects the natural environment as the context within which it should fit. In particular development should be integrated with ecology rather than ignoring it or actively destroying it.

The following points are essential practical measures that can provide an explicit spatial framework at site scale within the Clonmagadden SDZ.

4.1.3 Refuges

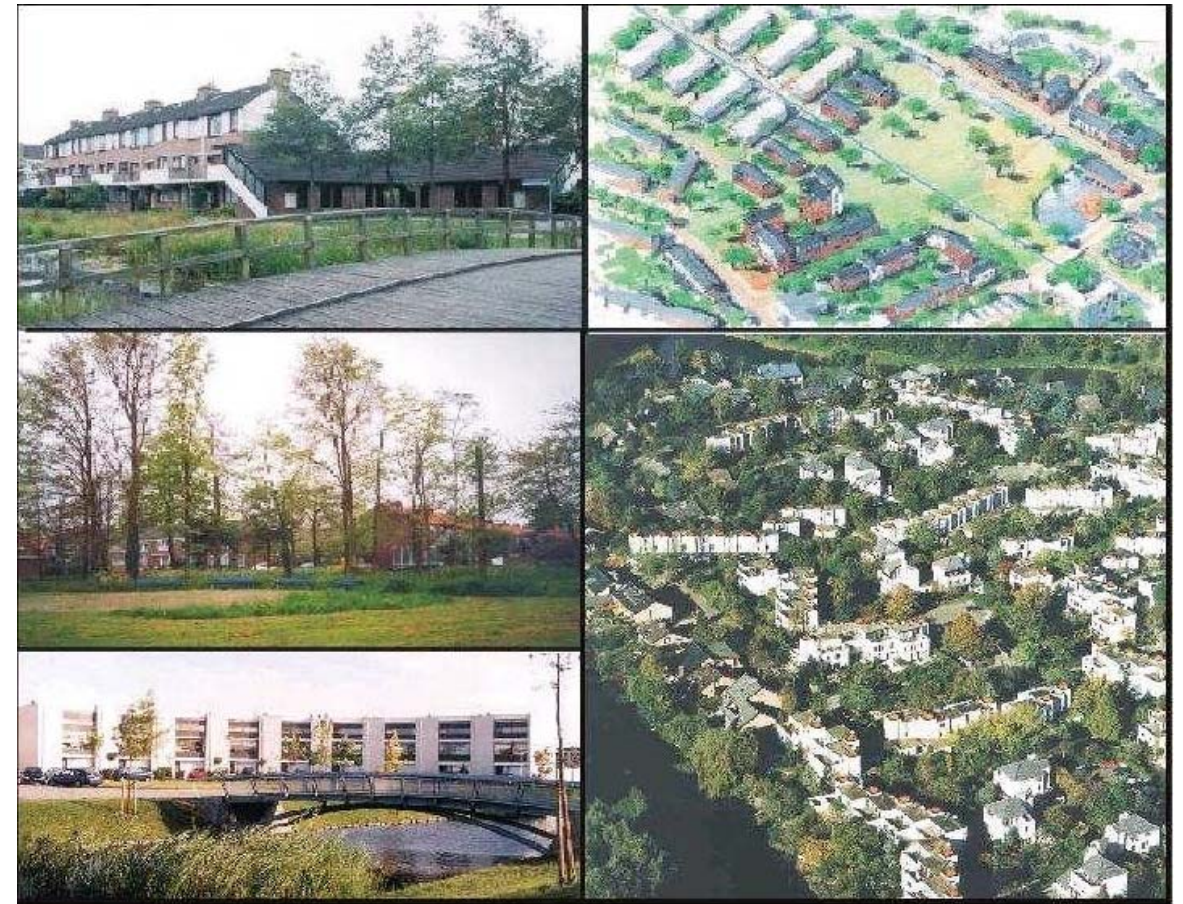
Within Clonmagadden SDZ some areas of existing semi-natural ecology will be maintained. In particular it is proposed to maintain as many ecological and existing landscape features (e.g. hedgerows, streams, ponds, etc.) as are consistent with the development of the area.

4.1.4 Corridors

To permit the potential movement of wildlife within the plan lands, and indeed to provide a sense of continuity between town and county ‘green corridors’ of indigenous vegetation (with a minimum width of, say, 4 metres) are proposed. Existing streams can provide potentially useful linear features in this respect.

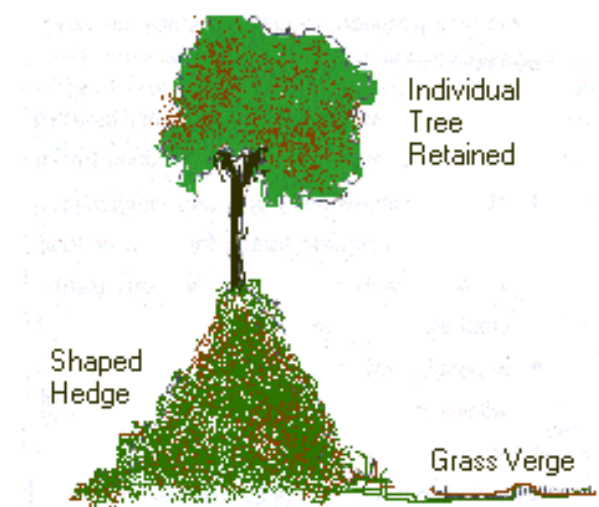
4.1.5 Hedgerows

These are traditional Irish landscape features, unfortunately much reduced as a natural resource by uncontrolled removal.



Integration of Ecology and Development

With adequate clearance on one or both sides, they have the valuable qualities of a corridor, as described above. Hence existing hedges within the Clonmagadden SDZ area will be regarded as ‘critical capital’, subject generally to modification but not complete destruction. New hedges can be planned, with attention given to species selection and appropriate management regime.



4.1.6 Stepping Stones

While it may sometimes be impractical to join refuges together with corridors, small areas of vegetation are proposed within the Clonmagadden SDZ to provide shelter for wildlife in transit between them. Rear gardens also contribute to a network of natural open space, provided that the garden enclosures are sufficiently open, especially at low level.

4.1.7 Water Habitat

It is a truism that 'water is life'. In the case of the Clonmagadden SDZ, it is proposed to provide a water feature at the north of the site within an existing wetland area. The Clonmagadden Stream and a number of field drains (which can be kept as part of the retention of hedgerows) will run into this pond.

4.1.8 Conservation Strategy

Planning in the past century has been much concerned with the relationship between town and country. While it is not necessarily desirable to blur the distinction between them - thereby losing the advantages of both - it is useful as in the case of Clonmagadden to provide for green corridors of open space that pass from the countryside into the SDZ site area.

4.2 Soil and Geology

4.2.1 Soil

Reference to the generalised Soil Map of Ireland (An Foras Taluntais, 1980) indicates that the site is underlain by Luvisol. Luvisol is equivalent to grey brown podzolics, which have a leached soil with strongly developed horizons. The presence of Luvisol soil is considered an indicator of a clay enriched subsoil.

4.2.2 Subsoils

Reference to the Quaternary Map, contained in the Groundwater Protection Scheme for County Meath (GSI, 1997), indicates that

the majority of the Clonmagadden site is underlain by till derived from Lower Palaeozoic rocks. This classification indicates that the unconsolidated material is composed of fine material, i.e. predominantly clay, which resulted from the erosion and breaking of Lower Palaeozoic aged rocks.

The material to the extreme north and north-east of the site is classified as Gravels derived from Lower Palaeozoic Rocks.

This was the limit of the excavator utilised in the pitting programme. The excavation of the trial pits was terminated for various factors.

4.2.3 Bedrock

Two distinct rock formations are recorded underlying the site. The northern portion of the site is underlain by the Britstown Formation (BW), which is the oldest rock type within the Grangegeeth Block. It is composed of well bedded volcanoclastic and volcanic rocks interbedded with siltstone and shale. The southern portion of the site is underlain by the Navan Group (undifferentiated) (NAV). The Navan Group incorporates a tight lithological sequence comprising a mixture of mudstone, muddy limestone, shale and calcareous sandstone.

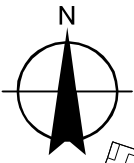
4.3 Groundwater

Reference to the Groundwater Protection Scheme (GWPS) for County Meath indicates that the aquifer potential beneath the site varies from Poor to Locally Important. The northern half of the site is underlain by bedrock that is classified as a Poor Aquifer Resource, which is generally unproductive except in localised zones (PI). The southern half of the site is underlain by a Locally Important Aquifer, which is moderately productive only in localised zones (LI).











4.4 Topography

In general the site slopes significantly downwards in a northerly direction from 56 metres O.D. at Blackcastle to 46 metres O.D. at the northern edge of the site, a drop of 10 metres. Advantage has been taken of this to provide higher buildings in the northern area generally below the 52 metre OD level and lower buildings on the higher ground adjoining the Blackcastle estate.

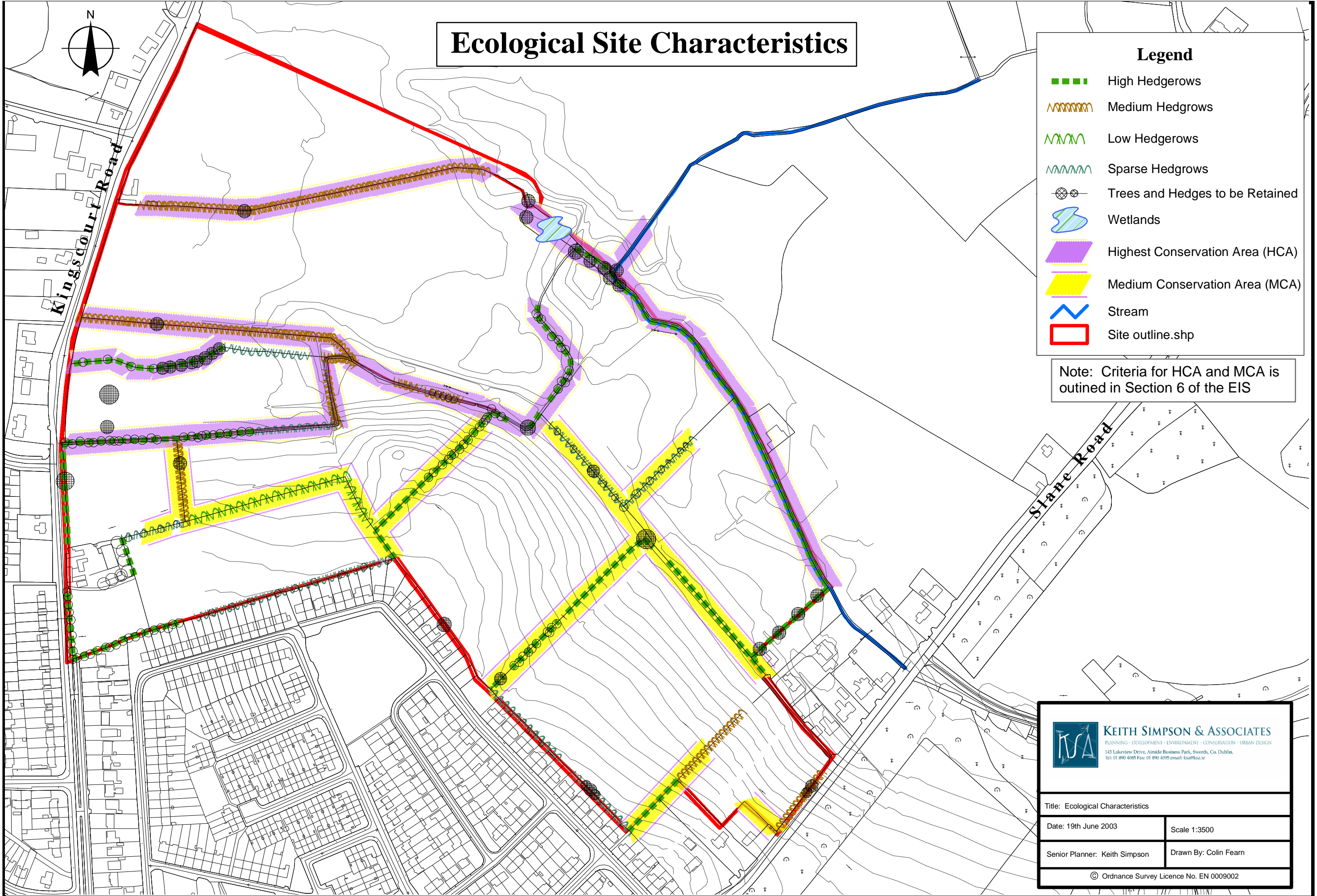
Ecological Site Characteristics




Legend

-  High Hedgerows
-  Medium Hedgerows
-  Low Hedgerows
-  Sparse Hedgerows
-  Trees and Hedges to be Retained
-  Wetlands
-  Highest Conservation Area (HCA)
-  Medium Conservation Area (MCA)
-  Stream
-  Site outline.shp

Note: Criteria for HCA and MCA is outlined in Section 6 of the EIS





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Title: Ecological Characteristics	
Date: 19th June 2003	Scale 1:3500
Senior Planner: Keith Simpson	Drawn By: Colin Fearn
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5 INFRASTRUCTURE

5.1 Surface Water Drainage

The Clonmagadden site is situated in the catchment area of the River Boyne, which is at an elevation of approximately 14metres below the lowest level of the site and is the main receiving water for all surface water channels in the Navan area. The site is located north of the River Boyne and downstream of the main urban area of Navan town.

A stream which forms the northern boundary of the site is referred to as the Clonmagadden Stream. This small watercourse converges with the River Boyne approximately 400metres to the east of the site boundary.

The flow in the Clonmagadden Stream is from the interconnection of a number of artificial land drains to the north of the site. Temporary ponding occurs in topographic lows and there is also a pond on the northern boundary of the site.

The development of the site will not require any major mitigation measures to limit any storm surge on the site as the volume of water generated will be within the capacity of the current drainage network and engineered culverts; however, the provision of a pond on the site will act as a buffer to a storm surge and also provide amenity value.

5.2 Foul Water Drainage

The construction of development within the site will result in the generation of wastewater. Due to the density of housing within the site it would not be practical nor environmentally desirable to treat the sewage at source. All sewage generated due the site development will be diverted to the main foul drainage network, which will be extended to cater for the development. There is

already a main sewer line crossing the site, so connection to this should be easily facilitated by Meath County Council.

5.3 Water Supply

Existing records do not document any potable supply boreholes in the environs of the proposed site. All water requirements for surrounding residences are supplied from the Navan Public Supply. It is proposed to seek connection to the public supply network to meet the water requirements of the development.

5.4 Electricity Supply









The primary ESB network within the plan area consists of existing 38kv overhead cabling. It is proposed that all new ESB cables within the site will be provided underground.

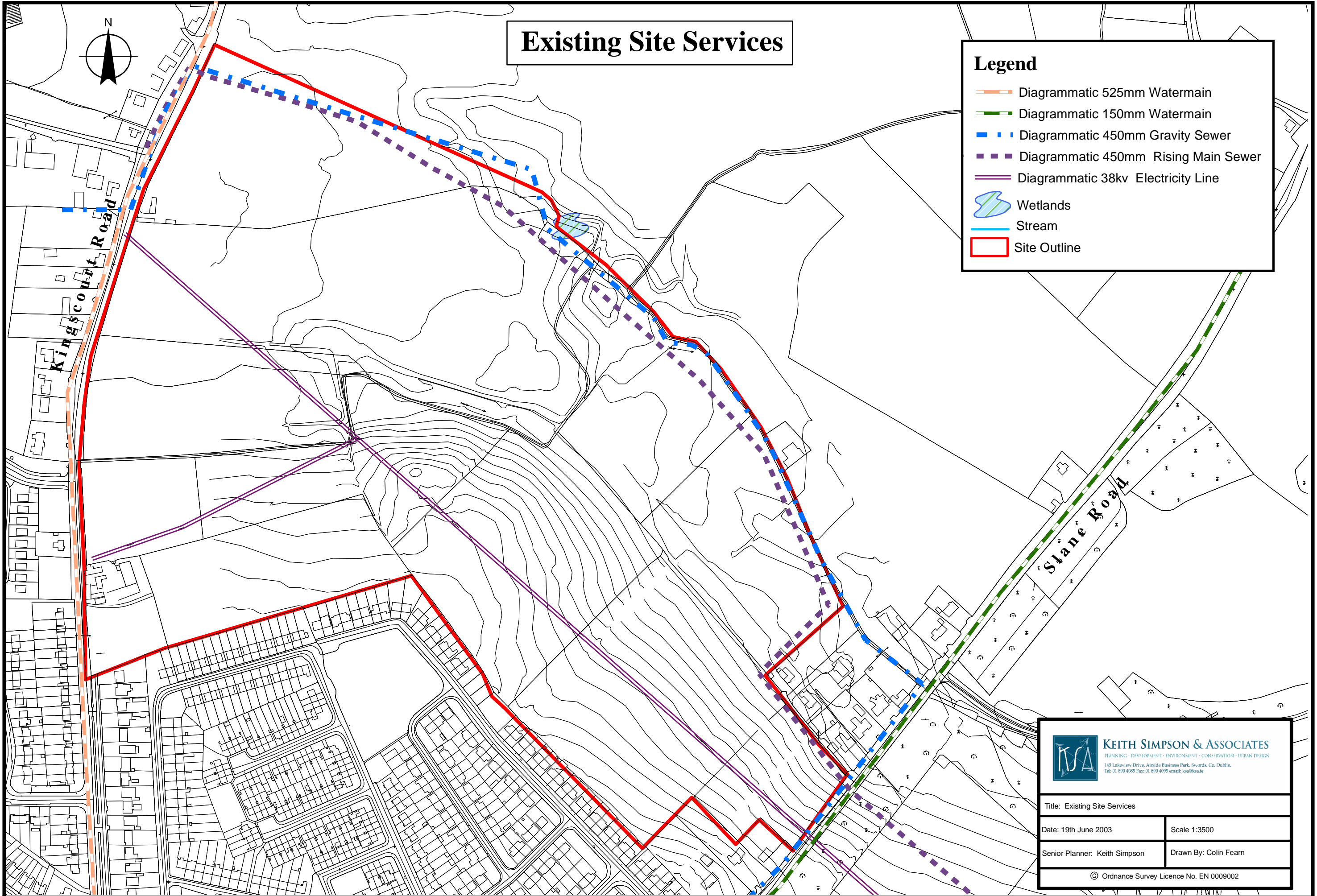
5.5 Gas Supply

Navan is currently serviced by a gas network. Bord Gais see no obvious constraints to extending the network to this area.

Existing Site Services

Legend

-  Diagrammatic 525mm Watermain
-  Diagrammatic 150mm Watermain
-  Diagrammatic 450mm Gravity Sewer
-  Diagrammatic 450mm Rising Main Sewer
-  Diagrammatic 38kv Electricity Line
-  Wetlands
-  Stream
-  Site Outline



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6 MOVEMENT AND MOBILITY

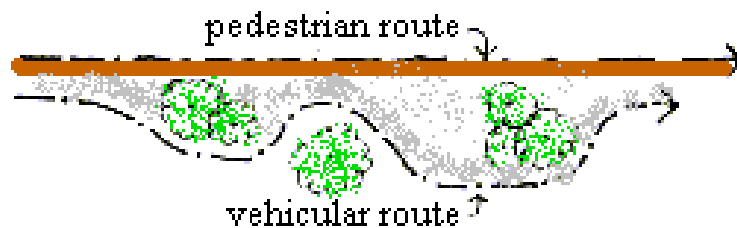
6.1 Priority

The movement network for the Clonmagadden SDZ was designed on the basis of the following order of priority:

- Pedestrians and cyclists
- Public transport
- Access for emergency vehicles
- Efficient circulation of local traffic
- Externalising non local traffic

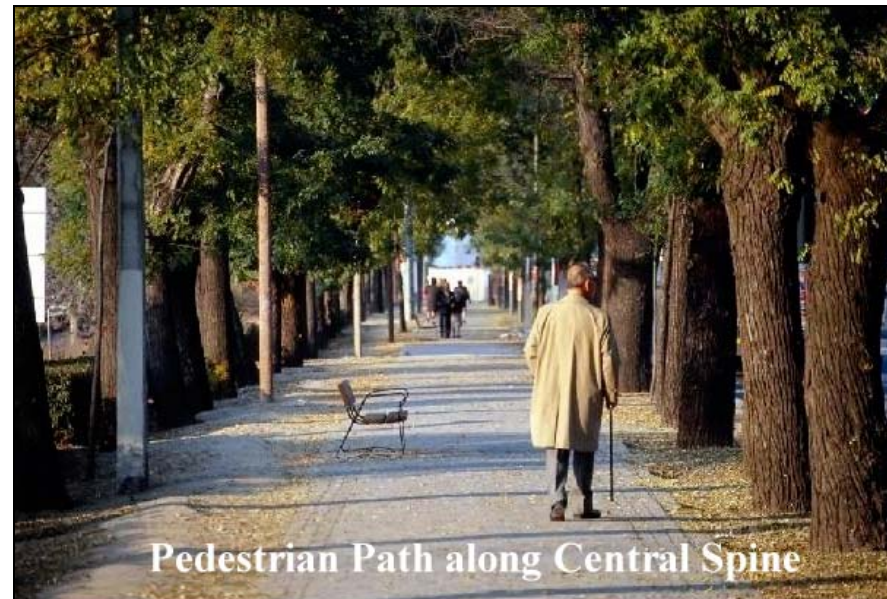
6.2 Planning for the Pedestrian

Walking is the most important mode in terms of number of trips or part-trips (though not of course distance). Walking constitutes the majority of trips for non-car-owners, women and children. Even quite modest changes in walking habits will therefore have an impact on overall energy use. At distances less than 0.5km the vast majority walk, but at a distance of 1km, which non-car-users generally walk, most car users rely on their vehicles.



Pedestrian routes should be direct.
Vehicular routes should be winding but not excessively circuitous.

In the case of Clonmagadden the basic principles of pedestrian planning for the area are:



- The provision of convenient and prominent pedestrian access points in terms of signage, lighting and gradients.
- A pattern of footpaths/pavements, which allows easy permeability; a choice of routes filtering through the area.
- Routes from houses to local facilities, including especially shops, schools and bus stops, are as direct and pleasant as possible avoiding steep slopes or steps/kerbs where possible.
- Use of green ‘open space network’ for longer distance walks linking to external facilities such as The Boyne Walk.
- Dedicated pedestrian routes along green corridors.
- The potential for future development of a pedestrian link between the SDZ site and the Blackcastle housing estate is recognised: the scheme shall be developed in a manner which will provide for such an linkage.

The proposals for the provision of pedestrian facilities are indicated on the Movement and Mobility Network Map at the end of this section, which indicates the overall movement network for the lands.

6.3 Planning for the Cyclist

For a cycle network to be successful it needs to be continuous and convenient with appropriate trip-end provision.

While walking and public transport are complementary modes of transport, the position of cycling is rather more equivocal. The principal motorised alternative for many cyclists is not the car, but the bus. An increase in bike use is liable to be at the expense of the bus, and expensive buses oblige people to get on their bikes. Conversely the bike is available to many people at low cost, is innately energy efficient, and can provide benefits in terms of health and fitness.

The average length of journey by bicycle according to some recent research is about 3km with a maximum regular trip no more than 16km (10 miles). The threshold beyond which cycling will generally not be used as the mode of travel lies around 5km (3miles).



In relation to Clonmagadden the proposed cycle network consists of:

- Dedicated cycleways and

- Cycle routes within residential areas

In the case of dedicated cycleways, these run along the bus route and along the green pedestrian routes. They do not in general run along the housing access roads.

Within housing access areas the cycle routes will be on road. However roads within residential areas will be required to be designed so as to provide for the cyclist.



Cyclist on Estate Road

The proposals for the provision of cycle facilities are indicated on the Movement and Mobility Network Map, which indicates the overall movement network for the lands.

6.4 Public Transport

The overall pattern of development has been designed so that a good level of public transport accessibility is afforded to all parts of the development with the minimum number of routes. The points where routes meet or cross (nodes) then become the location for jobs and services.

The structure of public transport provision is critical to sustainability of the development. Achieving the most effective public transport configuration must be given pre-eminence in the

design process. Different land uses can then be ‘hung’ on the public transport network. The network becomes a starting point, not an afterthought.

6.4.1 Access to Stops

The bus route in Clonmagadden has been designed so that all significant development is within easy walking distance of a good (or potential good) public transport service. The general guideline distance used in this regard is 400metres. Achieving this is considered critical – the ‘bottom line’ of sustainable development – and for medium scale developments as in the case of Clonmagadden, is not negotiable.



Key planning principles for effective bus operation:

- Providing direct routes for buses between points of primary attraction.
- Ensuring through bus-only lanes or priority measures, the bus will rarely be slowed or delayed by traffic congestion.
- Providing balanced housing densities along the routes with the highest density housing being close to stop.



- Providing direct and pleasant pedestrian access routes from the housing or commercial areas, avoiding physical or psychological deterrents (e.g. dual carriageway).
- Locating secondary trip objectives on the line of the route between key points – e.g. schools, post offices, public buildings.

In the case of Clonmagadden it is proposed to:

- Locate the Navan Ring Road on the edge of the site.
- Provide a shared busway running as a spine through the middle of the site.
- The shared busway will be designed so as to give priority to buses over cars by for instance not providing for bus lay-bys so that buses control the speed of traffic on this route.

- Through access for buses through the site and having no through access for cars through the site. Cars and other non-bus methods of vehicle transport generated from the east of the site have to go east to access the external road system and traffic at the west has to similarly travel west. This will be achieved by the provision of a ‘bus gate’ in the centre of the spine road.
- Providing bus stops within 400 metres of the majority of homes within the SDZ area.
- Providing higher intensity of development either by use and /or density within 100 metres of the bus stops.

The proposals for the provision of a bus facility are indicated on the Movement and Mobility Network Map, which indicates the overall movement network for the lands.

6.5 Roads and Traffic

6.5.1 External Traffic

External traffic has both its origin and destination outside the area.



In general, external traffic should not be permitted to use the mainly residential area of Clonmagadden as a short cut or ‘rat run’ to other areas.

The Navan Environs Development Plan 1997 shows the building of a Distributor Road around Navan as a specific objective. This road is shown on an indicative basis as passing through the middle of Clonmagadden SDZ.

Traffic modelling has shown that approximately 800 vehicles would pass along the Distributor Road at Clonmagadden in the AM peak hour in the year 2010. Approximately 550 vehicles will be generated by the SDZ in the AM peak hour in 2010.

The introduction of this level of additional external traffic into the Clonmagadden SDZ area would have serious repercussions for the quality of the environment within the Clonmagadden SDZ including community severance, noise and pollution and traffic danger.

It would also seriously undermine the strategy indicated in this document in relation to the priority of movement.

It would sever links between the parts of the development to either side of the road and would reduce the importance of public transport by allowing all vehicles to move through the SDZ. It would also be incompatible with a high-density housing development.

On this basis, it was decided to propose the location of this road to generally extend along the edge of the SDZ area with no provision for direct vehicular access through the SDZ lands.

In addition, proposals for Clonmagadden SDZ as indicated in the above sections will ensure that only public transport, pedestrians and cyclists will be able to pass through the area. The routing of

the proposed ring road will not add significantly to journey times on the ring road.

This option has no adverse effects on external traffic moving between the Slane Road and the main Distributor Road around Navan. This option is of great benefit to the SDZ, allowing greater movement within the development as well as ensuring that only public transport, pedestrians and cyclists can pass through the area.

A setback of 10 metres for roads purposes along the Kingscourt Road between the north of the SDZ and Tara Glen will provide the opportunity for the widening of this road and also to introduce safety measures for cyclists and pedestrians. A further 10 metre setback for open space purposes will also be required along this western boundary of the site.

Development at Clonmagadden SDZ will increase the overall volume of traffic in the north of Navan. However, the provision of the Distributor Road between the Slane Road and the N3, including a new bridge over the River Blackwater will mitigate the adverse impact of the development. Development of the SDZ lands will make a significant contribution to the provision of the Distributor Road and new bridge. In fact, with this Distributor Road in place by 2010 and Clonmagadden at its full size, the total traffic on the Inner Relief Road and Flower Hill is reduced by approximately 700 vehicles.

Development of the site in accordance with the Clonmagadden SDZ planning scheme will be subject to the provision of the necessary infrastructure.

6.5.2 Road Access

The main access to the Clonmagadden SDZ lands for cars and service vehicles will be the shared bus/vehicular spine, which runs through the middle of the scheme.

The design of this route will be such as to give priority for bus movements. Its width shall be 5 metres with no bus lay-bys. This will ensure that cars and other private vehicles will have to ‘wait their turn’ behind buses.



No through access will be allowed for cars and other private vehicles across the Clonmagadden SDZ. A device such as ‘bus gate’ will be provided to ensure this at an appropriate location.

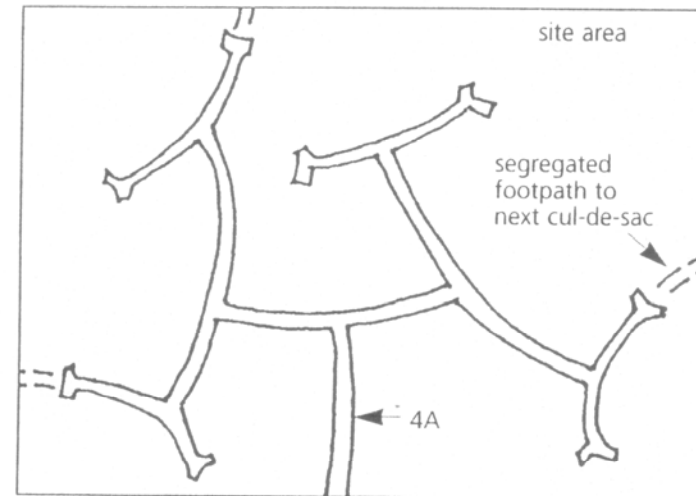
The design speed of this route will be 30mph. Where possible the use of ramps and platforms should be avoided as these may produce noise and vibration, wear and tear on cars and speeding between them.

6.5.3 Access Roads

6.5.3.1 Cul-de-sac

The use of cul-de-sacs result in a ‘tree’ structure of access, with only one main entry to the site. The diagram below shows this hierarchy of roads, which produces high vehicle flows towards the entrance. Dwellings located on the ‘Access Road’ suffer significantly more air and noise pollution, and risk of accident, than those within the cul-de-sac. The access road is also a

relatively hostile environment for pedestrians and cyclists. Alternative routes for the latter, on segregated paths from the end of cul-de-sacs may be neither direct in terms of distance, nor safe in terms of security.

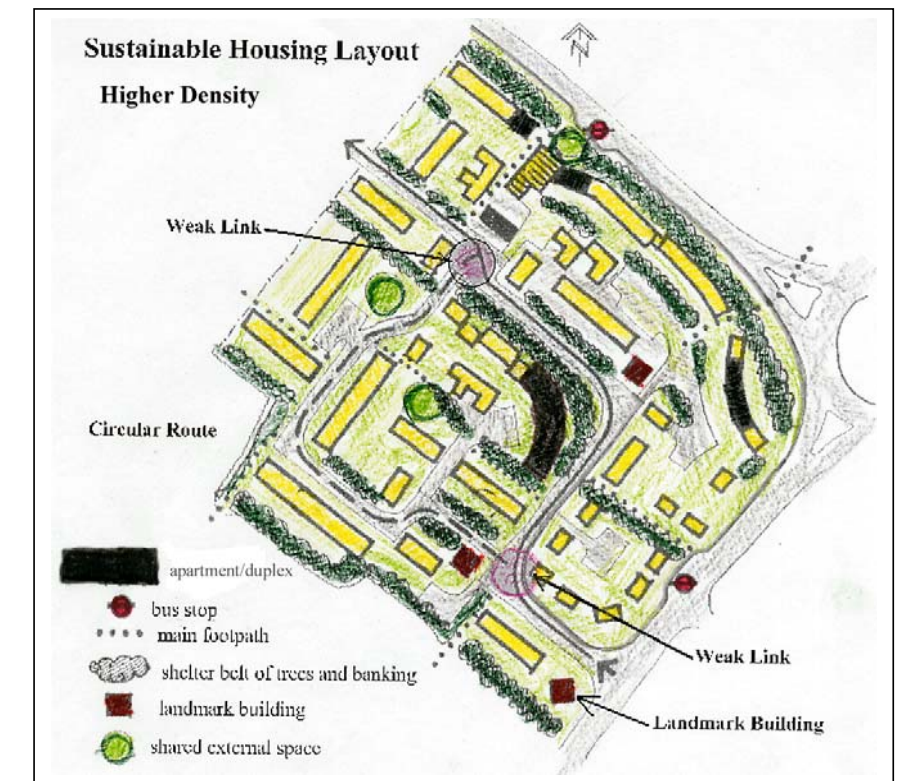


6.5.3.2 The Network Alternative

An increase in the number of access points (related to density and the location of external attractions) provides for peak vehicle flows to be kept to a minimum. Traffic is distributed more evenly throughout the layout. The consequences for pedestrian and cycle movement are significant. Shared surfaces can be used more generally, routes tend to be more direct, with higher amenity and safety. The plan is potentially more coherent and legible on the ground. Further advantages are that the roads are narrower, taking up to 9% less land area, and constructed to a lower specification, therefore using fewer natural resources. Costs remain similar owing perhaps to increased complexity at a detailed level.

Loops and circuits are better for service vehicles (e.g. milk delivery) and also reduce the problems of nuisance caused by reversing and turning vehicles. ‘Weak links’ allow service vehicles and emergency services to travel along the short segregated cycle and pathways, which break up the traffic grid.

Discontinuity would otherwise be a nuisance, and reduce the quality of the environment.



In general the access road layout for Clonmagadden is based on:

- A multiplicity of access points
- The provision of traffic cells
- A permeable structure
- Weak links through housing areas to facilitate service and emergency vehicles but to deter through traffic

6.5.4 Detailed Design of Roads

In relation to the detailed design of such roads:

- The hierarchy of roads and areas accessible by vehicles should be clearly communicated by signs, changes of

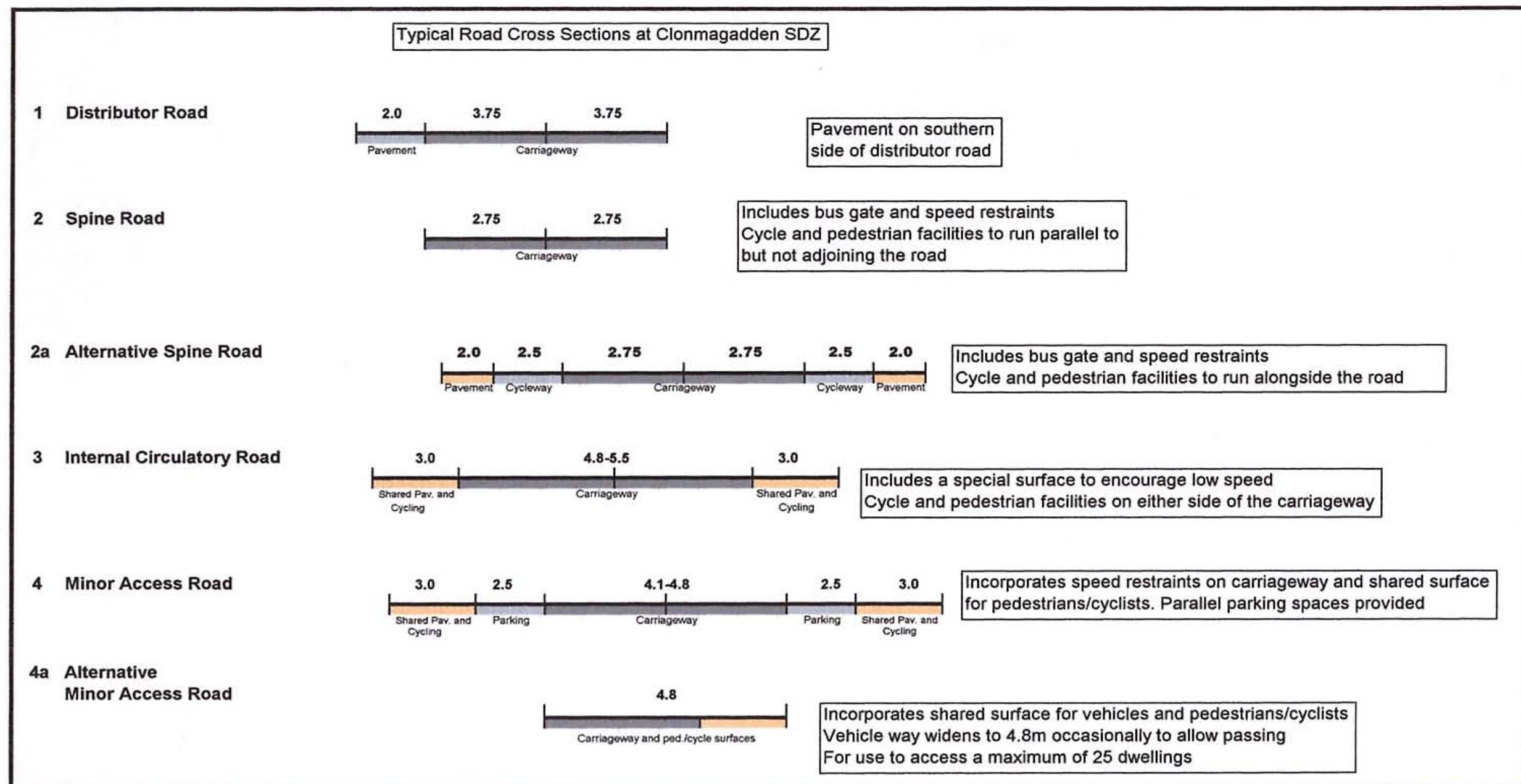
surface, enclosure at entrances, landscaping and progressive slowing down.

- The Ring Road will be a 7.5 metre single carriageway.
- The main access road (the ‘spine’ road) should have a ‘target maximum mean speed’ of 30 mph, with an emphasis on achieving steady speeds (thereby reducing fuel consumption, noise and danger). This road will have a maximum carriageway width of 5.5 metres.

- Internal access roads should have a target design speed of 20 mph. These are roads, which provide internal access to residential and other areas. They will have a carriageway width of between 4.8 metres – 5.5 metres. They will have dedicated 1.8 metre footpaths either side. Cyclists will use the road surface.
- Loop layouts and the linking of cul-de-sacs with ‘weak links’ (accessible only by authorised vehicles) facilitate delivery/collection by service vehicles. Large vehicles otherwise require large turning areas. Note that the expanses

of roadway associated with turning access are often used for haphazard car parking, which then constrains turning by service vehicles. These roads will have a maximum width of 4.1 metres with dedicated footpaths of 1.8 metres in width either side. Cyclists will use the road surface.

- Shared surface roads (to serve up to 25 dwellings in a cul-de-sac; up to 50 dwellings where conventional roads are located at each end) have the advantage of providing sufficient space for large vehicles to approach close to houses without giving an impression of a ‘tarmac prairie’. Delineation of parking



- and access ways, and footways, is essential. These roads will have a maximum carriageway width of 3.0 metres with the addition of integrated footpaths at 1.0 metre on either side.
- Road widths may be reduced to the minimum under an integrated traffic calming schemes (e.g. 4.8, 4.1 and 3m as shown on the diagram below) saving resources and land; but while a ‘squeeze’ may be positive to reduce car speeds, it can be dangerous for pedestrians and cyclists, so the road designs and signs should give clear priority to the latter.

6.5.5 Standards for Path Design

It is sometimes assumed that pedestrians and cyclists are so ‘mobile’ that almost any surface, gradient or width of path will suffice. Streets have been so thoroughly orientated to the needs of vehicular traffic that even the remaining refuge of the pedestrian, the footpath, is undermined by proliferating traffic signs and parked vehicles. The challenge for sustainable design is to create streets that contain vehicles, and are wholly safe and enjoyable for energy efficient modes of movement – including the movement of people with prams, small children, the elderly and those with impaired vision or mobility.

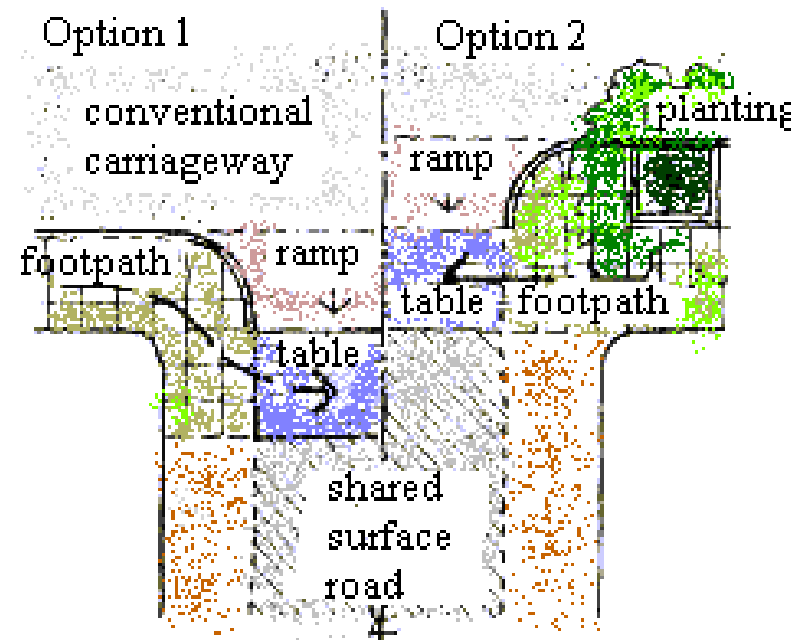
6.5.5.1 Continuity

Routes should not end abruptly at hazardous junctions. With reference to the diagram below where minor vehicular routes cross the pathway, pedestrians should have absolute priority, but the path should be set back from the side of the road. The designers of junctions would best serve the public if they can accept that pedestrians and cyclists use every opportunity to take the shortest route between two points; similarly that cyclists do not favour ‘stop-start’ conditions because of the additional physical effort involved. Layout should be checked for their

compatibility with the *desire-lines* revealed in the course of site appraisal, and modified by the new proposals.

6.5.5.2 Gradients

Pedestrian and cycle routes should generally ‘follow the contours’ when a site layout is first planned. A normal maximum gradient is 5% (1:20), through for cycle routes this



footpath alignment at junction

Option 1 requires a diversion. Option 2 permits a direct pathway but requires a buffer zone (for planting, bus-shelters, seats etc.

should not exceed 100 metres distance. Absolute maxima are 8% (1:12) for pedestrians over very short distance, and 7%

(1:14) for cyclists not exceeding 30 metres distance.

6.5.5.3 Widths

A 2 metre wide path is the minimum size to cater for up to 50 dwellings, enabling a single person (760mm) to pass a person with pram and small child (1250mm); extra width must be provided for obstructions such as lamp standards and carparking. A 2.5 metre width can cater for unsegregated cycling/pedestrian use, provided there are less than 200 cycle movements per hour (1000/hour if segregated).

For larger numbers of cyclists (unsegregated) and at school entrances, in alleyways under buildings, and at bus stops, a path should be more than 3 metres wide. Note, that cyclists require additional width on steep hills and bends.

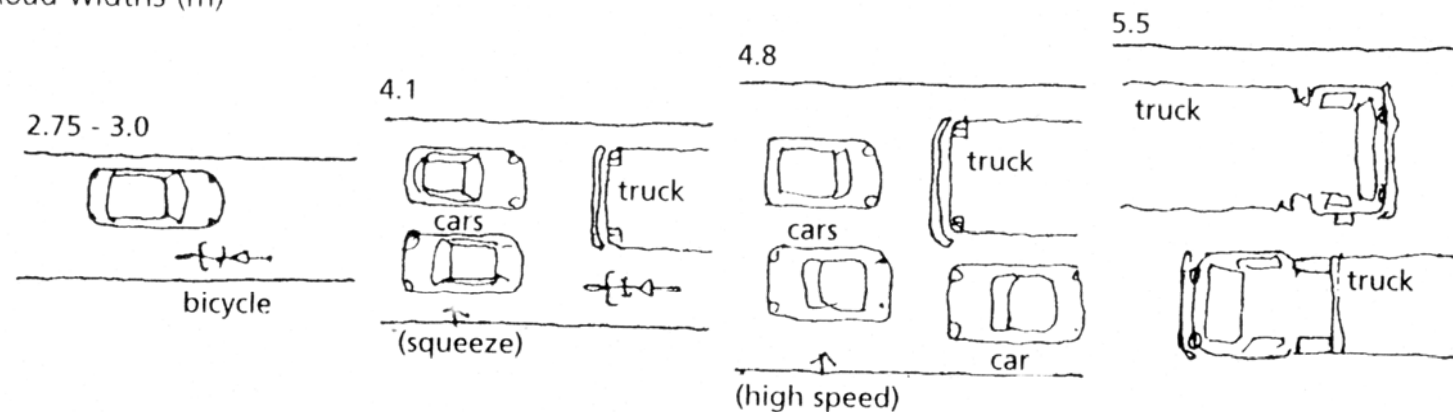
6.5.5.4 Surfaces

Dropped kerbs are required, preferably in conjunction with raised platforms across carriageways. While pedestrians require surface texture to prevent sliding, cyclists need very smooth, well drained, well maintained pathways without drainage gratings and manhole covers. With reference to the need to maximise water infiltration great care must be taken in the specification of materials and the proposed maintenance regime.

6.5.6 Car Parking

Parking control is one of the main mechanisms currently available for deterring car use. However, parking standards need

Road widths (m)



to be carefully devised to reinforce the public transport and higher density land use policies without causing undesirable side effects for residents or penalising car use where essential.

Car parking should generally be sited within established building lines in such a manner as to ensure minimal injury to the amenity of adjoining premises. In the town centre parking spaces should be located behind buildings or underground wherever possible, to encourage the continuity of streetscapes. Where parking will be opened to public view, adequate landscaping and tree planting must be provided to counteract the appearance of parking areas.

Construction and layout standards for multi-storey and underground car-parks are set out in the document, - ‘Design Recommendation for Multi-Storey and Underground Car Parks’ (current edition), published by the Joint Committee of the Institute of Structural Engineers and the Institution of Highways and Transportation.

6.5.7 Multi-Storey Car Parking

It is proposed to provide one multi-storey car park to serve the development of those land uses, which are likely to attract significant traffic from outside the SDZ site. Such uses are indicated with an asterisk in Para. 7.1.2 on the Landuse Table.

Two possible locations for the multi-storey car park are identified on the Clonmagadden Plan - Overall Scheme Map. However it is envisaged that only one multi-storey car park will be provided, if any.

The sizing of the multi-storey car park should have regard to the overall parking requirements associated with the comprehensive development of lands available for community/commercial uses. The external design of the multi-storey building shall be designed so as not to provide a single or major massing. In particular it shall relate to:

- (a) The water feature
 - (b) To the general scale of the adjoining square
- The design of the building should also have regard to its prominent location adjoining the Distributor Road and will also be required to be of a particularly high quality finish and design. Significant detailing should be provided in the façades of the car park and if necessary the car park should be presented as a series of buildings rather than one individual form by use of both design and materials. Particular attention should be paid to design to ensure that the traditional car park design approach, which presents a series of voids to the façade is avoided. In essence, the multi-storey car park should not form an overall dominant monolithic structure, but should read as buildings, which sit readily into the grain of development adjacent to the multi-storey car park. The multi-storey car park should be a high quality landmark building in its own right and subject to design and finishes constraints associated with such buildings as outline in Para. 8.9.

6.5.7.1 Parking Standards

Land Use - Residential	Car Parking Requirement
Dwellings	2 per conventional dwelling
Flats/Apartments	1.25 per unit
Hotel Accommodation	1 per bedroom
Guesthouses	1 per bedroom
Motel Accommodation	1 per bedroom
Hostel Accommodation	1 per bedroom or 1 per 10 bed
Self-Catering Accommodation	1 per unit
Institutions	1 per employee

Land Use - Employment	Car Parking Requirement
Offices	1 per 25 sq. gross floor area

Land Use - Commercial	Car Parking Requirement
Shop	1 per 20 sq.m. gross floor area
Banks	1 per 20 sq.m. gross floor area
Restaurants	1 per 5 sq.m. dining area
Bars, Lounges, Function Rooms incl. such spaces in hotels	1 per 4 sq.m. of public area

Land Use - Commercial	Car Parking Requirement
Service Garages	To be determined by the planning authority
Retail Outlets with garages	1 per 20 sq.m of net floor area

Land Use - Health and Education Facilities	Car Parking Requirement
Hospital Facility	1 per bed
Surgeries	2 per consulting room
Nursing Homes	1 per 3 beds and one space per employee
Schools	3 per classroom

Land Use - Community Facilities	Car Parking Requirement
Churches	1 per 6 seats
Libraries	1 per 20 sq.m. gross floor area
Cultural Buildings	To be determined by the planning authority

Crèches	1 per employee and dedicated set down area 1 per 5 children
Community Centres	To be determined by the planning authority

Land Use: Sports Facilities	Car Parking Requirement
Sport Clubs - including swimming pools tennis courts, etc.	2 per court, 5 per 100 sq.m.

6.5.7.2 Demand for Parking

Type	Description of Location	Provision of Parking
Standard Housing	Housing within residential areas Excluding mixed use areas	100% of requirement
Apartment	Units within Residential Areas	80% of requirement
Local Services in solely commercial blocks		100% of requirement
Local Services and residential in mixed-use blocks		80% of requirement
All other areas within 100 metres of a bus stop		80% of requirement

In assessing the need for car parking in any particular scheme account will be taken of:

- The particular location of a land use
- The intensity of employment and the exact nature of the proposed use, particularly in retail shopping
- Grouped or dual parking provision where peak demands do not coincide (especially where day and night uses are combined)
- Existing on and off street car parking

- Proximity to public transport
- The availability of quality pedestrian, cyclist and public transport routes

In the case of any specific uses not listed in the above table, the planning authority will specify its requirements in relation to parking.

Parking facilities for mobility impaired drivers and their vehicles shall be provided at the general rate of 1 per 100 spaces and shall be proximate to entry points to the proposed buildings.

6.5.7.3 Loading and Unloading

In addition to the general car parking requirements, service parking space may be required for cars or other necessary vehicles involved in the operation of the business or a particular building, e.g. delivery and collection of goods. In commercial developments, developers will be required to provide loading and unloading facilities sufficient to meet the likely demand of such development. Off-street loading facilities shall be designed to conform to the following requirements:

- Each required space shall be not less than 3.7 metres in width, 6 metres in length and 4.3 metres in height exclusive of drives and manoeuvring space and located entirely on the site being served.
- Loading spaces may be enclosed within a structure and must be enclosed if located within 15 metres of the curtilage of the residence where the use involves regular night operation.
- There shall be appropriate means of access to a street or road as well as adequate manoeuvring space.

- The maximum width of driveway openings at the street boundary shall be 6 metres and the minimum width shall be 3.6 metres.

Loading facilities shall be provided and maintained so long as the use exists which the facilities were designed to serve. They shall not be reduced in total extent after their provision and all reasonable precautions shall be taken by the owner or sponsor of particular uses to assure availability of required facilities to the delivery and pick-up vehicles that they are designed to serve.

However, the planning authority may modify the requirements of loading and unloading facilities in any specific case where it appears that it would be in the interest of the proper planning and sustainable development of the areas to do so.

6.5.7.4 Design Criteria

RECOMMENDED AISLE WIDTHS	
Parking Angle	Preferred Width
90 degrees	7 metres (two way aisle)
90 degrees	6 metres (two way aisle)
80 degrees	5.25 metres
70 degrees	4.7 metres
60 degrees	4.2 metres
50 degrees	3.8 metres
45 degrees	3.6 metres

The basic dimension required for the layout of car parking areas is as follows:

1. Short-term parking bays (for shopping centres particularly) shall be 2.5 metres wide by 4.75 metres in length. In no instance shall a width of less than 2.4 metres be accepted, even for long-term (office blocks) parking spaces.
2. Parking bays for disabled persons will be a minimum of 3.0 metres wide by 4.75 metres long. This includes disabled parking bays in the proposed multi-storey car park. The number of spaces provide will be determined by the planning authority in accordance with the Building Regulations (Part M) and any other relevant guidelines.

6.5.7.5 Heavy Vehicles

The indiscriminate parking of heavy commercial vehicles or machinery in residential areas detracts greatly from the amenities of these areas. It is the intention of the planning authority to protect and improve residential amenities in all areas of the town. The planning authority will co-operate with all other bodies that exercise control over this type of parking, to eliminate the nuisance created.

6.5.7.6 Cycle Parking

Secure cycle parking facilities shall be provided in new office, residential, retail and employment generating developments. Bicycle racks shall be provided in all cases where the planning authority deems bicycle parking necessary. Such facilities should be within 25 metres of a destination for short-term parking, (shops) and 50 metres for long term parking (school, college and office). Where stands cannot be provided on site, a contribution will be required towards the provision of public cycle stands by the Council at the rate of €100 per space required. The number of stands required will be approximately a third of the number of car spaces required for the development, subject to a minimum of one stand.



















All long-term (more than 3 hours) cycle racks shall be protected from the weather. From a security viewpoint cycle racks should not be located in out-of-the-way locations.

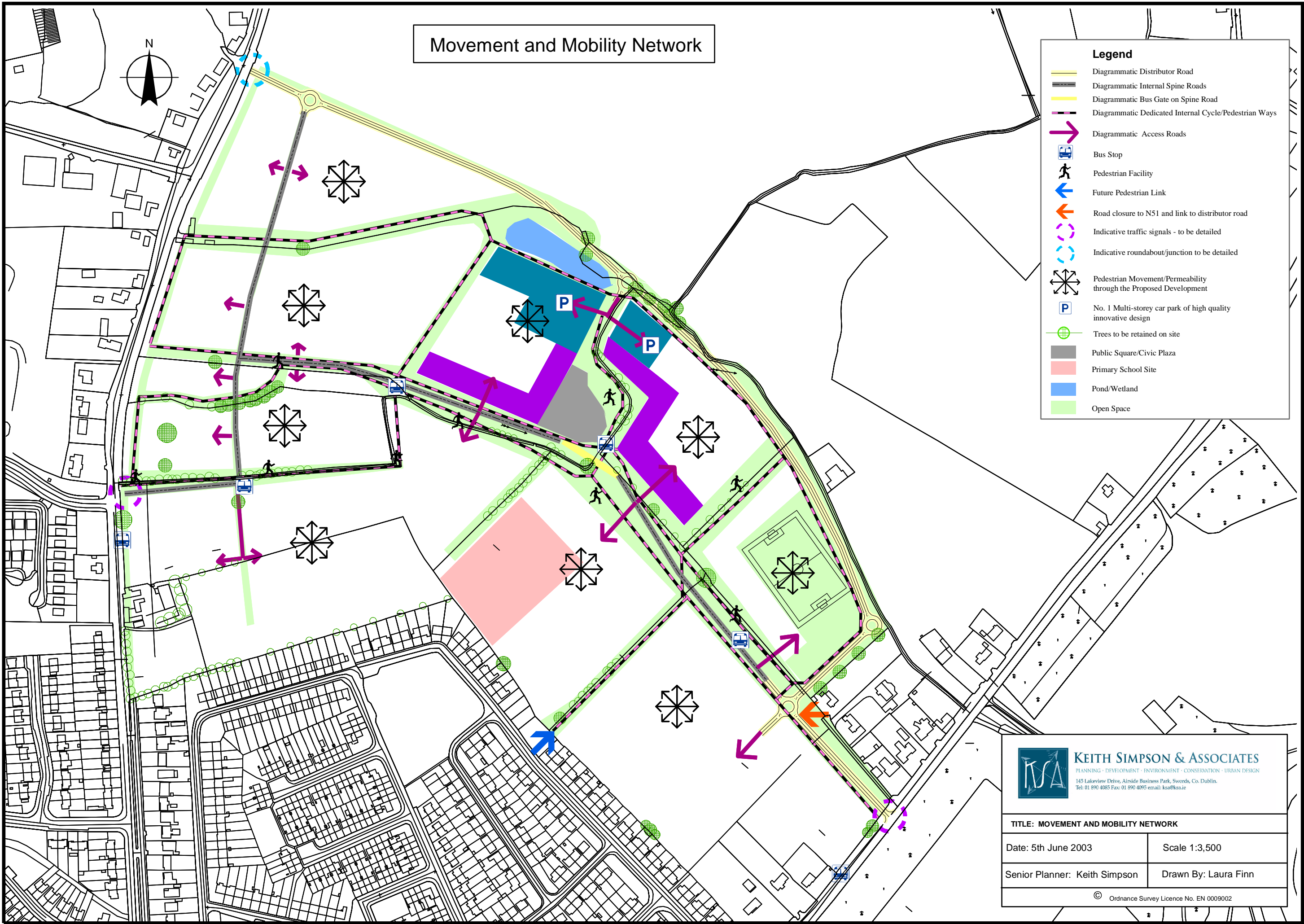
All cycle facilities in multi-storey car parks shall be at ground floor level and completely segregated from vehicle traffic. Cyclists should also have designated entry and exit routes at the car park.


Cycle parking facilities shall be conveniently located, secure, easy to use, adequately lit and well posted. Weather protected facilities should be considered where appropriate. In addition, parking should be placed within a populated, well-supervised area, and monitored by CCTV where possible.

Movement and Mobility Network

Legend

-  Diagrammatic Distributor Road
-  Diagrammatic Internal Spine Roads
-  Diagrammatic Bus Gate on Spine Road
-  Diagrammatic Dedicated Internal Cycle/Pedestrian Ways
-  Diagrammatic Access Roads
-  Bus Stop
-  Pedestrian Facility
-  Future Pedestrian Link
-  Road closure to N51 and link to distributor road
-  Indicative traffic signals - to be detailed
-  Indicative roundabout/junction to be detailed
-  Pedestrian Movement/Permeability through the Proposed Development
-  No. 1 Multi-storey car park of high quality innovative design
-  Trees to be retained on site
-  Public Square/Civic Plaza
-  Primary School Site
-  Pond/Wetland
-  Open Space





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TITLE: MOVEMENT AND MOBILITY NETWORK

Date: 5th June 2003	Scale 1:3,500
Senior Planner: Keith Simpson	Drawn By: Laura Finn

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7 LAND USE, FACILITIES AND DENSITY

7.1 Mixed Uses

In the planning of a town there should be a rough balance of homes, jobs and services.

In the case of Clonmagadden due to its size and context it is not possible or appropriate to provide a balance of uses as the area has neither the capacity to support such uses, nor would large scale or intensive district or town scale uses be appropriate within the area.

However, there is still a need to provide for a range of uses and range of intensity of development within and appropriate to the area.

7.1.1 Provision of Facilities

Local facilities proposed for the centre of Clonmagadden are those generally, which serve the SDZ area.

Based on the need to balance the protection of amenities of dwellings in this predominantly residential area and the need to provide facilities within the SDZ it is considered that the following uses table will apply within the SDZ zone.

7.1.2 Land Use Table

Land Use Table	
Community/ Commercial Centre	Adverts, Bring Banks, Bank, Religious Facility, Major Crèche/Childcare Facility(*), Community Facility/Centre, Hotel/Conference Centre(*), Cultural Facility/Use, Doctors/Dentists, Education, Enterprise Centre, Major Fitness Centre(*), Guest House (max. 20 bedrooms), Health Centre, Home Based Economic Activity, Major Leisure/Recreation(*), Library, Local Shops, Offices, Public House (*), Recycling Facility/Civic & Amenity, Public Services, Residential, Restaurants/Cafés, Sports Facilities, Take-Aways, Tourism Complex(*), Veterinary Surgery, Bank
Residential/ Gateway Building on Kingscourt Road	B & B/Guesthouse (Max. 5 guest bedrooms), Local Crèche/Childcare Facility (generally 1 per 75 dwellings and in accordance with the ‘Children’s Facilities, Guidelines for Planning Authorities’), Home Based Economic Activity, Open Space, Smallscale Residential Institution, Public Services, Recycling Facility/Civic & Amenity, Residential,
Primary School Site	Education, Public Services, Recreational Open Space
Open Space	Open Space and Recreational Facilities Public Services, Sports Facilities

Public Square/Civic Plaza	Temporary Retail Kiosks, Open Air Dining and Drinking Facilities Relating to Adjoining Uses in the Square, Temporary Displays for Public Information Purposes, Exhibitions of Crafts, Works of Art and other items of Artistic Content, Cultural, Social and Community Events
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(*) – Only in buildings directly served by link to Distributor Road at north of site as indicated in the land use and overall plan, and subject to the construction of the multi-storey car park.

7.2 Facilities

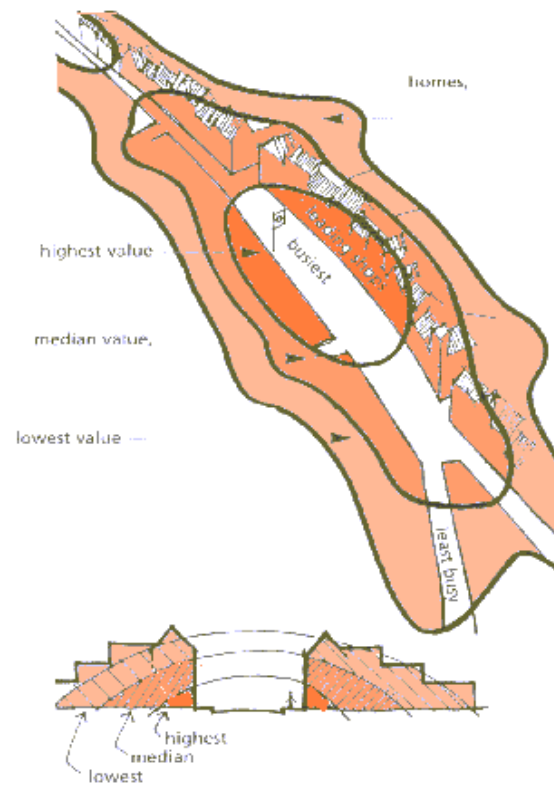
7.2.1 Access to Facilities

Access to employment, shopping, education, health, leisure and social facilities are all important. However, modern lifestyles are not normally geared to one specific job/service centre, but to a wider range of choice. The increasing mobility of large sections of the population may mean that local people may not in any case choose to use local facilities.

Nevertheless, some sections of the population remain highly dependant on local facilities and sustainable development means trying to ensure that all people have the opportunity to use local facilities and preferably a choice of local facilities.

For this reason it is difficult to be prescriptive about access to facilities. Also the provision of a variety of local facilities within the Clonmagadden SDZ is no guarantee of short trips but does permit short trips.

Typical high street diagrammatic values/uses contours



7.2.2 Catchment Areas

Traditional approaches to catchment areas, as in the new towns, equated catchment areas with neighbourhoods, which were based on specific population levels. The problem with this approach is that it had limited regard to the needs of residents in that it did not specify the distance such facilities should be from residents. With low densities in particular, this approach resulted in a poor provision of services.

There is a gradation of access distances which are desirable, depending on the user, the use, and the catchments requirements. The diagram above suggests a range of standards, which may be adapted to local circumstances. The standards are based on the balancing of different criteria.

These ‘ideal’ standards have been applied to the Clonmagadden SDZ in relation to local facilities and are indicated on

Community/Leisure/Recreational and Commercial Facilities Map.

7.2.3 Location of Facilities – The High Street

In general local facilities in Clonmagadden have been clustered together at locations served by bus, bike and pedestrian routes in a linear cluster similar to traditional high streets. This provides for variable catchments that can adapt to changing market conditions.

The linear concentration of varied retail, social, cultural and commercial activities, plus flats and town houses, along the Clonmagadden ‘High Street’ provides varied benefits by comparison with compact centres including:

- Better access from homes to local facilities
- Flexibility of hinterland size for facilities over time
- A wide range of property values, permitting marginal users frontage positions
- A common focus for main pedestrian, bus and bike routes

In general the Clonmagadden ‘High Street’ will:

- Combine office, retail, leisure, civic and high residential uses in close and overlapping patterns, knit together by the pedestrian/cycle network, particularly to increase the ‘viability and vitality’ of the centre.
- Facilitate multi-purpose trips, and increase the viability and service quality of public transport.
- Provide for functional linkages between activities within the site to be a key determinant of the planning of the area, so as

to provide potential for dual use of space, trip purpose sharing and multi-functional design.

- A health centre shall be made available within the first phase of development and commissioned prior to occupation of any of the dwellings in the second phase of development.

7.2.4 School Provision



In addition to the provision of the above facilities the consideration of the provision of primary school is a particularly important element.

7.2.4.1 Primary School

It is proposed to reserve a 1.21 hectare (3 acre) primary school site to cater for the SDZ lands. This will include both the building site and recreational open space. This recreational open space will be made available to the local community.

The primary school site identified on the Clonmagadden Plan - Overall Scheme Map shall be reserved within the first phase of development. The school shall be constructed and operational prior to occupation of any of the houses in the second phase of the development.

The location of the primary school is within 400m of most homes, and 600m of all houses in Clonmagadden. Within 400 metres walking the children to school is the norm, but there is increasing resort to the car as distance increases beyond that,

7.2.4.2 Secondary School

A location for a secondary school site is currently being considered in the north of Navan other than on the Clonmagadden lands. This will cater for the pupils coming from the Clonmagadden lands.

7.2.5 Housing Mix

7.2.5.1 Planned Variety

The policy appropriate for any particular development area depends on its size and context.

In the case of Clonmagadden it is proposed to provide a range of residential units across the site generally in accordance with Table 7.2.5.1(a). While it is accepted that applications in areas designated for particular densities will vary from the specified housing mix, the overall site shall comprise the range of housing identified.

The proposed balance for Clonmagadden is in terms of

- Terraces/semis/detached dwellings,
- One/two/three/four/five + bedroom dwellings,
- Up market/mid-market/starter homes,
- Social and affordable houses including if possible co-operative/ housing trust housing associations houses,
- If required special needs/sheltered accommodation.

In general terms it is proposed that the appropriate approximate percentage of housing mix should be as follows:

Table 7.2.5.1(a)	
Terraced Dwellings	not <u>less</u> than 50%
Apartments and Duplex	not <u>more</u> than 30%
Semi detached dwellings	not <u>more</u> than 20%
Detached dwellings	not <u>more</u> than 5%

The range of bedroom numbers will correlate with the type of housing as follows:

Table 7.2.5.1(b)	
Dwelling Type	Indicative number of bedrooms
Apartments and Duplex	1, 2 and possibly some 3 bed
Terraces	2, 3 and possibly some 4 bed
Semi detached dwellings	3 and 4 bed
Detached Dwellings	3, 4 and 5 + bed

Residential developments must ensure a high standard of residential amenity and quality of life for future inhabitants, and as such should endeavour to exceed minimum apartment size standards. To this end, it is recommended that 1 bed apartments should exceed 45 sq.m, 2 beds should exceed 65 sq.m., 3 bed should exceed 90 sq.m. In addition all apartment, townhouse and semi-detached dwellings shall be provided with adequate storage space.

7.2.6 Social and Affordable Housing

Social and affordable housing shall be provided as follows:

- Affordable Housing – 17% of total residential units
- Social Housing – 3% of total residential units

unless Meath County Council require otherwise, as may be outlined in the review of the County Housing Strategy as applicable to Navan.

7.3 Density

7.3.1 The Role of Density

Density is one of the most important elements in locational policy particularly at local level.

It is also one of the most fundamental urban form variables. Research has shown that it is a major factor influencing the level of car ownership and car reliance independent of income variations.

Higher densities foster walking, cycling and public transport and make for shorter journeys. Higher densities are also associated with energy-efficient building forms (e.g. terraces) and economies in the provision of infrastructure. A close knit preferably mixed use pattern of building is seen by some as essential to create a vibrant and enriching urban environment.

However, very high densities are seen as threatening the quality of life, particularly if they involve loss of open spaces and ‘the urban green’.

7.3.1.1 The Best of Both Worlds

Achieving the benefits of higher density – especially good accessibility – without the problem of ‘town cramming’ means a rise in the average new-build net densities, while gross densities

are kept low enough to encompass the open space networks, parks, shelterbelts and wildlife refuges that sustainable development demands.

7.3.2 Average Net Density

Hence for the purposes of the Clonmagadden SDZ **average net density** will be used.

Average Net Density = Net Site Area/No. of Dwellings

Net Site Area includes:

- Access roads within the site
- Private garden space
- Car parking areas
- Incidental open space and landscaping
- Children's play areas where these are to be provided

It excludes:

- Major and local distributor roads
- Primary schools, churches, local shopping, etc
- Open spaces serving a wider area
- Significant landscape buffer strips and open space spines along hedgerows

7.3.3 Appropriate Net Density

The lands contained within the Clonmagadden SDZ are 'open lands on the periphery of Navan, whose development will require the provision of new infrastructure, roads, services and ancillary social and commercial facilities'.

The Residential Density – Guidelines for Planning Authorities define such areas as 'Outer Suburban/Greenfield Sites'.

In relation to such sites the guidelines state that 'the greatest efficiency in land usage on such lands will be achieved by providing net residential densities in the general range of 35-50 dwellings per hectare (14-20 per acre).

In addition the guidelines also indicate that higher densities may be provided at public transport nodes. In this regard, higher densities at up to 60 dwellings per hectare (24 dwellings per acre) will be permitted along the proposed busway and within 100 metres of bus stops.

In relation the Clonmagadden SDZ the average net density range for the various areas is as follows:

- **Medium Density Housing Area (indicated on Built Form and Density Plan) – Density 37-45 dwellings per hectare (15-18 per acre)**
- **Higher Density Housing Area (indicated on Built Form and Density Plan) – Density 45-60 dwellings per hectare (18-24 per acre)**
- **Mixed Use Area (indicated on Built Form and Density Plan) – Plot Ratio 1.0 – 2.0**

Plot Ratio – Total Floor Area/Total Site Area

The maximum number of dwellings on site shall be 1,400 units, the construction of which shall be carried out over three phases comprising 500 units in Phase 1, 500 units in Phase 2 and 400 units in Phase 3.

7.3.3.1 Density Patterns

The differing density patterns combined with a significant level of net density proposed for the Clonmagadden SDZ will provide for a number of sustainable objectives including:

- To minimise average trip lengths and maximise the level of accessibility.
- To safeguard the viability of local shops, services and public transport.
- To permit diversity of density and character in every neighbourhood, and thus encourage diversity of household types.
- To facilitate creation of the open space network and of pedestrian access to open country.

In general density levels and use intensity, in the Clonmagadden SDZ vary in relation to the level of public transport accessibility and proximity to prime pedestrian routes.

- High density/high intensity near local high streets and bus stops, and along the distributor road.
- Lower density adjoining existing dwellings to reflect the pattern of development in adjoining areas.
- Linear bands of higher density/intensity may be provided along green corridors.

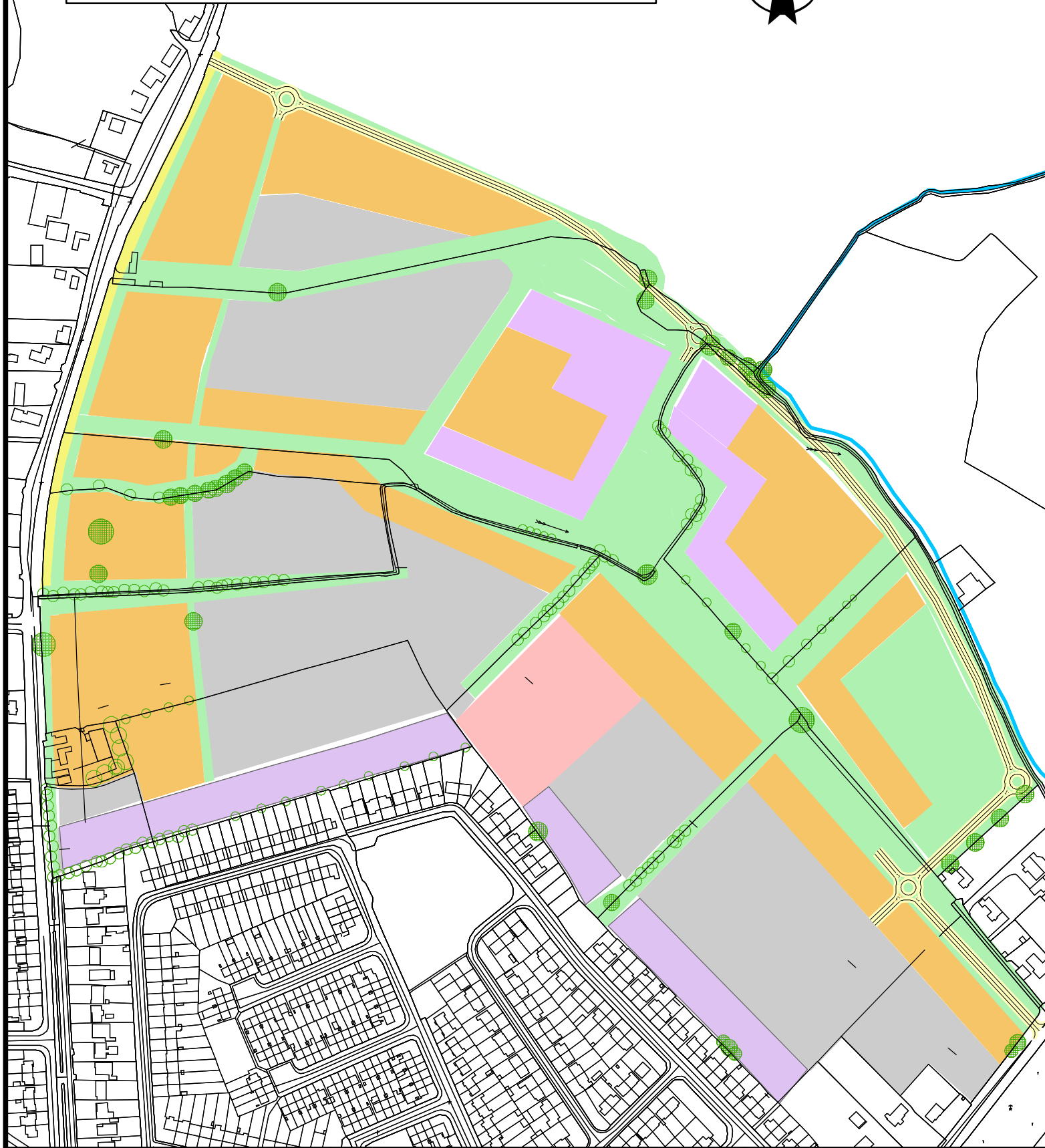
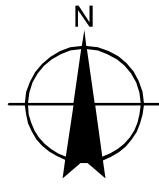
7.4 Application of Density Principles to the Area







The application of the foregoing principles to Clonmagadden are indicated on the Built Form and Density Map.

This provides for:

- Public transport providing the spine and structure for the settlement – two very efficient routes serves the whole population of Clonmagadden.
- Facilities and higher intensity housing are concentrated along the public transport spine.
- Higher density within 100 metres of at bus stops.
- Linear bands of higher density/intensity may also be provided along major elements of the pedestrian/cycleway networks.
- Everyone living within 400m of the public transport service and walking distance of some local facilities.
- Wider choice of facilities is available one or two stops away.
- Densities grade down away from the core thus giving varied living environments and a range of housing, while maximising accessibility.
- The main distributor road is kept peripheral to the development, so as to attract car traffic away from the high street.
- The multi-function open space network threads through the development. All dwellings are within 400 metres of significant open space.

Map of Built Form indicating Summary of Estimated No. of Residential Units and Gross Density Proposed



Landuse	Area of Lands (Hectares)	Estimated No. of Units (Lowest Expected)	Estimated No. of Units (Highest Expected)
 Medium Density (37 - 45 units per ha 15 - 18 units per acre)	14 ha (34.6 acres)	518 units	630 units
 Higher Density (45 - 60 units per ha/ 18 - 24 units per acre)	9.4 ha (23.3 acres)	423 units	564 units
 Community/ Commercial Recreational / Residential Facilities (45 - 60 units per ha/ 18 - 24 units per acre)	1.08 ha (2.66 acres)	49 units	64 units
 Open space/ Public Square/ Civic Plaza / Pond	11.5 ha (28.5 acres)		
 Road Setback	0.49 ha (1.32 acres)		
 School Site	1.1 ha (3 acres)		
Total		990 units	1258 units
Gross Density	38 ha (94 acres)	26 units per ha (10.5 per acre)	33 units per ha (13.4 per acre)



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TITLE: BUILT FORM AND DENSITY

Date: 12th June 2003

Scale 1:4,000

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8 DESIGN OF BUILT FORM

8.1 Built Form

The overall form of the Clonmagadden SDZ is essentially linear in nature. It is based on the provision of a pedestrian/cycle and bus spine through the centre of the lands and the provision of the High Street along the centre of this spine.

In general as the site slopes significantly downwards in a northerly direction from 56 metres O.D. at Blackcastle to 46 metres O.D. at the northern edge of the site, a drop of 10 metres. Advantage has been taken of this to provide higher buildings in the northern area generally below the 52 metre O.D. level and lower buildings on the higher ground adjoining Blackcastle.

8.2 The High Street, Clonmagadden

The High Street in Clonmagadden is proposed as a series of limited generators of activity. These generators being bus stops, local shop, clusters of civic/community buildings, café and so on. The High Street should not necessarily be uniform in activity levels and uses.

Within the high street there will be zones of prime locations, secondary and tertiary locations. These relate to distance from the main activity generators both in horizontal distance - length



The Clonmagadden High Street will be generally 3 storeys high. However at particular locations along the High Street, particularly to emphasize a change in direction or to indicate the importance of a space or nodal point of pedestrian, cycle and if relevant bus route, landmark buildings up to 5 storeys in height will be considered. Such buildings, if permitted will in any event be limited in number and must demonstrate a high quality of design and must not seriously impinge on the amenities of the area. The locations of these landmark buildings are indicated on the Clonmagadden Plan – Overall Scheme Map.

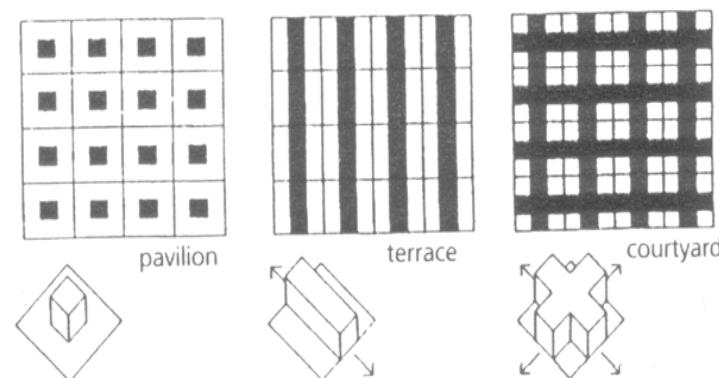


Nodal point in High Street

along the high street and in depth to the rear of the plots - and in vertical distance, the upper floors. Housing can be infilled in less valuable locations along the axis, on upper floors and in the rear of plots in courtyard arrangements.

In form, compared with 'Main Street' USA, the High Street will not be geometrically straight, but slightly irregular, changing direction gradually and opening out to places of congregation. This more organic form takes cues from the topography to give shelter and can take advantage of sunny settings for central locations.

Section through Development Area



8.3 Patterns of Density and Built Form

The maximum number of dwellings on site shall be 1,400 units, the construction of which shall be carried out over three phases comprising 500 units in Phase 1, 500 units in Phase 2 and 400 units in Phase 3. The density and layout of residential

development within the Strategic Development Zone lands shall be as per the Clonmagadden Plan – Overall Scheme Map.

A variety of densities and built forms are appropriate, to accord with the density patterns which have been identified previously.



Schematic Progression of Built Forms in an Urban Linear Band

There is no simple prescription for determining appropriate built form, although a thorough understanding of context and the potential within the detailed development of a design may narrow the options. The purpose of looking at simple generic forms, is to encourage a systematic approach and ensure that appropriate alternative concepts are considered in the design process.

8.3.1 Aspect of Housing

All housing shall at minimum be dual aspect and designed so that greatest advantage is taken of southwest orientations.

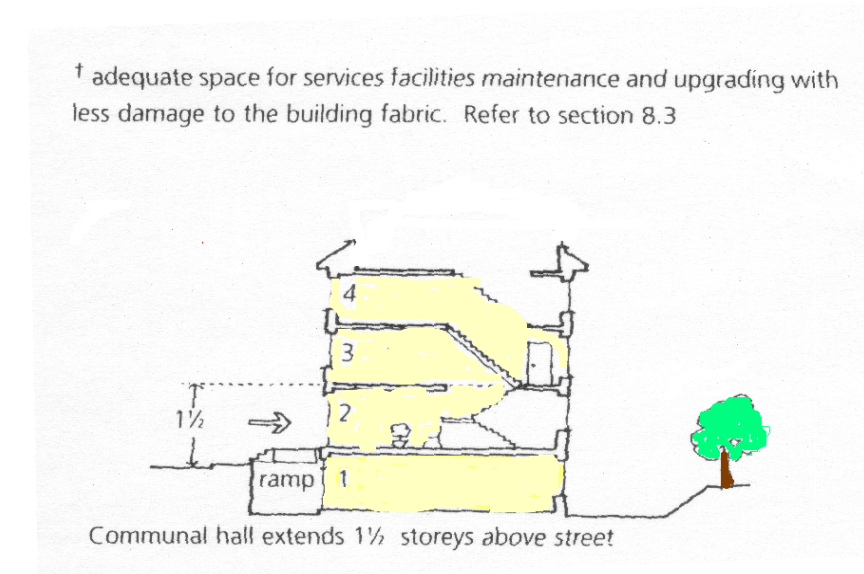
8.4 Build Potential

Build potential is defined as the ratio of the floor area (of the built form) to the site area. The graph shows that in comparison to the detached form, the built potential of the terraced form at

its upper limits has twice the value, and the courtyard form has no less than three times as much potential. Plan geometry directly affects the potential density, assuming that height is an important factor.

8.4.1 Building Height

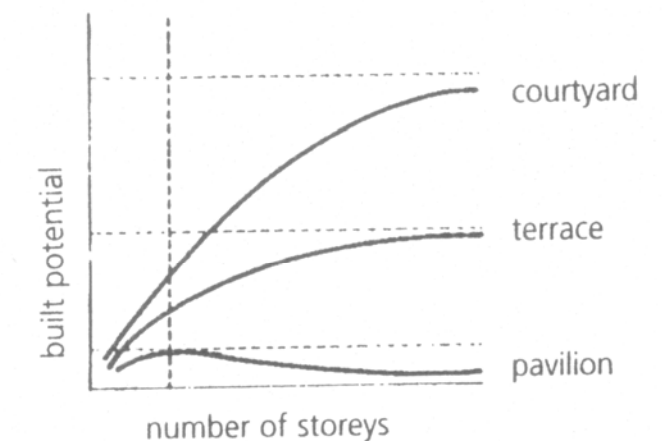
In general, houses of two or three storeys best meet human need with the minimum expenditure of resources. Two reasons for their success are that there is a reasonable level of access to and from external spaces, and satisfactory natural lighting at high densities. The purpose of this section is to highlight these issues particularly in relation to both higher and lower buildings.



8.4.2 Storey Height

This is not a 'fixed dimensional unit', though the modern tendency to use minimum figures as a target has produced a great many habitable rooms with a floor to ceiling height around 2.3 metres. It may be advantageous to consider 2.4 – 2.5metres as a better standard, for living rooms. The expenditure of embodied energy required to increase the height of buildings by three brick courses (225mm) could be justified by:

- Improved natural lighting, using windows that are taller and therefore less obstructed in high-density developments (Georgian houses are an example of this approach).
- More satisfactory conditions of natural lighting in deep plans, or following construction of extensions and conservatories.
- More even efficient distribution of light from (centrally located) artificial lighting.
- Improved indoor air quality.
- Reduced requirements for extract ventilation to avoid condensation.
- And, with an increased dept of floor, better sound insulation, and space for services within floor voids.



Built potential in relation to number of storeys (Martin and March, 1972)

8.5 Multi-storey Development

It is good practice to ensure that the actual entrance door of a flat or maisonette is no more than 1.5 storeys above communal entrance or street level. This tends to set a limit at 4 storeys (see diagram). Then the communal hallway and stairs, reduced to approximately one and a half storeys in height, should be designed for maximum ease of use, taking into account a wide range of abilities, and activities associated with access. Ramps, and resting places on stair landings, serve the needs of everyone at some time or another (whether they are carrying shopping bags, moving house, or feeling unwell).

Buildings that have relied on sophisticated lifts in the recent past have often been taken to excessive heights in order to justify the large capital investment. The results have sometimes been disastrous, for well-publicised reasons. Where lifts are required, either because of height or occupancy, any design proposals should:

- Allow for satisfactory use of building in the event of prolonged lift failure.
- Discourage the habitual use of the lift, through the provision of circulation space that is enjoyable and safe to use.

8.6 Single Storey Development

Single storey dwellings, although not generally suitable for urban areas, can provide useful benefits in specific situations such as:

- Special Needs: homes for elderly and disabled people, and families with young children. Patio houses achieve much higher densities than bungalows, and can be integrated into a

larger scheme to suit the desired mix and avoidance of overshadowing.

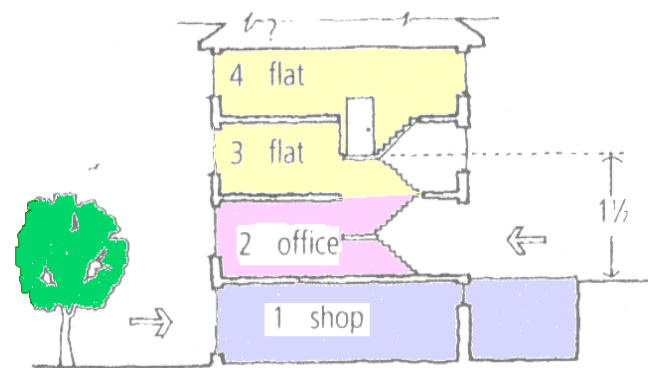
- On plots which are smaller than those normally acceptable for family sized houses.
- On sites which are awkward to develop with conventional houses because of the shape and/or relationship with adjoining dwellings.

8.7 Generic Built Forms

A layout can be developed from three basic forms, shown in the diagrams above (a) pavilion (b) linear or ‘terraced’ (c) enclosed or ‘courtyard’. Each has particular characteristics, but they are essentially points of recognition in what may more properly be seen as a continuous transformation from one extreme to the other.

For an idealised density pattern for public transport, it might be suggested that progression from local centre to outskirts, using court, terraced and finally detached forms corresponding to the required density. A purely schematic progression is overlaid on to a sketch of an urban linear band, to illustrate the point (see below).

However, mixed uses and transport inevitably complicated the picture in the areas of highest intensity, i.e. the local centre.



As above, but with mixed use, and taking advantage of slope

Even if the courtyard form provides the same amount of floor space on the same site area with the same condition of building depth, in only one third the height of the pavilion form, it may still be desirable to locate higher buildings along the central spine with deep-plan pavilion forms. There remains the possibility of adapting the courtyard form to make fine urban squares, and the linear form to produce streets of vitality and civic quality.

8.7.1 Pavilion Forms

Providing that the quality of the local environment and internal comfort standards are satisfactory, detached blocks can contribute to sustainability whereby:



- A site with awkward shape, overshadowing, poor ground conditions can be utilised.
- A landmark is required, to reinforce local identity and sense of place, or to provide a focus along a public transport spine.

- A deep plan structure is envisaged, with the advantages of thermal insulation (an intermediate flat has the lowest heat loss of all conventional dwelling types).
- A range of uses and ancillary spaces can be accommodated.

8.7.2 Terrace Forms

8.7.2.1 Terraces

The terrace is the means by which much ‘high density low rise’ development is accomplished, and the urban areas of Ireland combine countless variations. As people have aspired to improve standards of living, it appears less attractive than more detached forms, owing to shortcomings that have been more a result of the past practices of development and construction than inherent defects. One such shortcoming is lack of sound insulation between properties, which is actually a surmountable problem provided sufficient attention is paid to it at both design and construction stages.

The advantages of terraces in general are:

- Low embodied energy in construction.
- Affordability.
- Good thermal insulation, hence low energy consumption.
- Durability, especially considering the relatively small area of external wall.
- Small plot size yielding high density and reduced travel distances.
- Urban design quality, as a form that encloses external spaces effectively (e.g. streets).

Since houses can be joined together in a variety of ways, including corners, cranked, and curved junctions they can contribute to urban design in a number of ways:

- The terrace addresses and defines the street, and public spaces.
- The rear gardens are protected from the street by a continuous barrier against sound pollution and visual intrusion.
- Planning can incorporate into the design and conserve features such as mature trees.
- Streets can ‘meander’ both for visual interest, and in relation to traffic calming.
- Streets can follow contours, to maintain minimum gradients suitable for energy-efficient movement (walking and cycling).
- Garages, studios, and other ancillary buildings can be incorporated with less risk of producing a chaotic appearance.
- Shared semi-public spaces (e.g. play and wildlife areas) can be partially enclosed to provide supervision and a sense of territory/community identity.

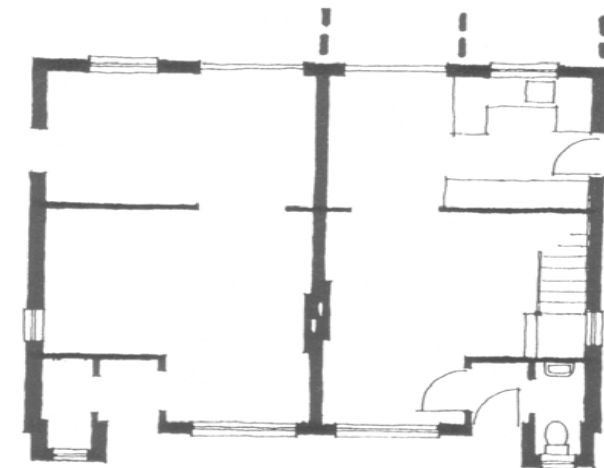
In the paragraphs below, it will be seen that to achieve a satisfactory ‘quality of life’ for residents, wide frontage may be superior to narrow frontage houses. However, the latter are still appropriate for a wide variety of uses and locations.

8.7.2.2 ‘Narrow Frontage’ Houses (approx. 5-7 m)

The common approach to the provision of the terrace form is to provide narrow frontage deep houses.



**Example of Narrow Frontage Terrace
as described in text**



Outline Plan of Narrow Fronted House

As a result of external criteria such as road requirements and the approach to the design of the narrow frontage terrace a substandard environment may result with long straight monotonous rows of similar houses dominated by car parking at front and with limited regard to the quality of the environment of the public realm. Also there may be poor natural lighting in the centre of the house.

In order to mitigate some of these defects improvements to the basic terrace form as previously used should include:

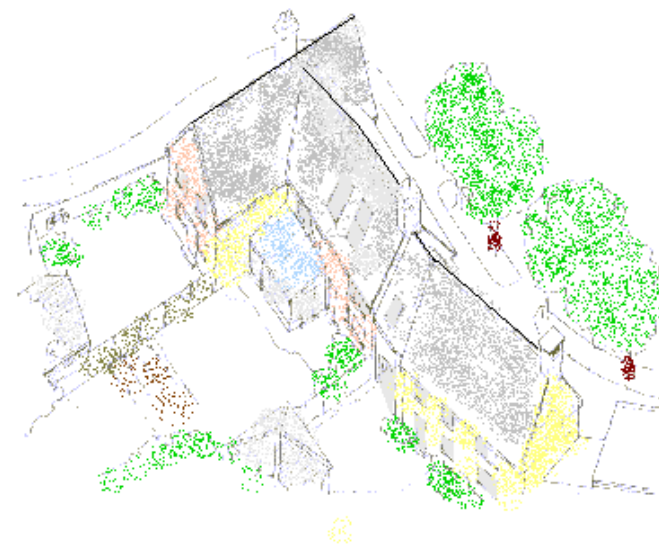
- Excellent sound insulation standards: to party and external wall, internal floors, and taking into account the juxtaposition of rooms between houses (e.g. staircases/bedrooms) and buffer zones (e.g. storage cupboards).
- Glazed porches, draught lobbies and conservatories, provided the living space can be effectively enlarged without significant loss of natural light to the centre of the house.
- Better natural lighting, using tall well insulated windows with integral blinds as necessary (and with the option of locating living space on the first floor in three storey and higher dwellings).
- More imposing appearance: detailed articulation of the main façade, perhaps incorporating local vernacular building techniques.
- Increased frontage dimensions to improve standards of access.
- Greater mix of uses on the ground floor.
- Patio gardens, detached garage/workshops/studio at the rear.

8.7.2.3 'Wide Frontage' Houses (8m)

The wide frontage terraced house may be regarded as having associations with more 'rural' forms of building, and as such it may offer an attractive and sustainable alternative to the semi-detached (and detached) house.



Example of Wide Front Housing Plan



Sketch of 3D Wide Frontage Houses

With many of the advantages of terraced construction, it achieves a balance between energy efficiency and long-term flexibility, in terms of its:

- Suitability for passive solar heating (more than narrow frontage) and good natural lighting.
- Potential to be modified and extended without serious detriment to the natural lighting of the main body of the house - thereby retaining its quality over a long life span, and providing a 'home for a life-time'.
- Range of living spaces that allows a family to accommodate dissimilar activities simultaneously.
- Quality of privacy and amenity especially in the rear garden.
- Provision of space for water butts, compost bins next to the house, reducing water consumption and waste disposal, and facilitating home food production.

In the context of overall site planning, this built form is also flexible in its use of site topography and layout. The internal layout lends itself to dual aspect, making use of sunlight at both front and rear of the house.

The disadvantage of the wide plot is that it may have insufficient length thereby introducing problems of overlooking and overshadowing between terraces arranged 'back to back'. Among various options, it may be possible to:

- Increase some or all of the plot areas.
- Avoid parallel layouts and use 'opposing crescents' instead.
- Locate ancillary buildings and open spaces to the rear of the terraces.

- Orientate the building cluster at a diagonal to the direction of the sun.
- Plan the houses to contain utility rooms and circulation spaces with small windows on north sides.

8.7.3 Courtyard Forms

Because the buildings are joined together, the sustainability of the courtyard form is enhanced by:

- Reduced heat losses through thermal insulation and shelter from wind.
- Low embodied energy and affordability.
- Communal arrangements, with shared facilities, sense of identity and territory.
- Traffic calming (where access is from within the enclosed space).

As with the terrace form, natural lighting and the definition of private and public spaces are very important, but the planning of the corners is particularly constrained, and whatever orientation is chosen, adjacent sides face in different directions. Whether access is from the outside, in the case of much perimeter development, or from the inside, in the case of the residential square or cul-de-sac, often determines how to address such issues.

8.7.4 Orientation

If the sides of the court are orientated towards the points of the compass, those dwellings on a north-south axis will not be suitable for passive solar design. While of those on the east-west axis, half may face 'in' and half 'out' of the court. A more equitable arrangement is one in which the corners are orientated

towards the points of the compass, so that all dwellings can face approx 45° of south, and the overshadowing of the midday sun is minimised (through being across the diagonal)

To overcome overshadowing (and windows are limited by overlooking) at the east and west corners, they may be left open as access ways, or used as non-residential space.

'As a rule of thumb, if the length of a square courtyard is more than 6 times the height above the 2 metre mark, ground floor windows facing the courtyard will receive enough daylight'.

To appear as an enclosed space, a courtyard should have spacing to height ratio of 4:1 or less - but there will be problems of corners.

8.7.5 Public/Private Space

The external spaces may be defined by the configuration of buildings, perhaps creating a place with great architectural character, but here is a danger that the dominant effect of the whole composition detracts from an individual sense of ownership. It can become poorly maintained 'no-man's land'. It is recommended that designs should be checked as follows:

- All spaces should have clear ownership and function.
- Management and legal agreements should ensure satisfactory maintenance.
- A strict hierarchy of spaces should be apparent, with private gardens adjacent to a dwelling entrance at ground level.
- Garage courts should be limited in size, possibly a maximum of 5 garages.
- Traffic calming should be an intrinsic element of the design.

- Pedestrian (and cycle) movements has priority, the paths having a good microclimate and high amenity.
- The courtyard entrances(s) should be well-lit and overlooked, with the potential for adding further security measures should they be found necessary.

8.8 Gateway Building

The purpose of gateway buildings is to provide indication of a significant entrance into Navan. One gateway building is proposed for the SDZ lands situated on the Kingscourt Road at its junction with the Ring Road.

An exceptional standard of design and finishes will be required in order to distinguish the building from its surrounding context. In addition, it is intended that such buildings should 'stand out' in relation to adjoining buildings.

It is recognised that ancillary and associated surface facilities will be required in the case of some or all of the uses proposed for the gateway building. However, such ancillary uses shall be designed so as not to detract from the gateway building.

In addition, non-residential uses will be considered for all or part of these buildings if this assists in achieving a high standard of design and finish. These uses are indicated in the zoning table for the Clonmagadden SDZ in Chapter 7 on Landuse, Facilities and Density.

8.8.1 Landmark Buildings

The landmark buildings relate to the internal urban form of the lands. Their purpose is to provide a signal of a significant place whether in terms of movement or use. These buildings are located in the Clonmagadden SDZ at points where:

- Pedestrians and cycle routes intersect and meet the busway and spine road.
- Adjacent to bus stops where appropriate.
- Where a change in direction in building form occurs along the high street.
- Adjoining and within the centre community/commercial facilities area.
- Generally along the high street.

The height of the buildings is such as to provide increasing intensity of scale (and use) moving along the spine road towards the High Street. Within the central area increased height is also provided for to emphasis the importance of this area.

In addition to increased height landmark buildings of exceptional stand of design and finishes will be required in order that such buildings fulfil their role as landmarks within the SDZ area.

8.9 Materials and Finishes

It is neither possible nor desirable to specify in detail particular materials, which will be acceptable or otherwise for particular areas as this is part of the detailed design process for such areas.

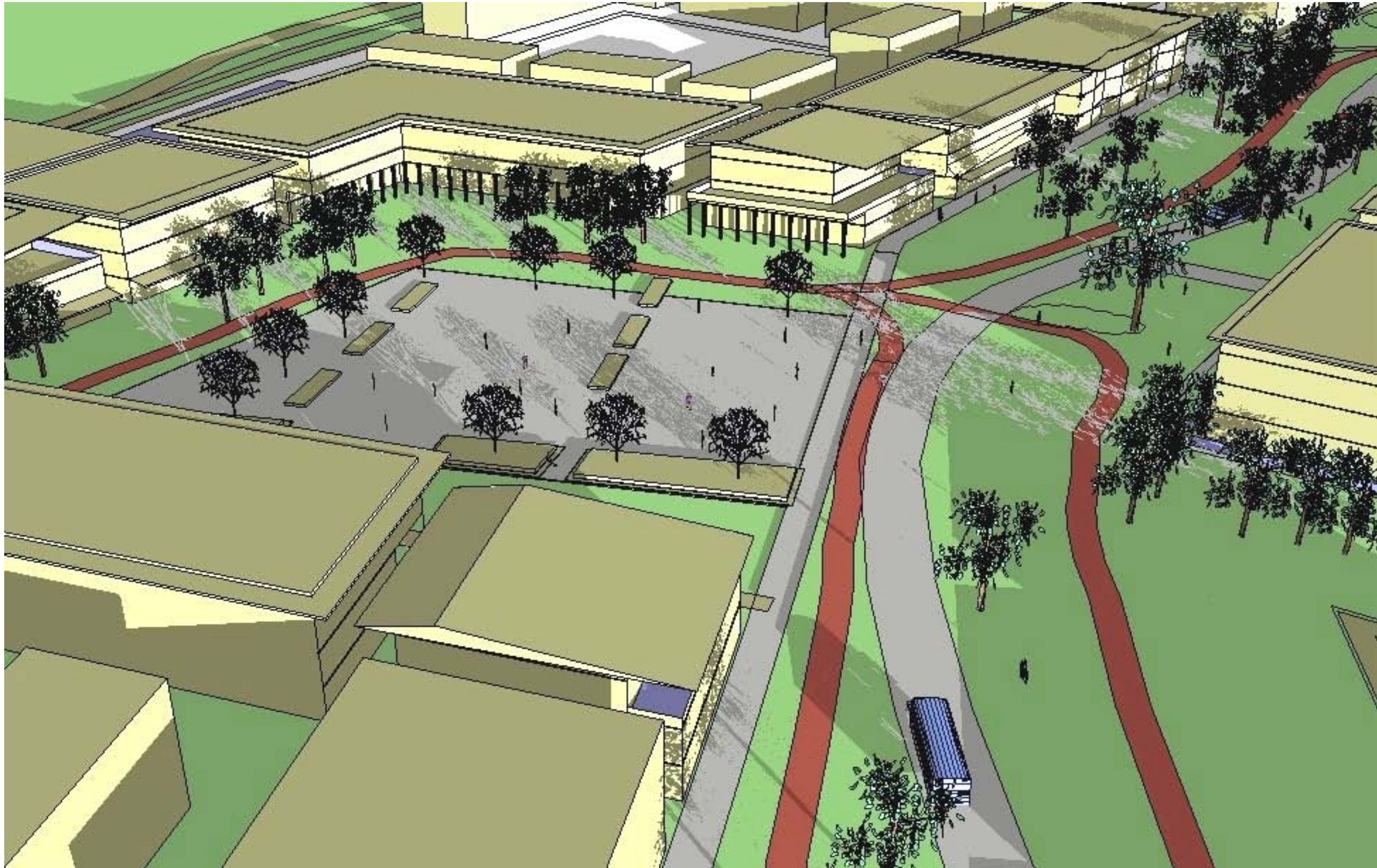
However certain principles will apply in relation to materials and finishes for the scheme as follows:

- In general, finishes and materials should be of a high quality nature and should be used in a consistent and restrained manner.
- Where possible natural materials should be used including wood, stone, slate etc.
- The use of native Irish material should be maximised.

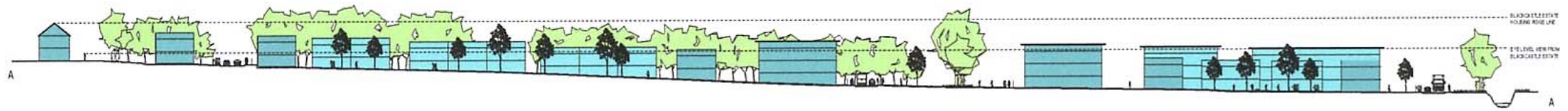
- Materials and finishes should as far as possible reflect an Irish vernacular and, where appropriate and feasible, a Meath vernacular.
- Use of non-natural materials such as clay pantiles will be permitted in limited circumstances where it is considered that such use contributes to the overall design quality of the scheme.
- Use of uPVC window frames and doors etc. shall in general be avoided unless a particular and specific case can be made for their use. However, there will in general be a presumption against such materials. This is in the interests of sustainable development and to help to promote the use of natural and native materials and more environmentally friendly materials.
- In cases where it can be demonstrated that the design of a building is of an exceptional nature and particularly in the case of gateway and landmark buildings, consideration will be given to the use of modern materials in the context of a modern design approach to such buildings.
- A variety of external wall finishes will be permitted including timber cladding, render, dash and brick. In the case of brick, it will be required that these are clay bricks.
- Whilst a variety of such finishes will be required across the whole scheme, there will be a presumption against the use of too much variety of finishes on the one hand and the lack of variety of finishes on the other hand.
- The use of porches of somewhat different design and of brick detailing should be considered.

- The use of colour should form part of any design proposal, however this should have regard to the traditional use of colour in the Irish context.
- In general, the design of schemes should focus on having a commonality of approach in terms of particular housing areas with a clearly different approach between housing areas.
- In addition, there should also be an overall and consistent design paradigm for the entire scheme.

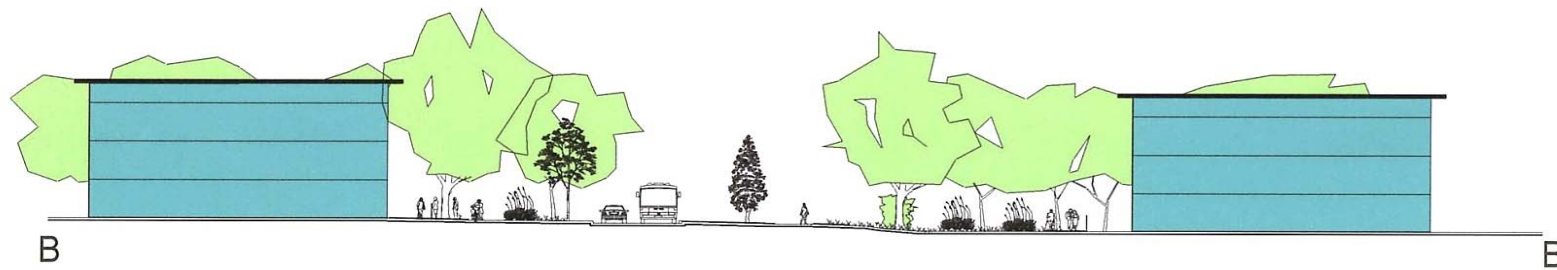
3D Diagrammatic Images and Diagrammatic Elevations of the Proposed Scheme



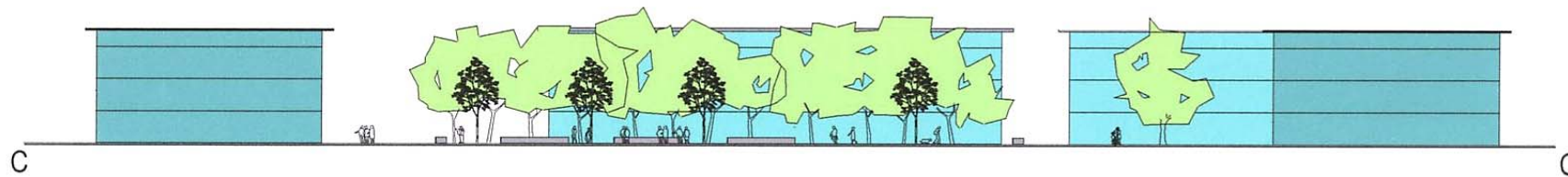
Internal Spine Route through Park Leading to Civic Plaza/Market Square (Looking East)



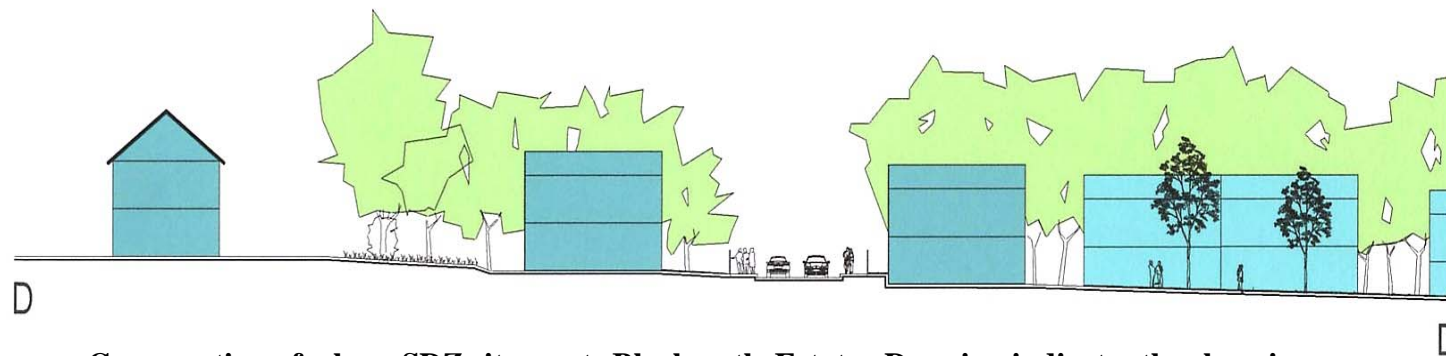
Cross section through site from Blackcastle (at very left) to north of site (at right) showing buildings relative to each other and slope of lands.



Cross section through Central Parkland indicating depth of open space with Spine Road/Bus Route and pedestrian walks.



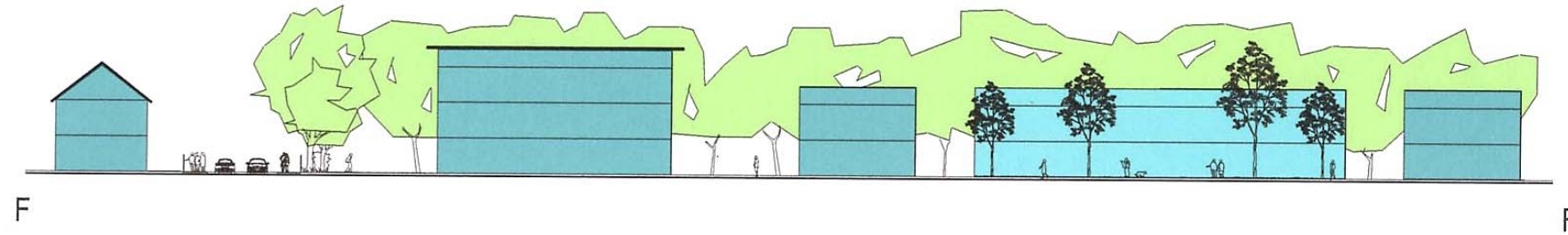
Cross section through Civic Plaza/Market Square.



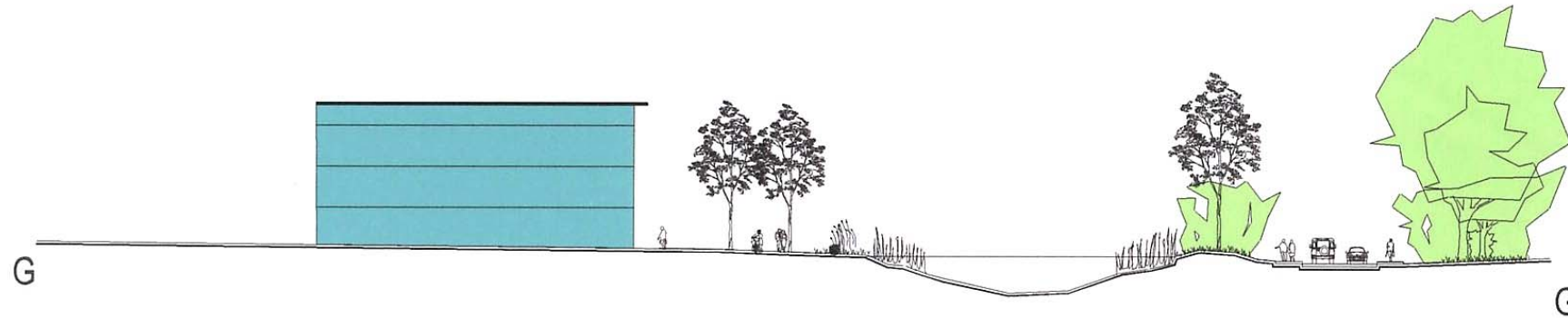
Cross section of where SDZ site meets Blackcastle Estate. Drawing indicates the slope in the levels of the lands and buildings in relation to each other.



Picture showing area around Central Park, with pedestrian routes and spine/bus route.



Cross section of wide setback and relationship of proposed buildings on Kingscourt Road.



Cross section of site boundary where developments meets Distributor Road.

9 OPEN SPACE AND LANDSCAPE NETWORK

9.1 The Open Space Network

9.1.1 Need for an Open Space Network

The open space network proposed for Clonmagadden provides room for human recreation and wildlife habitats. Too often these functions are treated as separate and residual aspects of urban planning, or sometimes ignored altogether. A sustainable approach to design changes that.

The open space network has been considered at the outset of the planning and development of Clonmagadden to allow its various functions to be fulfilled and integrated into the overall plan.

In particular the Clonmagadden SDZ plan provides for:

- Access to open space facilities.
- Provision of wildlife refuge and corridors.
- Retention as far as possible of significant trees and hedgerows and their incorporation into the overall plan layout.

9.2 Access to Open Space

Within the Clonmagadden SDZ people have a realistic opportunity to:

- Walk or cycle to a range of open spaces.
- Walk or cycle between spaces on the green network within

the sites.

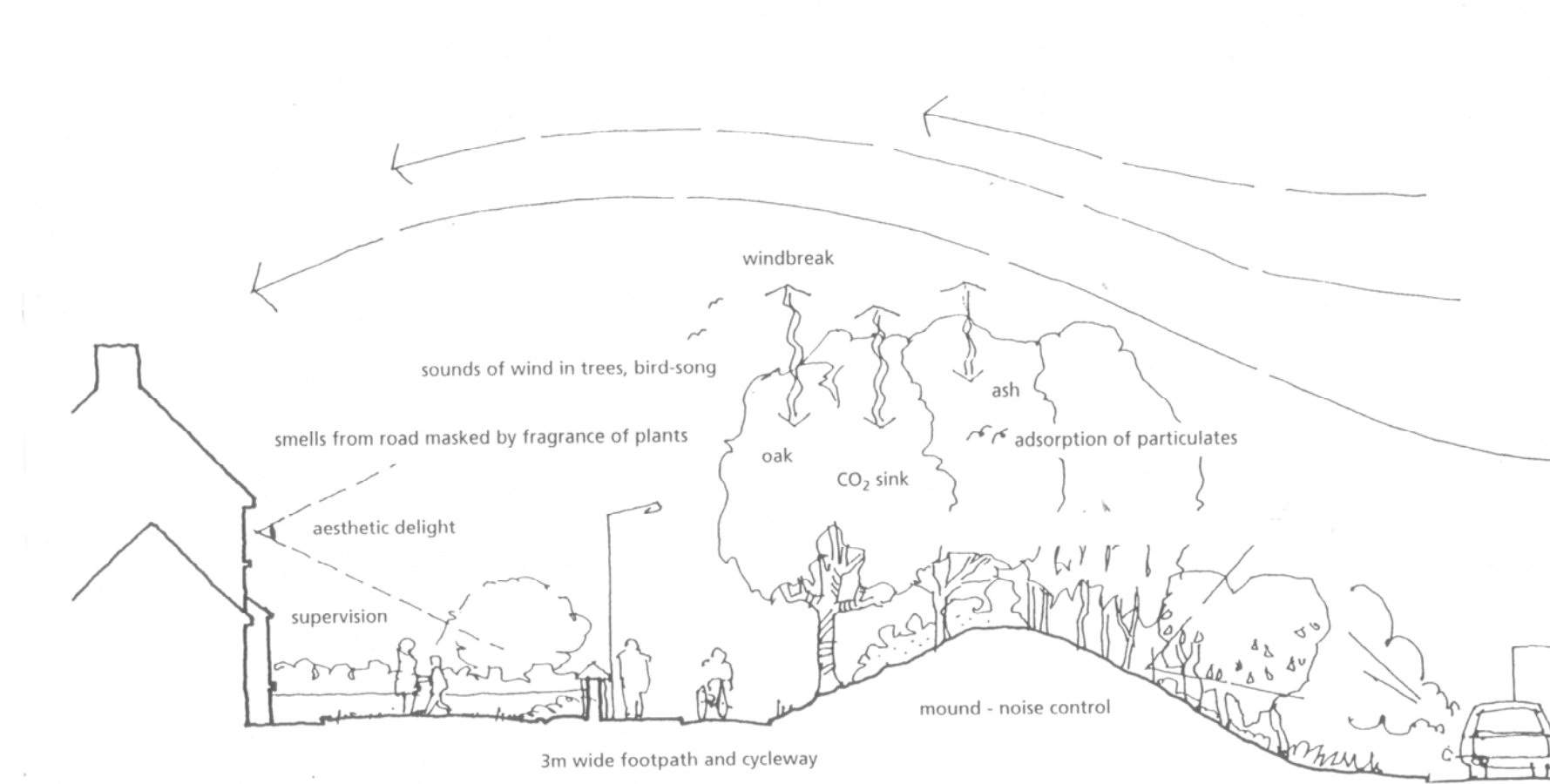
9.3 Provision of Recreational Facilities

In the case of Clonmagadden the level of access to recreational facilities is as follows:

Recreational Access

Facility	Provided Distance/Time	Location
Local green space	200m/2.5 minutes walk	Within Clonmagadden SDZ
Town Park or green area on the open space network	600m/7.5 minutes space network (2hectres +) walk	Within Clonmagadden SDZ
Playing fields	500m/6.25 minutes walk	At northeast corner of site and as part of Primary School Site
Major Sports Facilities	1500m/18.75 minute walk 6 minutes by bike	Simonstown Gaels Sports Facility
Natural green space	1250m/16.5 minutes walk, 5 minutes by bike	The Boyne Valley
Open Country or green lung (200h.min)	1000m/13 minutes walk 4 minutes bike ride	Open County north of Clonmagadden SDZ

Inter-Related Functions of Landscaping



9.4 Public Open Space

The Plan provides for a total of c.10 hectares (c.25 acres) of major public open space, including the green routes, the town park incorporating public plaza and children’s play area and the

playing field, including those which are part of the school site. These areas are indicated on the Clonmagadden Plan - Overall Scheme Map. It is a requirement that a development provides the open space as indicated on the Overall Scheme Map.

For individual residential developments, public open space shall generally be provided at a rate of 20% of each development site area.

Recreational facilities include open space and/or intensive and indoor facilities.

The size of the ‘playing pitch’, located in the south-east corner of the SDZ site as indicated on the Clonmagadden Plan - Overall Scheme Map shall be 1.62 hectares (4 acres), such that it can provide for GAA, football, rugby, hockey or other sports pitch. Furthermore, the lands shall be of sufficient size so as to comprise adequate changing facilities and car parking. The provision, management and use of these facilities shall be such that they serve all sectors of the sporting community within the Clonmagadden site, in addition to other sports clubs. The details of this shall be determined at application stage.

9.5 Semi-Private and Private Space

Each house should be designed to have a public and private side.

Certain factors have been isolated which can help to establish ‘defensible space’, in particular a hierarchy of stepping stone spaces spanning from the public realm to the private. These spaces act as filters progressively inducing a sense of intrusion for a person approaching a private space.

The hierarchy is composed of:

- Public space:- e.g. the street, the public realm.
- Semi-public space:- e.g. a courtyard or entrance lobby.

- Semi-private space:- e.g. a corridor or ‘front garden’.
- Private space:- e.g. front door and interior, and rear garden of house.

9.5.1 Semi-Private Space

This occurs for instance where a dwelling abuts a public area such as open space or a street. The essential function is to provide a transitional zone between public and private areas. Landscaping can be used in conjunction with external structures to create ‘defensible space’ for houses. The demands of privacy and perceived comfort must be weighed against the demands of security and the value of social contact, according to circumstances. Access to the house on foot and by those with impaired mobility must also be considered.

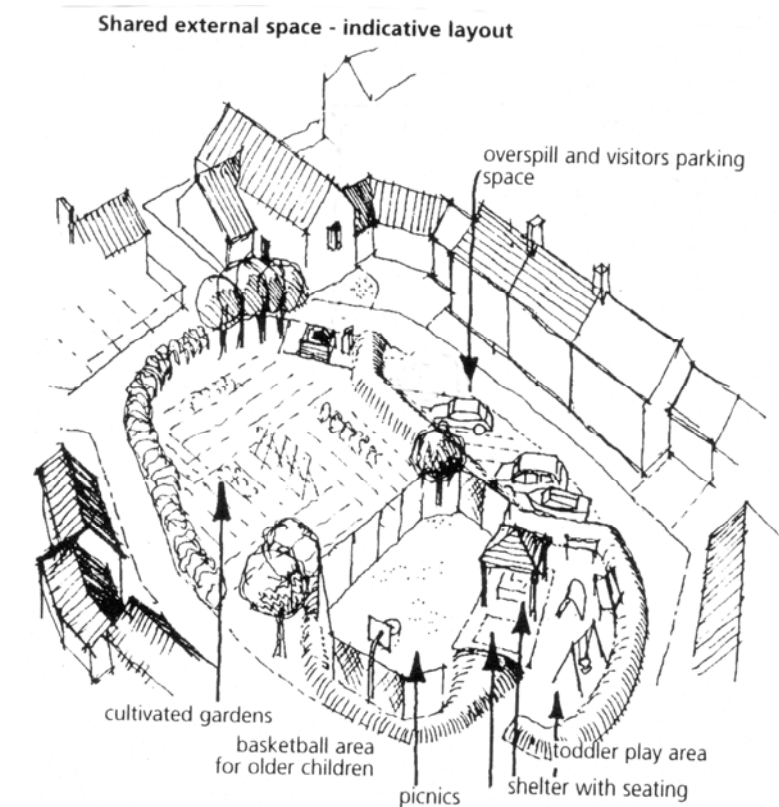
9.5.2 Private Open Space

Privacy is an essential part of the quality of a residential environment. The provision of an adequate sized external space, which is free from undue observation, is a fundamental tenet of residential amenity. Privacy can be achieved in a wide variety of ways through:

1. The relationship of residential buildings to each other, to open space (both public and private) and to the road system.
2. The location of fenestration such that overlooking of adjoining dwellings is minimised.
3. The use of adequate screening devices and landscaping elements.

All houses (terraced, semi-detached, detached) should have an area of private open space behind the building line. In general the requirement should be 60 – 70m² minimum for 3/4/5 bedroom houses in order to ensure that most household activities

are accommodated and that it is at the same time adequate to offer visual delight, receive some sunshine and encourage plant growth. A slightly reduced standard may be acceptable where 1 and 2 bedroom houses are proposed but in no instance should a figure of less than 48m² per dwelling be acceptable. A minimum standard of 22 metres between directly opposing first floor windows should normally be observed. This will normally result in a rear garden depth of 11 metres. However, where adequate levels of privacy are provided, this depth may be reduced provided that the minimum area outlined above is achieved. If considered appropriate, a condition might be attached to any grant of permission requiring that no additional development whatsoever take place within the curtilage of each house save with a prior grant of permission, notwithstanding the exempted development provisions of the Planning and Development Regulations 2001 (or any amendment or replacement of said Regulations).



In certain innovative housing layouts, the developer may choose to provide a combination of private and semi-private spaces such as in courtyard layouts, etc. This could be in the form of small private terraces for each dwelling opening directly onto a semi-private enclosed landscaped space solely for the use of the residences, which directly adjoin this space. In such cases, it may be considered appropriate to accept a sum of the area of both spaces as satisfying the private open space requirement for these dwellings.

It is required that, in the case of apartment and duplex style schemes, private open space will be provided in the form of landscaped areas, courtyards, terraces/patios and balconies. Roof gardens should also be considered, provided that they are easily accessible, secure and attractively landscaped. Recommended minimum standards for private open space are as follows:

1. 10m² per one bedroom apartment
2. 15-20m² per two or three bedroom apartment

close to town centres to:

3. 20m² per 1 bedroom apartment
4. 30 – 40m² per 2 or 3 bedroom apartment

in the outer suburban areas.

9.6 Landscaping of Roads

On Trunk Roads: A bank of dense planting may protect houses against noise, dust etc. Linear continuous buildings alongside the road prevent excessive noise penetration into private spaces beyond. Soft landscaping will generally absorb higher frequency sound and the internal planning of houses should

provide a buffer zone of utility rooms and stairs with small double glazed windows.

On Major Roads: Depending on the orientation and access allowing habitable space to be on the quiet side of the houses, either use built form (rather than planting) which will facilitate pedestrian safety and urban identity, or use a narrow band of planting with an earth bank, which uses the minimum of land, and may still facilitate surveillance from upper rooms.

Minor Roads: Surveillance by all householders of the semi private and semi public realm for which they feel a sense of responsibility (territoriality) act as a self-policing mechanism for an area. Crime cannot be ‘designed-out’ in a direct deterministic sense; however opportunities for criminal activity can be minimised through the adoption of certain well-established methods. This can be achieved through the layout of buildings and the careful consideration of the design of windows and their location. In these ways the chances of being observed from a large number of vantage points is high yet without investing in the technology and overbearing service of anonymous surveillance offered by CCTV.

Obviously surveillance is aided by unobstructed views and good street lighting, but this should not lead to simplistic ‘control’ layouts devoid of planting or without changes of direction. Rather it should influence the design of spaces, layout of buildings, location of windows and doors, walls and planting.

An effective screen:

- Conceals views into habitable rooms from the street.
- And permits views from the habitable rooms into the street.
- Deters intruders from entering the curtilage.

- Permits surveillance from neighbours of the house itself.
- Conceals noise sources (actual noise reduction is minimal).
- And reduces external sound reverberation.
- Reduces glare from streetlights and headlights (important near major roads), also sunlight and permits a view of the façade (the public face of the building).

Communal Territory (between road and dwelling): Semi-public and semi-private spaces should be considered in relation to their ownership of stewardship. They are vital stages in the hierarchy from public to private space but must be located adjacent to the housing to which they relate.

Basically all external space should be designed to fall into one of the four categories set out at the beginning of the section and not remain as ‘SLOAP’ (Space Left Over After Planning) - ill defined, poorly maintained and not useful for any particular purpose. Open plan gardens are likely to function most effectively. Spaces that are intended for use by a particular house group should not be disconnected from it by distance (e.g. garage or drying area court) or level (e.g. decks over garages) because they are less likely to be perceived to be under the direct control of householders. Territoriality can be fostered through the demarcation of the space by symbolic barriers, fences, changes of level, spaces set back from the public realm. Higher densities and mixed uses are likely to contribute to higher levels of usage of the public realm - which should aid the policing and surveillance of an area.

The arrangement of houses around a shared surface road or a courtyard can in theory facilitate a sense of territoriality and surveillance, but in reality the area may be virtually deserted for predictable times of the day, if all households have similar

lifestyles. Either it is preferable to use a layout with a relatively narrow street of households closely related to the back edge of the footpath, or a concerted effort should be made to achieve a rich, high density, mix of households so that courtyards spaces are protected during the daytime and in holiday periods.

9.6.1 Rear Garden Privacy

The private side of the dwelling should accommodate the main windows of those spaces, which require greatest privacy, usually the living room and at least one bedroom, and should have an adjacent outside sitting area, (preferably with an aspect which catches afternoon sun) of approximately 9m². This area should be free from direct overlooking from the side or from the end of the plot.

Especially in passive solar housing, the designing of the external sitting area should balance the need to achieve privacy from overlooking by neighbours, against the need to avoid overshadowing of the south elevation of the building. Thus solid garden boundary walls and fences between 1.5 - 1.8 metres high are a preferable solution than substantial building projections of even one storey height. Note that a passive solar layout using essentially 'single aspect' dwellings have the benefit of the south elevation facing relatively blank north elevation of the parallel terrace.

Consideration should also be given to trellises or open fencing which can be used in conjunction with climbing plants to achieve privacy when most needed in the summer, and light penetration in the winter. Fencing or glazing bars painted white tend to direct the eye from what is behind them and therefore enhance privacy. The location of garages, porches and projections on the ground floor can aid privacy, unless the effect of overshadowing precludes this.

Traditional forms of enclosure, possibly incorporated within the vernacular architecture of the locality, may suggest practical methods of establishing plants from an early stage. The supporting structure decays over time and becomes secondary to the planting.

9.6.2 Shared External Spaces

A small area of external space can be directly related to each housing group, dedicated to shared activities and uses. The range and nature of activities and uses can be determined and managed by the residents of each housing group, in the same way that flat lease-holders have a joint management company to manage communal structures and spaces.

The distribution of open spaces relating directly to small housing groups may result in a more economical use of space, of higher quality, with better maintenance, than the specification of a single large area of 'public open space'. There is a range of activities and uses which require accommodation, not often recognised in the planning of conventional housing schemes: allotments, play areas, areas for communal events and celebrations, overspill parking (caravans, visitors, boats, etc) nature conservation areas etc.

These activities change over time, as do residents' lifestyles and age ranges'.

In summary, this use of external space is intended to be:

- More economical in the amount of land required.
- More likely to be effectively managed and maintained, increased territoriality across semi-private space.
- More adaptable to changing lifestyle and age ranges.
- An amenity, close to home, thereby reducing vehicular trips.

9.6.3 Detailed Design

Making the detailed design, layout and specification appropriate to the location is likely to be more important than the achievement of a specific space standard. However, the need to provide play space near the home has often been disregarded in modern estates, possibly because there is a tendency to fit them into the space left over after planning. That said, the relationship between the area being in the visual control of the housing to which it relates, and ensuring that excessive noise and visual intrusion does not disturb the nearest residents. It is recommended that seats and associated gathering places (for both parents and young people) are positioned accordingly.

9.6.4 Access to Open Space

The value of open space as an urban amenity is largely determined by its accessibility, though its innate quality and variety, current and past uses, must be considered.

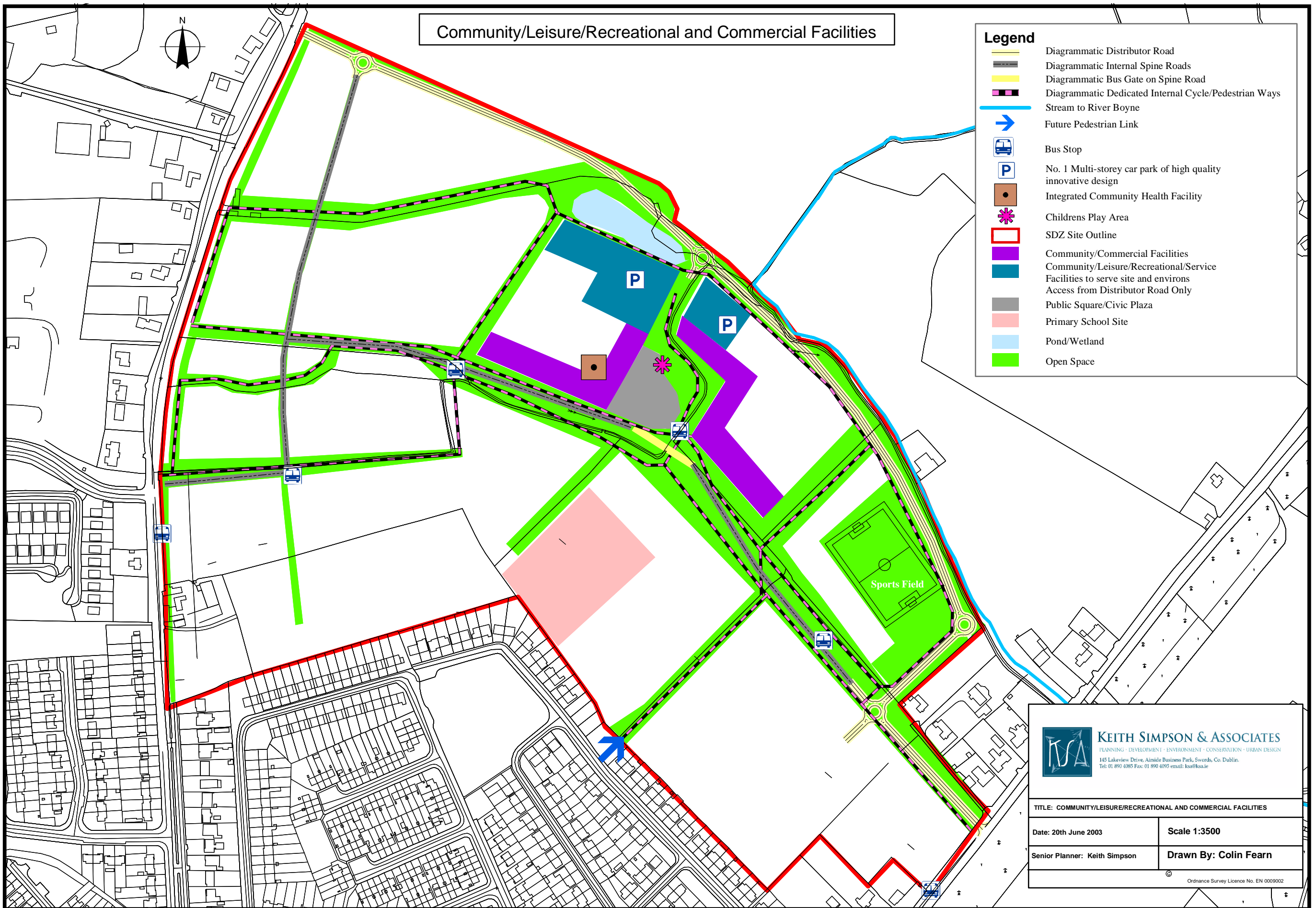
Play areas for young children should be very close to home, informally supervised from nearby buildings, and reached without having to cross dangerous roads.

Open space should be planned as a hierarchy which allows convenient access from all homes, via safe and pleasant paths or green corridors.

It should be possible to walk or cycle from the home, to the countryside outside a town, using a network of green spaces, without significant interruption by hazards or pollution.

Open space standards should be applied to safeguard against 'town cramming'.

The microclimate of external spaces affects their use for walking and cycling.



10 IMPLEMENTATION

10.1 Financial Contributions

Contributions payable in respect of developments within the Strategic Development Zone lands shall be in accordance with the provisions of Section 48 and 49 of the Planning and Development Act, 2000.

Contributions payable in respect of developments within the SDZ lands shall include both Meath County Council’s standard contributions as set out in the County Meath Development Contribution Scheme prepared under the provisions of Section 48 of the Planning & Development Act, 2000 and adopted on 1 March 2004 and Special Development Contributions, attached as conditions to planning permissions within the SDZ site pursuant to Section 34 of the Planning and Development Act, 2000.

Special Development Contributions will be required for the upgrading and provision of certain elements of the road infrastructure within and adjoining the SDZ lands and for deficiencies in on site provision of open space and of intensive recreational facilities, i.e. playground and playing pitches. Special Development Contributions are required in respect of specific exceptional costs incurred by Meath County Council in respect of public infrastructure and facilities which benefit the proposed development and are not covered by a General Development Contributions Scheme.

The provision of the section of Local Distributor Road within the SDZ site itself, linking the Slane Road to the Kingscourt Road, may require the preparation and adoption of a Supplementary Development Contribution Scheme in accordance with the

provisions of Section 49 of the Planning & Development Act, 2000.

Cash Security

In addition to the above a cash security is required as follows:

Houses 1 – 10	€6,350 per dwelling
Houses 11 – 20	€3,800 per dwelling
Houses in excess of 21	€1,900 per dwelling

10.2 Development and Phasing

Based on a minimum build rate of 140 dwellings per annum and a maximum build rate of 280 dwellings per annum, it is expected that the development of Clonmagadden will take between 5 and 10 years.

Table of Phasing of Development					
Phase	No of Houses	Internal Works	Internal Facilities	External Works	Estimated Time
1	500	<ul style="list-style-type: none"> Entire Distributor Road within the SDZ to be built* Entire Spine Road / bus route within the SDZ are to be built* Development of major public open space ** Upgrade of Kingscourt Road, such works should include public lighting and landscaping / amelioration measures along this route to ensure residential and visual amenity of the area is protected. 	<ul style="list-style-type: none"> Primary school site to be reserved Health centre to be built and made available Playing pitch and ancillary services to be built and made available for use Building of the hotel and leisure facilities and 50% of the commercial and community facilities may be permitted as part of Phase 1 	<ul style="list-style-type: none"> Design of Distributor Road from Ratholdren Road to N3 to be completed CPOs to be completed and land acquired for construction of Distributor Road from Ratholdren Road to N3 Construction of Blackwater Bridge to be commenced 	18 months – 3 years and 4 months
2	500	<ul style="list-style-type: none"> Completion of major public open space** 	<ul style="list-style-type: none"> Primary school to be built and operational prior to occupation of any houses in the second phase. Construction of the remaining commercial and community facilities permitted as part of Phase 2. 	<ul style="list-style-type: none"> Complete construction of Blackwater Bridge*** Distributor Road from Ratholdren Road to N3 to be completed*** 	3 years – 7 years
3	400	<ul style="list-style-type: none"> Upgrade of Slane Road 			5 years – 10 years

* These works in Phase 1 must be in place prior to occupation of any of the first 500 houses.
 ** Development of major public open space is to be in phase with the development of the planning scheme.
 *** These works in Phase 2 would be required to be completed prior to occupation of any houses in Phase 2.

In regard to phasing of development, it is considered that this should provide for:

- The overall orderly development of the lands.
- The provision of facilities and infrastructure within the lands.
- The provision of infrastructure outside the lands, which is necessary to facilitate the development of the lands.

On this basis, the phasing of development will be as follows.

Overall, the development will commence from the Kingscourt Road and move in an easterly direction towards the Slane Road.

The phasing of development will be as indicated on the table above. The development of the lands in accordance with the planning scheme will be subject to the necessary infrastructure being put in place.

A 'roll-over' mechanism may operate between any two phases. In the event of the maximum permissible number of units being completed in advance of the required facilities and infrastructure of that phase, a roll-over of up to 100 dwelling units in the following phase may be constructed, subject to planning permission. Those dwelling units shall not be occupied until the required facilities and infrastructure scheduled for that phase have been completed.

10.3 Treatment of Planning Applications

Each planning application for development on the subject lands shall include the following:

(In addition to any requirements arising out of the planning and development regulations, together with any additional material required by the Council.)

1. Copy of the overall comprehensive plans for sewerage infrastructure, water infrastructure, roads infrastructure and landscaping scheme.
2. Copy of an overall site plan for the subject lands indicating how individual site proposals fit into the overall sewerage infrastructure, water infrastructure, roads infrastructure and landscaping scheme.
3. All planning applications for substantive works shall be accompanied by construction traffic management plans.
4. A submission indicating how the proposed development complies with all the provisions of the SDZ plan.
5. A comprehensive overall design brief for the lands.
6. As part of a planning application under this scheme, a full archaeological assessment, which shall include text excavations, shall be submitted to the planning authority.

10.4 Agreement Between Landowners and Meath County Council

An agreement was signed on 26 February 2002 between Vitgeson Ltd (c.60 acres), Patrick Lynch (c.17 acres), Trudo Construction Ltd. (c.7 acres), and Martin Lynch (c.10 acres). In short, the agreement included the following:

- That the parties agree to pay to Meath County Council a sum equivalent to the consultants' fees to prepare the SDZ scheme on a pro-rata per acre basis.
- Each party shall have the right to require any of the other parties to provide a right of way and way-leave for all services (including a right to connect to any then existing services) for the purpose of the development of such party's lands and to construct such roads and services on the others

land to implement and comply with the planning scheme. The compensation if any to be paid by any party to another shall be determined in default of agreement thereon within two months from the date on which the right has been required, by an arbitrator to be appointed in default of agreement by the president for the time being of the Institute of Engineers in Ireland. The decision of such arbitrator shall be binding on the parties to the arbitration. The arbitrator shall determine the compensation if any payable hereunder within two calendar months of his appointment. The compensation (if any) awarded by the arbitrator shall not contain any element of premium profit or licence fee to the owner over whose lands the rights are being exercised but shall be calculated on the basis of compensations such owner for any lost, cost or expenditure incurred by such owner attributable to the grant of such right of way or way-leave and which would not otherwise have been sustained or incurred by him. If the award made by the arbitrator has not been paid within seven days of its being made interest shall be payable thereon at the rate of 12% per annum until discharged in full.

- Any party availing of any services provided by another party shall contribute to the provision of such services in an amount as shall be reasonable in all the circumstances taking all relevant factors into consideration and to be agreed within two months of the date on which those services were first called upon or failing such agreement in an amount to be determined by an arbitrator.
- Vitgeson Limited, however, shall not be liable to compensate any other party hereto for the right to connect to any foul sewers on or under its own lands in consideration of its assuming sole responsibility for the care and maintenance of

any foul sewers on or under its said land and Vitgeson Ltd hereby indemnifies the other parties hereto in respect of any such repairs and maintenance.

This agreement was entered into for the purpose of facilitating the preparation of the planning scheme and the subsequent development by each landowner of his or its land.

N.B. For the purposes of the legal agreement referred to above, it is understood that Vitgeson Ltd relates to Billy Farrelly's land holdings as indicated on the land ownership map in Para. 3.2.

11 STAKEHOLDERS' INTERESTS

Stakeholders include the following:

- Meath County Council.
- Landowners and their representatives.
- The local community and community and sporting organisations.
- Prescribed bodies.
- Other.

Stakeholders were consulted in a number of ways as follows:

- By newspaper advert inviting written submissions.
- By direct letter inviting written submission or offering.
- By direct meeting.

11.1 The local community and community and sporting organisations

A public meeting was held in Simonstown Gaels on 10 December 2002. The issues were as follows:

- What type of roads would be built within the development?
- Who would buy the houses? Concerns about speculation.
- Inexistence of cycle facilities in Blackcastle is obstacle to opening of route to Clonmagadden.
- Will the school really be built?
- High-rise (density?) very near the cottages on Slane Road.
- What is the process from here? Will Meath County Council have the last word?
- Will the connection with Blackcastle accommodate a road?
- Is the Distributor Road necessary for the development?
- House vs. Apartments – How many of each?
- What will be the type of houses in the strip of land nearer to Blackcastle?

- What does 2-storey and 3-storey buildings exactly mean?
- Clonmagadden will be a commuting neighbourhood. How can the Dublin commuting be tackled?
- Concerns about transient population.
- Development is in the wrong part of town.
- Inappropriate location and scale.
- Lack of sport/leisure facilities. Simonstown cannot take all the responsibility of providing these.
- Concerns about height blocking views from Blackcastle.
- Densities are too high.

Submission on behalf of Simonstown Gaels GFC (Cooney Architects)

The submission on behalf of the Simonstown GFC outlines existing and proposed facilities. The club currently caters for thirty-eight teams, male and female. Facilities include 2 no. GAA pitches, a training pitch, all weather pitch, basketball court, tennis court and car parking. Internal facilities include existing hall, minor hall/function room, club rooms, meeting rooms, wet and dry changing rooms, bar and reception/office area.

Future proposed facilities include a covered stand and health suite.

Given their close proximity to the SDZ, there will be many repercussions for the club. As such they make the submissions as follows:

- Provision of adequate pedestrian and cycle linkages required to and from SDZ to Simonstown.
- Public lighting along linkages.
- Need adequate road infrastructure out onto the Kingscourt Road and to Simonstown.
- Have regard to Simonstown facilities, which will cater for the projected additional population.

- Integrate Simonstown into overall scheme as a key player in sporting facilities.
- Require provision of additional facilities within SDZ site to comprise part of Simonstown overall facilities. Urgently require at least one more football pitch (min. 160yds x 95yds with run off of 4 yards all around & dressing rooms.)

11.2 Prescribed Bodies

Submissions were invited from the prescribed bodies as follows:

The Minister for the Environment, An Bord Pleanala, The Regional Authority, Forfas, Minister for Education and Science, The appropriate health board, The Minister for Public Enterprise, The National Roads Authority, The Minister for Arts Heritage, Gaeltacht and the Islands, The Heritage Council, An Taisce - The National Trust for Ireland, An Chomhairle Ealaion, Bord Failte Eireann, Regional Fisheries Board, Waterways Ireland, The Minister for the Marine and Natural Resources,

Responses were received from the prescribed bodies as follows:

Submission from North Eastern Health Board

Given the scale of the proposed development, the North Eastern Health Board submit that an integrated community health facility be provided as part of the development. This should include the provision of G.P. practice centre; health centre base for public health nurses, social workers and community welfare officers; clinic room for visiting clinicians such as speech & language therapist, occupational therapist, physiotherapist and psychiatry; disability resource centre; day centre for older people.

The recommended size of building required for a community health centre is 1500 sq.m. approx. Depending on car parking requirements, the site area could extend to 0.75 ha.

As part of the social housing to be provided, part of the development should be reserved for housing for people with

special needs, i.e. physical and sensory disability, learning disability, mental disability and older people.

Providing these requirements will allow the North Eastern Health Board to provide a comprehensive community health service.

Submission from the Department of Arts, Heritage, Gaeltacht and the Islands

A submission from Duchas, The Heritage Service outlines their archaeological recommendations. The SDZ is situated in an archaeologically rich area. Several archaeological monuments are recorded for the area and further previously unidentified archaeological features/material may exist. An archaeological assessment should be carried out which should address a detailed account of the historical and archaeological background of the proposed SDZ, the nature, extent and locations of any archaeological monuments, structures or features within or close to the zone, photographs of the area, the impact of any proposed development on the archaeological monuments or features and suggested mitigation measures.

Submission from Minister for the Environment and Local Government

A submission from Mr. Martin Cullen, TD, Minister for the Environment and Local Government in relation to architectural heritage refers to two farmyard complexes within the SDZ lands. These consist of:

1. A four-bay two storey farmhouse and outbuildings, probably of the early 20th century. The farmhouse is still a viable residence and should be retained for that purpose.
2. A single storey former cottage/farmhouse set back from and facing the road and outbuildings. The structure is in a poor state of repair. Unless considerable measures are taken the structure has no viable future. Retention would probably

require its entire removal and reconstruction. This would be a questionable process. As possibly the last mudwalled structure in the vicinity of Navan town, it is considered that the cottage and farm complex should be documented by means of a measured survey together with a detailed historic and scientific survey.

11.3 Meath County Council

Direct meetings were held on an ongoing basis with the officials of Meath County Council.

A presentation was made to the Meath County Council members and officials on 21 November 2002.

There were a number of issues raised by the members in relation to the draft plan. Comments included:

- Plan moving in the right direction.
- Concerns about traffic and worried about extra 600 cars from development.
- Density and movement based on bus stops - In Navan bus is based on where you stick your hand out and not on bus stops. Are we planning bus stops?
- How do you stop cars going through the bus only link road?
- Narrow roads internally could be a problem with large trucks parking on the roads.
- Would consider the plan if traffic from this area to town/new motorway if infrastructure was available?
- When will the school and the distributor road come?
- Need to put forward how the pedestrian route to Blackcastle Estate will be dealt with.

- Overall scheme is fine as long as infrastructure goes in.
- How will everything be paid for?
- Who lives in these houses - 20% social/ affordable, housing mix, locals and local need, overflow from Dublin.
- Houses should have own parking in houses.
- Nursing home near centre to include all age groups.
- Speed restrictions - bollards, not necessarily ramps.
- No pedestrian route through Blackcastle.
- Pond is nice - maybe should be a little bigger.
- Primary school - what about a secondary school?
- Where is it proposed to build a primary school? What size is it?
- Do we have to depend on Simonstown for football pitches?- Need pitches.
- Need services - good that a health centre is proposed for this site.
- Concerned about access and roads - need infrastructure in before people live on the site.
- Strengthening of bus service - like Dublin Bus.
- If infrastructure is the only reason to stop this plan - may as well stop planning Navan - need to take an overall view.
- Strengthen the commercial centre.
- Good plan, self contained.

- Density - other development with 25 to the hectare.
- What mix of housing will it be?
- Will there be apartments over the shops in the commercial centre?
- Need to get infrastructure in first.
- Very comprehensive plan.
- Why does Johnstown have these problems - because there was no overall plan and there was a massive road through Johnstown.
- SDZ enables financial contributions.
- Wants to avoid extra traffic.
- Wants to know infrastructure will be there.
- SDZ is exceptionally good and cannot be faulted - but in the bigger picture it could lead to major traffic problems.
- If going to argue for extra infrastructure - need to prove that Navan needs it.
- Thinks that instead of it just being zoned residential in next development plan - should go for SDZ and take control
- Look at positioning of distributor Road.

A further presentation was made to the Navan Area Councillors and Navan Town Council on 13 June 2003. Issues raised related to:

- Open space.
- Community facilities.

- Playing pitches.
- Density and height.

These issues have been considered and addressed in the final draft scheme.

11.4 Landowners and their representatives

Direct meetings were held with all landowners and their representatives. Landowners include the following:

- Martin Lynch
- TRUDO Construction Ltd.
- Pat Lynch
- Billy Farrelly
- Cortip Developments Ltd.

The main issues concerning the landowners included the following:

- Financial contributions and phasing.
- Densities on the site.
- The alignment of the Distributor Road.
- The provision of open space for the site.

11.5 Other Submissions/Comments

Letters were also sent to the following informing them of the production of an SDZ plan:

Planning Transmission, ESB Northern Region, National Roads, Iarnrod Eireann, Bus Eireann, County Meath Vocational Education Committee, Department of Education, Planning &

Building Unit, Educate Together, O2 Ireland, Meteor Mobile Communications, Vodafone Ireland Ltd., Eircom Headquarters, Chorus Communications Ltd., Bluecom, Esat B.T., NTL Communications (Ire) Ltd., Pre School Inspector Family Resource Centre NEHB, County Clinic Our Ladys Hospital, North Eastern Health Bord, Chief Ambulance Officer – NEHB, Superintendent - Navan Garda Station, Post Master – An Post, An Taisce

The following submissions were received:

Submission from Meteor Mobile Communications Ltd.

The submission is based on a site, which Meteor intend to apply for planning permission in the near future. The site will be located in an ESB substation close to Batterstown. Its purpose is to provide indoor coverage in Batterstown and surrounding townlands and in car coverage along the main Trim/Dublin road.

Submission from An Bord Gais

A submission from An Bord Gais expressed their support for the proposed development and they would be happy to discuss with developers of the site the possibility of servicing the SDZ with a gas infrastructure to cater for its future energy requirements.

12 SIGNIFICANT ENVIRONMENTAL IMPACTS OF THE PLAN

12.1 Description of the Development

The planning scheme covers approximately 38 hectares (94 acres) of lands zoned for a residential Strategic Development Zone (SDZ) located to the north of Navan between the Kingscourt Road and the Slane Road. The lands lie directly to the north of the existing Blackcastle housing estate.

The northeastern boundary of the lands is delineated by a hedgerow and stream, which runs to the River Boyne. The northern boundary to the west cuts through an existing field. The southern boundary of the site comprises back gardens of an existing and well established housing estate named Blackcastle. The western boundary which runs along the Kingscourt Road comprises of one existing 20th century farmhouse. On the opposite side of the Kingscourt Road, there are a number of detached dwellings and some existing business. The eastern site boundary has a road frontage onto the Slane Road of 100 metres. This portion of the site is surrounded on both sides by detached dwellings. Currently, the lands within the SDZ are predominately under agriculture use.

This proposed SDZ scheme consists of a residential development plan of c.1400 dwellings and associated facilities. These include provision of transport infrastructure as part of the overall development incorporating a distributor road and spine road with bus route and commercial and community facilities. The proposal envisages a sustainable settlement incorporating a planned development with a high quality landmark entrance that can act as a model to all future residential development within the town. The planned nature of the development will allow for provision of facilities resulting in a development ensuring quality of life for inhabitants of the area.

12.2 Planning and Development

The SDZ planning scheme shall consist of a written statement and a plan which shall indicate how the site is to be developed. The scheme should also state the types of development to be permitted on the site and their extent and give proposals in relation to design, minimisation of adverse effects on the environment and ancillary infrastructural, community and other developments. The scheme must include an EIS insofar as that is relevant to the detail of the scheme. The scheme must be consistent with the housing strategy prepared by the planning authority.

12.3 Human Beings

The overall plan for the development of lands within Clonmagadden SDZ has been developed with an emphasis on protecting and enhancing existing residential amenity.

The impact on dwellings along the Slane Road will be reduced by relocating the initial proposal for a gateway building at the Slane Road entrance to the site to a more suitable location. In addition to the general open space buffer that is being provided adjacent to the Slane Road houses, proposed residential has been omitted at this location and a football pitch will be provided in lieu.

Where the development borders the Blackcastle residential area, the boundary will comprise of an open space network with pedestrian links to facilitate existing residents access to and use of the proposed facilities – including school, shops and open space.

Where development of residential units will occur along this boundary, these buildings will be developed to respect the existing residential amenity. For this purpose, buildings will be medium density at of no more than 2 storeys in height.

The residential development will be accompanied by adequate provision of community facilities and services to support the resulting increase in population in the area. These will include

recreation, education and retail facilities and public transport provision.

A green corridor will act as a buffer zone to protect existing amenity on lands abutting the site.

12.4 Cultural Heritage

The proposed development is located in the valley of the Boyne, 6 miles west of the Boyne Valley World Heritage Site, and 6 miles north of Tara. It is therefore situated in a region of the utmost archaeological significance. The site contains the remains of a circular cropmark, and recent excavations of a portion of the lands suggest that the area was the location for human activity since the Neolithic era.

The site adjoins the townland of Donaghmore, named after a church reputed to have been founded by St Patrick in the 5th century. The proposed link road which has formed part of this study is routed along the boundary of the enclosure of the church, the outline of which is clearly discernible in aerial photographs. Other possible remnants of the era may be associated with the various townland boundaries, hedgerows, and streams currently on the site. The lands will therefore require archaeological assessment prior to development, to facilitate the full recovery of archaeological remains.

As part of a planning application under this scheme, a full archaeological assessment, which shall include text excavations, shall be submitted to the planning authority.

With the exception of a derelict thatched cottage in poor repair, and a relatively modern farmhouse, there are no upstanding buildings on the site, which comprises both pasture and arable lands.

The area studied comprises improved farmland in the townlands of Batterstown and Blackcastle near Navan, Co Meath. The site is laid out in large fields, bounded by mature hedgerows and has

been used principally for tillage farming. Some pasture land and derelict buildings occur on site. A stream is associated with the eastern margin. This discharges into the Boyne.

A review of historical sources of information showed that no woodland was found on the site in the 19th century. Areas of conservation interest present on site then were a stream, a small wetland and hedgerows.

12.5 Ecology

Fieldwork revealed that the present habitats on site (as categorised by Fossitt, 2000) are improved grassland, tillage fields, a watercourse, hedgerows and artificial surfaces. Areas of principal conservation interest are the wetland, stream and certain well structured and species rich hedgerows.

Wetlands have suffered from local lowering of the water table and run off from heavily fertilised land. They are still of significant ecological value and have potential for improvement. The hedgerows are good examples of this type of habitat. While none of the important habitats are features of sufficient quality to be designated by international or national legislation they are important regionally. They are linking features within the site and between the site and adjacent habitats, particularly the Boyne, which receives drainage from the stream.

The study concludes biodiversity values at this site will be improved if the development incorporates the following features:

1. Green space or buffer between residential land and adjacent farmland or green land.
2. Best quality hedgerows and 50% of medium quality hedgerows are retained and incorporated into amenity areas or transport networks.

3. The pond and stream are incorporated into amenity scheme or water treatment system so that wetland ecological values are maintained and improved.

4. An area of species rich dry grassland is developed.

It will have a significant negative impact on biodiversity values if the following occur:

1. Best quality hedgerows are removed
2. More than 50% of medium quality hedgerows are removed
3. The quality of the wetland habitats in pond and stream deteriorate.

Development will have a neutral impact if the following changes occur:

1. The poorest quality habitats are removed. These include fields and poorest quality hedgerows.
2. Half of the medium quality hedgerows are removed.
3. The pond and stream are retained but not considered in the design of new amenity or wastewater schemes.

Based on this assessment practical guidelines are provided to support the incorporation of biodiversity values and strategic development objectives.

12.6 Landscape and Visual Assessment

The landscape and visual impact assessment was made from a series of key viewpoints which ranged from private houses to points on roads, public footpaths and public open spaces that were likely to experience a degree of visual change following implementation of the proposed development. The visual assessment compares the quality of each of the existing views with those that would result on completion of the proposed development; it then quantifies the degree of change.

- On a winter's day immediately after construction
- On a winter's day 15 years after the construction

Although residents may be particularly sensitive to changes in their visual amenity, most land use planning regimes consider

that public views are of greater value than views from private property. Mitigation measures have been designed in order to negate or at least minimise the potential negative impact both during the construction period and on completion of the works. The significance of the predicted visual impact upon the identified viewpoints was assessed as being either beneficial or adverse and rated as high, medium, low or not significant at all.

A total of fifteen viewpoints were selected, 67% of these show that the visual significance of the proposed development, one year after the development's construction, would result in a medium adverse impact on the viewpoints. The visual significance of the remaining 33% of viewpoints was assessed to have a high adverse impact.

All of the viewpoints that recorded a high adverse impact were either from public open space, a public footpath or housing (front elevation view) - located immediately adjacent to the proposed development site. The remaining viewpoints, which recorded medium adverse impact, were from rear elevation housing views or from public footpath or open space viewpoints located at a distance from the site and screened by existing vegetation.

The visual significance of the proposed development, 15 years after the development's construction, would reduce to a medium adverse impact for 33% of the viewpoints, due to the maturity of screen planting. With the remaining viewpoints assessed to have a reduced visual significance from medium-adverse to low-adverse, 15 years after construction.

12.7 Noise

The proposed site is currently semi-rural in character. It has a mixed noise environment from road traffic, overhead aircraft, a garage, domestic activities such as lawn mowing, and natural

sources. Road traffic, on the Kingscourt Road and the Slane Road, is the dominant source of background noise. The link or distribution road proposed for construction to the North of the subject site will add slightly to the existing noise baseline at some local houses.

Existing dwellings, in the main, are c.10 to 30 metres from the likely location of the nearest proposed buildings and construction works. However the average distance of likely construction work is c.160 to 230 metres. Thus while construction noise levels are expected to be noticeable at times, in general a moderate impact is predicted. Existing dwellings are mainly from c.10 to 30 metres from both the Kingscourt Road and the Slane Road, with some of them being as close as 5 or 6 metres, and others in the range of c.30 to 90 metres back from the road. Thus, both by day and by night, road traffic is the dominant determinant of the noise climate at all houses likely to have any traffic noise impact due to this proposal.

Those houses in Clusker Park and Hillview Estate which back on to the subject site have the lowest existing ambient noise levels, being furthest from local roads.

The ground contours of the site are such that most existing housing is at a higher level than the projected developments. This is helpful in minimising noise from both (a) construction works, and (b) the likely traffic on the distributor road.

Development traffic is calculated to add c.0.5 to c.3 dBA to existing traffic noise levels in 2010. These increases in traffic noise level are regarded as 'Negligible' to 'Noticeable'. The 3 dB increase is calculated from increased traffic on the new road West into Navan from the Kingscourt Road. Road Traffic on the proposed Distributor road is estimated to generate negligible noise at Hillview Estate and Clusker Park, due to screening by the proposed housing.

Road traffic on the proposed Distributor Road is calculated to increase noise levels by c. 0.5 LAeq_{1hour} at the house near the Slane Road Junction, in 2010. This level of traffic noise increase is regarded as 'Negligible'.

It is concluded that the proposed development can (a) be constructed and (b) be operated, without any undue noise impact on the local environment. Some noise screening may be required at the Kingscourt Road junction.

12.8 Climate

No significant adverse effects have been identified, no mitigation measures are required. However, some impacts can be reduced through planting of trees and vegetation (reduces CO₂ emissions and can act as wind breaks).

12.9 Air Quality And Odour

Remedial and reductive measures to minimise emissions during the construction phase are detailed below.

1. No outdoor burning should occur on the site
2. Regular road damping and sweeping must be carried out – a minimum of three times daily to reduce air borne dust (frequency to be increased according to requirements)
3. Road damping should be carried out on both paved and unpaved roads to minimise emissions. This should include public roads outside the site which may be impacted by material carried off site, on truck tyres for example
4. Damping of any soil stockpiles stored on site during dry conditions
5. Dusty materials (e.g. top soil) should be transported in covered trucks
6. Limit vehicle speeds on site to control dust emissions during dry periods
7. A complaints register should be maintained at the site at all times.

It is considered that the air quality impact of the proposed development will be insignificant provided that the mitigation measures detailed above are implemented.

12.10 Traffic

The assessment carried out shows that the development at Clonmagadden Valley would increase the overall traffic volumes on the road network in the north of Navan. However, the provision of new road infrastructure in this area, namely the Distributor Road, can mitigate the adverse impact of the development.

In fact, with the full Distributor Road in place by 2010, and Clonmagadden Valley at its full development, the total traffic on the Inner Relief Road and Flower Hill is decreased by approximately 700 vehicles.

The completion of the Distributor Road is therefore, essential to avoid an increase in traffic congestion in the north of Navan.

12.11 Water

The construction of residential units within the site will result in the generation of waste water. All sewage generated due the residential units will be diverted to the mains foul drainage network, which will be extended to cater for the development. Wastewater in the vicinity of the site is currently treated at Farganstown (Navan) wastewater treatment works. The plant is designed to cater for 40,000 p.e. and can be upgraded to cater for 60,000 p.e. The plant is presently treating approx. 25,000 p.e. and so there is adequate capacity to take foul water from the proposed development.

Existing records do not document any potable supply boreholes in the environs of the proposed site. All water requirements for surrounding residences are supplied from the Navan Public

Supply. It is proposed to seek connection to the public supply network to meet the water requirements of the development. There is a 525mm watermain on the Proudstown Road to the west of the site and a 150mm watermain on the Slane Road to the east of the site. Water is supplied from Navan & Mid Meath Regional Water supply via Liscarton Treatment Works / Proudstown Reservoir. The Liscarton treatment plant, which abstracts water from the River Blackwater, is presently operating at maximum capacity. A new interim treatment plant located at Kilcarn, Navan, which will treat water from the River Boyne, was commissioned in 2004 and will be used to augment supply to the Navan area until the proposed major regional scheme is constructed.

The proposed development will result in slightly elevated run-off and increased run-off rates to the Clonmagadden Stream and the Boyne Catchment however the impact is estimated to be within the capacity of the drainage network on-site. This increase could be attenuated by provision of a storm surge pond which would also serve as an amenity.

12.12 Conclusions

Having regard to the findings of the EIA, as briefly outlined above, the proposed development should not unduly impact on the environment and or quality of life in the area.

An over-riding factor in assessing the impact of the development is the existing zoning for residential use on the site. A significant planning gain of developing the lands in accordance with the SDZ planning scheme is that it allows for a comprehensive structure for overall development, ensuring provision of community, amenity and commercial facilities in conjunction with residential.