Strategic Development Zone
Planning Scheme

September 2003

South Dublin County Council **Planning Department**

adamstown

Strategic Development Zone
Planning Scheme

September 2003

South Dublin County Council **Planning Department**

Kieran Kennedy M.Sc., M.Appl. Sc., M.R.T.P.I., A.S.C.S.
Director of Planning

adamstown

Contents

1.0 Introduction

1.1 Adamstown Planning Scheme Philosophy

1.1.1 This Planning Scheme aims to create sustainable communities rather than just housing developments. The Scheme was prepared with regard to best practice in the planning and design of new urban communities. This is a holistic approach that integrates:-

- **Urban Design**
  To create urban place with a strong sense of identity that is attractive and desirable as well as safe and secure, in a traditional town and village format;

- **Land Use**
  To require a mix of land uses to provide amenities, facilities, services and employment and enable the community to work, shop and recreate locally;

- **Housing**
  To facilitate a mix of house types, sizes and tenure options that allow all sections of society to remain part of the community throughout the life cycle i.e. from the cradle to the grave;

- **Transportation**
  To provide alternatives to the private car in the form of a new railway station and transport interchange, additional rail capacity, dedicated bus routes and a continuous network of walking and cycling links;

- **Ecology and Landscape**
  To preserve ecosystems and landscape by incorporating distinct habitats and established landscape features into a network of parks and open spaces;

- **Conservation**
  To protect and ensure the appropriate use of historic structures, built heritage and archaeological features;

- **Energy Efficiency**
  To minimise energy usage through innovations in accessibility, block layout, building design, use of materials and adaptability in floor plans and uses;

- **Phased Delivery**
  To ensure that development occurs at a pace whereby it is supported by all necessary infrastructure, services, amenities and facilities.

1.2 Planning Scheme Format

1.2.1 This Planning Scheme comprises five parts. The first part introduces the concept and explains the background to the Adamstown Strategic Development Zone (SDZ) process.

1.2.2 The second part presents proposals for the overall development of Adamstown, including the type, extent and design of development and proposals for transportation, services and amenities.

Figure 1.1. Adamstown SDZ - Regional Context

1.2.3 The third part details each of the 15 sub-areas that the Adamstown SDZ has been sub-divided into for the purposes of the Planning Scheme. There are 11 'development areas' and 4 'amenity areas'.

1.2.4 The fourth part of the Planning Scheme indicates the required phasing of development. The number of dwelling units that may be permitted as part of each phase of development is dependent on a certain amount of infrastructure, services, facilities and amenities having been completed.

1.2.5 The fifth part comprises an Environmental Appraisal of the Scheme and includes proposals relating to the minimisation of adverse effects on the environment.

1.3 Background and Process

1.3.1 Part IX of the Planning and Development Act 2000 introduced Strategic Development Zones (SDZs) to facilitate specified development of economic or social importance to the State.

1.3.2 The Government designated 223.5 hectares of land at Adamstown, to the south-west of Lucan, County Dublin, as a site for a Strategic Development Zone for residential development, on 1 July 2001.

1.3.3 South Dublin County Council is the specified Development Agency for the Adamstown SDZ site, being the relevant Planning Authority for the area. A Draft Planning Scheme was prepared and submitted to the elected members of South Dublin County Council in December 2002.

1.3.4 The Draft Planning Scheme was displayed in public during January and February 2003, during which time submissions and observations were invited from all interested parties. A total of 123 valid submissions were made to the Planning Authority.

1.3.5 Reports on submissions and observations received were prepared and submitted to the elected members of the Planning Authority. The Reports recommended 40 changes to the Draft Planning Scheme. The elected members proposed 56 further changes in the form of motions during April 2003.

1.3.6 After several Council meetings at which the proposed changes were considered, the elected members of South Dublin County Council decided, by resolution, to 'make' the Draft Planning Scheme subject to a total of 62 variations and modifications, on 7 May 2003.

1.3.7 A total of 20 parties who had previously made submissions to the Planning Authority in respect of the Draft Planning Scheme, made appeals to An Bord Pleanala regarding the decision of South Dublin County Council, in June 2003.

1.3.8 An Bord Pleanala held an oral hearing in respect of the Draft Planning Scheme during July 2003. The Board approved the Planning Scheme, subject to 26 further modifications, on 26 September 2003. This document comprises the consolidated Planning Scheme and incorporates all changes, variations and modifications.

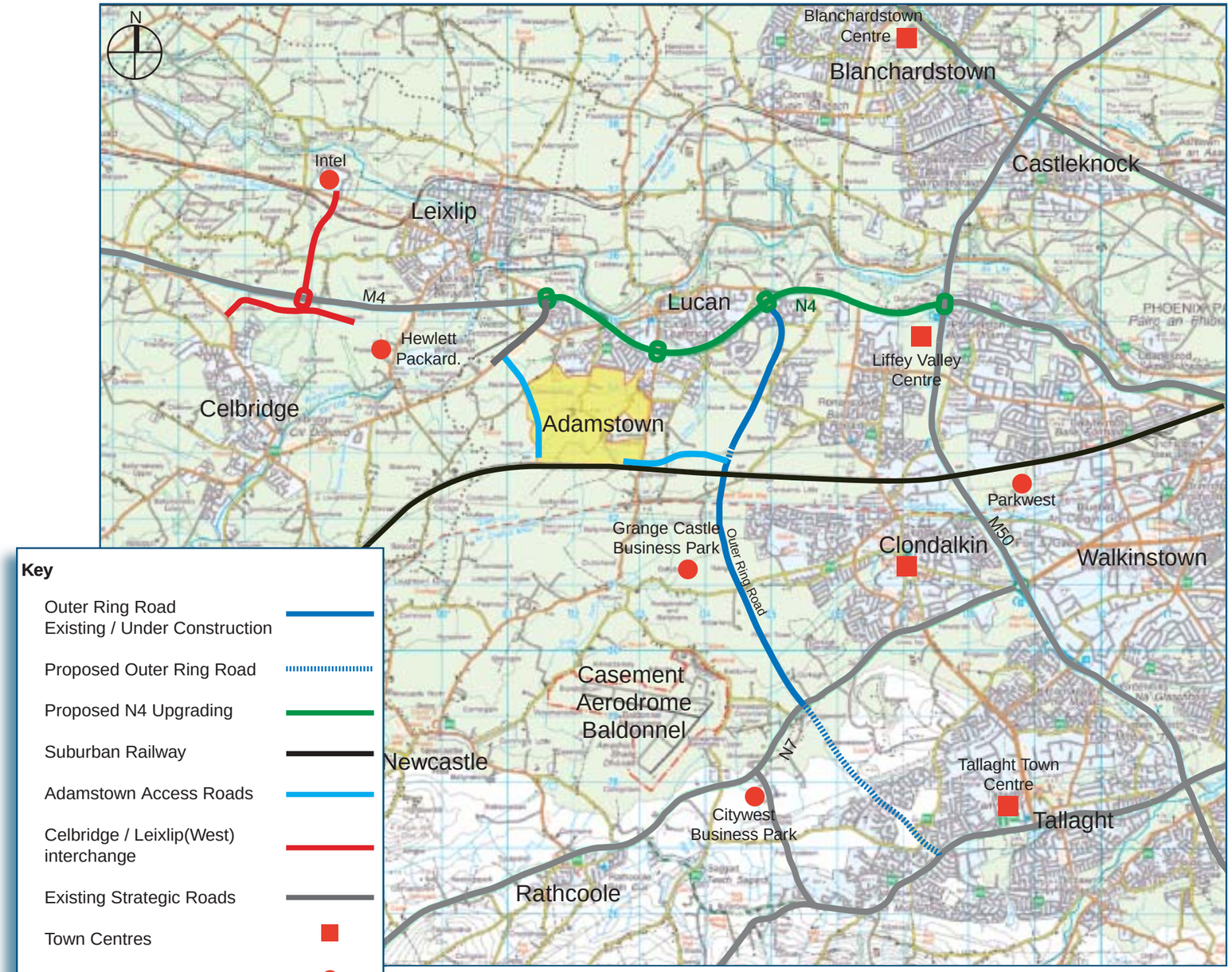


Figure 1.2. Adamstown SDZ - Sub-Regional Context

1.4 The Approved Planning Scheme

1.4.1 The Adamstown SDZ Planning Scheme forms part of any County Development Plan in force in the area of the Scheme until the Scheme is revoked, and any contrary provisions of the Development Plan shall be superseded by the Planning Scheme.

1.4.2 Development within the Planning Scheme area requires planning permission from South Dublin County Council. Where development proposals are consistent with the provisions of the Planning Scheme, they will be granted planning permission. Where not consistent with the Scheme, no permission will be granted.

1.4.3 No party may appeal to An Bord Pleanala against a decision of South Dublin County Council on any application for permission in respect of a development within the area subject to the Adamstown SDZ Planning Scheme.

1.5 Planning Scheme Area

1.5.1 The total gross area of the Adamstown SDZ is 223.5 hectares. This area includes the lands west of the R120 Newcastle (Lock) Road and north of the railway that are zoned 'A1' in the South Dublin County Development Plan 1998, the adjoining roads, railway line, site boundaries, Tandy's Lane and an adjoining public open space in the Hillcrest housing area to the north-east.

1.5.2 The total gross SDZ area is greater than the area subject to the Planning Scheme. The Planning Scheme area is 218.8 hectares and comprises all of the lands within the SDZ, but excludes the existing occupied protected structures at St. Helen's and Somerton and their attendant grounds (Figure 1.3.) and the adjoining public open space at Hillcrest.

1.5.3 The area subject to the Planning Scheme is greater than the actual developable area. The developable area also excludes the adjoining roads and railway line and comprises 213.9 hectares.

1.6 Planning Context

Adamstown Local Area Plan 2001

1.6.1 A detailed Local Area Plan (LAP) exists for Adamstown (Figure 1.4. overleaf). The Adamstown LAP was adopted by South Dublin County Council in July 2001. The Plan sets out the framework for the future development of the lands at Adamstown and forms the basis for the preparation of the Adamstown SDZ Planning Scheme.

South Dublin County Development Plan 1998

1.6.2 The South Dublin County Development Plan was adopted by South Dublin County Council in December 1998. The Adamstown SDZ lands were zoned "To provide for new residential communities in accordance with approved Action Area Plans".

Strategic Planning Guidelines for the Greater Dublin Area 1999

1.6.3 Strategic Planning Guidelines for the Greater Dublin Area (SPGs) were published in March 1999. The Adamstown SDZ lands are located within the defined Metropolitan Area, for which the strategy is to consolidate development by increasing overall densities and thereby facilitating the provision of a considerably enhanced public transport system.

A Platform for Change - DTO Strategy 2000-2016

1.6.4 A transport strategy for the Greater Dublin Area was published by the Dublin Transportation Office (DTO) in September 2000 and is the overall planning framework for the development of the transport system in Greater Dublin, including the Adamstown SDZ lands, over the period 2000-2016.

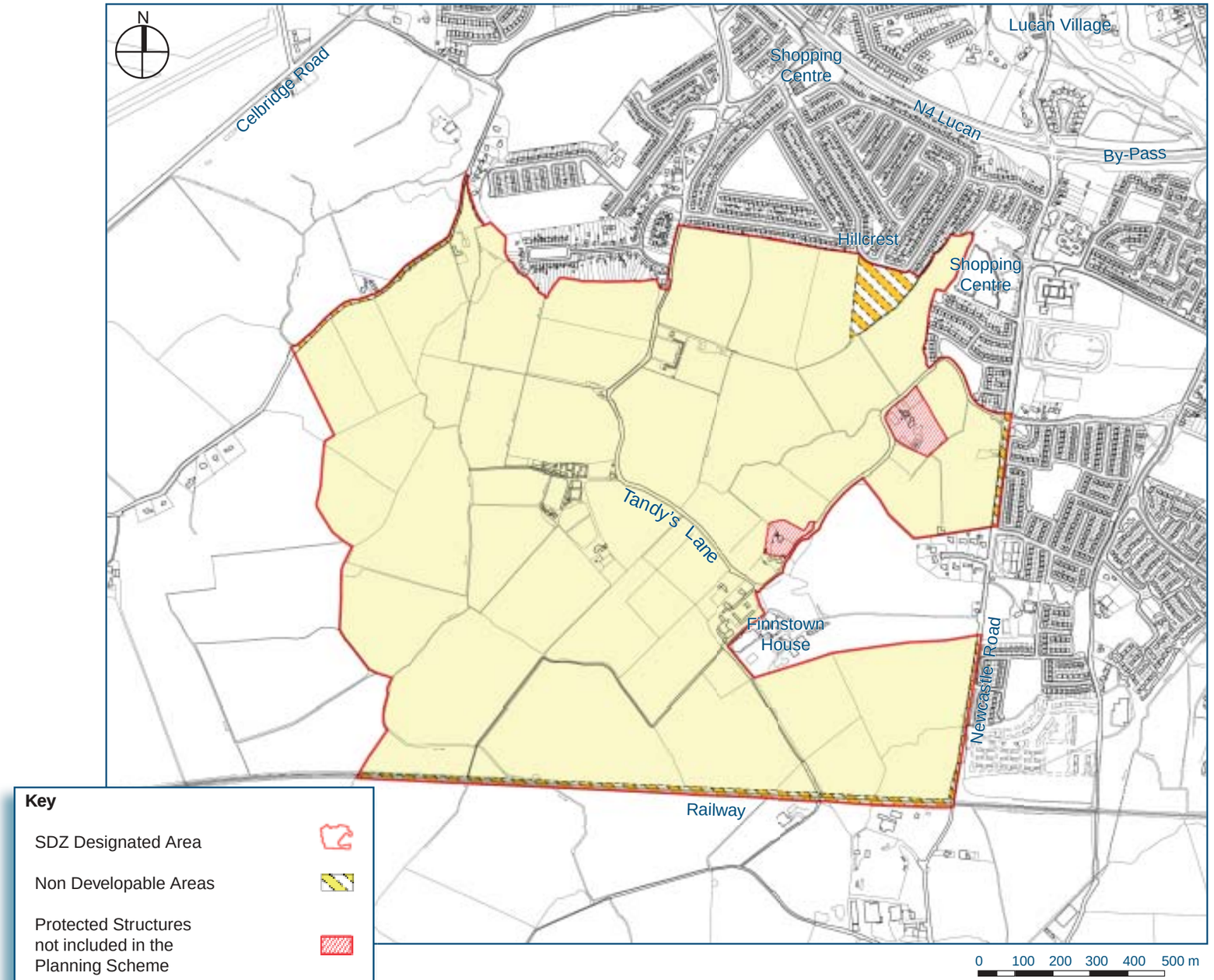


Figure 1.3. Designated Adamstown SDZ Area Boundary

Residential Density Guidelines for Planning Authorities 1999

1.6.5 Residential Density Guidelines for Planning Authorities were published by the Department of the Environment in September 1999. The Guidelines identify appropriate locations for higher residential densities including outer suburban / 'greenfield' sites and lands proximate to existing or proposed public transport corridors such as Adamstown.

Retail Planning Strategy for the Greater Dublin Area

1.6.6 The Retail Planning Strategy for the Greater Dublin Area was published in January 2002. The purpose of the Strategy is to ensure that adequate provision is made for retail development and to advise on floorspace location. Potential is identified for a new District Centre to serve Adamstown and for the expansion of the existing Centre at Lucan - Esker (Superquinn Centre).

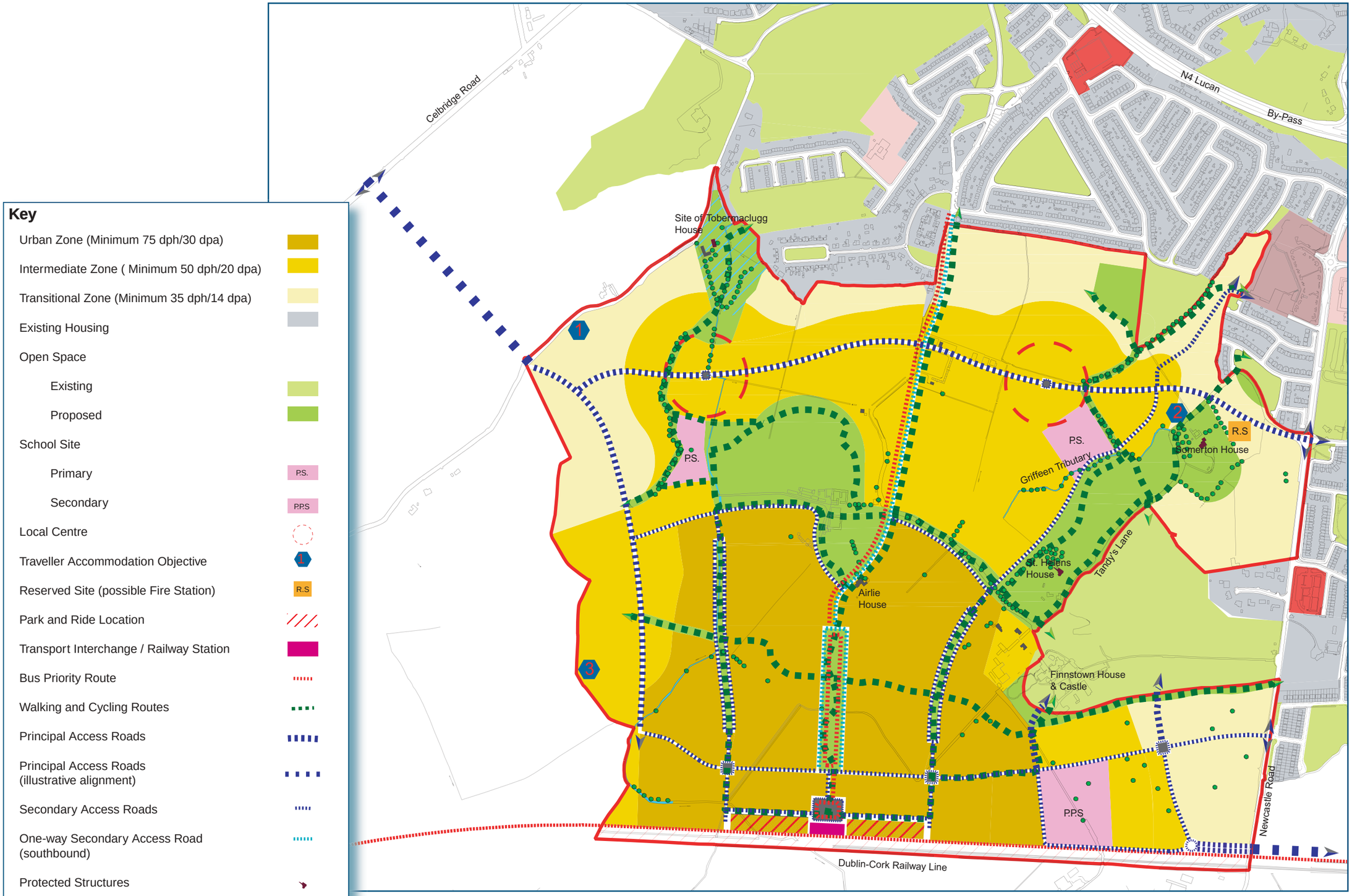


Figure 1.4. Adamstown Local Area Plan 2001 - Strategy Map

1.7 Area Characterisation

1.7.1 The gross developable area of the Adamstown SDZ Planning Scheme comprises 213.9 hectares and is subdivided into eleven development areas and four amenity areas. The purpose of this is to characterise each part of the SDZ as a smaller, more identifiable unit.

1.7.2 Excluding proposed main road and railway reservations, major public open spaces and sites for schools from the total gross developable area, the total net developable area is 155 hectares. Main road reservations include all required public space within the road corridor such as footpaths etc.

1.7.3 Area character type is based on the *Adamstown Local Area Plan 2001* and in particular the three density zones identified, '*transitional', 'intermediate' and 'urban'*. The Local Area Plan Density zones have been related to the Planning Scheme development areas, which are characterised as either low, medium or high development density.

	Development or Amenity Area	Gross Area (hectares)	Net Area (hectares)	Area Character Type
1	Adamstown Castle	21.1	12.15	Low density
2	Somerton	14.5	12.8	Low density
3	Airlie Stud	15.6	14.5	Low density
4	Tobermaclugg Village	21.4	19.3	Low density
5	Tubber Lane	18.8	17.6	Low density
	Tandy's Lane Village	21.7	17.0	Medium density
7	St. Helen's	16.0	14.2	Medium density
8	Aderrig	21.7	17.8	Medium density
9	Adamstown Square	15.1	12.15	High density
10	Adamstown Boulevard	14.4	11.3	High density
11	Adamstown Station	8.3	6.2	High density
	Subtotal	**188.6**	**155.0**	
A	Tandy's Lane Park	8.0	7.7	Park
B	Tobermaclugg Park	3.8	3.4	Park
C	Airlie Park	11.6	10.85	Park
D	Central Boulevard	1.9	1.3	Urban Park
	Subtotal	**25.3**	**23.25**	
	TOTAL	**213.9**	**178.25**	

Table 1.1 Adamstown SDZ - Development and Amenity Areas

Figure 1.5. Adamstown SDZ Planning Scheme - Gross and Net Development Areas

2.0 Proposals for Development

2.1 Types of Development

2.1.1 A Planning Scheme must indicate the type or types of development that may be permitted within the designated Strategic Development Zone (SDZ).

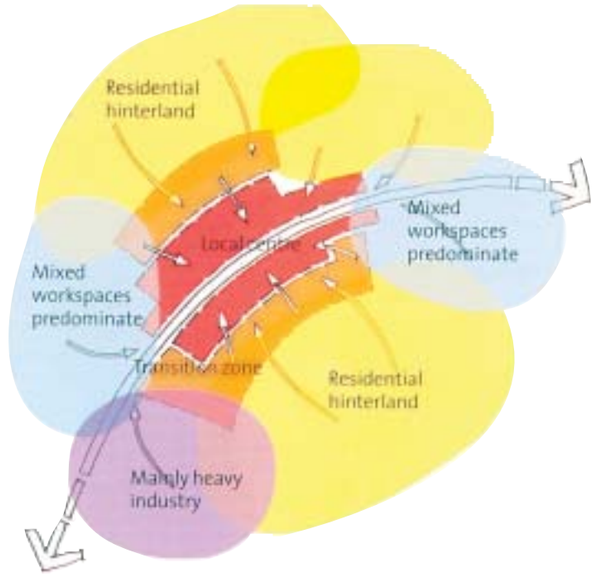
2.1.2 The *South Dublin County Development Plan 1998* indicates the types of development that may be permitted in an area by identifying a zoning objective and specifying the types of development that are either '*permitted in principle'*, '*open for consideration'* or *'not permitted'* in that area.

Permitted in Principle	Advertisements & Advertising structures, Bed and breakfast, Betting office, Car park, Church, Community facility, Creche/Nursery school, Cultural use, Dancehall/ nightclub, Doctor/Dentist etc.., Education, Enterprise centre, Funeral home, Guest house, Health centre, Hospital, Home-based economic activities, Hotel/motel, Industry-light, Office-based industry, Offices, Open space, Petrol station, Public house, Public services, Railway Station, Recreational buildings (commercial), Recreational facility/sports club, Residential, Residential caravan bays/Group housing, Residential institution, Restaurant/Cafe, Retirement home, Science and Technology based enterprise, Service garage, Retail service, Shop, Vet. Surgery
Open for Consideration	Agricultural buildings, Caravan park-holiday, Cash and carry/Wholesale outlet, Garden centre, Household fuel depot, Motor sales outlet, Refuse transfer station, Retail warehouse, Telecommunications support structures required to service Adamstown, Transport depot, Warehousing
Not Permitted	Abattoir, Aerodrome/Airfield, Boarding kennels, Cemetery, Concrete/Asphalt plant, Heavy vehicle park, Industry-Extractive, Industry-General, Industry-Special, Refuse landfill, Rural industry, Scrap yard

Table 2.1 Types of Development Permissible in Adamstown - Development Areas

2.1.3 The *Adamstown Local Area Plan 2001* aims to "Create a sustainable and vibrant community based on a traditional town format, with a wide range and choice of dwellings, shopping, services, employment, education, community and leisure facilities and amenities".

2.1.4 The Government Order designating Adamstown as a site for an SDZ. S.I. No. 272 of 2001, specifies "residential development and the provision of schools, commercial activities including employment, office and retail facilities, a rail halt, emergency services and the provision of community facilities as referred to in Part III of the First Schedule of the Planning and Development Act 2000, including health and childcare services".



A vibrant and sustainable form results from blurring the distinction between uses and designing places that make walking to the local centre and bus stop or railway station, as convenient and comfortable as possible

Figure 2.1. Mixing Uses

Permitted in Principle	Community facility, Cultural use, Open space, Recreational facility/sports club, Car park, Restaurant/Café
Open for Consideration	Agricultural buildings, Bed and breakfast*, Caravan park-holiday, Church, Creche/Nursery school Education, Garden centre, Guest house*, Home based economic activities*, Public services, Residential caravan bays/ Group housing, Residential instution*, Retirement home*, Recreational buildings (commercial), Telecommunications support structures required to service Adamstown
Not Permitted	Abattoir, Adverrtisements & Advertising structures, Aerodrome/Airfield, Betting office, Boarding kennels, Cash and carry/Wholesale outlet, Cemetery, Concrete/Asphalt plant, Dancehall/nightclub, Doctor/Dentist etc., Enterprise centre, Funeral home, Health centre, Heavy vehicle park, Hospital, Hotel/motel, Household fuel depot, Industry(all categories), Motor sales outlet, Office-based industry, Offices, Petrol station, Public house, Railway Station, Refuse landfill, Residential, Retail warehouse, Scrap yard, Retail service, Shop, Transport depot, Vet. Surgery, Warehousing

Table 2.2 Types of Development Permissible in Adamstown - Amenity Areas

*** In existing structures**

2.1.5 Adamstown is primarily a residential development area with significant community and commercial elements focused on a new railway station, new district centre and at least two new local centres.

2.1.6 The types of development permissible in the eleven development areas (Figure 1.5) are indicated on Table 2.1. the types of development permissible in the four amenity areas (Figure 1.5) are indicated on Table 2.2.

2.2 Extent of Development

Development Type	Minimum Extent	Maximum Extent
Total Residential and Non-Residential	840,000 square metres	1,035,000 square metres
Total Dwelling Units	8,250 units	10,150 units
Total Non-Residential Development	32,600 square metres	125,500 square metres
Additional Development	Railway station/transport interchange Three primary schools One secondary school Fire Station	

Table 2.3. Total Extent of Development Permissible in Adamstown*

(i) Total Extent

2.2.1 In addition to the type or types of development that may be permitted, a Planning Scheme must indicate the extent of any such proposed development.

2.2.2 The scale of the Adamstown SDZ is such that the area is likely to be developed over a relatively long period of time. The Planning Scheme must therefore be sufficiently flexible to allow for changing economic and social conditions, yet be clear enough to indicate the full extent of development permissible.

2.2.3 To facilitate flexibility over time and ensure clarity, this Planning Scheme is based on a system that indicates an acceptable range of development. Both a minimum and a maximum ('*min-max*') amount of development are specified. The extent of development permissible falls within this min-max range.

*** Non residential development includes community, commercial, leisure, retail, office, employment, cultural and civic uses**

(ii) Breakdown of Total Extent

2.2.4 The total extent of development in the Adamstown SDZ comprises:-

- Development in Net Development Areas;
- Development in Landmark Buildings;
- Development on School Sites;

Net Development Areas

2.2.5 The vast majority of development in Adamstown will take place in the eleven net development areas. These areas exclude main road and railway reservations, major parks (amenity areas) and sites for schools and a fire station.

	Development Area	Total Development (square metres)		Total Dwelling Units (number)	
		Min	Max	Min	Max
1	Adamstown Castle	50,000	60,000	500	600
2	Somerton	45,000	55,000	450	550
3	Airlie Stud	57,500	70,000	575	700
4	Tobermaclugg Village	87,500	105,000	875	1,050
5	Tubber Lane	70,000	85,000	700	850
6	Tandy's Lane Village	85,000	102,500	850	1,025
7	St. Helen's	92,500	110,000	925	1,100
8	Aderrig	115,000	140,000	1,150	1,400
9	Adamstown Square	90,000	110,000	900	1,100
10	Adamstown Boulevard	85,000	102,500	850	1,025
11	Adamstown Station	62,500	75,000	475	550
	TOTALS	**840,000**	**1,015,000**	**8,250**	**9,950**

Table 2.4 Development Permissible by Net Development Area*

2.2.6 Within each of the eleven net development areas, the Planning Authority will allow flexibility in the relationship between the amount of floorspace and the number of dwelling units. For example, a developer may provide the minimum amount of floorspace and the maximum number of dwellings, or vice-versa. This allows for considerable variation in dwelling size and type.

2.2.7 There is generally a 20% variation between the minimum and maximum extent of development within each net development area. This is to counter excessive fluctuations throughout Adamstown.

*** Excludes additional floorspace/dwellings available for landmark buildings and school sites**

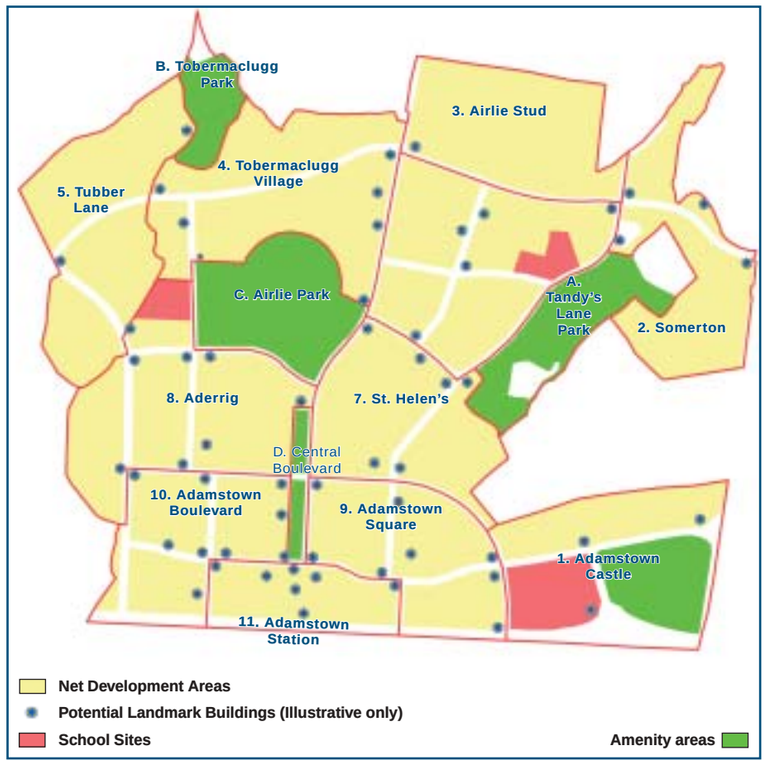


Figure 2.2. Net Development Areas, Landmark Buildings and School Sites

Landmark Buildings

2.2.8 Up to 1% of floorspace in the net development areas may be provided to facilitate landmark buildings at appropriate locations throughout Adamstown. This permits up to a maximum of 10,000 square metres of further development which may include up to 100 extra dwelling units.

2.2.9 Additional floorspace available for landmark buildings at any given time is calculated as 1% of already permitted floorspace throughout the Adamstown SDZ, up to a cumulative maximum of 10,000 square metres and is subject to certain design standards, detailed in Section 2.3 below

School Sites

2.2.10 Designated school sites do not form part of the net development areas. There are three sites identified for the provision of four schools:– two 1.2 hectare primary school sites and one large 4 hectare combined school site, capable of accommodating both a secondary school and a primary school.

2.2.11 In addition to two schools, the large 4 hectare site may also include up to 10,000 square metres of development which may include up to 100 residential units.

2.2.12 Additional development on the large school site must have a clear design relationship with the school buildings and will be subject to maximum density standards relating to the site as a whole:- site coverage up to 25% and plot ratio up to 1 : 0.5.

(iii) Total Residential Development

2.2.13 There are a minimum of 8,250 dwelling units and a maximum of 10,150 units permissible in the Planning Scheme area. It is an objective that in accordance with the *South Dublin County Council Housing Strategy 2001*, 15% of all dwelling units within each development area shall be provided as social and/or affordable units.

2.2.14 In achieving the objective to provide social and affordable housing, the Planning Authority will consider the following:-

- Whether the proposal for social / affordable housing will contribute effectively and efficiently to the achievement of the objectives of the Council's Housing Strategy and this Planning Scheme;
- Whether the proposal would constitute the best use of the resources available to ensure an adequate supply of housing and any financial implications of the proposal for the Council in its functions as a Housing Authority;
- The overall need to counteract undue segregation in housing between persons of different social background in each of the development areas of this Planning Scheme and in the overall context of this Planning Scheme;
- The time within which the social/affordable housing element of the proposal is likely to be provided;
- The need to ensure the overall coherence of the proposal in the context of the Council's Housing Strategy and this Planning Scheme;
- The need to take into account the views of the applicant as set out in their proposal for compliance with the provisions of the Council's Housing Strategy and this Planning Scheme.

2.2.15 Social housing provision must include at least three traveller accommodation sites to accommodate at least 30 units of accommodation, two-thirds of which must be grouped houses and one-third residential caravan bays.

2.2.16 The three traveller accomodation sites shall generally be located in accordance with the symbols identified on Figure 2.4. The proposed traveller accomodation sites in the Somerton and Tubber Lane development areas will comprise group housing and the proposed site in the Adderig development area will comprise halting site bays.

(iv) Total Non-Residential Development

2.2.17 There is a maximum of 125,500 square metres of non-residential development permissible in the Planning Scheme area (excluding school buildings, railway station and fire station). The maximum amount of non-residential floorspace is available for commercial, retail, community, office, employment, leisure, civic and cultural activities and uses.

2.2.18 In each of the eleven net development areas, the maximum extent of non-residential floorspace is related to total floorspace. Similarly, the maximum extent of retail floorspace is related to total non-residential floorspace.

	Development Area	Total Maximum Non-Residential		Total Maximum Retail	
		As a % of total floorspace	Floor Area (square metres)	As a % of total non-residential floorspace	Floor Area (square metres)
1	Adamstown Castle	5%	3,000	10%	300
2	Somerton	5%	2,750	50%	1,375
3	Airlie Stud	5%	3,500	10%	350
4	Tobermaclugg Village	10%	10,500	25%	2,625
5	Tubber Lane	5%	4,250	10%	425
6	Tandy's Lane Village	10%	10,250	25%	2,575
7	St. Helen's	5%	5,500	10%	550
8	Aderrig	5%	7,000	10%	700
9	Adamstown Square	10%	11,000	10%	1,100
10	Adamstown Boulevard	10%	10,250	10%	1,025
11	Adamstown Station	50%	37,500	50%	18,750
	Subtotals		**105,500**		**29,775**
	Landmark Buildings	100%	10,000	0%	0
	School Sites	100%	10,000	0%	0
	TOTALS		**125,500**		**29,775**

Table 2.5 Maximum Extent of Non-Residential Development *

*** Excludes school buildings, railway station and fire station. Childcare places estimated at 5 sq.m. per child. Total maximum non-residential floor area figures rounded to nearest 250 square metres. Total maximum retail floor area figures rounded to nearest 25 square metres**

2.2.19 There is a minimum of 32,600 square metres approximately (excluding school buildings, railway station and fire station) of non-residential floorspace required to ensure the provision of certain community, retail and retail service uses as follows:-

- 19,950 sq.m. retail and retail services;
- 1 no. 1,000 sq.m. central civic hall;
- 2 no. 1,500 sq.m. enterprise centres;
- 1 no. 150 sq.m. community centre per 1,000 dwelling units (8-10) no. in total;
- 1,449 no. childcare places in at least 15 separate facilities (at 5 sq.m. per child, estimated to be 7,245 sq.m. approximately).

	Development Area	Retail & Retail Services (sq.m.)	Community Buildings (sq. m.)	Childcare Places (no.)		Total (sq.m.)
				no.	sq.m.	
1	Adamstown Castle	0	0 -150	133	665	665
2	Somerton	0	0 -150	120	600	600
3	Airlie Stud	0	150	153	765	915
4	Tobermaclugg Village	2,200	1,500 + 150	155	775	4,625
5	Tubber Lane	0	150	186	930	1,080
6	Tandy's Lane Village	2,125	1,500 + 150	151	755	4,530
7	St. Helen's	0	150	123	615	765
8	Aderrig	0	150	153	765	915
9	Adamstown Square	0	150	120	600	750
10	Adamstown Boulevard	0	150	113	565	715
11	Adamstown Station	15,625	1,000	42	210	16,835
	TOTALS	**19,950**	**5,200 - 5,500**	**1,449**	**7,245**	**32,395**

Table 2.6 Minimum Extent of Non-Residential Development *

*** Excludes school buildings, railway station and fire station. Childcare places estimated at 5 sq.m. per child.**

2.2.20 Up to 20% of permissible non-residential floorspace in any development area may be transfered to one or more immediately adjoining development areas or subject to Table 2.2, amenity areas, subject to the following:-

- 'Immediately adjoining' requires adjoining development areas to share a contiguous boundary within the Planning Scheme area;
- Transferred floorspace is additional to permissible development in the destination area or areas;
- Transferred floorspace causes a reduction in permissible development in the origin area or areas;
- Total permissible non-residential floorspace in the Adamstown Planning Scheme area as a whole shall remain unchanged;
- Transferred floorspace shall not apply cumulatively and shall be based on the non-residential floorspace figures detailed in this Planning Scheme;
- Floorspace may be transferred only with the written agreement of the owner(s) of the origin and destination landholding, which must accompany any relevant planning application;
- The transfer of floorspace will not have the effect of reducing the minimum size or number of community buildings or minimum number of creche places required in any development area;
- A maximum of 20% of permissible retail floorspace in any one development area may be transferred in accordance with the above and total permissible retail floorspace in the Adamstown Planning Scheme area as a whole shall remain unchanged.

Public transport orientated development ensures that a mixed use community has a railway station or bus stop within walking distance at its heart

Figure 2.3. Integration between Type and Extent of Development and Transportation

Figure 2.4. Adamstown SDZ Planning Scheme 2003

2.3 Overall Design of Development

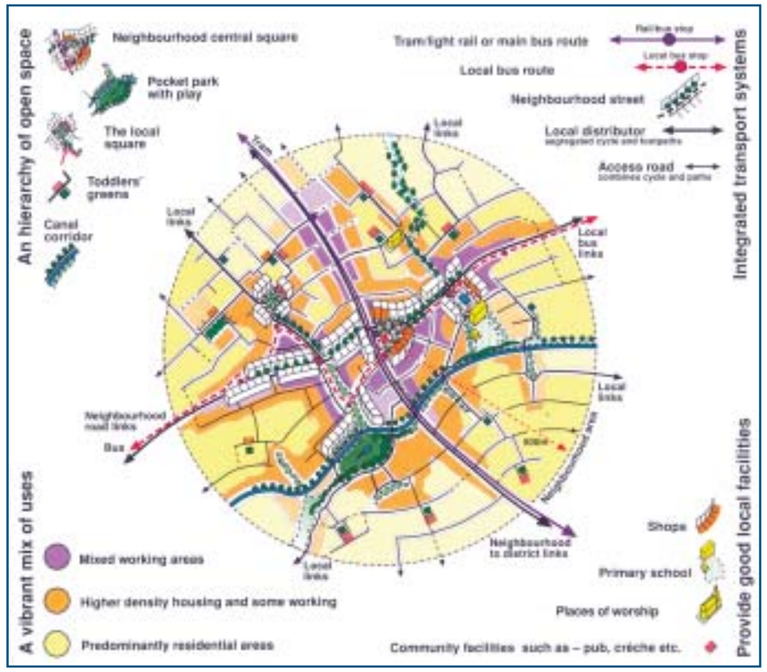
(i) Design Statement

2.3.1 Development in the Adamstown SDZ is based on a traditional urban town and village format, with a lively and interconnecting network of streets, squares and public parks and gardens, varied and interesting buildings and a mix of residential, commercial, public and community uses, all in close proximity.

2.3.2 The guiding principles of planning and design within Adamstown are:-

- Connectivity and permeability in layouts rather than enclosed and gated enclaves;
- Perimeter buildings addressing and abutting streets rather than set back on their sites;
- Integration of buildings and public amenity space to ensure overlooking and passive supervision;
- A mix of activities and uses focused on a hierarchy of identified centres with opportunities for non-residential development throughout the area;
- Greater variety in residential densities than in suburban areas to date;
- Greater variety in building height;
- Opportunities for landmark buildings at key nodes and focal points to promote urban legibility and a varied townscape;
- Good modern architecture with a building language that is varied and forward-looking rather than repetitive and retrospective;
- A range and choice of dwelling types and sizes;
- Apartments, duplexes and townhouses, with greater internal floor areas and private amenity space than before;
- Increased utilisation of shared/communal and well-defined on-street car parking.

2.3.3 These principles support a deliberate shift in the planning and design of Adamstown, away from the traditional suburban housing estate format with over-provision for car use, which has contributed to the problems of recent suburbanisation such as physical isolation, lack of facilities and traffic congestion.



Figures 2.5. and 2.6. Design and Layout Principles: Concept and Application

(ii) Layout

2.3.4 To encourage connectivity and permeability whilst ensuring that maximum safety standards are maintained, the Planning Authority will base its assessment of residential road layouts in the Adamstown SDZ on the guidance detailed in the UK Department of the Environment, Transport and the Regions (DETR) *Design Bulletin 32* (DB 32), *Residential Roads and Footpaths* and its companion guide, *Places Streets and Movement.*

2.3.5 The most significant requirement of DB32 in relation to Adamstown is that roads serving more than 50 dwellings should be loops or through roads. Direct access to dwellings is considered appropriate from roads serving up to 300 units. Where more than 300 dwellings are proposed, the provision of additional access routes assists in reducing the number of dwellings served to that figure.

2.3.6 The *Traffic Management Guidelines* manual was published by the Departments of the Environment & Local Government and Transport and the Dublin Transportation Office (DTO) in August 2003. The manual supports the design and layout objectives of this Planning Scheme and regard shall be had to the guidance contained therein.

2.3.7 Proposed layouts must demonstrate standards of permeability that prioritise public walking and cycling routes that are direct, safe and secure. Major barriers to pedestrian/cyclist movement such as gated or fenced-off compounds around individual developments will not generally be permitted. Layouts shall be designed to ensure that defensible space is defined by buildings, which shall in turn provide passive supervision of the public realm.

2.3.8 Passive supervision of the public realm is the most effective means of preventing anti-social behaviour. All roads/streets, walking/cycling routes and public open spaces shall be overlooked by adjoining accommodation to ensure passive surveillance. Back-land spaces, rear access lanes, blind corners and long side-garden walls will not be permitted.

(iii) Block Size

2.3.9 In order to maximise pedestrian accessibility, block sizes in Adamstown should generally be in the range of one acre (0.4 hectares) to one hectare (net) in area and generally not more than one hectare (net) in area. This equates to approximate dimensions of 65m x 65m or 50m x 80m for a one acre (0.4 hectare) block and 100m x 100m or 80m x 120m for a one hectare block.

2.3.10 As a guide, a net block size of one acre (0.4 hectares) is adequate to allow a four storey perimeter building with up to one surface car parking space per 50 square metres of development, or two storey housing with a garden and private car parking space provided for each dwelling. Flexibility is allowed for by varying block size, building height/type or car parking provision, such as decked, underground or basement parking.

(iv) Hierarchy of Centres

2.3.11 Adamstown is focused on an identifiable hierarchy of district and local centres and a network of smaller local nodes. The principal District Centre is focused on the proposed railway station and transport interchange.

2.3.12 In order to encourage a mix of activities and uses the boundary of Adamstown District Centre is not physically defined. The District Centre comprises all of the Adamstown Station development area and may include parts of the adjoining Adamstown Boulevard and Adamstown Square development areas.

2.3.13 The District Centre is defined by the greatest concentration of permissible shopping, services, leisure and employment activities together with community uses serving Adamstown as a whole, in addition to a significant permissible residential element.

2.3.14 In design terms, the Centre is characterised by the availability of good public transport, higher plot ratios, pedestrian priority, smaller block sizes, greater building heights, hard-landscaped civic spaces, green boulevards and high quality buildings and materials in order to create development in an urban format.

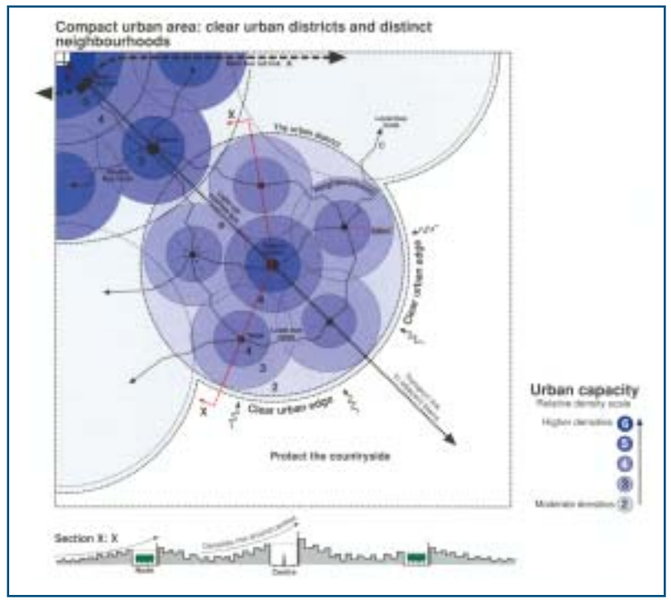


Figure 2.7. The Relationship between Hierachy and Urban Capacity

2.3.15 The two proposed Local Centres, are located at the centre of the Tobermaclugg and Tandy's Lane development areas in the north-west and north-east of Adamstown respectively. The boundary of neither Local Centre is physically defined.

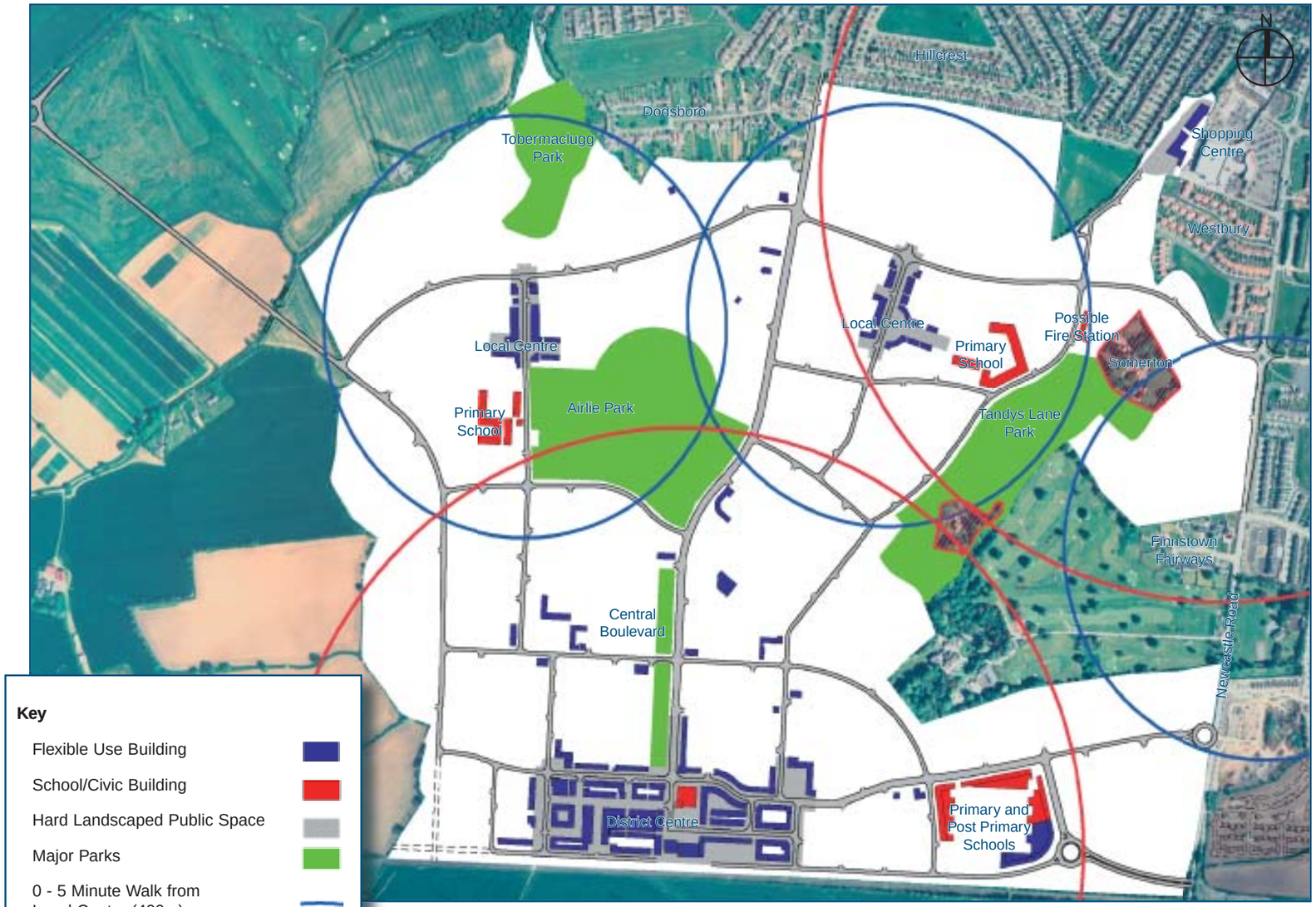


Figure 2.8. Hierarchy of Centres

2.3.16 The two Local Centres are defined by a local concentration of both residential and non-residential uses. Each includes a proposed enterprise centre and each is located immediately adjacent to a primary school site and close to a major park. In design terms, the Local Centres are characterised by similar criteria to the proposed District Centre, although reduced in scale to create development in an urban village format.

2.3.17 The existing Superquinn District Centre adjoins the north-eastern boundary of Adamstown and abuts the Somerton development area. An extension to the existing District Centre is permissible in order to facilitate direct vehicular and pedestrian access from within Adamstown and thereby expand the Centre's natural catchment.

2.3.18 There are a network of local nodes throughout Adamstown which may accommodate permissible small-scale non-residential uses such as childcare facilities, community centres, individual/groups of shops, a pub and/or bus stop in the form of urban parades or cross-roads, subject to appropriate traffic safety measures.

(v) Development Density

2.3.19 Development densities in Adamstown are expressed in terms of plot ratio. Plot ratio is a measure of building density and is calculated by dividing the total floor area of a building by the total site area. It is considered an effective means of controlling the form of built development on a site.

2.3.20 Adamstown is subdivided into eleven development areas to identify and characterise each part of the SDZ. Based on the three density zones identified in the *Adamstown Local Area Plan 2001*; '*transitional', 'intermediate' and 'urban*', each development area has been characterised as either low, medium or high development density and an appropriate range of min-max plot ratio standards applied:-

	Development Area	Development Density (plot ratio)		Residential Yield (dwellings per hectare)	Area Character Type
		Min	Max		
1	Adamstown Castle	1 : 0.42	1:0.5	42 - 50	Low density
2	Somerton	1:0.35	1:0.42	35 - 42	Low density
3	Airlie Stud	1 : 0.40	1:0.48	40 - 48	Low density
4	Tobermaclugg Village	1 : 0.45	1:0.54	45 - 54	Low density
5	Tubber Lane	1 : 0.40	1:0.48	40 - 48	Low density
6	Tandy's Lane Village	1 : 0.50	1:0.60	50 - 60	Medium density
7	St. Helen's	1 : 0.65	1:0.78	65 - 78	Medium density
8	Aderrig	1 : 0.65	1:0.78	65 - 78	Medium density
9	Adamstown Square	1 : 0.75	1:0.9	75 - 90	High density
10	Adamstown Boulevard	1 : 0.75	1:0.9	75 - 90	High density
11	Adamstown Station	1 : 1.0	1:1.2	75 - 90	High density
	Overall	**1 : 0.54**	**1:0.65**	**53 - 64**	**Medium Density**

Table 2.7 Min-Max Development Density and Residential Yield by Net Development Area

Figure 2.9. Development Density

2.3.21 Average net density on any individual development site, in each development area and in any future planning application, shall be within the minimum-maximum density range permissible on Table 2.7.

(vi) Residential Yield

2.3.22 Residential yield in the Adamstown SDZ is expressed in terms of the number of dwellings per hectare. Dwellings per hectare is considered the most appropriate means of estimating future residential yield and is also a measure of overall residential density. In order to influence the form of development in Adamstown, dwellings per hectare is used in conjunction with plot ratio and other planning standards.

2.3.23 Based on the three density zones identified in the *Adamstown Local Area Plan 2001* - '*transitional', 'intermediate' and 'urban*', each development area has been characterised as either low, medium or high development density and an appropriate range of min-max dwellings per hectare standards applied (Table 2.7).

(vii) Road/Street Width

2.3.24 Road and street widths in the Adamstown SDZ are expressed in terms of building setback and street corridor width (in metres) and vary in relation to road type and function and car parking provision. Based on the Adamstown Local Area Plan and subsequent traffic modelling analysis, there are two principal types of road in Adamstown, Distributor Roads and Local Roads:-

Road Type	Carriageway Width	Car Parking Provision	Min-max Building Setback from Centreline	Min-max Street Width
Access Distributor	9m	None unless on adjoining parallel road	13 - 20m	26 - 40m
Busway Access Distributor	7.0m + 2 x 3.5m (+median)	None to allow for busway	13 - 20m	26 - 40m
Residential Distributor	7.5m	In most cases - parallel only	11 - 13.25m	22 - 26.5m
Busway Residential Distributor	7.0m + 2 x 3.5m (no median)	None to allow for busway	11 - 13.25m	22 - 26.5m
Local Roads	6m	Perpendicular	12 - 14m	24 - 28m
	5.5 - 6m	Parallel and in-curtilage	13.75 - 15m	27.5 - 30m
	5.5 - 6m	Parallel	9.25- 11m	18.5 - 22m

Table 2.8 Min-Max Building Setback and Street Widths by Road Type

2.3.25 The required network of distributor roads has been identified as a result of traffic modelling. Distributor roads are 7.5-9m in width and Busway distributor roads are generally 14m in width to allow for two dedicated bus lanes parallel to the main carriageway. The distributor road network is designed to facilitate access to the maximum extent of development permitted on the SDZ lands whilst discouraging unnecessary through-traffic.

2.3.26 To reinforce this function, there is no car parking provision on the 9m north-south access distributor road and on both 14m busways and on limited sections of the 7.5m residential distributor road network. Parallel car parking is required on 7.5m residential distributor roads. The access distributor road corridor may also include parallel local slip roads up to 6m in width.

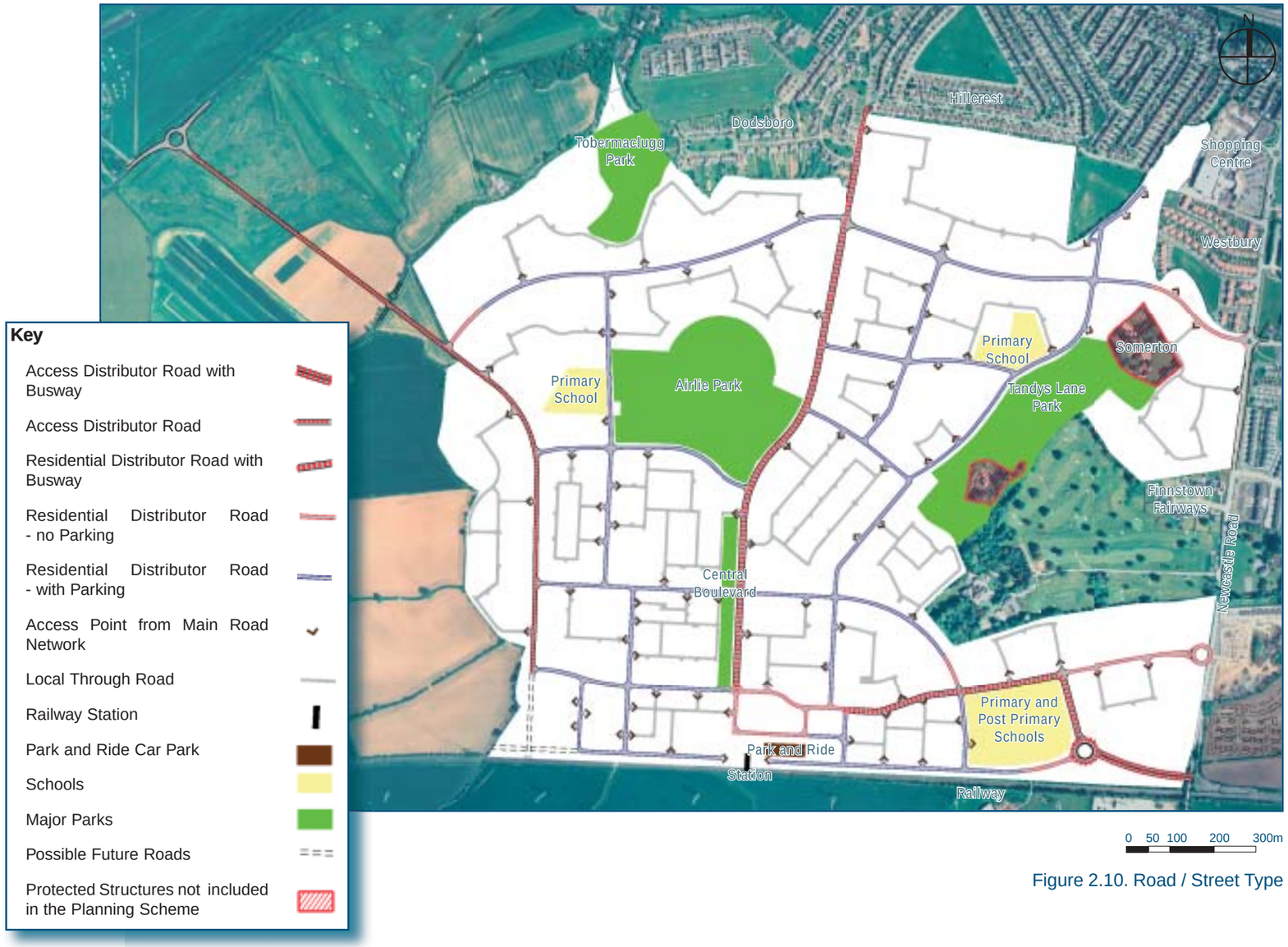


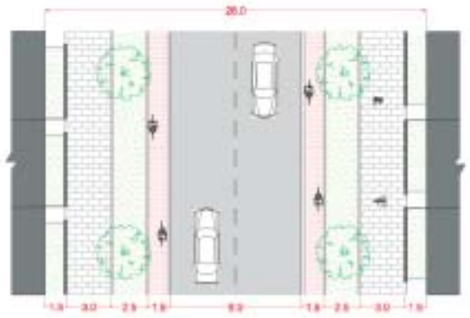
Figure 2.10. Road / Street Type

2.3.27 Local roads are 5.5-6m in width and comprise the road network serving each of the eleven development areas. Local roads must include parallel or perpendicular car parking or a combination of parallel and in-curtilage car parking. A mix of parking types may be provided on different sides/sections of the same local road. Appropriate min-max distances from the centreline shall apply and minimum carriageway width shall be 6m in all cases where perpendicular parking is provided.

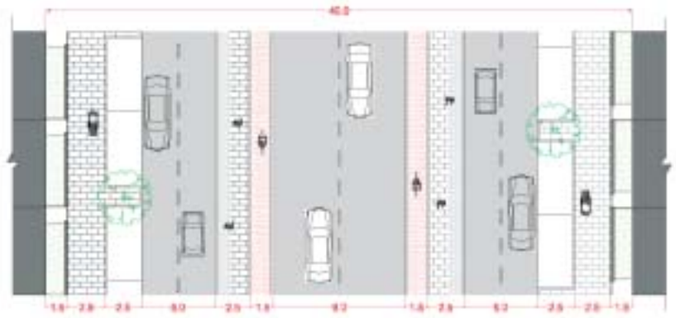
2.3.28 Minimum dimensions generally required for a footpath or a cycleway are 1.5m. A minimum distance of 1.5m is also required for a privacy setback/disabled access platform adjoining all buildings. Car parking spaces should generally be 2.5m x 5.5m where parallel and 2.5m x 5.0m where perpendicular.

2.3.29 A service strip of not less than 1m in width shall be provided on the footpath side of all road edges and shall be treated with cobblelock rather than grass, except where adjoining the 9m access distributor and busway with median.

Access Distributor

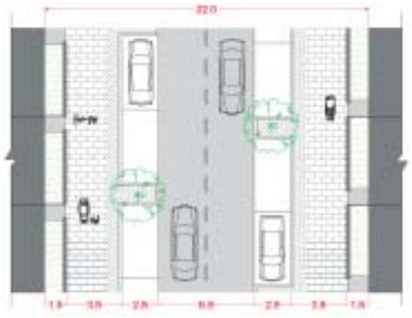


Min. Condition: 26m



Max. Condition: 40m

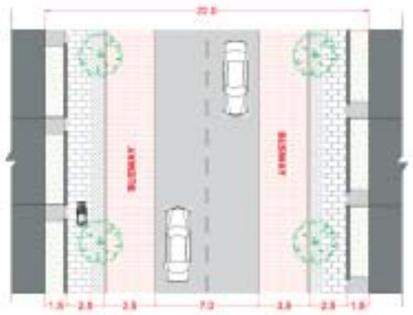
Residential Distributor



Min. Condition: 22m
Parallel Parking

Max. Condition: 26.5m
Parallel Parking

Busway Residential Distributor



Min. Condition: 22m
No parking to allow for Busway

Max. Condition: 26.5m
No parking to allow for Busway

Figure 2.11. Distributor Road / Street Sections

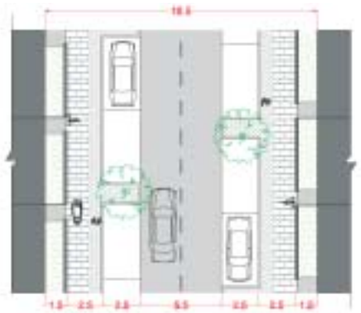
Local Roads

Perpendicular parking
Min. Condition: 24m

Perpendicular parking
Max. Condition: 28m

Parallel and in curtilage parking
Min. Condition: 27.5m

Parallel and in curtilage parking
Max Condition: 30m



Parallel parking
Min. Condition: 18.5m

Parallel parking
Max. Condition: 22m

Mixed parking
Min. Condition: 21.5m

Mixed parking
Max. Condition: 25m

Figure 2.12. Local Road / Street Sections

(viii) Building Type and Height

	Development Area	Area Character Type	Courtyard Building Height (no. storeys)	Perimeter Building Height (no. storeys)
1	Adamstown Castle	Low density	1 - 2 and up to 3 at corners (1 - 2 where reduced)	3 - 4 and up to 5 at corners (2 - 3 and up to 4 at corners where reduced)
2	Somerton	Low density	1 - 2 and up to 3 at corners (1 - 2 where reduced)	3 - 4 and up to 5 at corners (2 - 3 and up to 4 at corners where reduced)
3	Airlie Stud	Low density	1 - 2 and up to 3 at corners (1 - 2 where reduced)	3 - 4 and up to 5 at corners (2 - 3 and up to 4 at corners where reduced)
4	Tobermaclugg Village	Low density	2 - 3 and up to 4 at corners (1 - 2 where reduced)	3 - 4 and up to 5 at corners (2 - 3 and up to 4 at corners where reduced)
5	Tubber Lane	Low density	1 - 2 and up to 3 at corners (1 - 2 where reduced)	3 - 4 and up to 5 at corners (2 - 3 and up to 4 at corners where reduced)
6	Tandy's Lane Village	Medium density	2 - 3 and up to 4 at corners	3 - 5
7	St. Helen's	Medium density	2 - 3 and up to 4 at corners	3 - 5
8	Aderrig	Medium density	2 - 3 and up to 4 at corners	3 - 5
9	Adamstown Square	High density	2 - 4 and up to 5 at corners	3 + 1 setback - 5 + 1 setback
10	Adamstown Boulevard	High density	2 - 4 and up to 5 at corners	3 + 1 setback - 5 + 1 setback
11	Adamstown Station	High density	2 - 4 and up to 5 at corners	3 + 1 setback - 5 + 1 setback

Table 2.9 Min-Max Building Height by Development Area

Figure 2.13. Building Type and Height by Development Area

2.3.30 For the purposes of this Planning Scheme, buildings in Adamstown are generally characterised as one of two basic building types - 'perimeter' or 'courtyard' buildings (Figure 2.13).

2.3.31 Perimeter buildings are larger buildings that address the main distributor roads, squares, parks and open spaces and generally define the outside of the blocks within each development area. They may range in height from three storeys in the lower density areas to five storeys plus one storey setback in the higher density areas, but shall generally be three-four storeys in height.

2.3.32 Courtyard buildings are smaller buildings laid out in a variety of configurations inside the perimeter of the blocks within each development area. They may range in height from one storey in the low density areas to five storeys at corner/feature buildings in the high density areas, but shall generally be two-three storeys in height.

2.3.33 Where maximum building height may be increased at corner and/or feature buildings (all buildings in lower density areas and all courtyard buildings elsewhere) this shall not generally apply to more than 25% of the footprint of all buildings in each development area. Roof space is not defined as a storey.

2.3.34 The maximum permissible height of buildings in Adamstown is reduced where located immediately adjoining existing housing (Figure 2.13). The maximum height of courtyard buildings is reduced to two storeys at any point and the maximum height of perimeter buildings is reduced to three storeys with four storeys at corners and/or feature buildings.

2.3.35 'Flexible use' buildings should generally be regarded as perimeter building types. School buildings should generally be regarded as courtyard building types. In addition to 'flexible use' buildings, non - residential uses may occupy other building types at appropriate locations, such as ground or first floor locations in perimeter buildings and corner or feature locations in either building type. Perimeter and courtyard buildings may contain a combination of uses.

2.3.36 It is an objective that buildings located immediately adjoining existing residential areas and shown hatched on Figure 2.13, should generally be used for residential purposes.

Figure 2.14. Illustrative Corner/Feature/landmark Building with Ground Floor Shop Unit

(ix) Landmark Buildings

2.3.37 To create a sense of place, urban legibility and visual diversity, landmark buildings are encouraged at key focal points throughout Adamstown. These locations include the transport interchange, village or local centres, important street corners or junctions with large open spaces, the edges of public squares, the end of strategic vistas and gateway locations at access points to urban blocks.

2.3.38 Landmark buildings may be particularly suited to non-residential uses and are encouraged to at least partly include public or community activities. They may be taller than adjoining buildings, and may be permitted to exceed the normal building height limitation in medium and higher density development areas.

2.3.39 It is important to note that the significance of these buildings need not be limited to their height and that their presence may be enhanced by changes in building form, colour and construction materials.

Area Character Type (development density)	Maximum Height (metres)	Maximum Height (no. of storeys approx.)
Low density	15	5
Medium density	21	7
High density	30	10

Table 2.10 Maximum Landmark Building Height by Area Character Type

2.3.40 To facilitate landmark buildings, a proportion (up to 1%) of total permissible floorspace in the net development areas is available (see paragraphs 2.2.8 - 2.2.9). Landmark buildings may be accommodated within permitted development floorspace, however, and are not obliged to include non-residential uses.

2.3.41 Landmark buildings will be characterised by high architectural quality in terms of innovation in design and use of materials. They will be evaluated in terms of townscape potential, overall environmental impact and contribution to sustainability through durability of materials and energy efficiency.

Building Heights

Low Density

Min Condition: 1-2 Storey, 3 to Corner

Max Condition: 3-4 Storey, 5 to Corner

Medium Density

Min Condition: 2-3 Storey, 4 to Corner

Max Condition: 3-5 Storey

High Density

Min Condition: 2-4 Storey, 5 to Corner

Max Condition: 3 + 1 Storey - 5 + 1 Storey

Figure 2.15. Building Height

(x) Building Language and Finishes

2.3.42 Good modern architecture and design will be encouraged throughout Adamstown. Architectural diversity will be encouraged between the eleven development areas identified. Within the individual development areas, there shall be consistency in materials, brick and render colours, proportions, roof pitches and building detailing.

2.3.43 Building materials shall be durable and of high quality. Construction materials and detailing shall adhere to the principles of sustainability: - energy efficiency; renewable material sources; clean production processes and minimisation of waste. High maintenance detailing, such as large expanses of hardwood sheeting, shall be avoided. External steelwork in balconies or railings shall be galvanised and powder coated.

2.3.44 The Planning Scheme envisages a difference in urban and architectural quality between the buildings and streets at the perimeter of the blocks and the courtyard housing within the interior of these blocks. This difference should be modulated by height, choice of materials and scale of technologies employed, colour, proportion, and differences in treatment of street/pavement/parking surfaces, railings and treatment of landscape.

2.3.45 The perimeter blocks shall have design consistency along the length of the block. This will be reflected in consistent parapet heights and treatment, clear relationships between storey heights (particularly at ground floor level) and the use of datum lines on longer elevations to ensure continuity of line and proportions. Streets and pavements outside the blocks shall be subject to a more urban treatment with, inter alia, good quality paving and kerbs, tree planters and guards, bollards and streetlighting etc.

2.3.46 Buildings within the block interiors shall be treated in a more informal architectural language with a greater emphasis on visual variety, colour and soft landscaping. This informality shall also be reflected in road and footpath arrangements with consideration to be given to the provision of shared surfaces etc. based on the UK DETR *Design Bulletin 32* (DB 32), *Residential Roads and Footpaths* and its companion guide, *Places Streets and Movement.*

2.3.47 The Adamstown District Centre area focused on the transport interchange is to be developed as a vibrant urban centre with mixed commercial and residential uses. Kerb and pavement materials, lighting, railings, bollards and other street furniture shall reflect the District Centre status and be of high quality. Along these streets trees shall be bedded in constructed tree pits with tree grids and protective rails.

2.3.48 Ground floor treatment in particular of buildings in the District Centre shall be of durable, high quality materials. High maintenance materials will be avoided in all circumstances. External roller shutter systems will not be acceptable. Entrance doors to larger buildings shall in size and quality and through the careful use of canopies reflect the scale of buildings accessed.

Figure 2.16. Variety of Modern Building Forms and Styles, 'Homes for the Future' Demonstration Project, Glasgow

2.3.49 Internally illuminated box signs shall be avoided in all instances. Signage on buildings shall be individually made and/or illuminated letters or hand-painted on building fascias.

2.3.50 Larger public spaces shall use stone paving where possible and enhance the spatial and civic quality of these spaces through the judicious use of patterning in separate materials.

(xi) Dwelling Size

2.3.51 The adopted Adamstown Local Area Plan requires that internal space standards for apartment, townhouse and duplex units should be approximately 20-25% in excess of the minimum city-centre standards detailed in the 1995 DoE *Guidelines on Residential Developments in Urban Renewal Designated Tax Incentive Areas*.

2.3.52 Having regard to the Adamstown LAP and to the internal space standards detailed in the UK Parker Morris Report, *Homes for Today and Tomorrow*, which remains a good indication of residential space standards, the minimum internal floor areas for dwellings in Adamstown are detailed below.

Unit Type	Apartments* (square metres)	Houses (square metres)
One bedroom	45	50
Two bedroom	65	70
Three bedroom	85	90
Four bedroom	105	110
Five or more bedrooms	120	125

Table 2.11 Minimum Required Dwelling Unit Size

(xii) Dwelling Type

2.3.53 The range of dwelling types permitted in the Adamstown SDZ includes houses, townhouses, duplex units and apartments. In order to facilitate market flexibility over the lifetime of the Planning Scheme, a detailed breakdown of unit types is not specified.

2.3.54 When variable plot ratio, dwelling yield, building type/height and minimum dwelling size standards are combined, it is possible to provide a full range of dwelling types in response to market demand. This may range from five-bedroom detached bungalows in a lower density development area to one-bedroom apartments in a five-storey block in a higher density area.

2.3.55 The standard requirement for 15% social and affordable housing ensures further variety in dwelling type through the provision of a range of tenure options.

(xiii) Private Amenity Space

2.3.56 All dwellings shall be provided with a private amenity space in the form of a garden, patio or balcony. Private amenity space shall be designed to have a functional relationship with the daytime rooms of the dwelling and shall be designed to optimise solar orientation and avoid both overshadowing and overlooking.

2.3.57 Apartments shall be provided with both private and semi-private shared or communal amenity space. Private amenity space may be provided in lieu of semi-private amenity space requirements. Semi-private amenity space may not be provided in lieu of minimum required private amenity space, however.

Unit Type	Apartments* (square metres)		Houses (square metres)
	Private Amenity Space	Semi-Private Amenity Space	
One bedroom	5	5	48
Two Bedroom	7.5	7.5	50
Three bedroom	10	10	60
Four bedroom	12.5	12.5	70
Five or more bedrooms	15	15	75

Table 2.12 Minimum Required Private Amenity Space

*** For the purposes of this Planning Scheme a house is defined as a single or multi-level living space with own door access and direct access to an outdoor private amenity space at ground level. All other dwelling types are considered to be apartments. Duplex units could be in either category.**

Figure 2.17. Illustrative Dwelling Types

2.3.58 Having regard to the Adamstown Local Area Plan and to the private amenity space standards recommended in Paragraph 5.8.2 of the *Guidelines for Planning Authorities on Residential Density,* the minimum required private and semi-private amenity space standards for dwellings in Adamstown are detailed on the adjoining table.

(xiv) Boundary Treatments

2.3.59 Special consideration must be given to boundary treatments, particularly where adjoining existing dwellings and protected structures. Existing natural and planted boundaries, including those adjoining protected structures, should generally be retained and augmented.

2.3.60 Boundaries between the rear of existing and proposed dwellings must be adequate in height (at least 1.8m) and construction (i.e. capped and rendered concrete block or brick walls) to ensure both privacy and security. Timber fencing will be acceptable only between new dwellings.

(xv) Electricity Supply

2.3.61 Provision will be made for electricity supply in consultation with service providers. There is a 220kv powerline traversing the south eastern portion of the lands. This powerline shall be diverted or placed underground if permanent occupied buildings are constructed within a minimum distance of 30 metres of it.

2.4 Proposals for Transportation

(i) Road Network

2.4.1 The purpose of the proposed road network is to adequately serve the maximum extent of development permitted in Adamstown whilst discouraging unnecessary through-traffic.

2.4.2 The road layout adopted in the *Adamstown Local Area Plan 2001* was tested using traffic simulation modelling. The traffic demand model predicted significant volumes of through traffic on the two east-west routes running across the northern and southern parts of Adamstown, with relatively low volumes of north-south traffic within the SDZ lands.

2.4.3 In response, the Adamstown road layout was modified by slightly reducing the width of the two original east-west routes, by introducing two additional east-west routes and a new link to facilitate north-south traffic in the south-east of the SDZ lands.

2.4.4 These modifications were also modelled and the result is to 'filter' traffic via a greater number of 7.5m wide residential distributor roads, as opposed to 'funnelling' it onto two main 9m wide access distributors that function as through routes. When combined with appropriate junction control measures and on-street car parking, this facilitates greater north-south traffic movement within Adamstown whilst also discouraging east-west through traffic movement.

(ii) Road Improvements

2.4.5 Development in the Adamstown SDZ will be supported by several major road improvement schemes outside the SDZ lands. Links to these roads will provide road access to Adamstown.

2.4.6 The initial section of the Outer Ring Road (ORR) is scheduled for completion by the end of 2004. The required link from Adamstown to the ORR is known as the Adamstown Link Road. The Adamstown link is to be constructed as an access distributor road with two carriageways in each direction, separated by a central median, two of which will accomodate a dedicated QBC busway.

2.4.7 The proposed improvements to the N4 between the M50 and Leixlip Interchange include grade separation of the existing N4 junction with the R120 Newcastle Road, two additional traffic lanes on the N4 and new local slip roads. The latest scheduled completion date for this work is 2006. Adamstown is linked to the N4 via the existing Newcastle and Millstream Roads.

2.4.8 The completion of the new Celbridge/Leixlip West interchange on the N4 will reduce traffic on the R403 Lucan-Celbridge Road and on the existing N4 Interchange serving Leixlip. The required link from Adamstown to the R403 is known as the Celbridge link road and is to be constructed as a 9m wide access distributor road.

Figure 2.18. Main Road and Busway Network

(iii) Suburban Rail

2.4.9 The Dublin Heuston Station to Kildare suburban rail service is currently being upgraded by Iarnrod Eireann (Irish Rail). This work is being undertaken as part of a phased programme of improvement.

2.4.10 The first phase includes additional railcars, platform extensions to accommodate longer trains and a new train turnback facility at Newbridge. This will significantly increase peak hour suburban capacity on the line from 800 people in each direction at present, to 3,000 people in each direction from Autumn 2003.

2.4.11 The first phase of improvement allows for the provision of a new railway station on the existing two-track railway line at Adamstown. There will initially be peak hour capacity for 600 people with 2-3 trains in each direction to and from Adamstown Station.

2.4.12 The second phase of improvement is the doubling of the railway line to allow suburban services to operate on separate tracks from intercity services. This will further increase peak hour suburban capacity on the line to a total of 8,000 people in each direction and is scheduled for completion to Adamstown by 2008.

2.4.13 The second phase will allow one peak hour suburban train in each direction every ten minutes and an increase in peak hour capacity to a total of 3,000 people in each direction to and from Adamstown Station. There is also the potential for some intercity trains to stop at Adamstown.

2.4.14 The third phase of improvement is electrification of the suburban railway line. To increase capacity this also necessitates running trains beyond Heuston. The current proposal is for a new interconnector tunnel from Heuston to the Drogheda and Maynooth suburban lines by running underground via Christchurch, St. Stephen's Green, Pearse and Connolly Stations and the Docklands, by 2016.

2.4.15 The third phase offers the potential to operate one peak hour train in each direction at intervals of less than five minutes whilst increasing the peak hour capacity of the line to more than 20,000 people in each direction. It also includes direct services to the city centre and direct through services to destinations on other suburban lines.

2.4.16 The key elements for the development of Adamstown are a new station post 2003 and completion of four tracking post 2006. Future electrification and the proposed interconnector tunnel, although desirable, are of such a scale in capacity terms that the development of Adamstown is not dependent on their completion.

(iv) Busway/QBC

2.4.17 A dedicated north-south QBC busway is required through the centre of the Adamstown SDZ lands between the railway station and the existing N4 Quality Bus Corridor (QBC). The busway comprises two 3.5m wide reservations segregated from the adjoining 7.0m wide carriageway on the Plan lands.

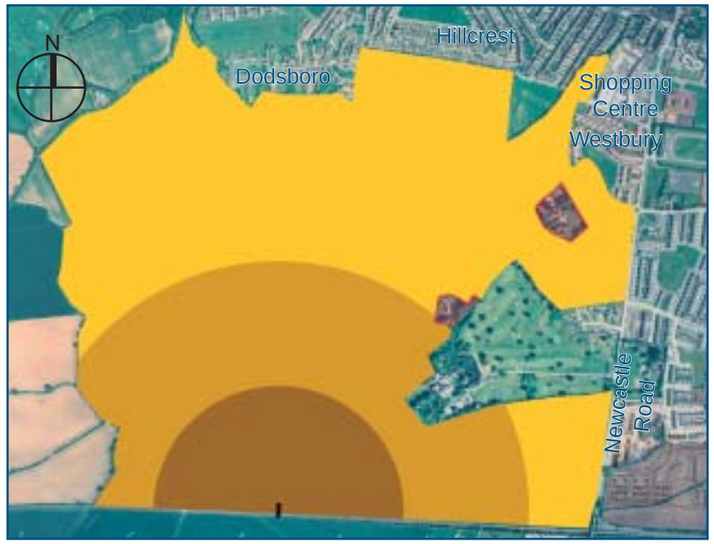


Figure 2.19. Walk Times to Station

Figure 2.20. Walk Times to QBC

2.4.18 The north-south QBC busway is routed north via Millstream Road, Dodsboro, the Celbridge Road and a bus only left-in access to the citybound N4 QBC at Ardeevin. The westbound left-out exit from the N4 QBC is via Old Cornmill Road and Millstream Road at Dodsboro.

2.4.19 The completion of the north - south QBC shall include both on-site and off-site bus priority measures between the SDZ and the N4 which may include, inter alia, road markings, bus gates and/or bus priority signals. A dedicated bus lane is not required where available road width is constrained at Dodsboro and the Old Celbridge Road.

Figure 2.21. Irish Rail Suburban Service.

Key

- Railway Station / Transport Interchange
- Dedicated QBC Busway
- 0 - 5 Minute Walkband
- 0 - 10 Minute Walkband
- 10 + Minute Walkband

Figure 2.22. Dublin Bus QBC Service

2.4.20 A second busway is proposed on the south east of the Adamstown SDZ between the railway station and the proposed Outer Ring Road QBC. This busway comprises two 3.5m wide reservations segregated from the adjoining 7.0m wide carriageway.

2.4.21 Each busway will include bus priority measures and will have a peak hour capacity of up to 3,500 people in each direction. Busways may be used for local as well as strategic services.

2.4.22 It is a further objective to secure a bus-only access route between the SDZ lands and the R120 12th Lock (Newcastle) Road via Lucan (Superquinn) Shopping Centre, subject to the agreement of the relevant landowner(s).

(v) Transport Interchange

2.4.23 The railway station will be an interchange between, rail, bus and car as well as walking and cycling modes of transportation. Provision must be made for conveniently accessible bus and taxi waiting areas, car drop off and car and bicycle parking.

2.4.24 Provision shall be made for waiting areas for six buses, ten taxis and a surface car park to accommodate a total of 300 car parking/park and ride spaces and 100 bicycle parking spaces. The waiting, set down and car and bicycle parking areas shall be provided as public infrastructure to be managed by the local planning authority or future regional transport planning authority.

2.4.25 The park and ride facility may be incorporated into a building. It may also be located either west or east of the proposed District Centre. The transport interchange facility must incorporate shared ticketing, waiting, toilet, newsagent and refreshment facilities that are protected from the elements. The Transport Interchange may be incorporated into a larger, landmark building.

Figure 2.23. Railway Station/Transport Interchange

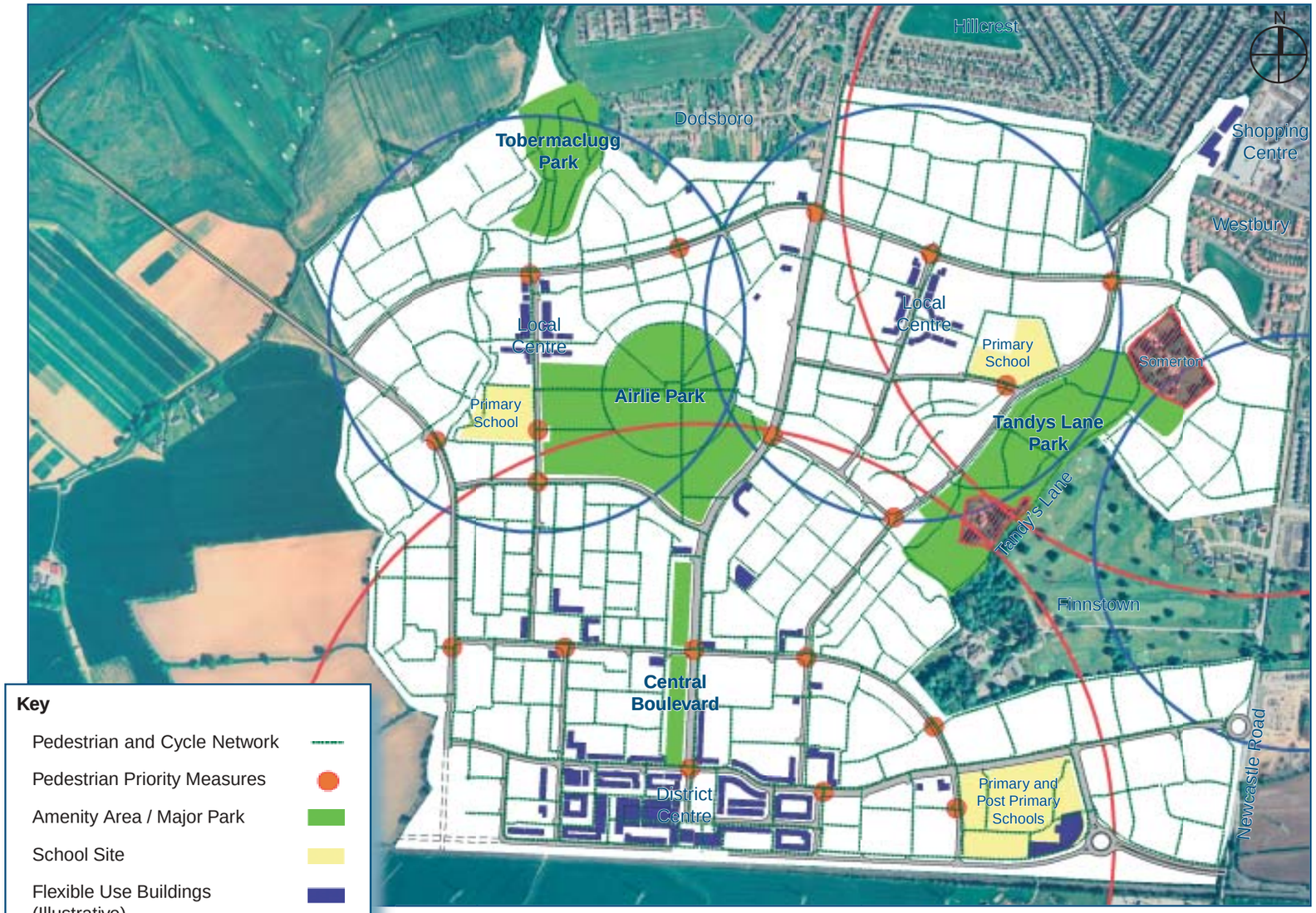


Figure 2.24. Pedestrian and Cyclist Permeability

(vi) Walking and Cycling

2.4.26 Walking and cycling routes form an essential part of the transport network in Adamstown. As a guiding principle, this Planning Scheme is based on five and ten minute walking distances, which are 400 metres and 800 metres respectively, from public transport and district and local centres.

2.4.27 Accordingly, future development proposals are required to maximise pedestrian and cyclist access to services and facilities and in particular, the local and strategic public transport network. This is to be achieved through the provision of a network of direct, safe, secure and pleasant pedestrian and cycle routes in the form of a permeable grid at regular intervals.

2.4.28 Pedestrian and cyclist priority measures shall be provided at the locations identified on Figure 2.24 and may include, inter alia, traffic lights, road markings, raised surfaces and/or vehicular pinch points. The map illustrates the principal locations for such measures but is not exhaustive. Detail regarding measures to be provided shall be submitted for consideration at planning application stage.

(vii) Car Parking

2.4.29 It is an objective that Adamstown is designed to accommodate but not be dominated by the car. Car-parking provision shall be carefully integrated in terms of layout, surface treatment and screen planting. Shared on-street and communal car parking shall be optimised.

2.4.30 Properly marked car parking spaces shall be provided on all roads and streets throughout Adamstown, with the exception of main access and busway distributor roads, certain sections of residential distributor roads, and in close proximity to junctions. In addition, no more than 60% of residential car parking spaces shall be provided as private in-curtilage parking spaces in any development area.

2.4.31 Where on-street car parking is provided in a road corridor outside but adjoining a net development area, it may contribute towards residential and/or non-residential car parking requirements in the net development area.

2.4.32 On-street car parking shall be combined with regular tree planting and a high standard of kerbing and paving. It is a general objective that not more than five perpendicular or two parallel car parking spaces be allowed between trees.

Development Type	Car Parking Standard
Residential	
Dwelling with 1 bedroom	1 space per dwelling
Dwelling with 2 bedrooms	1.5 spaces per dwelling
Dwelling with 3 or more bedrooms	2 spaces per dwelling
Commercial	
Convenience retail	1 space per 15 square metres gross
Comparison retail/retail services	1 space per 30 square metres gross
Office/high tech industry (employment)	1 space per 45 square metres gross
Community/Leisure*	
Schools	1 space per 1.25 classrooms
Major Parks	1 space per 0.2 hectares
Creches/Community Centres	1 space per 30 square metres gross

Table 2.13 Car Parking Standards

2.4.33 Residential car-parking may be provided as courtyard arrangements within blocks, although parking courts on backland sites will not be permissible. Where residential car-parking is grouped, the spaces shall be overlooked by adjoining dwellings to minimise the risk of anti-social behaviour.

* **Minimum Car Parking Standard**

Figure 2.25. On-street Car Parking

Figures 2.26. and 2.27. Provision for Bicycle Parking/Cycling

2.4.34 Commercial car parking may be provided on a larger scale. Surface car parking must be located mainly to the rear or side of buildings served or in courtyard arrangements within blocks so as not to physically dominate individual sites. Large surface car parks in front of buildings will not be acceptable.

2.4.35 Decked, underground or basement car parking may be provided for residential and/or non-residential development. Quantitative standards for the provision of car parking are detailed on Table 2.13 and unless stated otherwise, are maximum standards.

2.4.36 The minimum residential car parking standard is an average of 1 space per dwelling. Where it can be demonstrated that car parking can be shared between complementary land uses, parking standards may be altered accordingly.

(viii) Bicycle Parking

2.4.37 In addition to bicycle parking provision at the transport interchange, secure bicycle parking to comprise covered or semi-covered space with locking bars shall be provided throughout Adamstown. Quantitative standards for the provision of bicycle parking are detailed on Table 2.14 below and are minimum standards.

Development Type	Bicycle Parking Standard
Residential	
Apartments*	1 per dwelling
Commercial	
Retail	1 space per 100 square metres gross
Office/high tech industry (employment)	1 space per 100 square metres gross
Community/Leisure	
Secondary school	1 space per 2 pupils
Primary school	1 space per 10 pupils
Major Parks	1 space per 0.2 hectares
Creches	1 space per 100 square metres gross
Community Centres	1 space per 30 square metres gross

Table 2.14 Minimum Bicycle Parking Standards

* **For the purposes of this Planning Scheme a house is defined as a single or multi-level living space with own door access and direct access to an outdoor private amenity space at ground level. All other dwelling types are considered to be apartments. Duplex units could be in either category.**

2.5 Proposals for Services

(i) Water Supply

2.5.1 There is no existing water supply infrastructure within Adamstown. An existing 150mm diameter water main runs north-south along the Newcastle Road immediately to the east of the SDZ.

2.5.2 The Lucan/Palmerstown High Level Water Supply Scheme (LPHLWSS) will provide additional water supply and boost pressures in the local area. The LPHLWSS comprises the construction of a new reservoir near Peamount and series of network improvements including a new 600mm diameter supply main through the Adamstown SDZ site.

2.5.3 Work on the LPHLWSS project commenced in 2002 and is scheduled for completion by early 2004. Completion of the LPHLWSS will ensure adequate supply to satisfy demand arising from the development of Adamstown.

2.5.4 The route of the 600mm diameter supply main through Adamstown follows the proposed main road layout and will directly serve the SDZ via a proposed distribution network of 100-300mm diameter pipes. The proposed distribution network is also routed in accordance with the proposed main road layout.

2.5.5 Development levies will be required in respect of development in Adamstown served by the LPHLWSS.

(ii) Surface Water Drainage

2.5.6 There is no existing surface water drainage infrastructure within Adamstown. The lands are currently drained by several existing streams and drains, all of which feed pipes and watercourses that ultimately discharge to the River Liffey.

2.5.7 Adamstown is subdivided into three surface water drainage sub-catchment as follows:-

Tobermaclugg

2.5.8 Approximately 65% of the SDZ is drained by the Tobermaclugg Stream which flows northwards through the western part of the site. The Tobermaclugg Stream is joined by the Backstown Stream on leaving the SDZ and continues along Tubber Lane and under the N4 via a culvert before discharging to the River Liffey in the vicinity of Lucan Village.

2.5.9 The options for a surface water drainage network within the Tobermaclugg catchment are a gravity-fed system of pipes ranging from 450-1,650mm in diameter that fully enclose the existing Tobermaclugg Stream, or, a more open system that incorporates the Tobermaclugg Stream as a water feature fed by a series of pipes ranging from 450-1,200mm in diameter into a proposed network of public spaces. Both are considered acceptable, although the latter is preferred.

Figure 2.28. Principal Watermain Network

2.5.10 Either option necessitates upgrading the capacity of the existing channel of the Tobermaclugg Stream along Tubber Lane. This includes replacing the current series of small diameter pipes and culverts with larger 1800mm diameter pipes. It is also necessary to regrade sections of channel and improve the capacity of the existing culvert under the N4.

North East Griffeen Tributary

2.5.11 Approximately 20% of the SDZ is drained by a tributary of the Griffeen River which flows in a north-easterly direction across the north-east of the site. On leaving Adamstown, the North-East Griffeen Tributary drains to an existing 1,200mm diameter pipe to the rear of the *Superquinn* District Centre which connects to a larger 1,350mm diameter pipe before discharging to the main channel of the Griffeen River.

2.5.12 The proposed surface water drainage network within the North-East catchment comprises a gravity-fed system of pipes ranging from 450mm to 1,050mm in diameter. The largest, 1,050mm diameter pipe discharges direct to the existing 1,200mm diameter pipe to the rear of the *Superquinn* District Centre after exiting the SDZ. The proposed network is routed in accordance with the proposed main road layout.

2.5.13 Due to capacity limitations in the downstream 1350mm diameter pipe that discharges to the Griffeen River, it is proposed to restrict flows to the 1200mm diameter pipe to the rear of *Superquinn* through the attenuation of storm water within Adamstown. This necessitates the storage of approximately 2,000 cubic metres in the vicinity.

2.5.14 It is proposed that attenuation be achieved using underground storage in the form of a combination of oversized pipes and/or a suitable form of proprietary high void material in conjunction with flow control devices.

South East Griffeen Tributary

2.5.15 Approximately 15% of the SDZ is drained by a tributary of the Griffeen River which flows east through the south-eastern corner of the site. On leaving Adamstown, the South-East Griffeen Tributary drains to an existing 450mm diameter pipe under the Newcastle Road before continuing eastwards and discharging to the main channel of the Griffeen River.

2.5.16 The proposed surface water drainage network within the South-East catchment comprises a gravity-fed system of pipes ranging from 300mm to 450mm in diameter. The largest, 450mm diameter pipe discharges direct to the existing 450 mm diameter pipe under the Newcastle Road on exiting the SDZ. The proposed network is routed in accordance with the proposed main road layout.

Figure 2.29. Main Surface Water Drainage Network

2.5.17 Due to capacity limitations in the 450mm diameter pipe under the Newcastle Road, it is proposed to restrict flows through the attenuation of storm water within Adamstown. This necessitates the storage of approximately 11,000 cubic metres in the vicinity.

2.5.18 It is proposed that attenuation be achieved using underground storage in the form of a combination of oversized pipes and/or a suitable form of proprietary high void material in conjunction with flow control devices.

2.5.19 Development levies will be required in respect of development in Adamstown served by surface water drainage works undertaken by South Dublin County Council.

(iii) Foul Sewerage

2.5.20 There is no existing foul sewerage infrastructure within the SDZ. As with surface water drainage, the site is sub-divided into three sub-catchments for the purposes of foul sewerage as follows:-

Western

2.5.21 Approximately 65% of Adamstown is within this catchment. The proposed foul sewerage network in the western catchment comprises a gravity fed system of pipes ranging from 225mm to 525mm in diameter and the construction of a new pumping station at Tobermaclugg. The proposed network is routed in accordance with the proposed main road layout.

2.5.22 Foul sewage will be pumped from the new Tobermaclugg pumping station via two new 500mm diameter rising mains direct to the existing '9B' branch of the main gravity sewer at Balgaddy.

North East

2.5.23 Approximately 20% of Adamstown is within this catchment. The proposed foul sewerage network within the northeastern catchment comprises a gravity fed system of pipes ranging from 225mm to 300mm in diameter. The largest, 300mm diameter pipe will flow direct to the existing foul sewerage system to the rear of the *Superquinn* District Centre after exiting the SDZ. The proposed network is routed in accordance with the proposed main road layout.

2.5.24 The existing sewer to the rear of the *Superquinn* District Centre flows to the existing Lucan Low Level pumping station which in turn pumps to the existing Lucan Esker pumping station, from which sewage is pumped direct to the existing '9B' branch of the main gravity sewer.

Figure 2.30. Main Foul Drainage Network

Figure 2.31. Peamount Reservoir Under Construction (Lucan - Palmerstown High Level Water Supply Scheme)

Figure 2.32. Services Infrastructure

South East

2.5.25 Approximately 15% of Adamstown is within this catchment. The proposed foul sewerage network within the southeastern catchment comprises a gravity fed system of pipes ranging from 225mm to 300mm in diameter. The largest, 300mm diameter pipe will flow to a new 450mm diameter pipe under the Newcastle Road after exiting the SDZ. The proposed network is also routed in accordance with the proposed main road layout.

2.5.26 The proposed 450mm diameter sewer under the Newcastle Road will join an existing 450mm pipe and flow along the Griffeen Valley via an existing 525mm diameter sewer to the existing Lucan Esker pumping station, from which sewage is pumped direct to the existing '9B' branch of the main gravity sewer.

Off Site Foul Drainage Works

2.5.27 The output of all three foul drainage catchments in the SDZ ultimately drains to the '9B' branch of the main gravity sewer. The output of both the northeast and southeast catchments drains via the existing Lucan Esker pumping station and the output of the northeast catchment also initially drains via the existing Lucan Low Level pumping station.

2.5.28 It is necessary to upgrade both the existing Lucan Esker and Lucan Low Level pumping stations through the provision environmental screening works in order to provide foul drainage to serve Adamstown.

2.5.29 At a later stage it will be necessary to undertake work to increase the capacity of the existing '9B' main sewer, to serve both Adamstown and the wider Lucan-Clondalkin area. Required work on the '9B' main sewer includes CCTV surveys, the identification and implementation of measures to prevent surface water infiltration and the relief of bottlenecks.

2.5.30 The commencement of development in Adamstown is not dependent on the completion of work on the '9B' sewer, which serves the entire Lucan-Clondalkin foul drainage catchment.

2.5.31 Development levies will be required in respect of development in Adamstown served by foul drainage works undertaken by South Dublin County Council.

(iv) Telecommunications/Information Technology

2.5.32 The development of Adamstown as a new mixed-use urban district is an opportunity to incorporate modern information technology infrastructure into the overall design and layout of the area.

2.5.33 This shall be achieved through the provision of a data infrastructure spine comprising a network of fibre-optic and broadband (ISDN) capacity cables routed in accordance with the main road layout. All dwelling units shall be connected to the data spine. Each shall provided with at least two telecoms ducts and shall be serviced by carrier neutral multi - duct infrastructure having regard to *Recommendations for Underground Telecommunications Cable Works,* issued by the Department of Communications, Marine and Natural Resources.

2.5.34 The purpose of this is facilitate the creation of an e-enabled community in Adamstown based on an internally and externally linked community network. There are potential benefits in relation to employment:–teleworking/flexibility; service provision:- single point entry to local public service providers; shopping/business:- local e-commerce; and most significantly, to the community:- via a live local information platform.

2.5.35 The latter presents particular opportunities for Adamstown as a new urban community. Possibilities include up-to-date and 'real time' information on matters such as public transport routes and timetables, traffic congestion, car pooling, station and shopping car parking availability, local meetings and events, park activities and opening hours, refuse collection and recycling, childcare and schools.

2.5.36 The proposed data infrastructure and community network would also support and complement the optimal use of the more traditional forms of proposed infrastructure in Adamstown, including the new railway station, busways, community centres, civic building, enterprise centres, childcare faciliites and schools, as well as local shops and businesses.

Figure 2.33. Information Technology

2.6 Proposals for the Provision of Amenities, Facilities and Services for the Community

(i) Major Parks and Public Open Spaces

2.6.1 In accordance with the *South Dublin County Development Plan 1998,* minimum required public open space within the Adamstown SDZ Planning Scheme Area is calculated as follows:-

County Development Plan 1998 Zoning Objective	Total Area subject to each Zoning Objective within the Planning Scheme Area (hectares)	County Development Plan 1998 Open Space Requirement	
		%	Hectares
A1 'to provide new residential communities' (excludes Tandy's Lane)	211.54	14%	29.62
A 'to preserve residential amenity'	0.12	10%	0.01
Unzoned (Tandy's Lane, adjoining roads, railway line and site boundaries	7.14	None	None
TOTAL	**218.8**	**30 hectares approximately**	

Table 2.15 Minimum Required Public Open Space

2.6.2 It is proposed to provide the majority of proposed public open space – at least 23.25 hectares or approximately 10% of the total Planning Scheme area, in four major parks, each of which comprise a separate amenity sub-area, detailed in Section 3.2 below.

2.6.3 The balance of required public open space, at least 6.75 ha or approximately 4% of the total Planning Scheme area, is to be provided as smaller local public spaces within each of the eleven development areas. These range from hard landscaped civic spaces and green boulevards to less formal kickabout greens and play areas.

2.6.4 For each of the major parks, a plan to include a detailed schedule of work shall be agreed with South Dublin County Council. All public open spaces, regardless of size, will include a significant amount of hard and soft landscaping and sensitive boundary treatment. Children's play areas and sports courts will be provided in both Airlie Park and on the Central Boulevard. Airlie Park shall also include all-weather playing pitch and changing facilities.

Figure 2.34. Public Open Space Network

2.6.5 It is an important feature of the Adamstown SDZ that all public open spaces are linked by a network of 'green' walking and cycling routes.

	Development or Amenity Area	Gross Development Area (hectares)	Public Open Space (hectares)	Area Character Type
A	Tandy's Lane Park	8.0	7.7	Major Park
B	Tobermaclugg Park	3.8	3.4	Major Park
C	Airlie Park	11.6	10.85	Major Park
D	Central Boulevard	1.9	1.3	Urban Park
	Subtotal	**25.3**	**23.25**	
1	Adamstown Castle	21.1	0.76	Low density
2	Somerton	14.5	0.52	Low density
3	Airlie Stud	15.6	0.56	Low density
4	Tobermaclugg Village	21.4	0.77	Low density
5	Tubber Lane	18.8	0.67	Low density
6	Tandy's Lane Village	21.7	0.78	Medium density
7	St. Helen's	16.0	0.57	Medium density
8	Aderrig	21.7	0.78	Medium density
9	Adamstown Square	15.1	0.54	High density
10	Adamstown Boulevard	14.4	0.5	High density
11	Adamstown Station	8.3	0.3	High density
	Subtotal	**188.6**	**6.75**	
	TOTAL	**213.9**	**30**	

Table 2.16 Minimum Required Public Open Space by development and amenity area

Figure 2.35. St. Helens's House from Tandy's Lane

Figure 2.36. Local Park with Playground

Figure 2.37. New Primary School Classroom

(ii) Historic Buildings and Landscape Features

2.6.6 The proposed public open space and walking/cycling network has been designed to preserve existing historic features including protected structures and good quality landscape features such as mature trees and hedgerows.

2.6.7 It is proposed that a section of Tandy's Lane be incorporated into the adjoining major park and preserved to become a pedestrian/cycle route with limited vehicular access.

2.6.8 The Site of Tobermaclugg House and Holy Well is incorporated into the adjoining major park. The two protected early 19th Century houses at St.Helen's and Somerton and their remaining privately owned land grounds together comprise 2.5 hectares and although excluded from the Planning Scheme, adjoin the major park at Tandy's Lane.

2.6.9 Airlie House is located between Airlie Park and the Central Boulevard. It is not a protected structure but is a feature of Adamstown that is of local historic interest and is in architectural terms, typical of a mid-19th Century farmhouse. The original part of the House is considered to be of local amenity value and it is proposed that it be retained. Appropriate uses could include community, residential or commercial activities.

(iii) Education/Schools

2.6.10 There are three sites identified for the provision of four schools in Adamstown - two 1.2 hectare primary school sites and one large 4 hectare combined school site, capable of accommodating both a secondary school and a primary school.

2.6.11 Each of the primary school sites can accommodate a school with up to 32 classrooms. The sites are each situated adjoining one of the two proposed local centres as well as a major park and are therefore at the focus of local walking and cycling networks.

2.6.12 The large combined school site is situated closer to the proposed Adamstown district centre and can accommodate a primary school with up to 32 classrooms and a secondary school for up to 1,000 pupils. Subject to certain design criteria the large school site may also include additional development floorspace (refer to Section 2.2.). Complementary land uses on the site could include a third level outreach centre or leisure facility.

(iv) Childcare Facilities

2.6.13 The *Guidelines on Childcare facilities for Planning Authorities* advise that an average of one childcare facility for every 75 dwelling units in new housing areas should be required unless there are significant reasons to the contrary. The Guidelines further state that one facility providing a minimum of 20 childcare places is a reasonable starting point.

2.6.14 It is proposed to apply the recommended standard in all five low density development areas and a reduced standard in the medium and high density development areas. The proposed standard is one childcare facility for every 150 dwelling units in the three medium density development areas and in two of the three high density areas. In the highest density Adamstown Station development area, one childcare facility for every 225 dwelling units is proposed.

	Development Area	Dwellings per 20 child facility (no.)	Childcare Places (no.)	Floor Area* (sq.m. approx.)
1	Adamstown Castle	75	133	665
2	Somerton	75	120	600
3	Airlie Stud	75	153	765
4	Tobermaclugg Village	112.5	155	775
5	Tubber Lane	75	186	930
6	Tandy's Lane Village	112.5	151	755
7	St. Helen's	150	123	615
8	Aderrig	150	153	765
9	Adamstown Square	150	120	600
10	Adamstown Boulevard	150	113	565
11	Adamstown Station	225	42	210
	TOTALS		**1,449**	**7,245**

Table 2.17 Minimum Childcare Provision by Development Area

*** It is estimated for that the minimum required floor area for a Childcare facility is 5 square metres per childcare place, not including outdoor play space or ancillary residential accommodation.**

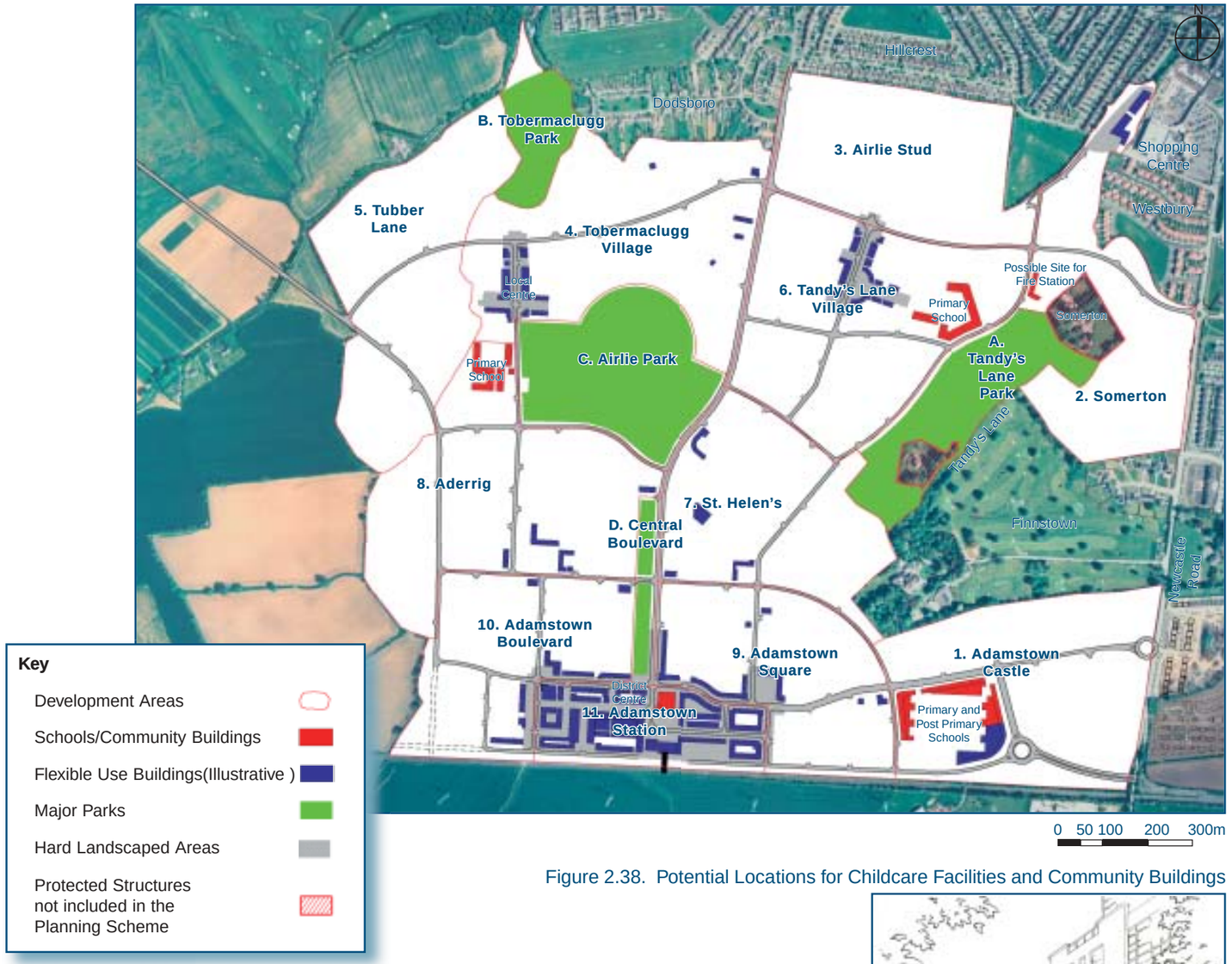


Figure 2.38. Potential Locations for Childcare Facilities and Community Buildings

2.6.15 Minimum proposed childcare provision is 1,449 childcare places. This is the equivalent of 74 facilities with 20 childcare places each. It is considered appropriate that a single facility may accommodate up to a maximum of 100 places. Accordingly, a minimum of 15 separate childcare facilities is required. Childcare facilities shall be located at identifiable nodes throughout Adamstown.

2.6.16 The higher figures for childcare provision, specified for each development area in Section 3.0 of this Planning Scheme, are based on the maximum number of dwelling units permissible.

Figure 2.39. Local Open Space and Childcare Facility as a Community Focus

(v) Community Buildings

2.6.17 It is proposed that one community centre per 1,000 dwellings be provided in Adamstown. Each community centre shall be at least 150 square metres in area and include a main meeting space, office and basic kitchen and toilet facilities. There is a minimum of eight community centres required throughout the SDZ.

2.6.18 The purpose of the centres is to provide a community focus with the capacity to accommodate local meetings, youth activities, training, teleworking support, social events etc. within each sub-area of Adamstown. The centres shall be located at identifiable nodes, ideally adjoining both housing and other local facilities such as creches, play areas etc.

2.6.19 It is proposed that one large civic hall be provided in the centre of Adamstown. The large civic hall shall be at least 1,000 square metres in area and include a large space with a stage and flexible seating, two smaller studio spaces, changing rooms with showers, storage rooms, office, meeting/training facilities, toilets and a public café.

2.6.20 The purpose of the large civic hall is for community meetings, conferences and gatherings, performance generally including theatre and the arts as well as public worship, training and social events etc. The civic hall shall be located in a landmark mixed-use building within the Adamstown district centre.

	Development Area	Community Centre (150 sq.m.)	Enterprise Centre (1,500 sq.m.)	Civic Hall (1,000 sq.m.)
1	Adamstown Castle	0-1	0	0
2	Somerton	0-1	0	0
3	Airlie Stud	1	0	0
4	Tobermaclugg Village	1	1	0
5	Tubber Lane	1	0	0
6	Tandy's Lane Village	1	1	0
7	St. Helen's	1	0	0
8	Aderrig	1	0	0
9	Adamstown Square	1	0	0
10	Adamstown Boulevard	1	0	0
11	Adamstown Station	0	0	1
	TOTALS	**8-10**	**2**	**1**

Table 2.18 Community Building Provision by Development Area

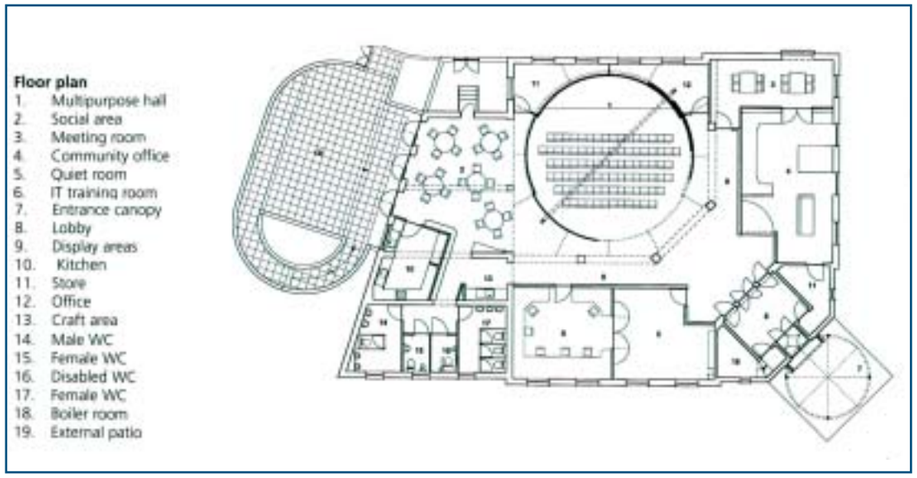


Figure 2.40. Illustrative Plan of Community Resource Centre

Figure 2.41. Local Civic Offices

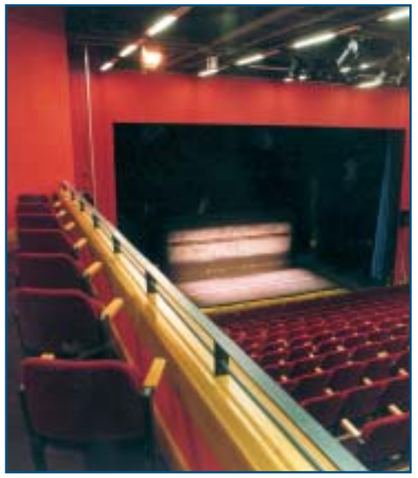


Figure 2.42. Civic Theatre

Figure 2.43. Civic Theatre

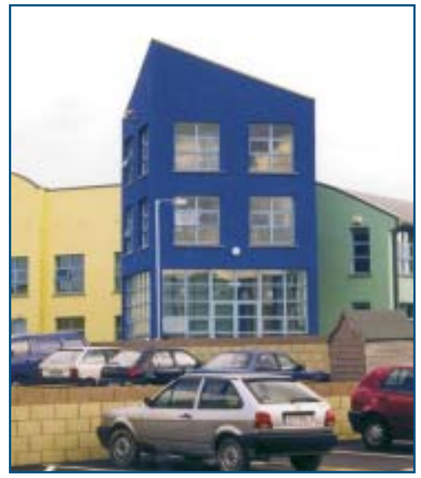


Figure 2.44. Enterprise Centre

2.6.21 It is proposed that two enterprise centres be provided in Adamstown. Each enterprise centre shall be at least 1,500 square metres in area and comprise 8-10 small own door units of approximately 70-120 square metres each, toilets with shower, office, meeting canteen and training facilities.

2.6.22 One of the two enterprise centres shall be an ICT enterprise centre incorporating an incubation centre, third level outreach centre, (HEA Report, 1999) and a SME education support centre.

2.6.23 The purpose of the enterprise centres is to provide office, studio and workshop accommodation backed up by support and training facilities for local business start-ups. The enterprise centres shall be located in the two proposed local centres at Tandys' Lane Village and Tobermaclugg Village, together with local shopping, schools, childcare, community centres and possibly other employment activities.

(vi) Shopping and Retail Services

2.6.24 It is proposed that shopping and retail services be provided in three principal centres within the Adamstown SDZ, although an element of shopping and retail service floorspace is permissible in all eleven development areas.

2.6.25 The maximum amount of retail floorspace permitted is expressed in percentage terms as follows:-

- 50% of total non-residential floorspace in Adamstown Station, which is the Adamstown District Centre and in Somerton, which adjoins the existing Superquinn District Centre;
- 25% of total non-residential floorspace in the Tobermaclugg Village and Tandy's Lane Village development areas, which are identified as the two major local centres;
- 10% of total non-residential floorspace in all other areas.

	Development Area	Minimum Retail and Retail Services	Maximum Retail	
		Floor Area (square metres)	As a % of total non-residential floorspace	Floor Area (square metres)
1	Adamstown Castle	0	10%	300
2	Somerton	0	50%	1,375
3	Airlie Stud	0	10%	350
4	Tobermaclugg Village	2,200	25%	2,625
5	Tubber Lane	0	10%	425
6	Tandy's Lane Village	2,125	25%	2,575
7	St. Helen's	0	10%	550
8	Aderrig	0	10%	700
9	Adamstown Square	0	10%	1,100
10	Adamstown Boulevard	0	10%	1,025
11	Adamstown Station	15,625	50%	18,750
	TOTALS	**19,950**		**29,775**

Table 2.19 Min-Max. Retail Provision by Development Area*

* **All retail floorspace figures are in square metres (sq.m.) and relate to gross shopping/retail service floor areas.**

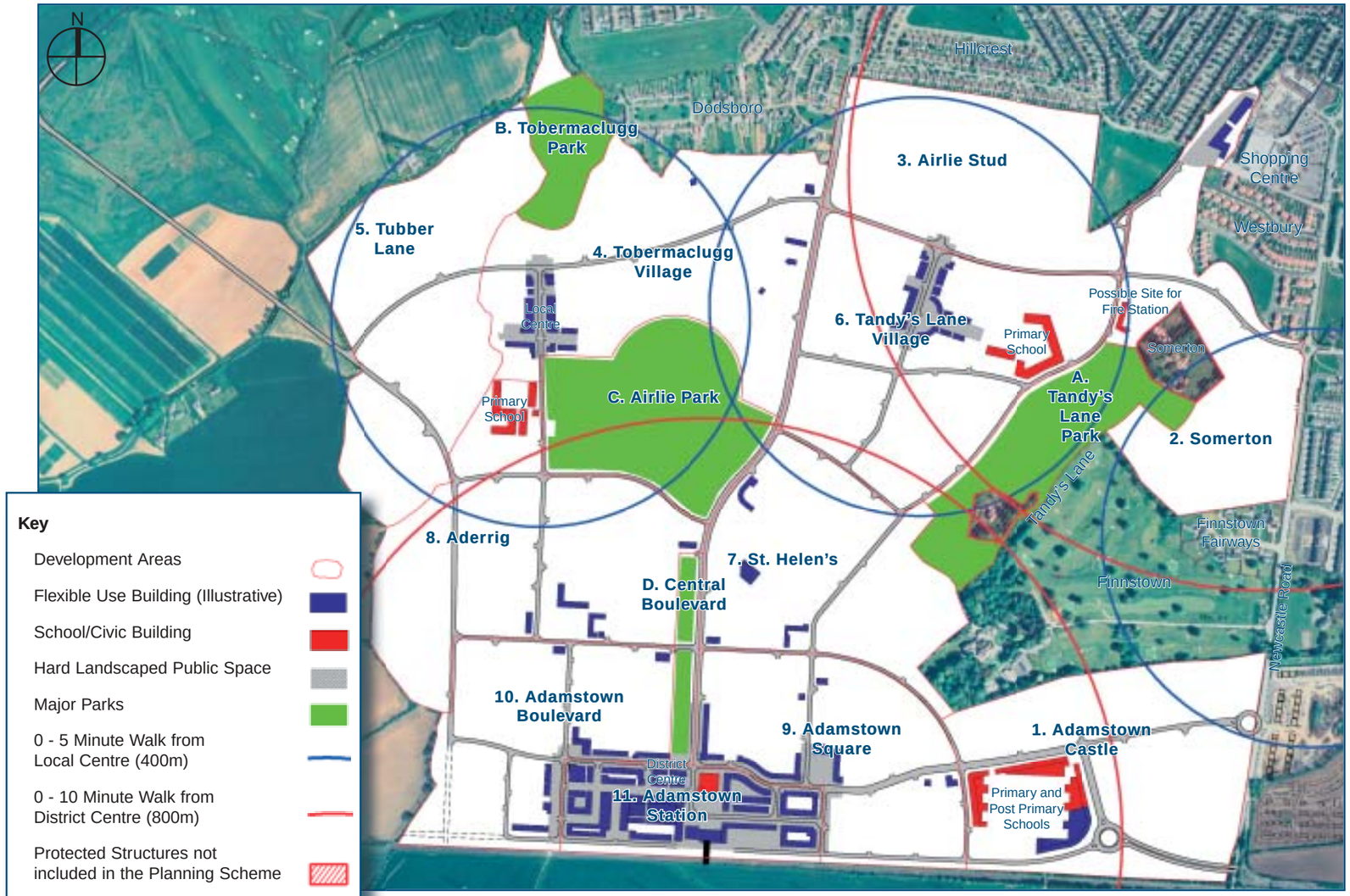


Figure 2.45. Shopping and Retail Services

Proposed Adamstown District Centre

2.6.26 There is one major District Centre proposed in Adamstown, focused on the Transport Interchange. Shopping up to a maximum of 20,875 sq.m. is permitted. This includes up to 1,025 sq.m. and 1,100 sq.m. in the adjoining Adamstown Boulevard and Adamstown Square development areas respectively.

2.6.27 It is proposed that shops be provided principally at ground level in both the Adamstown Station development area and immediately adjoining parts of the Adamstown Boulevard and Adamstown Square development areas.

2.6.28 Adamstown District Centre may include more than one large supermarket and a significant quantum of comparison shopping floorspace. Retail service, community, leisure, employment, civic and cultural uses may be provided in addition to shopping.

2.6.29 There is a minimum requirement for 15,625 sq.m. of shop and retail service floorspace in Adamstown District Centre. As an absolute minimum, the District Centre must include one large supermarket and units suitable for use as individual shops and retail service outlets, such as newsagent, pharmacy, video store, doctor's/dentist's surgery, bank and/or estate agency uses. The District Centre must also include at least one public house.

Existing Superquinn District Centre

2.6.30 There is a maximum of 1,375 sq.m. of shopping floorspace permissible in the Somerton development area which includes lands adjoining the existing Superquinn District Centre.

2.6.31 It is proposed that any additional shopping in this area would comprise an extension to the existing District Centre. This could be by means of an extension to an existing shop unit and/or new shop unit(s). New access to the existing Superquinn District Centre from Adamstown is required to facilitate this, although this may not necessarily include a vehicular through route.

2.6.32 An extension to the existing District Centre to provide additional shopping may comprise part of an overall development proposal that also includes all other non-residential floorspace permissible in the Somerton development area.

Proposed Local Centres

2.6.33 There are two proposed local centres, at Tandy's Lane Village and Tobermaclugg Village. Retail and retail service floorspace of up to a maximum of 2,575 sq.m. and 2,625 sq.m. is permitted in each local centre respectively and a minimum of 2,125 and 2,200 sq.m. is required in each centre respectively.

2.6.34 It is required that each local centre includes a large convenience store/ small supermarket together with units suitable for use as individual shops and retail service outlets, such as newsagent, pharmacy, video store, doctor's surgery or estate agency uses. Each Local Centre may also include a public house.

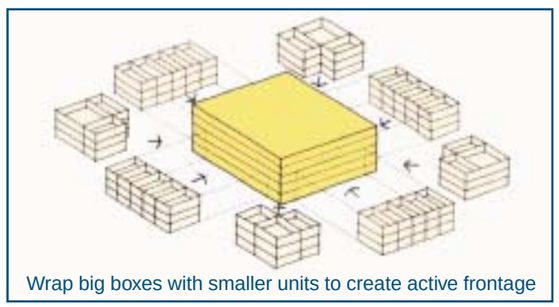
Local Parades

2.6.35 Five out of a total of eleven development areas permit only a small element of local shopping/service outlets either as individual shops or small parades, with maximum floor areas in the range of 300 - 700 sq.m. It is noted that a typical convenience store is less than 500 sq.m. in area.

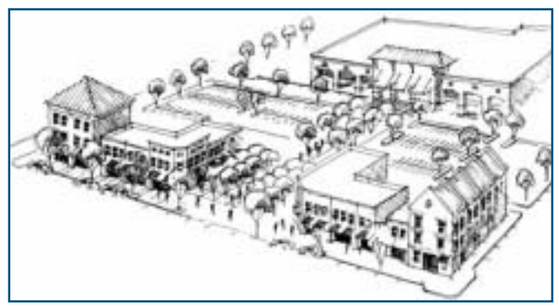
2.6.36 There is no minimum requirement for shopping floorspace in these areas. Suitable locations include local nodes and intersections and ground floor frontage on the main pedestrian and road network.

Figure 2.46. District Centre Alternative Concept Options

Figure 2.47. Existing Superquinn District Centre



Wrap big boxes with smaller units to create active frontage



Figures 2.48. and 2.49. Illustrative Retail Centre Formats indicating Frontage Development as the preferred alternative to Large Retail Boxes dominated by Car Parking

2.6.37 For the purposes of this Planning Scheme, the definition of 'shop' accords with that outlined in the Planning and Development Regulations 2001 and includes:-

- The retail sale of goods;
- A post office;
- The sale of tickets or a travel agency;
- The sale of sandwiches or other food for consumption off the premises where the sale of such food is subsidiary to the main retail use;
- Hairdressing;
- The display of goods for sale;
- The hiring out of domestic goods or articles;
- A launderette or dry cleaners;
- A premises for the reception of goods to be washed, cleaned or repaired.

2.6.38 For the purposes of this Planning Scheme, a retail service is defined as a service provided principally to visiting members of the public in accordance with the Planning and Development Regulations 2001 and includes:-

- Financial services;
- Professional services;
- Any other service.

(vii) Health/Emergency/Religious

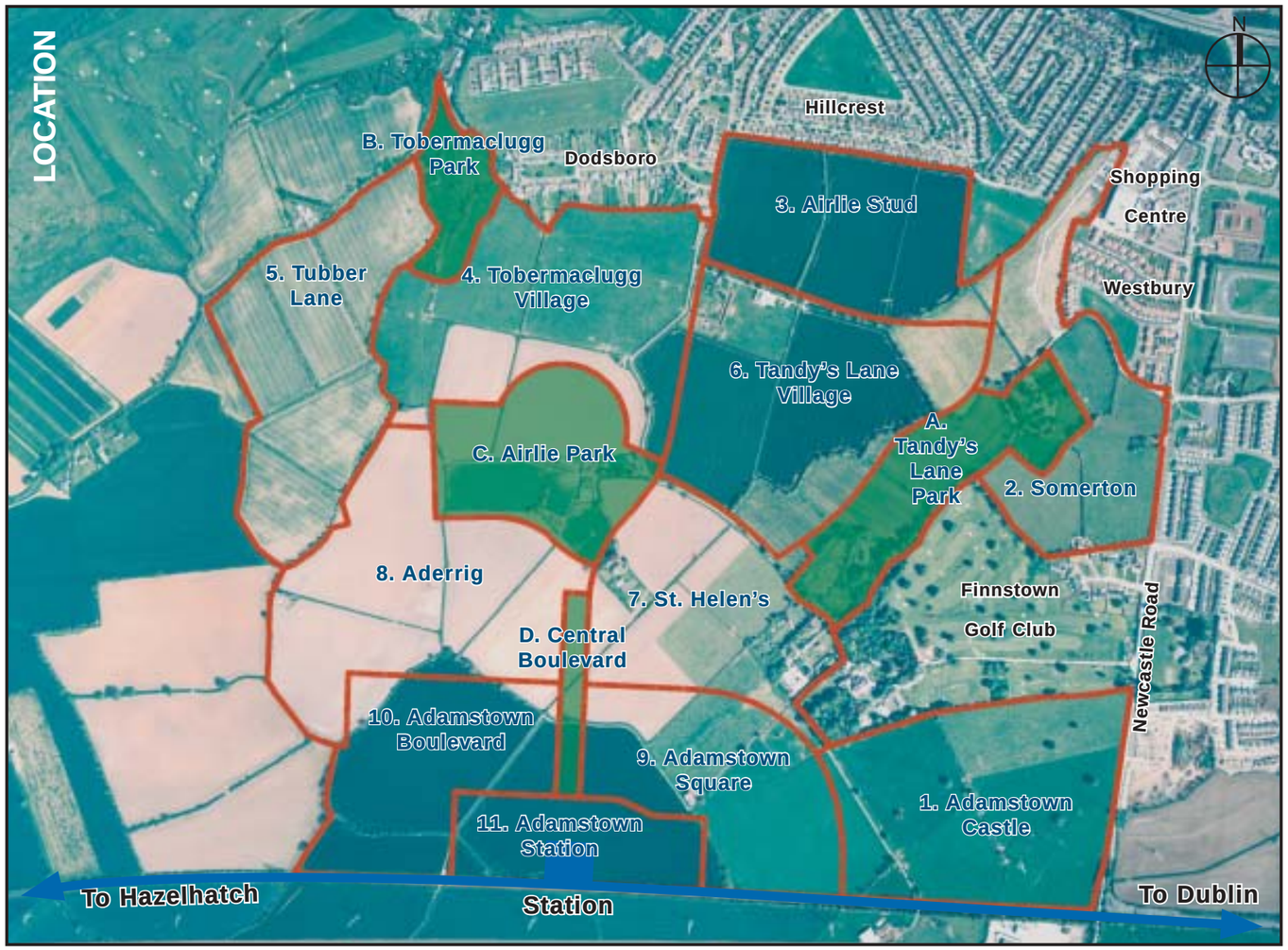
2.6.38 Given the nature and scale of development proposed in Adamstown provision has been made to reserve a site of approximately 0.4 hectares (1 acre) for a fire station within the SDZ.

2.6.39 The proposed fire station site will be levelled, grassed and seeded to form an area of public open space, pending determination of the need for a fire station in this area and selection of this site for such a facility. This work should comprise part of the development of the adjoining 'Somerton' development area and phased accordingly. Should it be determined by Dublin Fire Brigade and the Planning Authority that the site is not required for a fire station, it may be developed for 'courtyard' housing in accordance with this Planning Scheme.

2.6.40 It is expected that the South Western Area Health Board will indicate a requirement for at least one new health centre in Adamstown. There is adequate non-residential floorspace permissible to accommodate this and any such facilities will be located in the proposed new District and/or Local centres.

2.6.41 There is no new Church or place of worship proposed to serve Adamstown. The proposed Civic Hall and Community Centre buildings may be used for public worship, however.

3.0 Development and Amenity Areas



3.0 Development and Amenity Areas

3.1 Development Areas

3.1.1 This section comprises the core of the draft Planning Scheme and details development permissible in each of the eleven development areas in Adamstown, using statistical and physical parameters illustrated by a series of plans and drawings.

(i) Statistical Parameters

3.1.2 Statistical parameters identify the gross and net extent of each development area. They govern permissible building and housing density using plot ratio and dwellings per hectare. They also define building height and local public open space requirements.

3.1.3 The statistical parameters similarly govern land use. They detail requirements for social and affordable housing, community and childcare facilities and shopping and services. They also define the overall extent of non-residential development permissible in each development area.

3.1.4 The statistical parameters are necessarily prescriptive but are generally expressed as a range to allow for flexibility. They must be read in conjunction with the overall proposals for development detailed elsewhere in the Adamstown SDZ Planning Scheme.

(ii) Physical Parameters

3.1.5 Physical parameters identify the main road layout, road type, parking conditions, principal access points, appropriate levels of vehicular and pedestrian permeability as well as key building frontages and public spaces and should generally be regarded as fixed.

3.1.6 The physical parameters, although prescriptive as illustrated, are expressions of design principle and in some cases may be interpreted with a degree of flexibility. For example, a particular number of access points from the main road network into each development area may be illustrated, but could be relocated subject to appropriate traffic safety considerations.

3.1.7 Similarly, key building frontages should generally be adhered to but may be varied in cases where it can be demonstrated that an alternative approach would achieve the same degree of preservation of the amenities of adjoining properties or passive supervision of public space, as appropriate.

3.1.8 In all cases physical parameters must also be considered in association with the overall proposals for development in the Adamstown SDZ Planning Scheme.

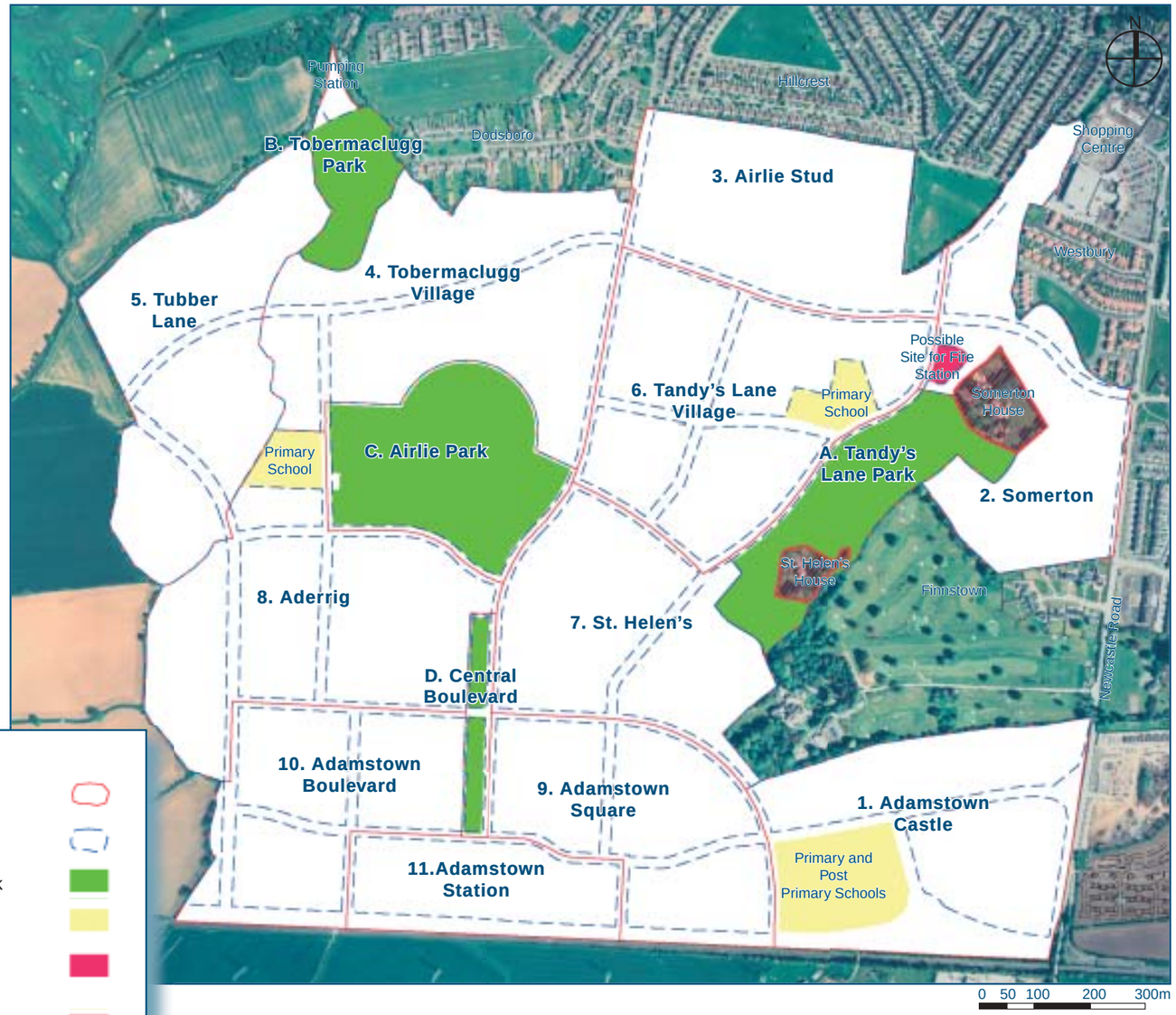


Figure 3.1. Adamstown SDZ Planning Scheme - Gross and Net Development Areas Index Map

(iii) Illustrative Layouts

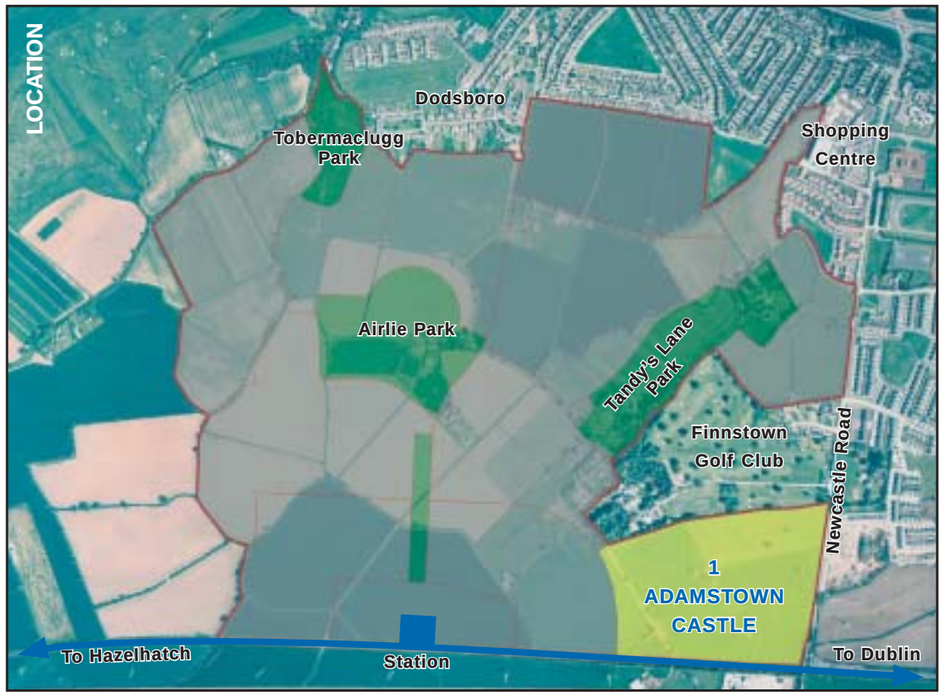
3.1.9 The illustrative layouts presented for each of the eleven development areas are possible development scenarios arising from the statistical and physical parameters detailed. Again, main roads and key building frontages should generally be regarded as fixed, but local roads and the majority of courtyard buildings should generally be regarded as more flexible.

3.2 Amenity Areas

3.2.1 Proposals for each of the four main amenity areas are also illustrated by a series of plans and drawings. The amenity areas must be subject to the high standard of finish detailed.

Development Area 1
Adamstown Castle

- **500 - 600 Dwelling units**
- **Up to 3,000 sq. m. of non-residential development**
- **Primary and Post Primary School site**



Adamstown Castle

Area character type	**Low development density**
Gross area	**21.1 hectares**
Net development area	**12.15 hectares**
Min-max plot ratio	**1 : 0.42 - 1 : 0.50**
Min-max total development	**50,000 - 60,000 sq. m.**
Min-max dwellings per Ha	**42 - 50**
Min-max total dwelling units	**500 - 600**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**133 - 160 no. childcare places**
Max non-residential development	**5% of total development up to 3,000 sq. m.**
Max retail development	**10% of total non-residential up to 300 sq. m.**
Min-max courtyard building height	**1 - 2 storeys with up to 3 storeys at corner/feature buildings** *1 - 2 where reduced*
Min-max perimeter building height	**3 - 4 storeys with up to 5 storeys at corner/feature buildings** *2 - 3 with up to 4 where reduced*
Max landmark building height	**15 metres (up to 5 storeys approx.)**
Min local public open space	**0.76 hectares**

Key - Access and Movement

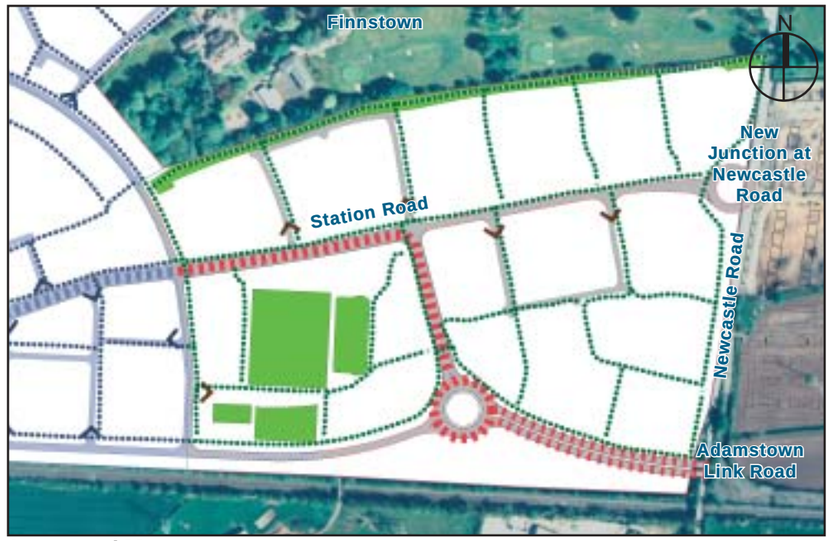
- Access Distributor Road with Busway
- Residential Distributor Road with Busway
- Residential Distributor Road - no Parking
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

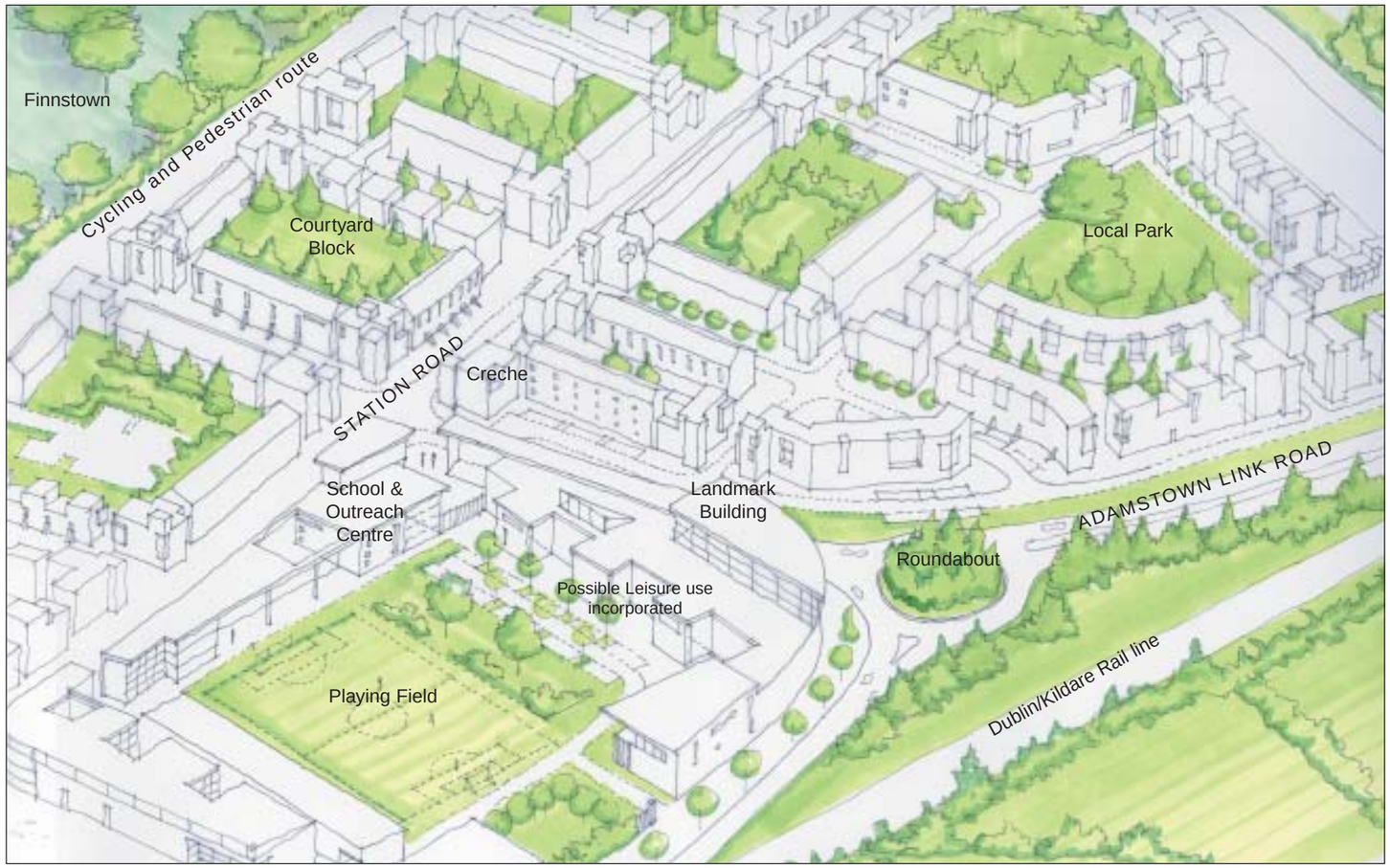


Access and Movement

Buildings and Spaces

Indicative Layout

0 50 100 200 300 m



Bird's Eye View of Entrance to Adamstown

Three-Storey Edge

Local Park - Quality Finishes

Urban Design Characteristics

- Clear pedestrian and cyclist network
- Landmark buildings at 'arrival' points, especially Adamstown Link Road
- School buildings provide street edge and internal protected play areas
- Retain existing trees
- Overlooked open space / cycleway to edge of Finnstown tree belt
- Apply orientation principles where possible - south facing living space etc.
- Permeable development areas
- Opportunities for creches off primary routes and adjacent to local park

Example of Pedestrian Edge

Example of School

Example of Courtyard Block

Development Area 2 Somerton

- **450 - 550 Dwelling units**
- **Up to 2,750 sq. m. of non-residential development**
- **Extension to existing District Centre**
- **Possible Fire Station site**

Somerton

Area character type	**Low development density**
Gross area	**14.5 hectares**
Net development area	**12.8 hectares**
Min-max plot ratio	**1 : 0.35 - 1 : 0.42**
Min-max total development	**45,000 - 55,000 sq. m.**
Min-max dwellings per hectare	**35 - 42**
Min-max total dwelling units	**450 - 550**
Min affordable/social dwellings	**15% of total dwellings to include 1 x traveller accommodation facility**
Min non-residential development	**120 - 146 no. childcare places**
Max non-residential development	**5% of total development up to 2,750 sq. m.**
Max retail development	**50% of total non-residential up to 1,375 sq. m.**
Min-max courtyard building height	**1 - 2 storeys with up to 3 storeys at corner/feature buildings** *1 - 2 where reduced*
Min-max perimeter building height	**3 - 4 storeys with up to 5 storeys at corner/feature buildings** *2 - 3 with up to 4 where reduced*
Max landmark building height	**15 metres (up to 5 storeys approx.)**
Min local public open space	**0.52 hectares**

Key - Access and Movement

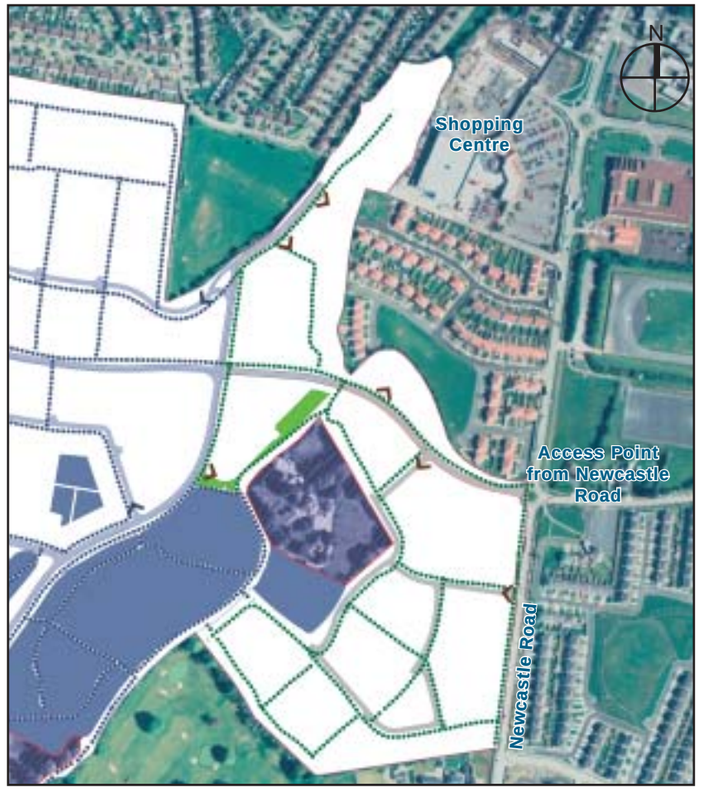
- Residential Distributor Road - no Parking
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Traveller Accommodation Group Housing
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved



Access and Movement

Buildings and Spaces

Indicative Layout

Birds Eye View Typical Courtyards

Urban Design Characteristics

- Development on boundary edge to Westbury housing to be of similar scale and nature. Back to back gardens
- Permeable housing courts to incorporate pedestrian and cyclist routes
- Housing overlooks Newcastle Road
- Potential extended commercial use at Superquinn, link(s) to Adamstown
- Retain existing trees on boundaries
- Apply orientation principles where possible - south facing living space etc.
- Good public lighting to edge of parks

Edge Housing to Park

Housing Fronting Open Space

Landscaped Parking Bays - Quality planting throughout

Mixed Housing

Communal Gardens

Development Area 3
Airlie Stud

- **575 - 700 Dwelling units**
- **Up to 3,500 sq. m. of non-residential development**

Airlie Stud

Area character type	**Low development density**
Gross area	**15.6 hectares**
Net development area	**14.5 hectares**
Min-max plot ratio	**1 : 0.40 - 1 : 0.48**
Min-max total development	**57,500 - 70,000 sq. m.**
Min-max dwellings per Ha.	**40 - 48**
Min-max total dwelling units	**575 - 700**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**153 - 186 no. childcare places** **1 x 150 sq. m. community centre**
Max non-residential development	**5% of total development up to 3,500 sq. m.**
Max retail development	**10% of total non-residential up to 350 sq. m.**
Min-max courtyard building height	**1 - 2 storeys with up to 3 storeys at corner/feature buildings** ***1 - 2 where reduced***
Min-max perimeter building height	**3 - 4 storeys with up to 5 storeys at corner/feature buildings** ***2 - 3 with up to 4 where reduced***
Max landmark building height	**15 metres (up to 5 storeys approx.)**
Min local public open space	**0.56 hectares**

Key - Access and Movement

- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

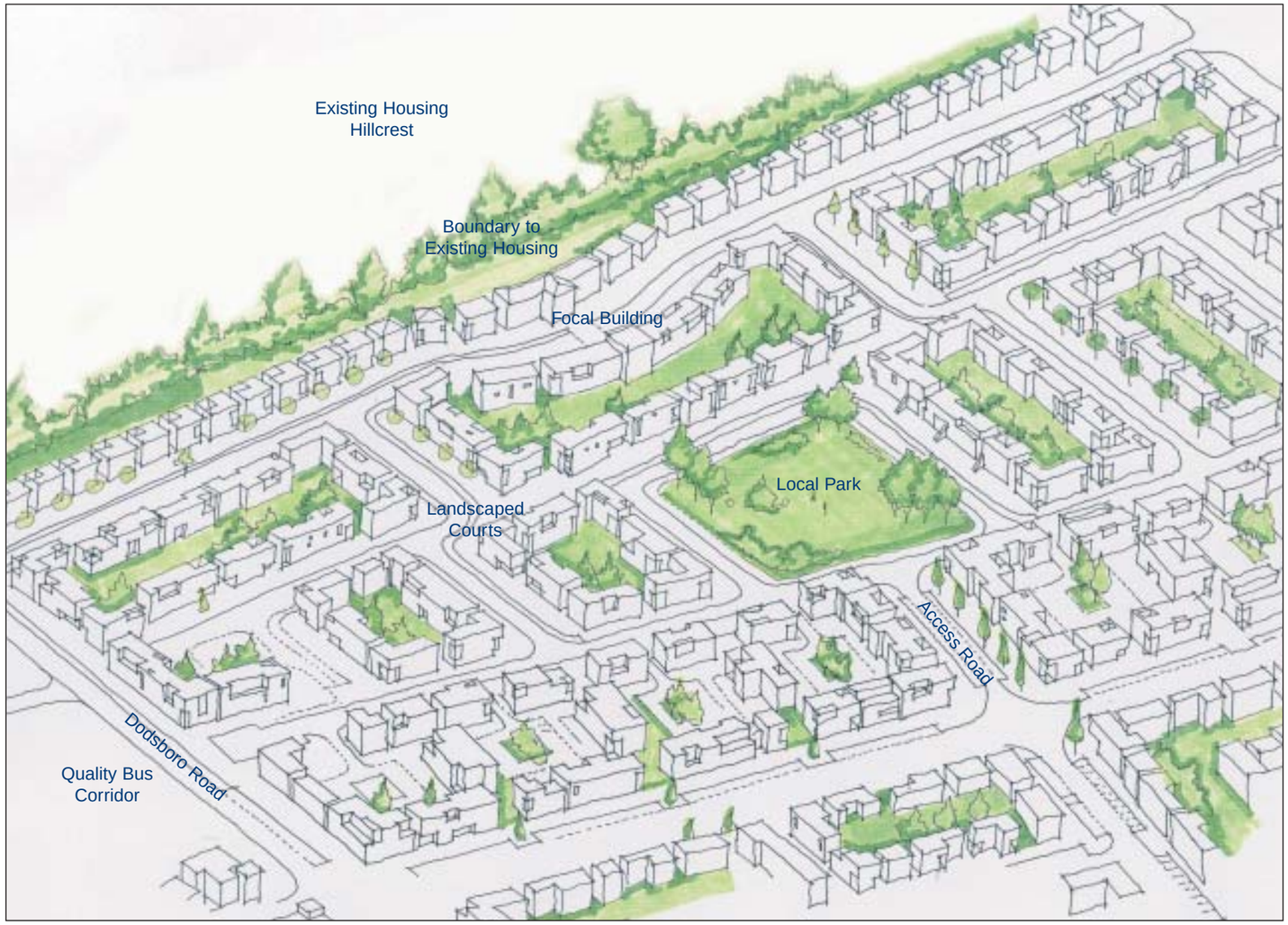
Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces

Indicative Layout

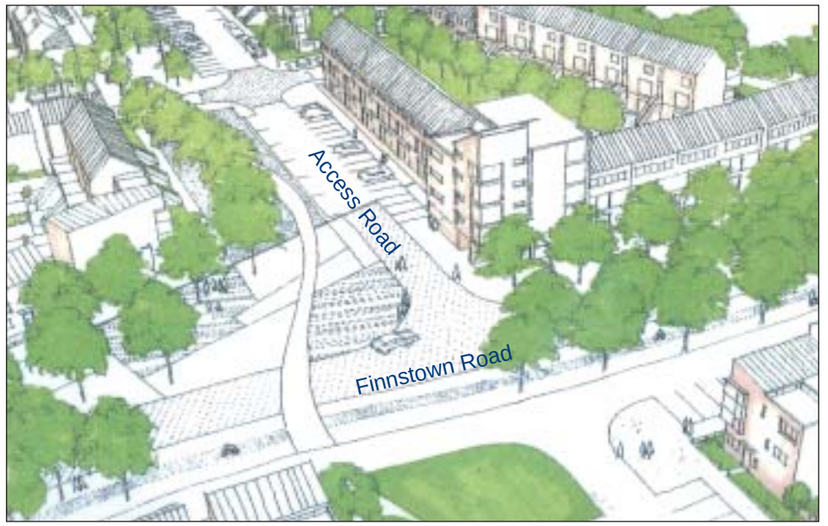


Birds Eye View

Courtyard Housing

Edge Housing Fronting Local Park

Landscaped Court



Road Way Edge - Possible Treatment

Integrated Traffic Calming

Urban Design Characteristics

- Development on boundary edge to Hillcrest housing to be of similar scale and nature; back to back gardens
- Strong, permeable pedestrian and cyclist network
- Strong edge treatment to main roads, including overlooking, tree planting etc..
- Local park acts as a focus for the area
- Good access to dedicated QBC busway

Development Area 4
Tobermaclugg Village

- **875 - 1,050 Dwelling units**
- **Up to 10,500 sq. m. of non-residential development**
- **New Local Centre**

Tobermaclugg Village

Area character type	**Low development density**
Gross area	**21.4 hectares**
Net development area	**19.3 hectares**
Min-max plot ratio	**1 : 0.45 - 1 : 0.54**
Min-max total development	**87,500 - 105,000 sq. m.**
Min-max dwellings per Ha.	**45 - 54**
Min-max total dwelling units	**875 - 1,050**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**155 - 186 no. childcare places** **1 x 150 sq. m. community centre** **1 x 1,500 sq. m. enterprise centre** **2,200 sq. m. retail/retail services**
Max non-residential development	**10% of total development up to 10,500 sq. m.**
Max retail development	**25% of total non-residential up to 2,625 sq. m.**
Min-max courtyard building height	**2 - 3 storeys with up to 4 storeys at corner/feature buildings** ***1 - 2 where reduced***
Min-max perimeter building height	**3 - 4 storeys with up to 5 storeys at corner/feature buildings** ***2 - 3 with up to 4 where reduced***
Max landmark building height	**15 metres (up to 5 storeys approx.)**
Min local public open space	**0.77 hectares**

Key - Access and Movement

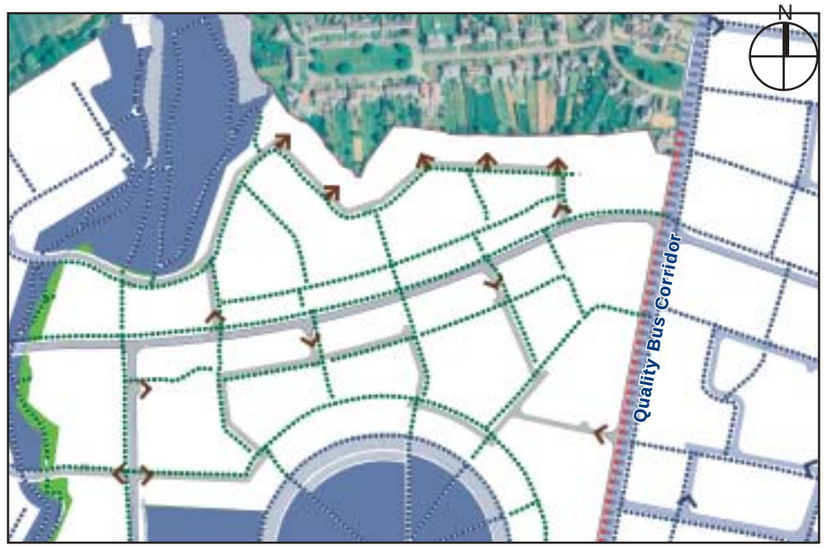
- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

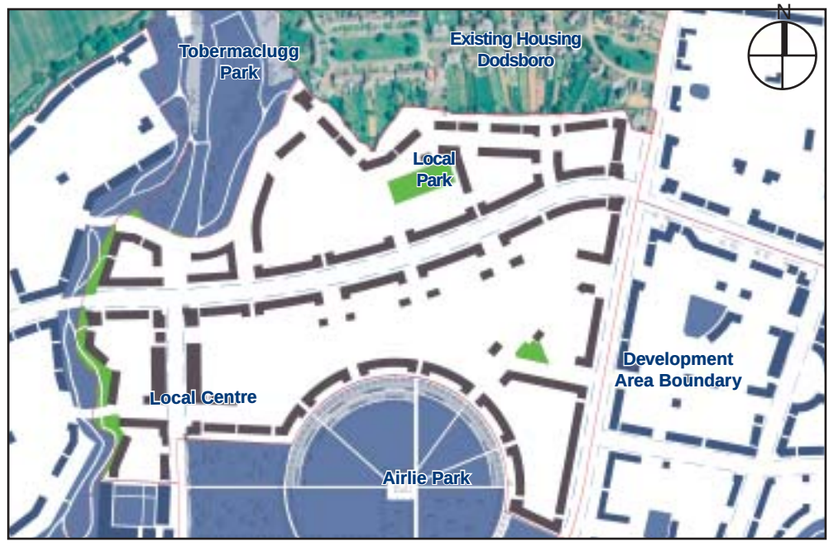
- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

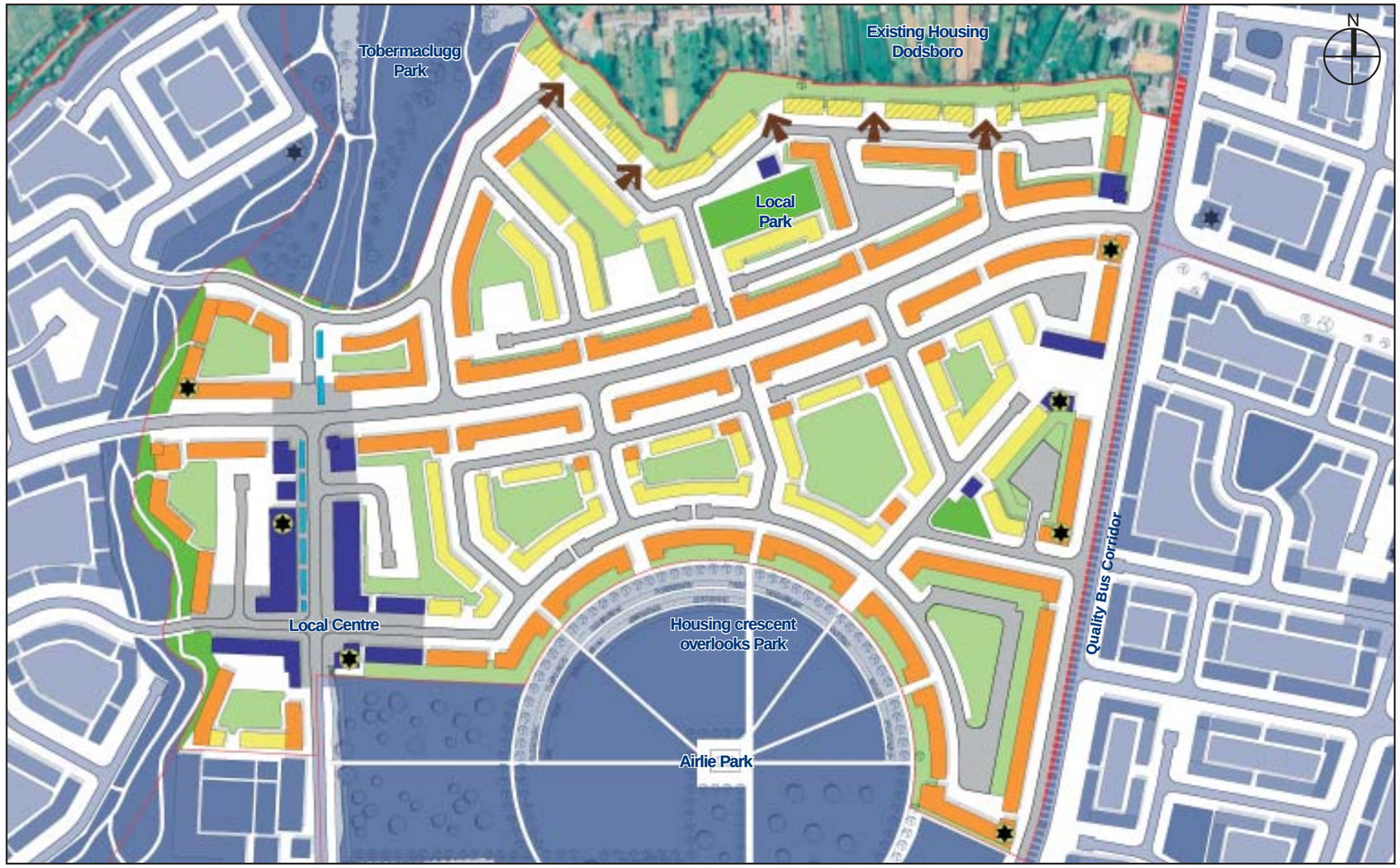
- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Possible Access Point to Backland Development
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved



Access and Movement



Buildings and Spaces



Indicative Layout

Bird's Eye View

Frontage to Park

Landmark Building Fronting Park

Urban Design Characteristics

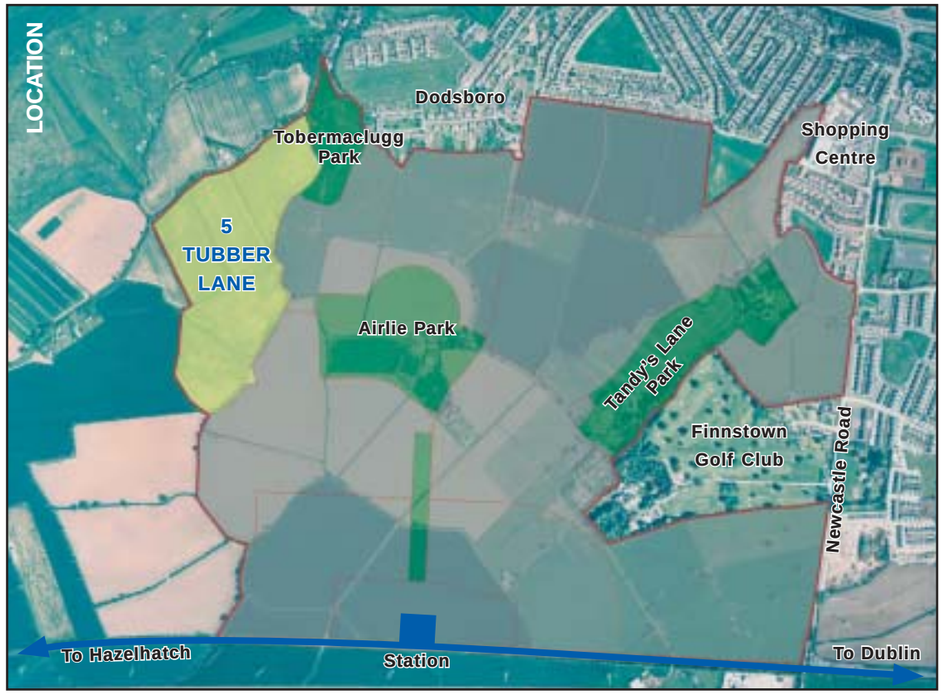
- Development on boundary edge to Dodsboro housing to be of similar scale and nature; back to back gardens
- Potential access points to facilitate development of the long rear gardens of Dodsboro housing
- South facing Crescent to Park to encourage sense of surveillance and safety
- Gateway buildings identify entrance to Park
- Change in road surface signals Local Centre. Buildings form urban edge
- Stream runs through Local Centre 'street' as feature.
- Permeable pedestrian and cyclist network with good access to dedicated Busway
- Good public lighting to edge of Parks

Calmed Area

Soft Landscaping to Courtyard - Child Friendly

Development Area 5
Tubber Lane

- **700 - 850 Dwelling units**
- **Up to 4,250 sq. m. of non-residential development**



Tubber Lane

Area character type	Low development density
Gross area	18.8 hectares
Net development area	17.6 hectares
Min-max plot ratio	1 : 0.4 - 1 : 0.48
Min-max total development	70,000 - 85,000 sq. m.
Min-max dwellings per Ha.	40 - 48
Min-max total dwelling units	700 - 850
Min affordable/social dwellings	15% of total dwellings to include 1x traveller accommodation facility
Min non-residential development	186 - 226 no. childcare places 1 x 150 sq. m. community centre
Max non-residential development	5% of total development up to 4,250 sq. m.
Max retail development	10% of total non-residential up to 425 sq. m.
Min-max courtyard building height	2 - 3 storeys with up to 4 storeys at corner/feature buildings *1 - 2 where reduced*
Min-max perimeter building height	3 - 4 storeys with up to 5 storeys at corner/feature buildings ***2 - 3 with up to 4 where reduced***
Max landmark building height	15 metres (up to 5 storeys approx.)
Min local public open space	0.67 hectares

Key - Access and Movement

- Access Distributor Road
- Residential Distributor Road - No Parking
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Traveller Accommodation Site
- Opportunity for Landmark Building
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces

Indicative Layout

Bird's Eye View

Courtyard Parking

Duplex Housing

Linear Park

Urban Design Characteristics

- Strong terrace of development to linear park to encourage sense of surveillance and safety
- Permeable housing courts with good pedestrian and cyclist links
- Landmark buildings close vistas
- Opportunities for creches off primary routes and adjacent to local parks
- Traffic calming through design of road hierarchy

Creative Corner Treatments

Stream in Park - Natural Setting

Development Area 6
Tandy's Lane Village

- **850 - 1,025 Dwelling units**
- **Up to 10,250 sq. m. of non-residential development**
- **New Local Centre**
- **Primary School Site**

Tandy's Lane Village

Area character type	**Medium development density**
Gross area	**21.7 hectares**
Net development area	**17 hectares**
Min-max plot ratio	**1 : 0.5 - 1 : 0.6**
Min-max total development	**85,000 - 102,500 sq. m.**
Min-max dwellings per Ha.	**50 - 60**
Min-max total dwelling units	**850 - 1,025**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**151 - 182 no. childcare places 1 x 150 sq. m. community centre 1 x 1,500 sq. m. enterprise centre 2,125 sq. m. retail/retail/services**
Max non-residential development	**10% of total development up to 10,250 sq. m.**
Max retail development	**25% of total non-residential up to 2,575 sq. m.**
Min-max courtyard building height	**2 - 3 storeys with up to 4 storeys at corner/feature buildings**
Min-max perimeter building height	**3 - 5 storeys**
Max landmark building height	**21 metres (up to 7 storeys approx.)**
Min local public open space	**0.78 hectares**

Key - Access and Movement

- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

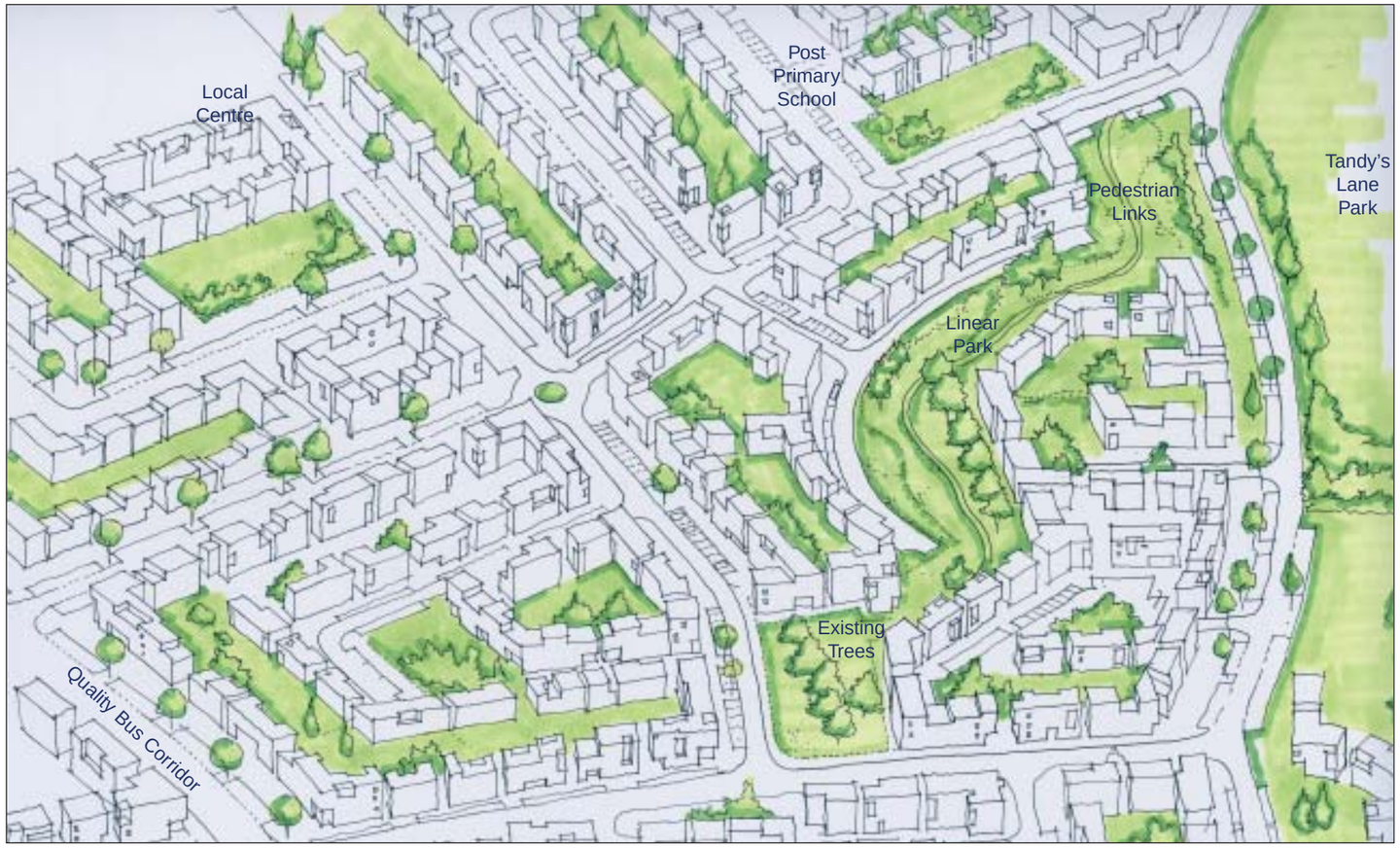
Key - All Plans

- SDZ Planning Scheme Boundary (gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces

Indicative Layout



Bird's Eye View

Urban Design Characteristics

- Local Centre and school as the focus of the Area
- Primary School close to Park
- Linear Park organised around existing trees links Tandy's Lane towards the Central Boulevard
- Cross link from QBC to Local Centre, on to the school and Tandy's Lane Park
- Good public lighting to edge of Parks
- Pedestrian and cyclist permeability

Duplex Housing

Courtyard Planting

Pedestrian Links - Supervised edges

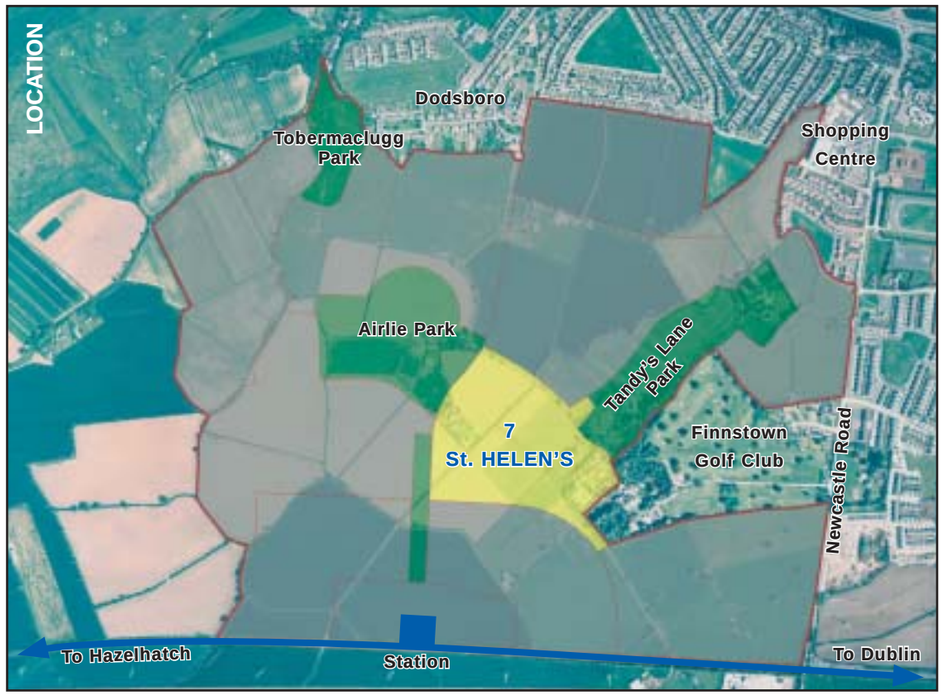
Quality Finishes Throughout

Quality Materials and Links

Hard courtyard Edge

Development Area 7
St. Helen's

- **925 - 1,100 Dwelling units**
- **Up to 5,500 sq. m. of non-residential development**



St. Helen's

Area character type	**Medium development density**
Gross area	**16 hectares**
Net development area	**14.2 hectares**
Min-max plot ratio	**1 : 0.65 - 1 : 0.78**
Min-max total development	**92,500 - 110,000 sq. m.**
Min-max dwellings per Ha.	**65 - 78**
Min-max total dwelling units	**925 - 1,100**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**123 - 146 no. childcare places 1 x 150 sq. m. community centre**
Max non-residential development	**5% of total development up to 5,500 sq. m.**
Max retail development	**10% of total non-residential up to 550 sq. m.**
Min-max courtyard building height	**2 - 3 storeys with up to 4 storeys at corner/feature buildings**
Min-max perimeter building height	**3 - 5 storeys**
Max landmark building height	**21 metres (up to 7 storeys approx.)**
Min local public open space	**0.57 hectares**

Key - Access and Movement

- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

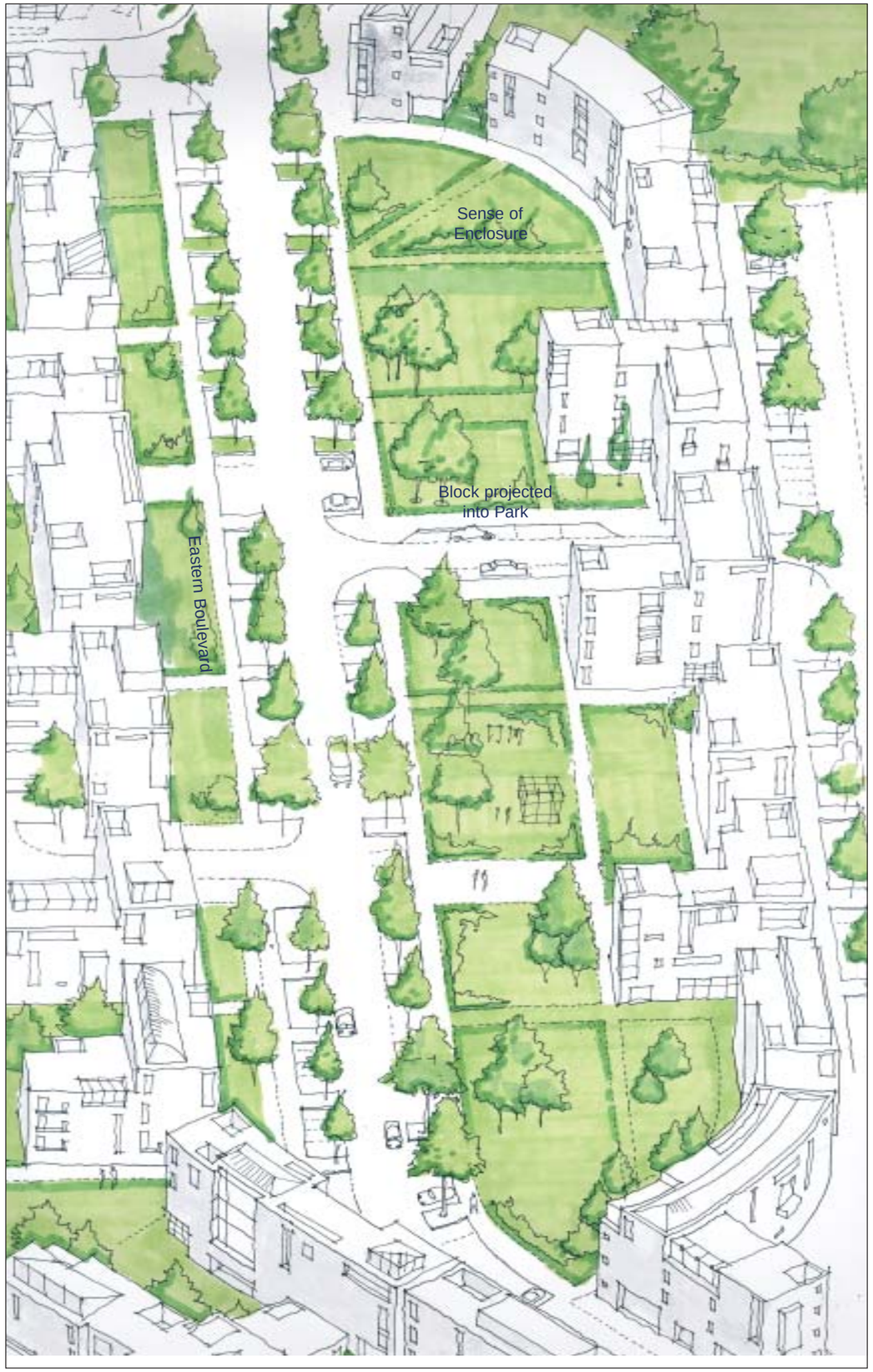
Key - All Plans

- SDZ Planning Scheme Boundary (gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces

Indicative Layout



Eastern Boulevard

Quality Street Furniture

Cycle Friendly

Typical Housing Edge

Projecting Blocks In Boulevard

Urban Design Characteristics

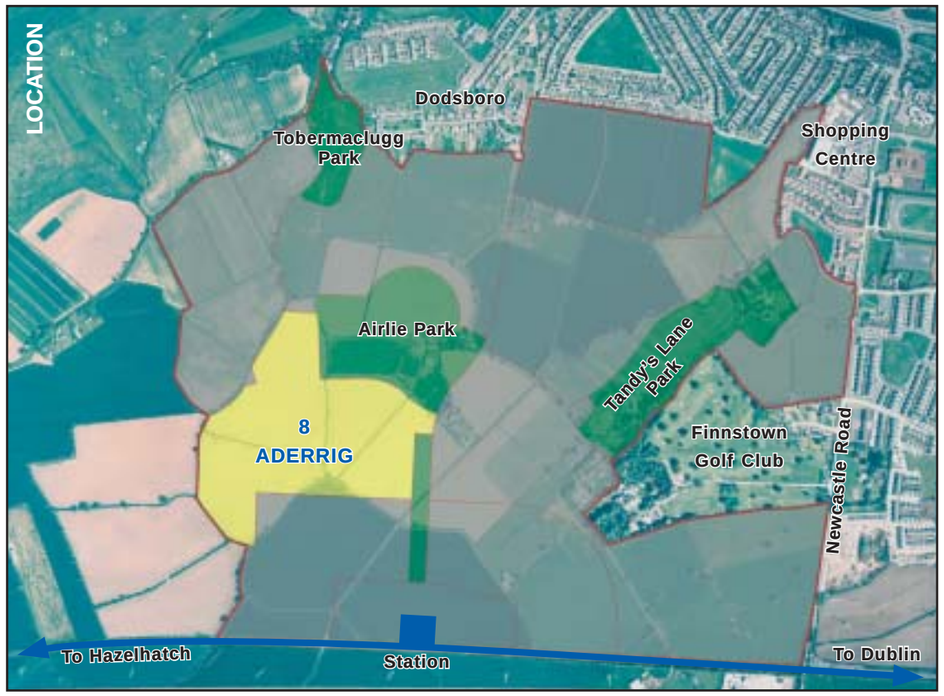
- The Eastern Boulevard is the neighbourhood focus
- A series of projecting elements define a series of public and semi-public 'rooms' or gardens
- Enclosure is provided by curved Landmark buildings or 'bookends'
- The cycleway becomes a part of the park without the cyclist being removed from the urban network
- Airlie House as secondary focus with views to Airlie Park
- Permeable pedestrian and cyclist links with good links to QBC busway

Urban Planting

Boulevard Enclosed by Housing

Development Area 8
Aderrig

- **1,150 - 1,400 Dwelling units**
- **Up to 7,000 sq. m. of non-residential development**
- **Primary School Site**



Aderrig

Area character type	**Medium development density**
Gross area	**21.7 hectares**
Net development area	**17.8 hectares**
Min-max plot ratio	**1 : 0.65 - 1 : 0.78**
Min-max total development	**115,000 - 140,000 sq. m.**
Min-max dwellings per Ha	**65 - 78**
Min-max total dwelling units	**1,150 - 1,400**
Min affordable/social dwellings	**15% of total dwellings to include 1 x traveller accommodation facility**
Min non-residential development	**153 - 186 no. childcare places 1 x 150 sq. m. community centre**
Max non-residential development	**5% of total development up to 7,000 sq. m.**
Max retail development	**10% of total non-residential up to 700 sq. m.**
Min-max courtyard building height	**2 - 3 storeys with up to 4 storeys at corner/feature buildings**
Min-max perimeter building height	**3 - 5 storeys**
Max landmark building height	**21 metres (up to 7 storeys approx.)**
Min local public open space	**0.78 hectares**

Key - Access and Movement

- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

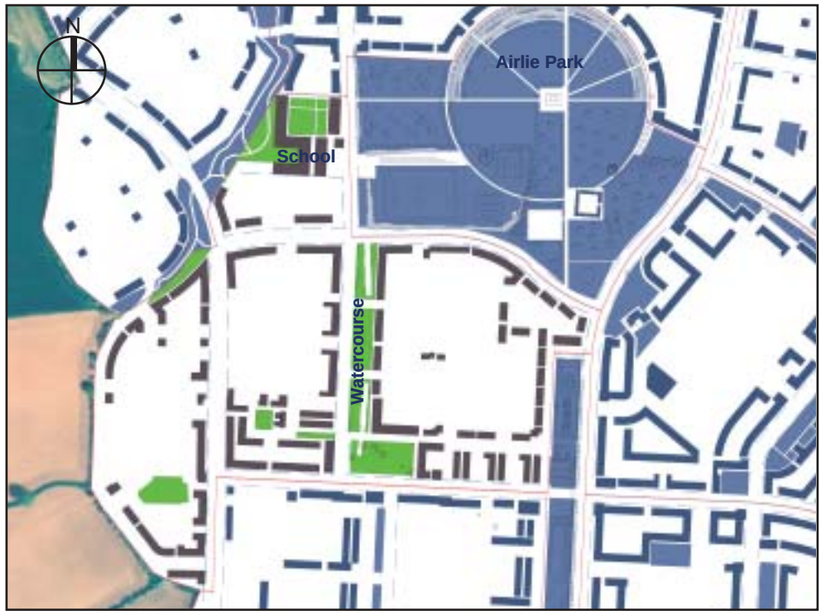
Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Traveller Accommodation Site
- Opportunity for Landmark Building
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

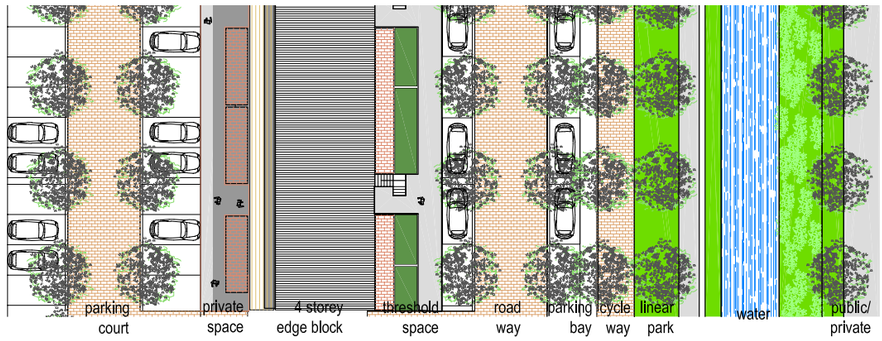
Access and Movement



Buildings and Spaces

Indicative Layout

Bird's Eye View



Part Plan at Water Feature

Housing Fronting Water Feature

Part Section at Water Feature A-A

Housing Fronting Water Feature

Urban Design Characteristics

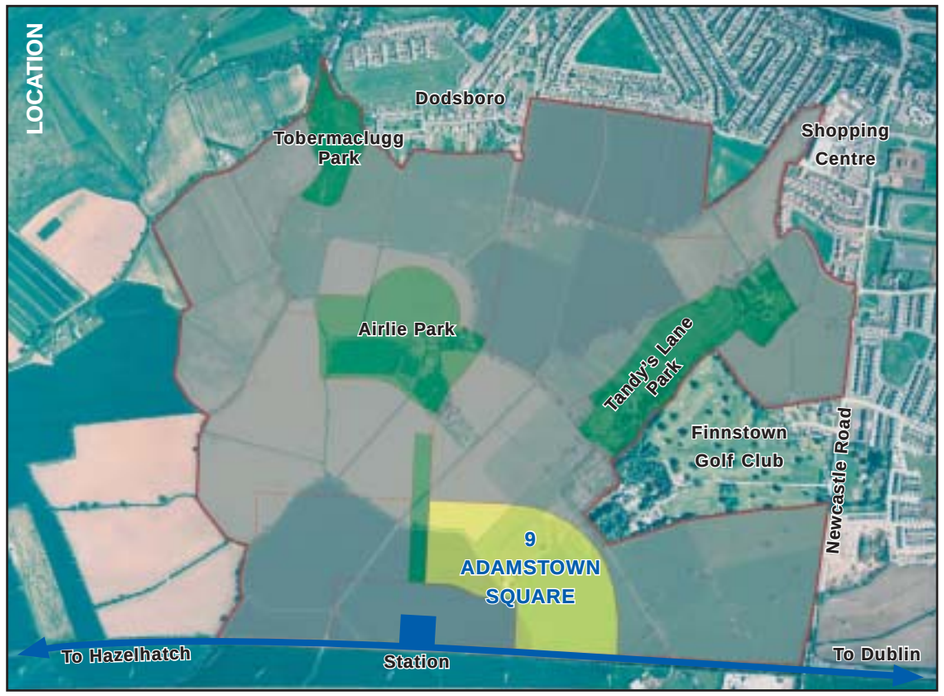
- The western boulevard shifts at Aderrig road, closing vistas and generating the local park.
- Landmark buildings edge the local park and water feature. These afford opportunities for creche and flexible use
- The school buildings are located on a route generated by the stream.
- On this route the water takes the form of urban canal, park watercourse and stream
- Permeable pedestrian and cyclist network

Water Edge Detail

Boulevard Scale Water Feature

Development Area 9
Adamstown Square

- **900 - 1,100 Dwelling units**
- **Up to 11,000 sq. m. of non-residential development**
- **New District Centre periphery**



Adamstown Square

Area character type	**High development density**
Gross area	**15.1 hectares**
Net development area	**12.15 hectares**
Min-max plot ratio	**1 : 0.75 - 1 : 0.90**
Min-max total development	**90,000 - 110,000 sq. m.**
Min-max dwellings per Ha	**75 - 90**
Min-max total dwelling units	**900 - 1,100**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**120 - 136 no. childcare places 1 x 150 sq. m. community centre**
Max non-residential development	**10% of total development up to 11,000 sq. m.**
Max retail development	**10% of total non-residential up to 1,100 sq. m.**
Min-max courtyard building height	**2 - 4 storeys with up to 5 storeys at corner/feature buildings**
Min-max perimeter building height	**3 storeys plus setback to 5 storeys plus setback**
Max landmark building height	**30 metres (up to 10 storeys approx.)**
Min local public open space	**0.54 hectares**

Key - Access and Movement

- Residential Distributor Road with Busway
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

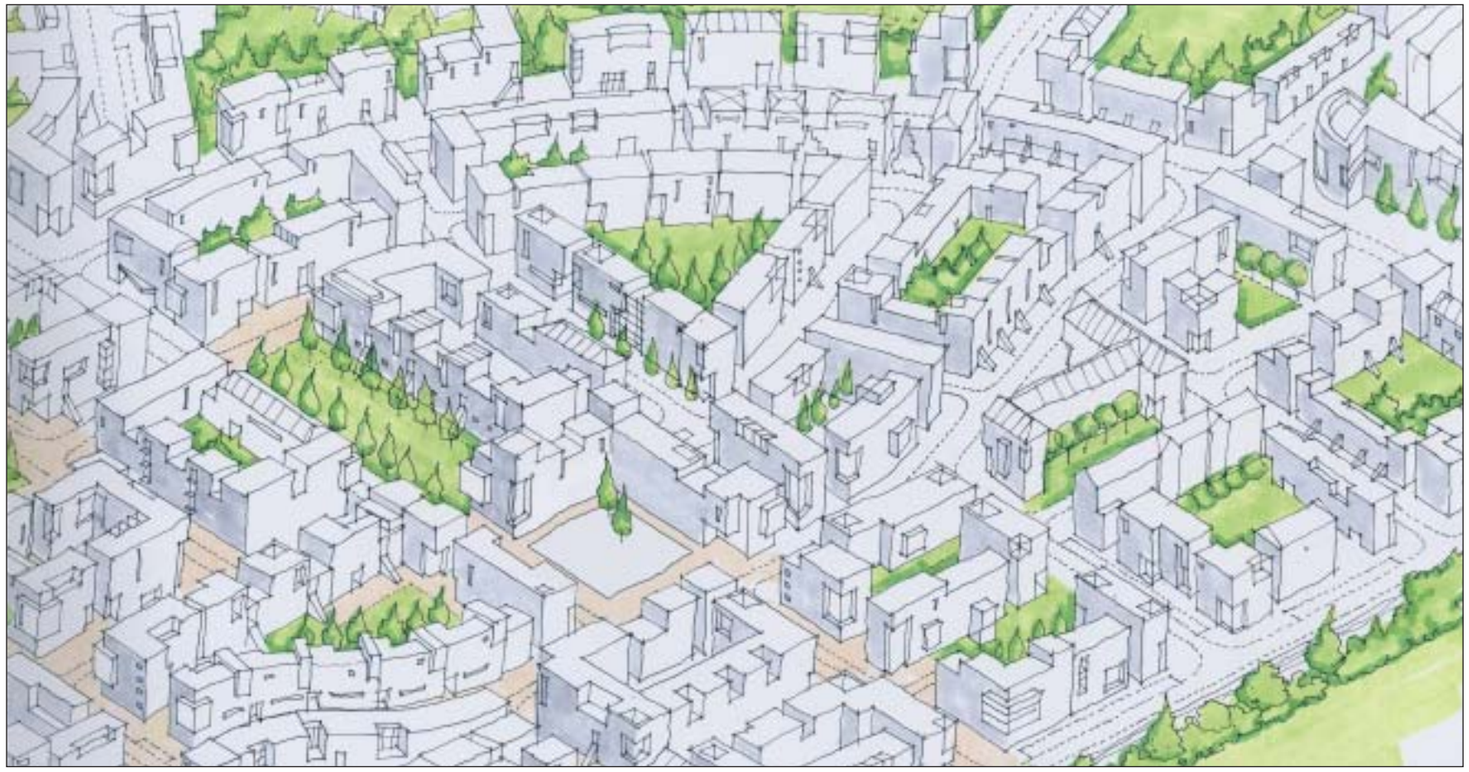
Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Perimeter Building
- Courtyard Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces

Indicative Layout

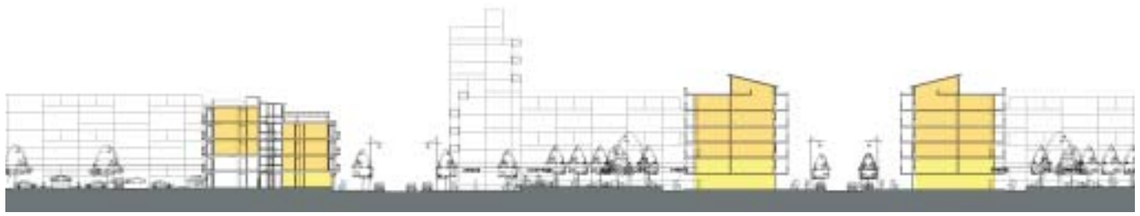


Bird's Eye View

Corner Detail

Street Edges - Imaginative

Terrace Housing



Section A-A at Adamstown Square

Materials

Materials - Quality Finishes & Street Furniture

Urban Design Characteristics

- End of eastern boulevard and urban square as focal point
- Landmark buildings edge the Square on two sides providing a back 'wall' to the plaza which looks south
- The road edges are defined by quality street furniture and lighting
- Strong urban blocks edge the Central boulevard to the east
- Pedestrian and cyclist permeability

Contemporary Courtyard Development

Variety in Form Frames Square

Development Area 10
Adamstown Boulevard

- **850 - 1,025 Dwelling units**
- **Up to 10,250 sq. m. of non-residential development**
- **New District Centre periphery**

Adamstown Boulevard

Area character type	**High development density**
Gross area	**14.4 hectares**
Net development area	**11.3 hectares**
Min-max plot ratio	**1 : 0.75 - 1 : 0.90**
Min-max total development	**85,000 - 102,500 sq. m.**
Min-max dwellings per Ha	**75 - 90**
Min-max total dwelling units	**850 - 1,025**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**113 - no. childcare places 1 x 150 sq. m. community centre**
Max non-residential development	**10% of total development up to 10,250 sq. m.**
Max retail development	**10% of total non-residential up to 1,025 sq. m.**
Min-max courtyard building height	**2 - 4 storeys with up to 5 storeys at corner/feature buildings**
Min-max perimeter building height	**3 storeys plus setback to 5 storeys plus setback**
Max landmark building height	**30 metres (up to 10 storeys approx.)**
Min local public open space	**0.5 hectares**

Key - Access and Movement

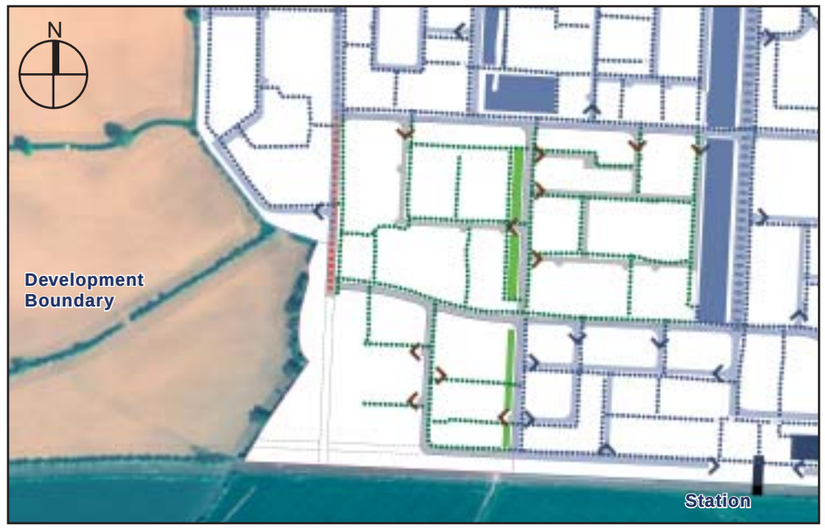
- Access Distributor Road
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Perimeter Building
- Courtyard Building
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved



Access and Movement

Buildings and Spaces

Indicative Layout

0 50 100 200 300 m

Bird's Eye View of Western Boulevard

Contemporary Treatment

Boulevard Cafe

Quality Bus Corridor- QBC

Corner Shop

Hard Landscaped Space

Urban Design Characteristics

- In the Western Boulevard the Water feature is treated with a more urban edge, and hard landscaping
- The Central Boulevard has more uses and a mixture of hard and soft landscaping with an active edge
- Pedestrian and cyclist permeability
- Creches to be associated with Public Open Space

Urban Scale

Bird's Eye View of Boulevard

Development Area 11
Adamstown Station

- **475 - 550 Dwelling units**
- **Up to 37,500 sq. m. of non-residential development**
- **New District Centre core**
- **Railway Station - Transport Interchange**

Adamstown Station

Area character type	**High development density**
Gross area	**8.3 hectares**
Net development area	**6.2 hectares**
Min-max plot ratio	**1 : 1.0 - 1 : 1.2**
Min-max total development	**62,500 - 75,000 sq. m.**
Min-max dwellings per Ha.	**75 - 90**
Min-max total dwelling units	**475 - 550**
Min affordable/social dwellings	**15% of total dwellings**
Min non-residential development	**42 - 48 no. childcare places 1 x 1,000 sq.m. central civic facility 15,625 sq. m. retail/retail services**
Max non-residential development	**50% of total development up to 37,500 sq. m.**
Max retail development	**50% of total non-residential up to 18,750 sq. m.**
Min-max courtyard building height	**2 - 4 storeys with up to 5 storeys at corner/feature buildings**
Min-max perimeter building height	**3 storeys plus setback to 5 storeys plus setback**
Max landmark building height	**30 metres (up to 10 storeys approx.)**
Min local public open space	**0.3 hectares**

Key - Access and Movement

- Residential Distributor Road - No Parking
- Residential Distributor Road - with Parking
- Access Point from Main Road Network
- Local Through Road
- Pedestrian and Cycle Network

Key - Buildings and Spaces

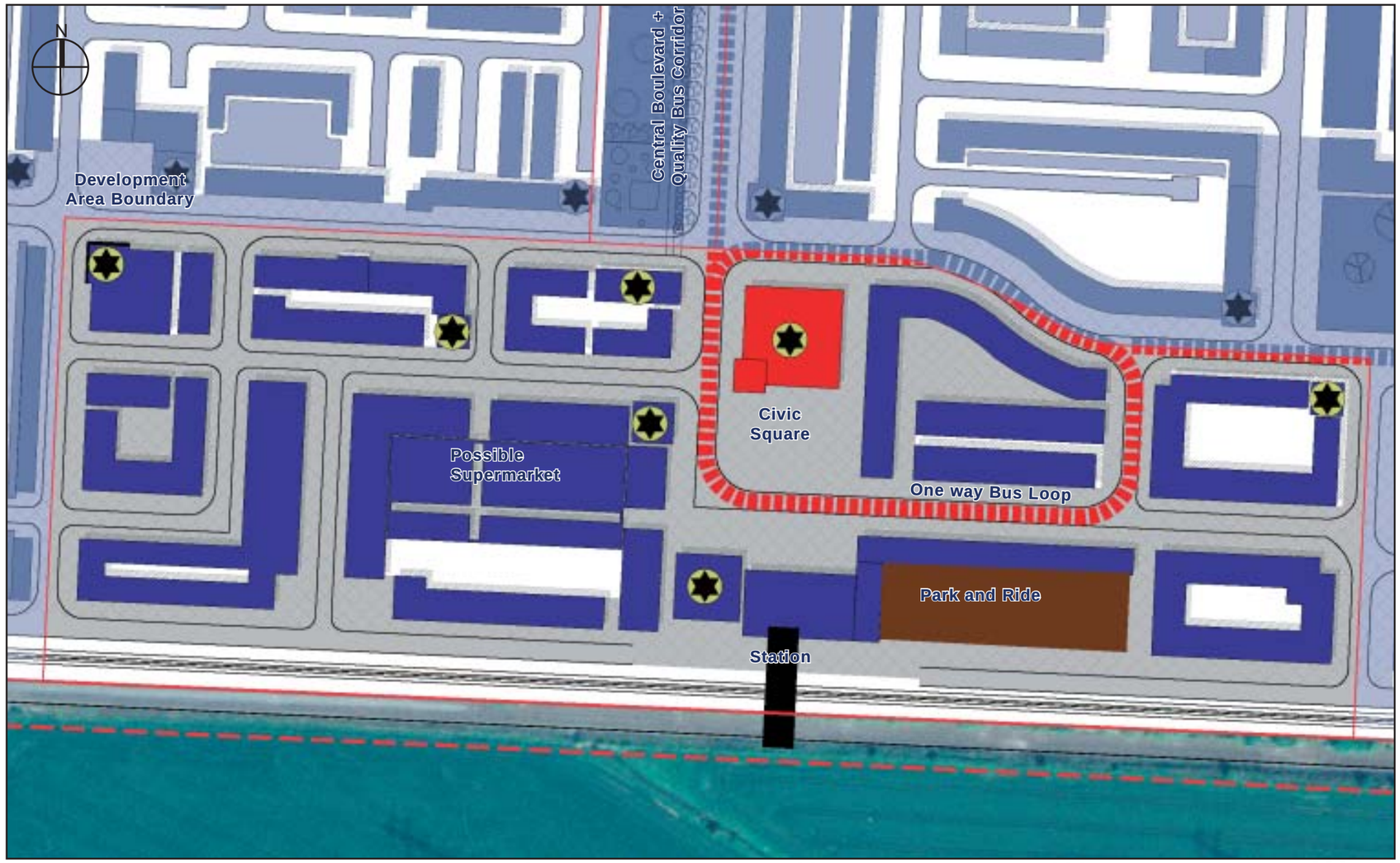
- Boundary of Net Development Area
- Key Building Frontage

Key - All Plans

- SDZ Planning Scheme Boundary (Gross Development Area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Railway Station
- Park and Ride Carpark
- Flexible Use (Perimeter) Building
- School/Civic Building
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Local Public Open Space
- Private Open Space
- Established Tree to be Preserved

Access and Movement

Buildings and Spaces



Indicative Layout

Bird's Eye View of District Centre

Quality Architecture

Civic Space

Urban Design Characteristics

- The civic space is located to one side of the central boulevard to remove traffic from the centre of the space
- The sequence of spaces is provided by a narrowing or 'pinch' at Adamstown Road
- Building heights vary along main roads, the highest at street intersections. There are opportunities for tall buildings at the end of vistas
- Smaller block depths encourage a tighter urban grain
- 'Markers' or Landmark buildings close vistas and provide identity & enclosure.
- The one way bus loop insures the Civic space will not be a bus park. The interchange takes place on the side street close to the sttation entrance
- The road edges are defined by quality street furniture and lighting

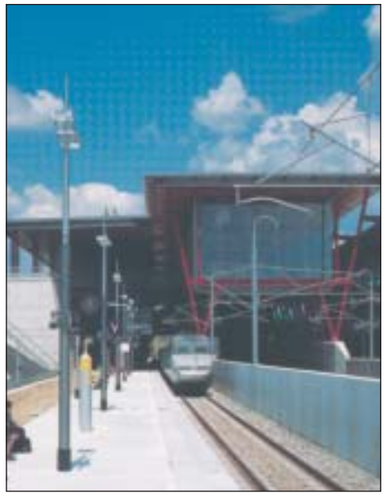
Section A-A at Adamstown Station

Urban Scale

District Centre

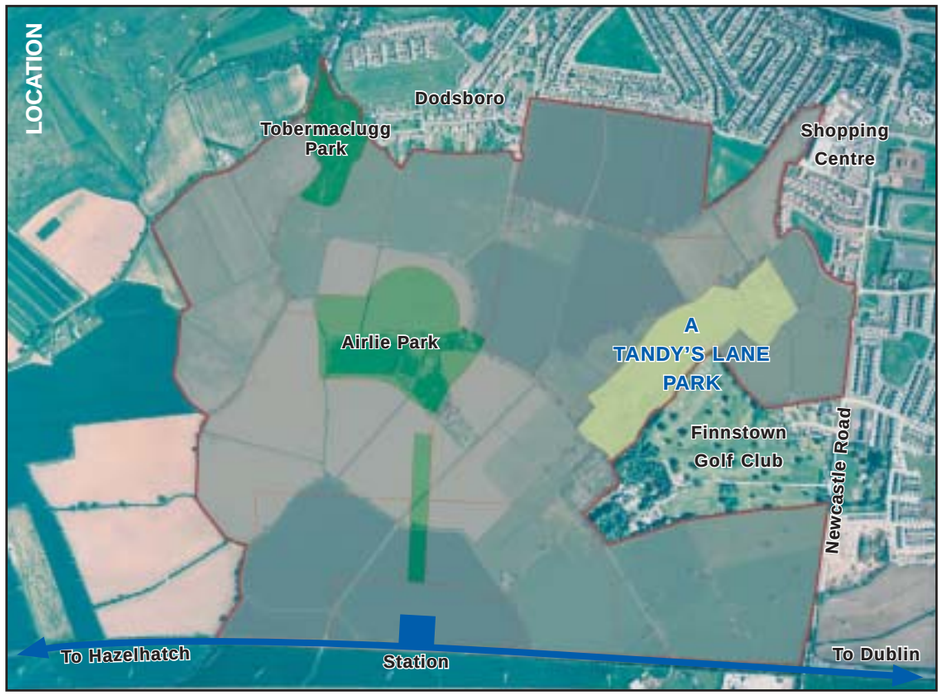
Busy Street - Mixed Use Edge To Planted Pedestrian Precinct

Urban Park Treatment



Station As Destination

Amenity Area A
Tandy's Lane Park



Tandy's Lane Park

Area character type	**Major Park**
Gross area	**8.0 hectares**
Net area	**7.7 hectares**

DIAGRAM DRAWING KEY

Park Landmarks - Features / Buildings

Access

Use Zones

1 Boundary with adjoining Properties Establish planting appropriate to surrounding mature woodland areas

2 Arboretum Zone Large Specimen Trees to complement surrounding mature landscapes

3 Feature Zone Seating and Feature Area

4 Retained Tree and Hedgerows Retain and reinforce mature hedgerow trees

Key - Main Plan

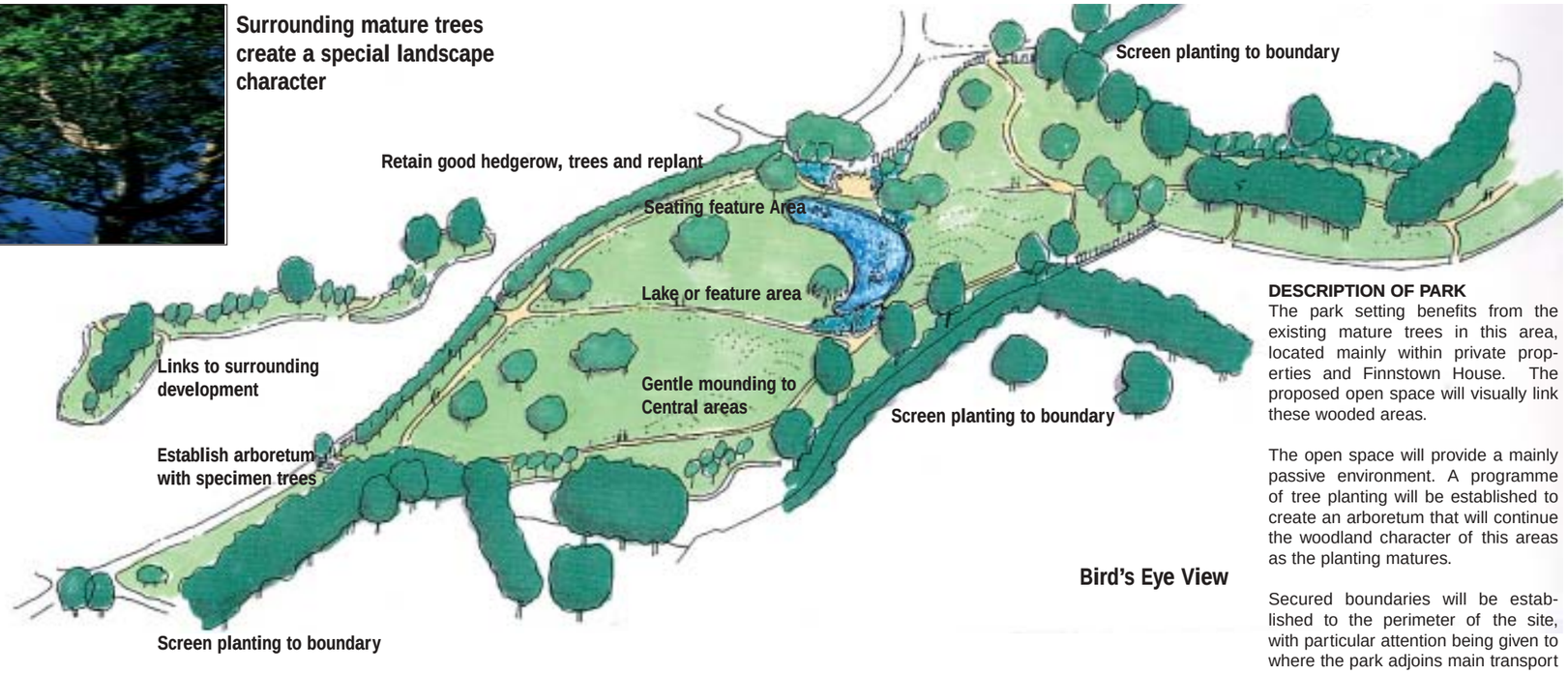
Boundary of Gross Development Area

Public Open Space

Established Tree to be Preserved

Protected Structures not included in the Planning Scheme

Surrounding mature trees create a special landscape character



Bird's Eye View

DESCRIPTION OF PARK

The park setting benefits from the existing mature trees in this area, located mainly within private properties and Finnstown House. The proposed open space will visually link these wooded areas.

The open space will provide a mainly passive environment. A programme of tree planting will be established to create an arboretum that will continue the woodland character of this areas as the planting matures.

Secured boundaries will be established to the perimeter of the site, with particular attention being given to where the park adjoins main transport routes.

Indicative Park Layout

Seasonal Planting To Key Areas

Seating / Feature Areas

Seasonal Planting To Key Areas

Amenity Area B
Tobermaclugg Park

Tobermaclugg Park

Area character type	**Major Park**
Gross area	**3.8 hectares**
Net area	**3.4 hectares**

DIAGRAM DRAWING KEY

Park Landmarks- Historical remains and Holy well

Access

Attenuation Area

Use Zones

1 Seating Area drawing on footprint of remains of Tobermaclugg House

2 Tobermaclugg stream Improve habitat value and accommodate attenuation requirements

3 Terraced Banks create informal grassed terraces

4 Pump Station with Screen planting

Key - Main Plan

SDZ Planning Scheme Boundary (Gross Development Area)

SDZ Planning Scheme Boundary (where outside gross development area)

Public Open Space

Established Tree to be Preserved

Use valley sides as informal seating areas

Develop the natural habitat value with improvement works to the stream

Develop the natural habitat value with native planting

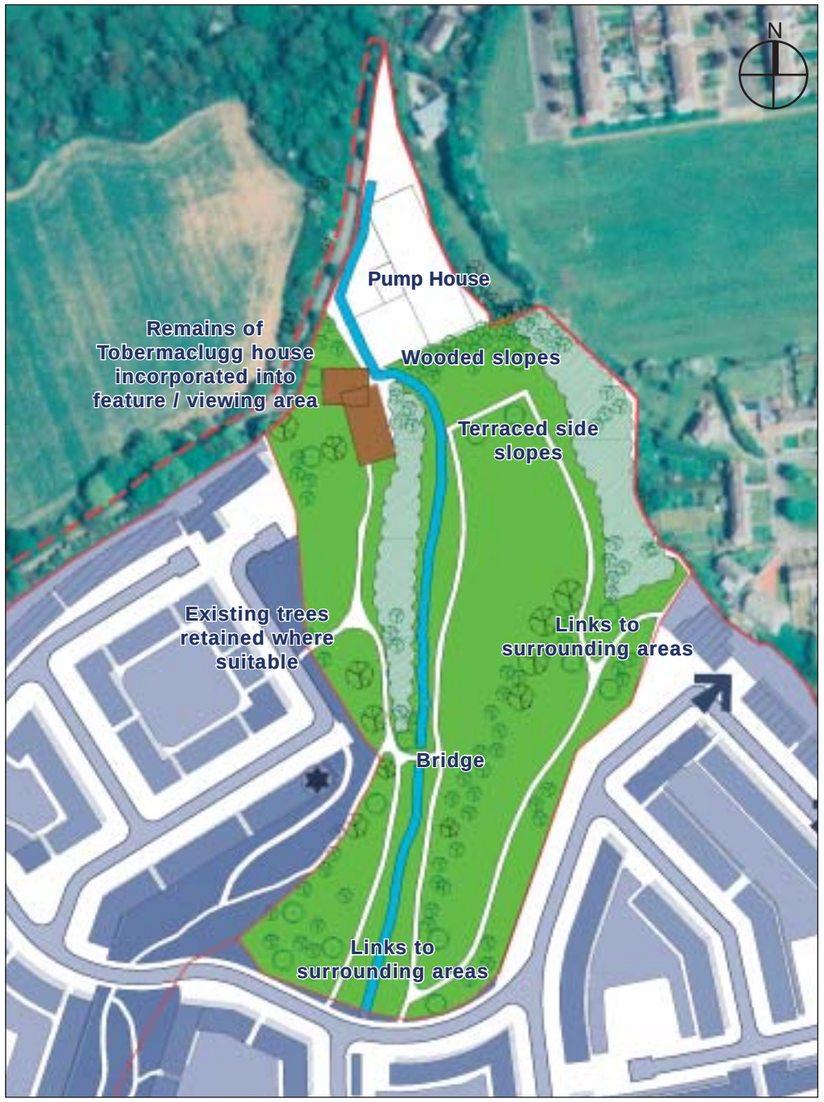
Integration of streams within open space areas

DESCRIPTION OF PARK

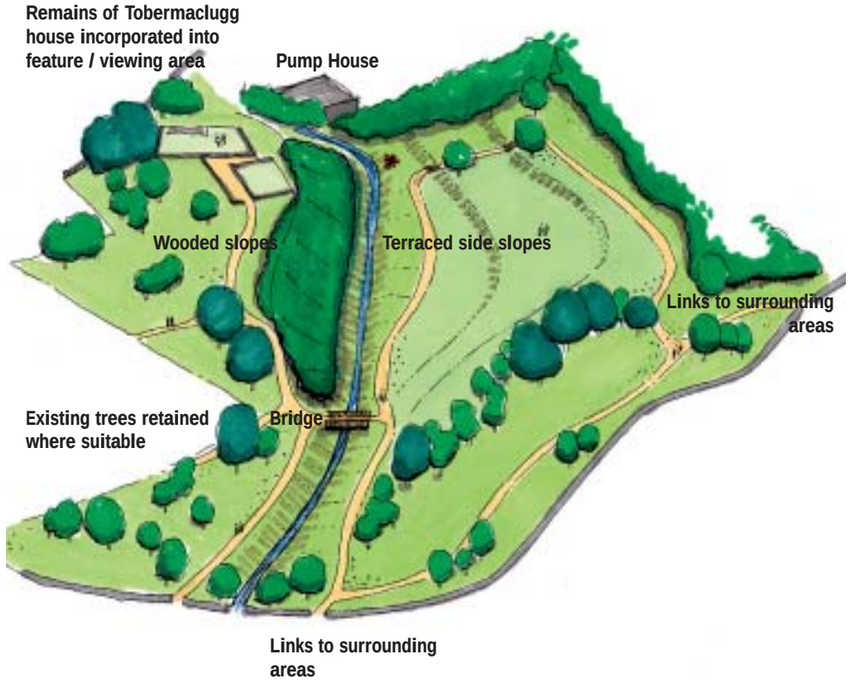
Set in a natural hollow this areas contains historical and archeological remains, with a holy well and the ruins of Tobermaclugg House within the proposed park area.

The park will focus on developing the stream and woodland habitats in addition to highlighting the links with the past. This will be achieved through enhancing the historical traces within focal areas, where appropriate, and a planting mix of mainly native species suitable to the location.

The existing steep sided slopes of the river valley will be terraced to allow maximum use for surrounding residents and to facilitate access for all. A bridge will allow access across the Tobermaclugg stream.

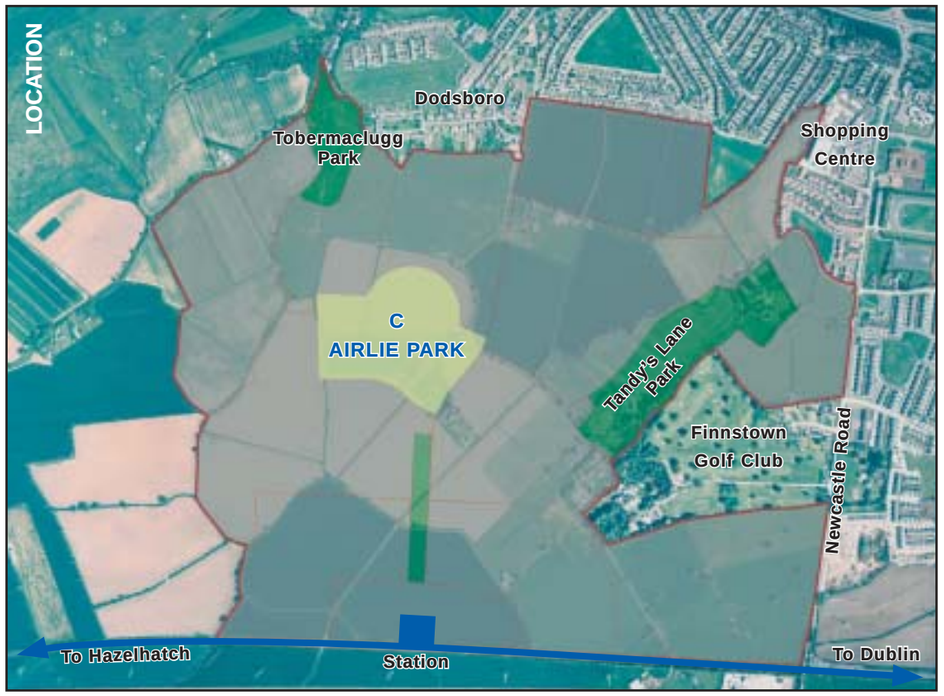


Indicative Park Layout



Bird's Eye View

Amenity Area C
Airlie Park



Airlie Park

Area character type	**Major Park**
Gross area	**11.6 hectares**
Net area	**10.85 hectares**

DIAGRAM DRAWING KEY

Park Landmarks - Features /buildings

Access

Use Zones

1 **Education Zone Linked to school site**

2 **Formal Park Zone Linked to residential areas**

3 **Historical Zone**

4 **Sports Zone Secured managed area**

5 **Active Zone Older Play area and Stables**

6 **Play Zone**

Key - Main Plan

Boundary of Gross Development Area

Public Open Space

Established Tree to be Preserved

Use - Encourage community wide use of Park Areas

Bird's Eye View

South Facing Perimeter Edge

A DESCRIPTION OF PARK

Centred on the old stud complex and positioned to allow the retention of existing trees and hedges the proposed Airlie Park is 11 hectares and is one of the main parkland areas proposed within the SDZ.

The park will contain a mix of active and passive areas and will also incorporate the existing Tober stream within a wildlife area. It will adjoin both main circulation routes and housing areas and appropriate links to surrounding areas will be detailed.

In addition to providing an open green space, it is proposed to create sports, play and amenity areas.

Indicative Park Layout

0 50 100 200 300 m

Amenity Area D
Central Boulevard

Central Boulevard

Area character type	**Major Park**
Gross area	**11.6 hectares**
Net area	**10.85 hectares**

DIAGRAM DRAWING KEY

Park Landmarks - Features /Buildings

Use Zones

1 **Feature buildings and amenity area**

2 **Demonstration gardens or sponsored plant display areas**

3 **Active play area secured ball court and older play areas**

4 **Kiosk / Information point / Feature**

5 **Sunken multi use area performance space / Market area etc. orientated to the sun**

6 **Possible linked play for younger children**

7. **Avenue and main pathway lined with hedges and sculptural lighting to create an edge to the space.**

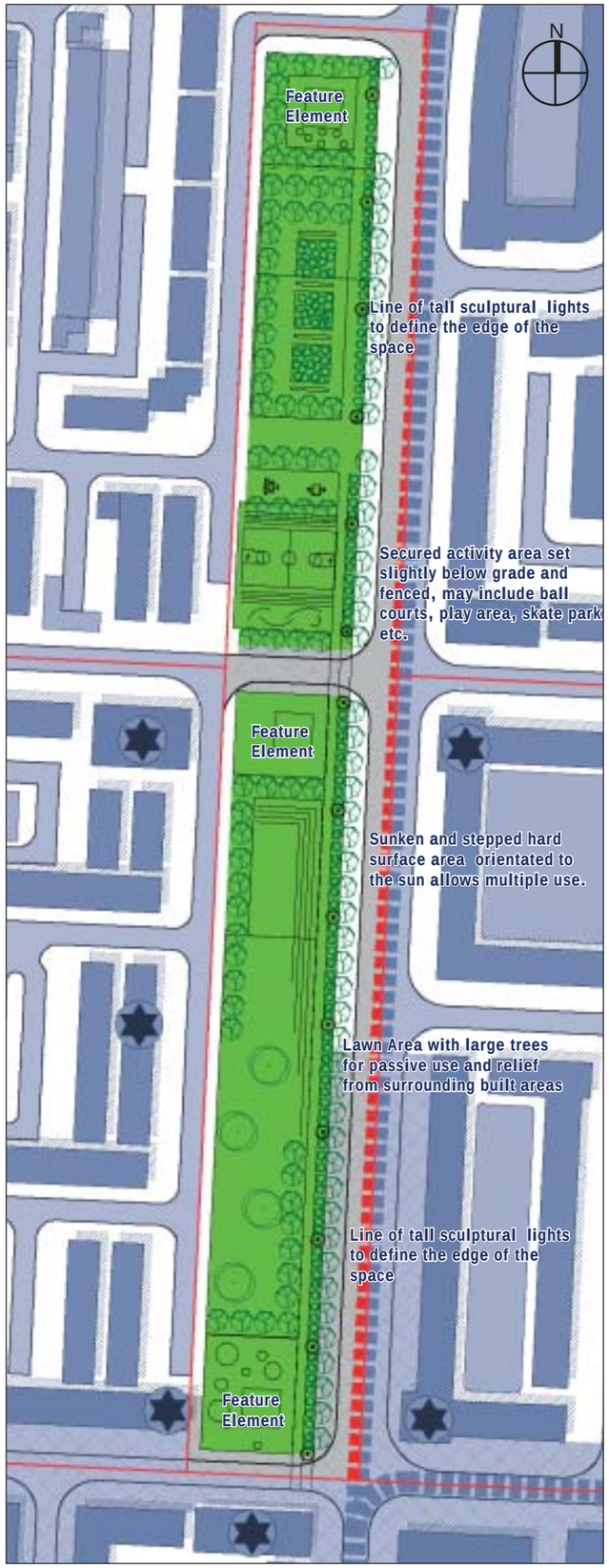
Key - Main Plan

Boundary of Gross Development Area

Hard Landscaped Public Space

Public Open Space

Established Tree to be Preserved



Indicative Park Layout 0 50 100 m

Features to create focal points

Light features to define edge of open space

Create pockets of formal garden areas which may be sponsored by local interest groups

Avenue trees and pedestrian routes to eastern edge of open space

DESCRIPTION OF PARK

A spine of open space linking Airlie park to the central area. The space will be for pedestrian use and will be buffered from surrounding roads by appropriate planting and feature elements.

The space will be designed to incorporate a number of linked but differently themed areas for various uses. Play elements will be incorporated along with active spaces but opportunities will also be there for passive areas. By creating various rooms within the overall spine areas can be versatile both in design and management terms.

4.0 Phasing and Implementation

4.1 Concept

4.1.1 It is proposed that all development within the Adamstown SDZ be subject to a schedule of phasing. The purpose of phasing is to ensure that infrastructure, services, facilities and amenities are provided together with residential development.

4.1.2 The proposed phasing schedule is based on the premise that the number of dwelling units that may be permitted in each phase of development is dependent on a predetermined amount of works to provide infrastructure, services, facilities and amenities having been completed to serve each phase.

4.1.3 This is considered appropriate in the context of a Strategic Development Zone, given that any planning application that is in compliance with the approved Planning Scheme will receive a final grant of planning permission within eight weeks. Construction may commence immediately thereafter.

4.2 Sequence

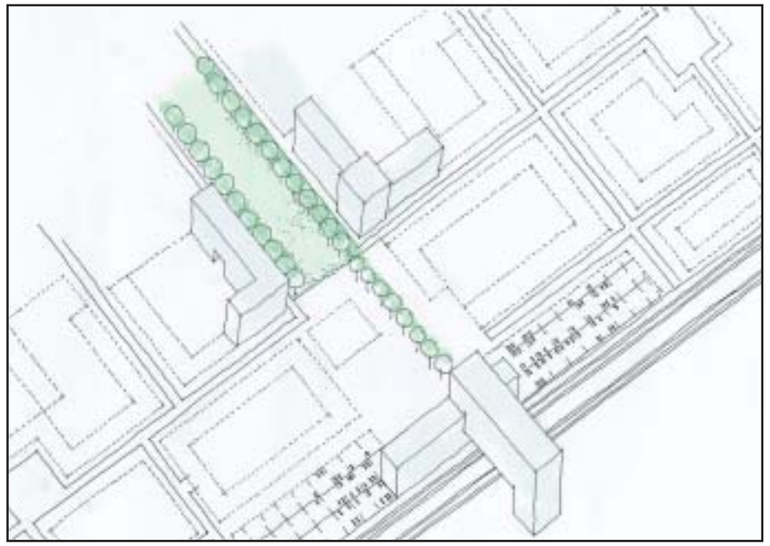
4.2.1 To ensure flexibility, the proposed phasing schedule is sequential rather than time-specific. There are thirteen sequential phases of development in the Adamstown Planning Scheme, with the critical first phase being split into phases 1A and 1B. Phase 1 comprises 1,000 units, evenly spilt between the two sub-phases. Phase 2 has 800 units and the remaining phases, except for the last phase, have 800 units.

4.2.2 A 'Roll - Over' mechanism may operate between any two phases. In the event of the maximum permissible number of units being completed before the required facilities and infrastructure in any phase, a 'Roll - Over' of up to 250 dwelling units may be constructed in the following phase, subject to planning permission. These residential units may not be occupied until the required facilities and infrastructure in the previous phase have been completed.

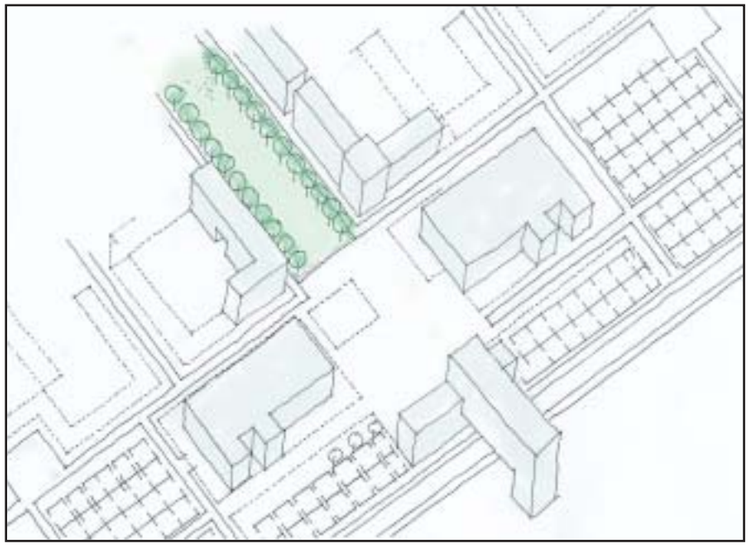
4.2.3 The thirteen sequential phases facilitate a gradual east-west progression across the SDZ lands. Prior to the completion of phase seven, or between 5,001 and 5,800 dwelling units, all of the SDZ lands will have been opened up for development and all major public transportation, external road links internal road loops and sanitary services infrastructure will have been completed.

4.2.4 Phases eight to ten allow for consolidation and completion of development throughout Adamstown and prior to the commencement of phase eleven, or more than 8,200 dwelling units, all infrastructure, services, facilities and amenities necessary to facilitate the minimum required quantum of residential development in the SDZ will have been completed.

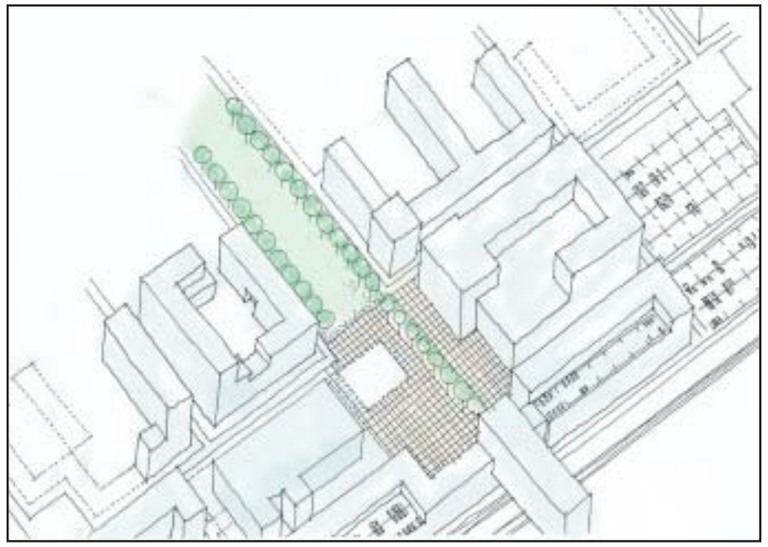
4.2.5 Phases eleven to thirteen comprise further intensification that allow additional residential development up to the permitted Planning Scheme ceiling of 10,150 dwelling units. The key elements of the proposed phasing sequence are illustrated and described on the following pages:-



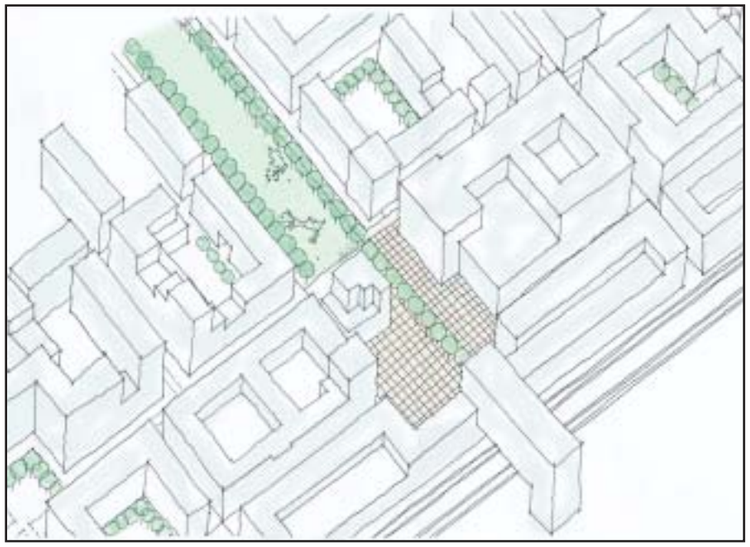
I



II



III



IV

Figure 4.1. Indicative Phased Development of Adamstown District Centre

Phase 1A 0-500 dwellings

4.2.6 Phase 1A allows development to commence at two separate locations on the east of the SDZ lands and requires completion of:-

- The upgrade of the R120 Newcastle Road to 9 metre distributor road standard with footpath on both sides adjoining the Adamstown Castle and Somerton development areas and the Finnstown House Hotel;
- One side of the Adamstown Link Road i.e. the road linking Adamstown to the Outer Ring Road (ORR) as a haul road to include a new bridge over the railway and Adamstown Link Road on the R120 Lock/ Newcastle Road;
- A new junction on the R120 Newcastle Road at Adamstown Castle;
- The initial section of the Main Adamstown Station Road as far as its junction with the Adamstown Link Road;
- The initial northern section of Loop Road #1 to replace the acute bend on the existing north-eastern section of Tandy's Lane;
- The Lucan-Palmerstown High Level Water Supply Scheme (not illustrated);
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

If the full quota of development permissible in phase 1A, i.e. all 500 dwelling units, occurs on the southeast of the SDZ lands, replacement of the acute bend on the existing north-eastern section of Tandy's Lane is not required as part of phase 1A.

Key

Access Only Cul De Sac		Schools / Civic Building	
Existing Road		Dedicated QBC Busway	
Finished Road		Flexible Use Building (to illustrate District And Local Centres)	
Haul Road		Pump Station	
Upgrade Existing Road/Footpath		Major Park	
Railway Station Operational		Surface Park and Ride Complete	
Park and Ride Operational		Railway Station Complete	
		Four Tracking Of Railway	

Figure 4.2 Phase 1A

Phase 1B 501-1,000 dwellings

4.2.7 Phase 1B allows further development at two separate locations on the east of the SDZ lands and requires completion of:-

- The Outer Ring Road (ORR) between the N4 and the N7 (not illustrated);
- One side of the Adamstown Link Road i.e. the road linking Adamstown to the Outer Ring Road (ORR) as a two-way single carriageway road;
- The Main Adamstown Station Road;
- Adamstown Railway Station and surface park and ride car park to a basic operational standard;
- The remaining parts of Loop Road #1 as a haul road;
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

If the full quota of development permissible in both phases 1A and 1B, i.e. all 1,000 dwelling units, occurs on the southeast of the SDZ lands, completion of Loop Road #1 as a haul road is not required as part of phase 1B.

Figure 4.3. Phase 1B

Figure 4.4. Phase 2

Phase 2 1,001-1,800 dwellings

4.2.8 Phase 2 ensures that both parts of the east of the SDZ lands are linked and requires completion of:-

- Loop Road #1. The existing eastern section of Tandy's Lane is subject to alternative access arrangements to be determined by the Planning Authority in consultation with the residents of that section of the Lane;
- The Link Road to the rear of the existing *Superquinn* District Centre;
- The Adamstown Station access road adjoining the railway line as a haul road;
- The works to upgrade the existing Lucan-Esker and Lucan-Low Level pump stations (not illustrated);
- Construction of Primary School #1 with a minimum of 8 no. classrooms of permanent construction (illustrated) or, construction of a Secondary School with a minimum of 12 no. class rooms of permanent construction;
- Community Centre #1 (not illustrated);
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

Figure 4.5. Phase 3

Phase 3 1,801-2,600 dwellings

4.2.9 Phase 3 supports consolidation of development on the east of the SDZ lands and requires completion of:-

- Both sides of the Adamstown Link Road i.e. the road linking Adamstown to the ORR to provide a two-way dedicated QBC busway in addition to a two-way single carriageway road;
- The dedicated QBC busway on the main Adamstown Station Access Road;
- A District Centre busway loop road adjoining Adamstown Station;
- The Adamstown Station access road adjoining the railway line;
- The eastern section of the Loop Road around Adamstown District Centre;
- Construction of a leisure centre with a swimming pool and all-weather pitch at the flexible use building location beside the site identified as Primary School #1;
- The northern section of Loop Road #2 to replace the existing western section of Tandy's Lane;
- Part of the northern section of Loop Road #3 as a haul road to facilitate construction of the Tobermaclugg Pump Station;
- Tobermaclugg pump station, associated overflow management measures and rising mains (pump station illustrated);
- Works to upgrade Tobermaclugg Stream between the SDZ lands and the N4 to include upgrading the Tubber Lane surface water drain, regrading sections of the channel and enhancing the capacity of the N4 culvert (not illustrated);
- Adamstown District Centre phase #1, to include a minimum of 3,000 sq.m. of retail and retail services;
- Community Centre #2 (not illustrated);
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata Childcare Provision as per the Planning Scheme (not illustrated);

Phase 4 2,601-3,400 dwellings

4.2.10 Phase 4 allows development to extend to the centre and northwest of the SDZ lands and requires completion of:-

- Part of the northern section of Loop Road #3;
- A new junction on the R403 Celbridge Road;
- Both the Celbridge Road Link and the remaining section of the northern part of Loop Road #3 as haul roads;
- The northernmost, central and southernmost sections of the central spine of Loop Road #2 and provision of a dedicated QBC Busway;
- Two cross links between Loop Roads #1 and #2, one of which comprises the northeastern section of the Loop Road around Adamstown District Centre;
- Construction of a Secondary School with a minimum of 12 no. classrooms of permanent construction (illustrated) if not constructed as part of Phase 2, or, construction of Primary School # 1 with a minimum of 8 no. classrooms, of permanent construction;
- Tandy's Lane Park including at least one playing field and a children's playground;
- Community Centre #3 (not illustrated);
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

If the full quota of development permissible in phases 1A to 4, i.e. all 3,400 dwelling units, occurs east of Adamstown Railway Station, completion of part of the northern section of Loop Road #3, of a new junction on the R403 Celbridge Road and of both the Celbridge Road Link and the remaining section of the northern part of Loop Road #3 as a haul road, are not required as part of phase 4

Figure 4.6. Phase 4

Phase 5 3,401-4,200 dwellings

4.2.11 Phase 5 ensures further links between the north and the south of the SDZ lands and requires completion

- All elements of Phase 4 not previously completed, as allowed for above;
- The doubling of the Dublin-Kildare suburban railway line or such other works to upgrade the rail line as part of the Kildare Route Project to accommodate a minimum of 3,000 peak hour direction trips serving Adamstown*;
- Adamstown Railway Station and surface Park and Ride car park to a finished standard;
- A District Centre loop road west of Adamstown Station;
- The western section of the Loop Road around Adamstown District Centre as a haul road;
- The northwestern section of Loop Road #3 as a haul road;
- Adamstown District Centre phase #2, to include a minimum of a further 5,000 sq.m. of retail and retail services;
- Further assesment of sewerage works and the works to upgrade the 9B sewer if required at this phase or a later one specified by the Development Agency arising from the assesment (not illustrated);
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

Figure 4.7. Phase 5

*** To provide for rail infrastructure such as would accomodate a capacity of 3,000 peak hour trips in each direction, i.e.**
- a.m. 3,000 peak hour trips from Adamstown in the direction of the city centre
- p.m. 3,000 peak hour trips to Adamstown from the direction of the city centre.

Figure 4.8. Phase 6

Figure 4.9. Phase 7

Phase 6 4,201-5,000 dwellings

4.2.12 Phase 6 supports further consolidation of development on the east and centre of the SDZ lands and requires completion of:-

- A further cross link road between Loop Roads #1 and #2;
- A link road south from Loop Road around Adamstown District Centre to the west of Adamstown Station;
- Construction of Primary School #2, with a minimum of 8 no. classrooms of permanent construction;
- Community Centre #4 (not illustrated);
- The Central Boulevard Urban Park;
- Enterprise Centre #1 (not illustrated);
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

Key

- Access Only Cul De Sac
- Existing Road
- Finished Road
- Haul Road
- Upgrade Existing Road/Footpath
- Railway Station Operational
- Park and Ride Operational
- Schools / Civic Building
- Dedicated QBC Busway
- Flexible Use Building (to illustrate District And Local Centres)
- Pump Station
- Major Park
- Surface Park and Ride Complete
- Railway Station Complete
- Four Tracking Of Railway

Phase 7 5,001-5,800 dwellings

4.2.13 Phase 7 allows development to extend to the west of the SDZ lands and requires completion of:-

- The Celbridge Link Road;
- All but the southernmost section of Loop Road #3;
- Construction of Airlie Park including at least two playing fields, a children's playground, four tennis courts, four five-a-side all-weather playing pitches and permanent changing and shower facilities. Playing fields within the Planning Scheme area shall be laid out and sized so as to accommodate Gaelic games or soccer or other field games as appropriate;
- Tandy's Lane Local Centre;
- Community Centre #5 (not illustrated);
- The Central Civic building in Adamstown District Centre;
- The provision of surface water works required for the northeast and southeast drainage catchments on a pro-rata basis in the context of the overall catchment surface water drainage strategies (not illustrated). These works must be completed in full by Phase 7;
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

Phase 8 5,801-6,600 dwellings

4.2.14 Phase 8 allows development to continue on the west of the SDZ lands and requires completion of:-

- The southernmost section of Loop Road #3;
- A cross link road between loop roads #2 and #3 to the south of Airlie Park;
- A link road south from the northern section of Loop Road #3 to intersect with the cross link south of Airlie Park;
- Construction of Primary School #3, with a minimum of 8 no. classrooms of permanent construction;
- Tobermaclugg Local Centre;
- Community Centre #6 (not illustrated);
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

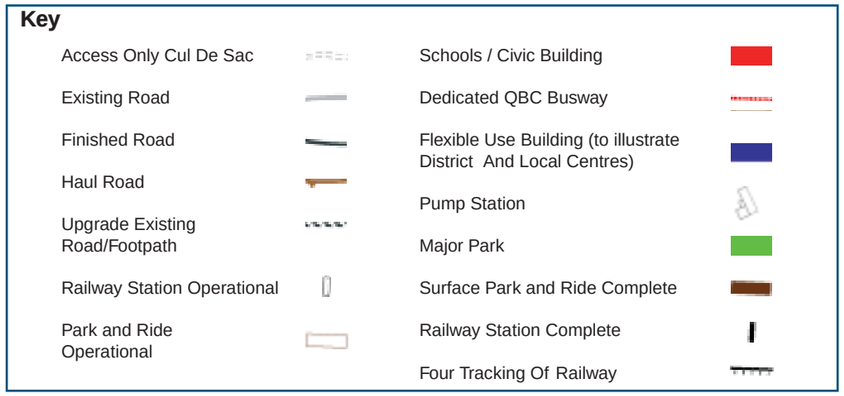


Figure 4.10. Phase 8

Phase 9 6,601-7,400 dwellings

4.2.15 Phase 9 supports further consolidation of development on the centre and east of the SDZ lands and requires completion of:-

- A central north-south link between the two cross links joining Loop Roads #2 and #3;
- Adamstown District Centre phase #3, to include a minimum of a further 7,625 sq.m. of retail and retail services;
- Construction of Tobermaclugg Park including at least one children's playground;
- Community Centre #7 (not illustrated);
- Pro-rata childcare provision as per the Planning Scheme (not illustrated);

Figure 4.11. Phase 9

4.2.16 Phases 10-13 (not illustrated) comprise completion of the development of Adamstown, including intensification up to the permitted Planning Scheme ceiling of 10,150 dwelling units and require:-

Phase 10 7,401-8,200 dwellings

- Enterprise Centre #2;
- Pro-rata childcare provision as per the Planning Scheme;

Phase 11 8,201-9,000 dwellings

- Community Centre #8;
- Pro-rata childcare provision as per the Planning Scheme;

Phase 12 9,001-9,800 dwellings

- Community Centre #9;
- Pro-rata childcare provision as per the Planning Scheme;

Phase 13 9,801-10,150 dwellings

- Community Centre #10;
- Pro-rata childcare provision as per the Planning Scheme.

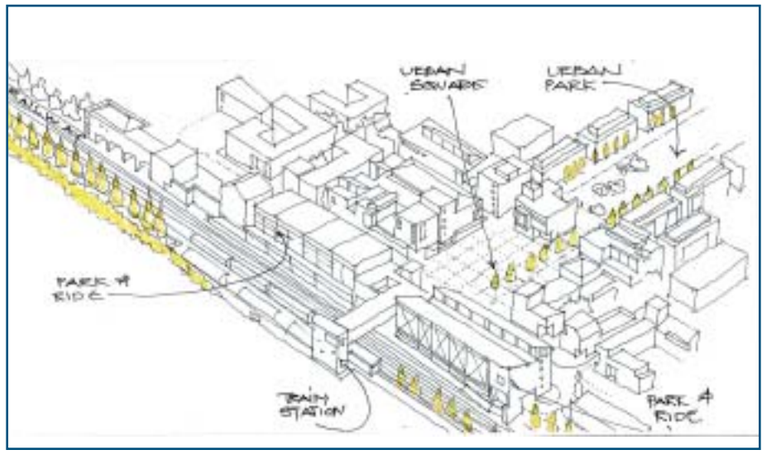


Figure 4.12. Concept District Centre

4.3 Operation

4.3.1 The proposed sequential phasing schedule operates as follows:-

- There are a certain amount of works, i.e. infrastructure, services, facilities and/or amenities required for each phase of residential development, i.e. per 800 dwelling units;
- Any required works may be brought forward and completed sooner than scheduled. However, unless all required works for a particular phase of residential development are completed, the total number of dwelling units that may be permitted will not increase beyond that phase;
- Certain required works may take longer than one phase of residential development to complete, in which case it may be necessary to seek planning permission for the works sooner than the phase of dwellings for which they are required;
- There is no limit on the amount of works i.e. infrastructure, services, facilities and amenities that may be subject to any single planning application;
- There is no limit on the number of dwellings that may be included in any single planning application, but any permission granted will be subject to a sequence of phasing that accords with this Planning Scheme;
- All planning applications submitted for either works and/or dwellings within the Adamstown Planning Scheme area shall include a schedule detailing exactly the required works i.e. infrastructure, services, facilities and amenities and number, type and location of dwellings completed to date;
- Prior to any phase of development, a schedule detailing compliance with the requirements of the previous phase or phases of development as appropriate, together with a report assessing the implications of the cumulative impacts of the proposed phase or phases of development as appropriate, with particular reference to traffic and transportation and drainage (including flooding), shall be submitted to the Planning Authority, the outcome of which shall influence, if necessary, the detailed design of the elements of the phase or phases for which planning permission is to be sought;
- Dwelling location is not specified for any phase of residential development and is flexible. The required sequence of phasing and the min-max criteria detailed in the Planning Scheme will result in a gradual east-west shift across the Planning Scheme lands.

4.3.2 A mid-term review of the Planning Scheme shall be undertaken as part of phase six, i.e. before phase seven can commence, to ensure that the required infrastructure and facilities detailed in phases 1-5 of the Planning Scheme have been provided and are operational and that the overall Scheme is progressing and continues to progress in a satisfactory manner.

4.3.3 To facilitate ongoing monitoring, evaluation and implementation of the Planning Scheme, it is proposed to establish: -

1) A Steering Group, which shall comprise representatives of the Elected Members and Officers of the Planning Authority/ Development Agency together with representatives of relevant statutory agencies and Government Departments;

2) A Project Implementation Team to comprise relevant technical and administrative staff of the Planning Authority/ Development Agency together with other relevant technical and administrative representation as may be applicable from time to time.

4.3.4 Haul roads (construction roads) are a key feature of the proposed phasing sequence and will ensure that heavy construction vehicles do not have to use the existing local road network or the local Adamstown road network as it is completed. For the purposes of this Planning Scheme, a haul road described as a drained and hard-surfaced (with clause 804 or similar) road that is open only to site/ construction traffic.

4.3.5 It is clarified that required public transport provision relates to the provision of land, facilities and infrastructure. It is further clarified that required schools are to be provided with associated toilets and staff rooms etc., and to a standard specified by the Dept. of Education.

4.3.6 In some cases, the completion of works required to facilitate residential development in a phased manner within the Adamstown SDZ are outside the direct control of either the SDZ landowners or the Development Agency, South Dublin County Council.

4.3.7 Such works include major upgrades to the strategic rail, road and drainage network, the provision of rail and bus services and the provision of school buildings and teaching staff.

4.3.8 To ensure phased development in accordance with proper planning and sustainable development it is necessary to programme these works into the schedule of phasing. If not carried out, further development will not be permitted.

4.3.9 It shall be a requirement of this Planning Scheme to pursue the development of a Section 49 Planning Scheme to support the funding of necessary infrastructure, facilities and amenities to serve Adamstown.

INFRASTRUCTURE, SERVICES, FACILITIES AND AMENITIES	PHASE	1	1B	2	3	4	5	6	7	8	9	10	11	12	13
	DWELLING NO	0 - 500	501 - 1,000	1,001 - 1,800	1,801 - 2,600	2,601 - 3,400	3,401 - 4,200	4,201 - 5,000	5,001 - 5,800	5,801 - 6,600	6,601 - 7,400	7,401 - 8,200	8,201 - 9,000	9,001 - 9,800	9,801 - 10,150
Upgrade R120 Newcastle Road/Footpath															
Adamstown Link Road as a haul road															
New junction & initial section of Main Adamstown Station Road															
Initial section of Loop Road #1															
The Lucan-Palmerstown High Level Water Supply Scheme															
Pro - rata creche provision as per the Planning Scheme															
The Outer Ring Road between the N7 and N4															
Adamstown Link Road as a two-way single carriageway															
Main Adamstown Station Road															
Adamstown Railway Station and surface park & ride to basic standard															
Loop Road #1 as a haul road															
Surface water attenuation works for north east & southeast catchments															
Loop Road #1															
Link Road to rear of Superquinn															
Adamstown Station access road adjoining railway line as haul road															
Upgrade Lucan-Esker and Lucan-Low Level pump stations															
Primary School #1 or Secondary School															
Community Centre #1															
Adamstown Link Road as two-way busway & two-way road															
Busway on main Adamstown Station Road															
Adamstown Station access road adjoining railway line															
Eastern section of Loop Road around District Centre															
Northern section of Loop Road #2															
Part of northern section of Loop Road #3 as a haul road															
Tobermaclugg pump station and rising mains															
Works to upgrade the Tubber Lane surface water drain and N4 culvert															
Adamstown District Centre phase #1															
Community Centre #2															
Part of northern section of Loop Road #3															
New junction & Celbridge Road Link & part of Loop Road #3 as haul roads															
Loop Road #2															
QBC busway on Loop Road #2															
Two cross links between Loop Roads #1 and #2															
Secondary School or Primary School #1															
Tandy's Lane Park															
Community Centre # 3															
All elements of Phase 4 not previously completed, as allowed for above															
Doubling of Dublin-Kildare railway line or equivalent															
Adamstown Railway Station and surface park & ride to a finished standard															
Western section of District Centre Loop Road & northwestern section of Loop Road #3 as haul roads															
Adamstown District Centre phase #2															
Further assesment of sewage works and the works to upgrade 9B sewer if required															
Cross link between Loop Roads #1 and #2 & link road south from District Centre to west of Adamstown Station															
Primary School #2															
Community Centre #4															
Central Boulevard Urban Park															
Enterprise Centre #1															
Celbridge Link Road															
Loop Road #3															
Airlie Park															
Tandy's Lane Local Centre															
Community Centre #5															
Central Civic building															
Cross link road between Loop Roads #2 and #3 and link road south from Loop Road #3															
Primary school #3															
Tobermaclugg Local Centre															
Community Centre #6															
Central north-south link															
Adamstown District Centre phase #3															
Tobermaclugg Park															
Community Centre #7															
Enterprise Centre #2															
Community Centre #8															
Community Centre #9															
Community Centre #10															

Figure 4.13. Planning Scheme Phasing Schedule by Number of Units

4.4 Timing

4.4.1 Time limits are not applied to the phasing of development in the Adamstown SDZ. This is to facilitate flexibility and allow for changing market conditions over time. The required sequence of phasing has been formulated with regard to the capacity of the construction industry in the Lucan area and the likely timescale for completion of major infrastructural projects.

4.4.2 During the period 1996-2001, in excess of 1,000 dwellings per annum were constructed throughout the Lucan area. This figure represents historically high levels of output, but could feasibly be exceeded in the Adamstown SDZ.

4.4.3 In reality, it is likely that there will be one or more peaks or troughs in annual dwelling completions in Adamstown. One phase of development, or 800 dwellings, is therefore regarded as a reasonable estimate of the annual average level of dwelling completion. Development is likely to commence before the end of 2004 with the first dwellings completed in 2005.

4.4.4 The estimated annual average figure of 800 dwellings per annum is consistent in the context of the timescale for completion of major infrastructural projects. The Outer Ring Road (ORR) is scheduled for completion before the end of 2004 and the proposed phasing sequence requires that not more than 1,000 dwellings may be completed before a single carriageway link to the ORR is in place.

4.4.5 Similarly, four-tracking of the Dublin-Kildare Railway Line is scheduled for completion to Adamstown by 2008 and the proposed phasing sequence requires that not more than 4,200 dwellings may be completed before four-tracking is in place.

4.5 SDZ Planning Applications

4.5.1 All planning applications submitted for development within the Adamstown SDZ will be given a specific 'SDZ' prefix in addition to the normal planning register reference number, in order to identify their Strategic Development Zone status.

4.5.2 All 'SDZ' planning applications must be assessed in the context of the approved Planning Scheme. Where proposed development is not consistent with the approved Planning Scheme, planning permission will be refused and where consistent with the approved Planning Scheme, planning permission will be granted.

4.5.3 In determining whether planning permission should be refused or granted, development proposals within the Adamstown SDZ will be considered under the following principal headings:-

1) Phasing
2) Development Area Characteristics
3) Overall Design Detail

The key planning considerations under each heading are summarised on the adjoining flowchart.

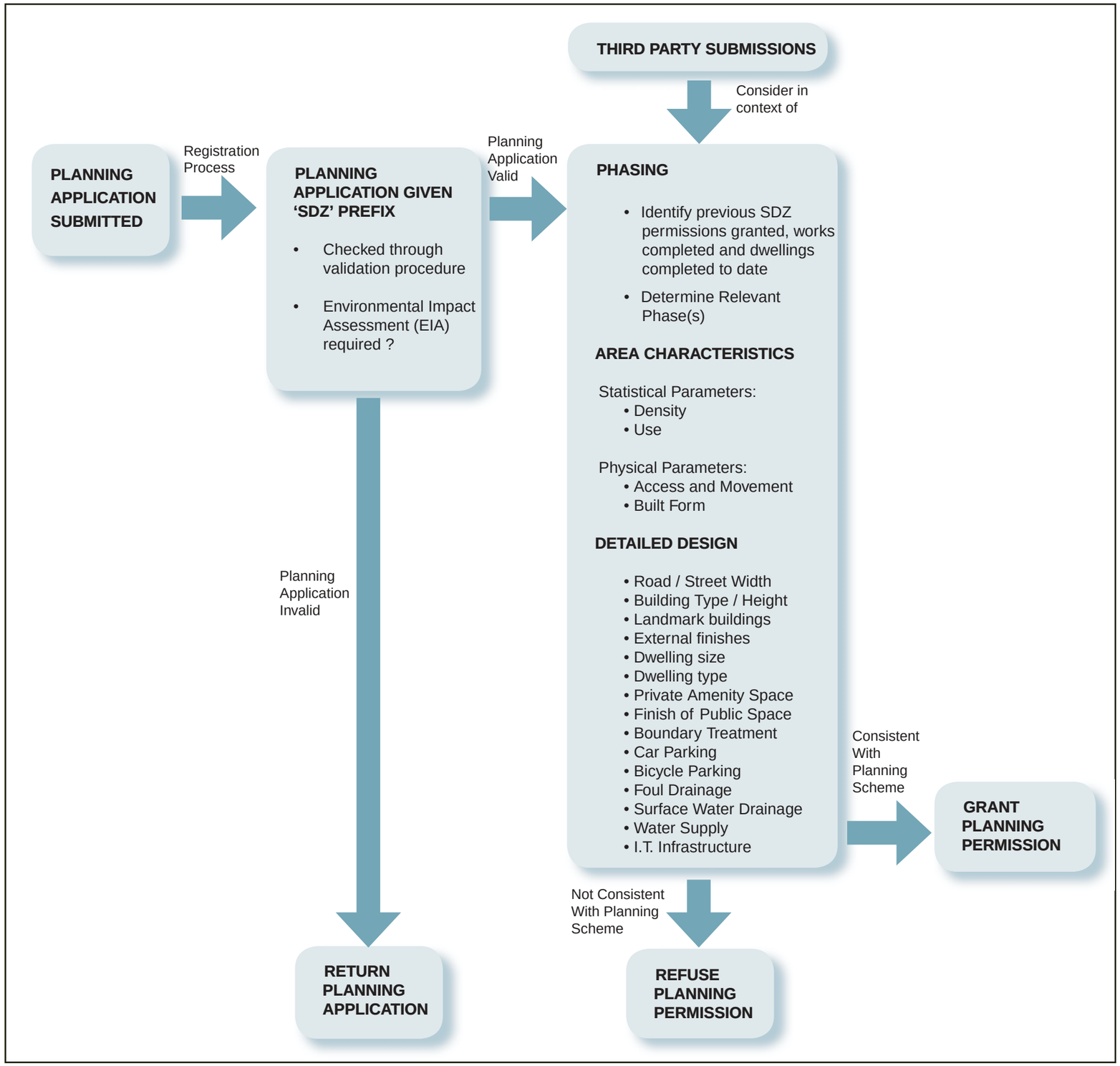


Figure 4.14. SDZ Planning Application Process

5.0 Environmental Appraisal

5.1 Introduction

5.1.1 Context

This section of the Planning Scheme comprises an Environmental Appraisal and details information relating to the likely significant effects of the development on the environment.

In accordance with the Planning and Development Act 2000, a Strategic Development Zone (SDZ) Planning Scheme must include

"Proposals relating to minimising any adverse effects on the environment, including the natural and built environment, and on the amenities of the area". In addition the Planning Scheme must also include "information on any likely significant impacts on the environment of implementing the Planning Scheme as prescribed under Section 177 of the Planning and Development Act 2000 in so far as such information is relevant to the detail contained in the scheme".

A full statutory Environmental Impact Statement (EIS) is not required for an SDZ under the above Act. The completion of the Planning Scheme does not however preclude or negate the necessity for an EIS to be prepared for individual developments within the SDZ if they are prescribed above the threshold requirements listed in the Schedules to the 'Environmental Impact Assessment' (EIA) Regulations implementing EC Directives 85/337/EEC ad 97/337/EU.

5.1.2 Environmental Appraisal Scope

The scope of this Environmental Appraisal is to present an appraisal of the 'likely significant cumulative' impacts of the full development of the SDZ. Where applicable, impacts during construction are also discussed, together with recommendations on mitigation measures as appropriate.

The Environmental Appraisal Report is divided into the following sections: -

- Services and Infrastructure – Section 5.2
- Traffic and Transportation – Section 5.3
- Soils and Geology – Section 5.4
- Air Quality – Section 5.5
- Noise and Vibration – Section 5.6
- Landscape and Visual – Section 5.7
- Flora and Fauna – Section 5.8
- Archaeology and Cultural Heritage – Section 5.9
- Socio-Economic Impacts – Section 5.10
- Interaction of Effects and Cumulative Impacts– Section 5.11
- Summary and Conclusions– Section 5.12

5.1.3 Terms of Reference

The Environmental Appraisal undertaken has been carried out in accordance with the 'Brief for Consultants to prepare a Strategic Environmental Appraisal for Adamstown SDZ Planning Scheme', issued by South Dublin County Council in June 2002. Reference has also been made to the 'Department of the Environment and Local Government 'Guidelines on Preparing Planning Schemes for Residential Development in Strategic Development Zones'.

5.1.4 Planning and Policy Context

Section 1.6 of the Planning Scheme outlines the main strategic planning and policy guidelines applicable to the Planning Scheme for Adamstown. This includes the following documents:-

- Planning and Development Act 2000;
- South Dublin County Development Plan 1998;
- Adamstown Local Area Plan 2001;
- Strategic Planning Guidelines for the Greater Dublin Area 1999;
- A Platform for Change – DTO Strategy 2000-2016;
- Residential Density Guidelines for Planning Authorities 1999.

The Planning Scheme for Adamstown is in accordance with the above documents. In addition, the following planning and policy guidelines are considered in this section:-

- Sustainable Development – A Strategy for Ireland 1997;
- National Development Plan 2000-2006;
- National Climate Change Strategy 2000.

5.1.4.1 Sustainable Development – A Strategy for Ireland 1997

The central aim of the Strategy is to provide a comprehensive analysis and framework that will promote sustainable development in Ireland. It also supports the commitment that Ireland made to sustainable development at the Earth Summit in Rio in 1992. One of the main objectives of the Adamstown SDZ development is to promote sustainable development principles and in particular to:-

- Integrate strategic economic and social planning
- Promote ecological principles, environmental upgrading and open spaces
- Promote sustainable transport - Improve accessibility and design flexibility
- Encourage use of energy efficient building practices

The Planning Scheme for Adamstown thus conforms to the stated objectives of the above Strategy.

5.1.4.2 National Development Plan 2000-2006

The central aim of the National Development Plan 2000-2006 (NDP) is to implement public policies, which will ensure the sustainability and consolidation of Ireland's recent economic growth. This is based on the development needs of the country and on achieving an appropriate balance between development and environmental conservation. The key policies of the NDP, which relate to the Planning Scheme for Adamstown, include continuing sustainable national economic and employment growth, fostering balanced regional growth and promoting social inclusion. The Planning Scheme for Adamstown aims to create a sustainable and vibrant community in a town with an excellent public transport system in addition to providing a broad mix of residential, employment and district centre uses. Thus the Planning Scheme for Adamstown conforms to the stated objectives of the National Development Plan. Several planned transport infrastructure projects being funded by the NDP, including improvements to the road and rail network will directly impact on and facilitate the proposed site. These projects are outlined in greater detail in Section 5.3.

5.1.4.3 National Climate Change Strategy 2000

The National Climate Change Strategy provides a framework for achieving greenhouse gas emission reductions, and is an essential step in preparing the country for the ratification of the Kyoto Protocol. The National Climate Change Strategy is relevant to the Planning Scheme for Adamstown in the areas of energy usage and transportation. The Planning Scheme for Adamstown aims to promote a high quality architectural design of buildings and spaces in accordance with the principles of sustainable development. In relation to the transport sector, the Strategy recognizes that a modal shift is necessary (i.e. increased use of public transport instead of the private car). One of the main objectives of Planning Scheme for Adamstown is to facilitate an excellent system of public transport as an attractive and reliable alternative to car use. It also aims to promote both walking and cycling as desirable and realistic alternatives to car use. Thus the Planning Scheme for Adamstown conforms to the stated objectives of the National Climate Change Strategy.

5.2 Services and Infrastructure (Water Supply, Surface Water, Foul Drainage, Solid Waste)

5.2.1 Introduction

This section examines the potential impacts on services and infrastructure associated with the proposed development.

5.2.2 Methodology

Reference is made to a number of studies prepared for the Adamstown Area including the following:

Report Title	Author	Date
Adamstown SDZ - Interim Design Report on Roads and Services	PH McCarthy and Partners	2002
Review of Interim Design Report on Roads and Services	Arup Consulting Engineers	2002
Adamstown SDZ – Public Private Partnership - DMDS 9B Foul Sewer Modelling	PH McCarthy and Partners	2001
Review of DMDS 9B Foul Sewer Modelling Report	Arup Consulting Engineers	2001
Drainage Review Study – Final Report - Lucan-Clondalkin (9B) Catchment	MC O'Sullivan & Co. Ltd.	1998
Adamstown Area Action Plan – Drainage Review 1999	PH McCarthy and Partners	1999
Outer Ring Road EIS	Arup Consulting Engineers	2001

5.2.3 The Existing Environment and Proposed Services Infrastructure

Existing and proposed services are detailed in Section 2.5. The site is currently "green-field" in nature thus no water supply, surface water or foul sewer infrastructure is present.

5.2.4 Evaluation of Potential Impacts

5.2.4.1 Construction

There is a potential for impacts during the construction of the development. With the provision and implementation of industry standard construction quality control assurance however, there is minimal risk of any flooding potential or groundwater/surface water pollution incidents occurring. Materials that will require disposal may include machinery oils, general debris, excess subsoil and food waste.

5.2.4.2 Operation

Water Supply

There is no existing water supply infrastructure within the Adamstown area. The proposed water supply network is described in Section 2.5. The Lucan/Palmerstown High Level Water Supply Scheme (LPHLWSS) will be adequate to provide the additional water supply required for the development. The impact of connecting the new network to existing mains may result in pipe bursts due to increased pressures and the possible reversal of flows across existing meters and district metering. Once the new water network is fully installed it is envisaged that any initial technical difficulties will be resolved.

Surface Water

There is no existing surface water drainage infrastructure within Adamstown. Adamstown is subdivided into three surface water drainage sub catchments; Tobermaclugg, North East Griffeen Tributary and South East Griffeen Tributary (Figure 5.4). The proposed surface water drainage network includes the following: -

- Upgrading the capacity of the existing channel of the Tobermaclugg Stream via new pipework along Tubber Lane.
- Attenuation of storm water in the North-East Griffeen Tributary catchment via underground storage tanks which will then drain to an existing pipe at the rear of Superquinn shopping centre on Newcastle Road.
- Attenuation of storm water in the South-East Griffeen Tributary catchment via underground storage tanks which will then drain via an existing drain under the Newcastle Road.

The proposed surface water drainage network is further detailed in Section 2.5.

Potential impacts from the development could include pollution of existing watercourses and culverts from surface water run-off.

Subject to the agreement of the Eastern Regional Fisheries Board and the Environmental Service Department of South Dublin County Council, some channels of the existing watercourses within the development lands may be permanently diverted and utilised as landscape features within green areas.

Foul Water

There is no existing foul sewerage infrastructure within Adamstown. The proposed foul water sewerage network is detailed in Section 2.5. This includes building a new pumping station at Tobermaclugg to facilitate the Tobermaclugg sub-catchment and upgrading the sewer/ pumping station network in the area. The South-East sub-catchment will be drained via the Lucan-Esker Pumping Station, which will be upgraded to facilitate the proposed development. The North-East sub-catchment will be drained via the Lucan Low Level Pumping Station, which will also be upgraded. In addition, the 9B main gravity sewer will be upgraded. The proposed foul water infrastructure will be adequate to accommodate the proposed development, however introduction of screening facilities at both new and existing pumping stations could potentially lead to risk of odour problems.

Solid Waste

The development of Adamstown will lead to increased waste generation and requirement for disposal of this waste. The main waste streams associated with a development of this nature, once construction is finished will generally be of domestic or commercial wastes.

5.2.5 Mitigation Measures

Water Supply

The proposed water supply infrastructure will be adequate to accommodate the development.

Surface water

A number of measures are proposed to alleviate the flooding along the Tobermaclugg Stream from the Backstown Stream include replacing the small diameter culverts with larger culvert sections, regrading and increasing the existing channel size to increase capacity along Tubber Lane and augmenting the capacity of the culvert under the N4. In addition, a complete topographical survey of the Griffeen Tributary and Tobermaclugg Stream downstream of the development will be carried out. This will further lead to the development of a hydroworks model to facilitate the detailed assessment of flood alleviation and attenuation requirements and any necessary adjustments to the storm water drainage master plan. Storm water generated in both the North East and South East Griffeen tributary catchments will require attenuation due to the limited available capacity of the existing down steam pipework. The provision of underground storm water storage tanks will to ensure that the downstream capacity of the Griffeen stream is not exceeded.

Adequately sized hydrocarbon interceptors will be installed to reduce inputs of pollutants and suspended solids into the surface water drainage system. Catchpits will be provided upstream of each storage facility within the development to prevent the discharge of sediments and other settable matter into the water courses.

Foul Water

Any odour problems associated with the proposed screening measures will be resolved through the detailed design and development of Operation and Maintenance procedures.

Solid Waste

Subsoil from excavations will be reused on site where possible but there may be excess material to be disposed of off-site. These materials will be disposed of or recovered, in accordance with the Waste Management Act 1996 and the Waste Management (Landfill Levy) Regulations 2002 to licensed landfills or waste recovery facilities. A regular programme of site tidying will be established to ensure a safe and orderly site. Scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind.

In terms of refuse and commercial waste, the services of South Dublin County Council (SDCC) and the private sector will be required to remove domestic refuse. At present the Council operates an Engineered Landfill for baled waste at Arthurstown, Co. Kildare. The disposal system will be designed to facilitate the segregation and separate collection of recoverable wastes if required.

Every effort will be made to encourage reduction and recycling of waste at Adamstown. South Dublin County Council, as part of its policy to foster and encourage recycling schemes, has made areas available at the Ballymount Civic and Amenity Facility for recycling facilities. These include facilities to recycle newspapers, light cardboard, magazines, aluminium and tin cans. A facility for the reception of green waste for composting was opened at Esker Lucan in 2001.

The Council also contributes to Rehab Recycling Partnership in relation to the placing of Bottle Banks at various locations throughout South Dublin, and supports Recoverable Resources Ltd. which is a can recycling venture. Support is also given to a textile recycling enterprise. It is envisaged that all the above recycling initiatives will be incorporated into the Adamstown SDZ.

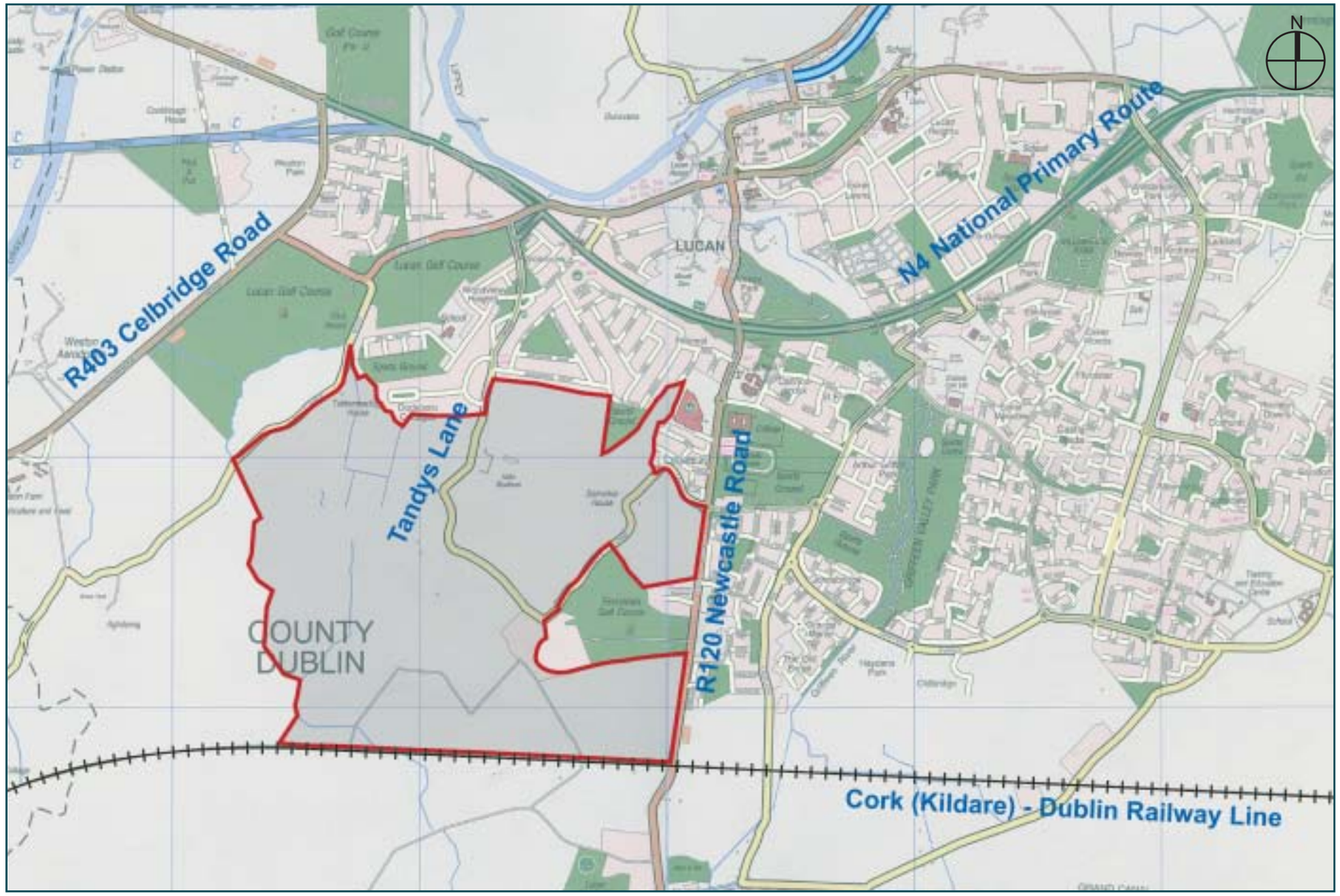


Figure 5.1. Existing Transport Infrastructure

5.3 Traffic and Transportation

5.3.1 Introduction

This section assesses the traffic and transport impacts of the development within the Adamstown SDZ Scheme and on the surrounding area. A review of the existing transport infrastructure in the area is initially presented. A review of transport elements of the proposed development, together with planned transport infrastructure servicing the development, is then outlined. Impacts of the Adamstown SDZ Area development are then presented, together with mitigation measures and recommendations on phasing and implementation as appropriate.

The SDZ Planning Scheme places a significant emphasis on the promotion of sustainable balanced transport objectives through the provision of new public transport links and improvements to public transport capacity. The area will also be serviced by planned improvements to the local (development proposals) and strategic road network in the vicinity.

5.3.2 Methodology

The traffic and transport assessment has been based on a number of information sources as follows: -

- Proposals outlined in the 'Adamstown Local Area Plan - July 2001';
- Traffic model prepared by TPI Limited (Adamstown SDZ - Interim Design Report on Roads and Services, PH McCarthy and Partners, 2002);
- Outer Ring Road Traffic Model developed by Arup on behalf of SDCC, updated in October 2002 (the extent of this model includes the proposed Adamstown Area);
- Traffic and transport trip generation is based on the development types and limits set out by the Adamstown Planning Scheme;
- DTO Platform for Change Strategy 2000-2016 (Transport Strategy for the Greater Dublin Area).

5.3.3 The Existing Environment

This section presents a summary of the existing environment in terms of transport infrastructure together with the status of proposals for the Adamstown area contained in the "Adamstown Local Area Plan – July 2001".

Adamstown is currently a 'green-field site' with limited accessibility by road. Existing transport infrastructure in the vicinity of the SDZ Area is presented on Figure 5.1.

Major road infrastructure in the vicinity of the site includes the N4 National Primary Route, approximately 1.5km to the north, and the M50 Motorway, approximately 4.5 km to the west. The R403 Lucan/Celbridge Road, providing access to the N4 via the 'Leixlip Interchange', is located approximately 500m to the north west of Adamstown, while the Newcastle R120 (Lock) Road is located immediately to the east of the area. The site is traversed by 'Tandy's Lane'.

The Kildare (Cork-Dublin) Railway Line is located immediately to the south of the site, with the nearest stations located at Hazelhatch to the southwest and at Clondalkin to the east of the site. This railway line provides inter-city and suburban rail (between Kildare and Dublin) services.

5.3.4 Adamstown SDZ Trip Generation

An assessment of trip generation from the proposed development has been made as presented in Table 5.1 below. This assessment allows for all trips, including car-based trips and public transport trips.

Activity / Trip Generator	Low	High	Medium
No Residential units	8250	10150	9200
Ave household size	2.5	2.5	2.5
Population	20625	25375	23000
% Economically Active	49%	49%	49%
Economically Active	10106	12189	11148
Local employees	25%	25%	25%
Schools area	28395	33635	31015
Schools job rate	0.00139	0.00139	0.00139
School related jobs	39	47	43
Local school jobs	10	12	11
Non-Local school jobs	30	35	32
Supporting uses floorspace (assumes average)	79050	79050	79050
Supporting uses job rate	0.05	0.05	0.05
Supporting uses jobs	3953	3953	3953
Local supporting jobs (60%)	2372	2372	2372
Non-Local supporting jobs (40%)	1581	1581	1581
Total Jobs in area	3992	3999	3996
Total local employees in area	2381	2383	2382
Total local employees outside area	7725	9806	8766
Total non-local employees in area	1611	1616	1613
Commuting jobs outbound	7725	9806	8766
Commuting jobs in bound	1611	1616	1613
% of Commuting Jobs in Peak Hour	64%	64%	64%
AM Peak Hour Commuting Trips Outbound	4944	6276	5610
AM Peak Hour Commuting Trips In bound	1031	1034	1033

Table 5.1 Adamstown SDZ Assumed Trip Generation (Full Development)

Traffic modelling of the area indicates that approximately 60% of road-based trips generated by the SDZ Lands will use the Adamstown Link Road and Outer Ring Road to the east, with the remainder utilising the Newcastle Road and Celbridge Road Link to the west.

As indicated in Section 5.3.1, the SDZ will be serviced by significant public transport links and infrastructure improvements. Allowing for a 50% public transport mode split (in line with the DTO Platform for Change Strategy), when fully developed, approximately 3322 trips in the AM Peak period would be by public transport, the remainder being accommodated on the road network.

The phasing of the SDZ Development will be managed to ensure that appropriate levels of public transport provision are in place for each stage of the development, in order to meet the public transport objectives of the scheme.

Proposed road and public transport infrastructure improvements to service the SDZ lands are detailed in Section 5.3.5 below.

5.3.5 Proposed Transport Improvements

Details of planned road and public transport infrastructure improvements, which will support or facilitate the Adamstown SDZ, are discussed in this section. Planned transport infrastructure in the vicinity of Adamstown is presented on Figure 5.5. The infrastructure improvements indicated are based on the DTO 'Platform for Change (2000 – 2016) Transport Strategy and projects proposed under the National Development Plan and the South Dublin County Development Plan 1998.

Proposed Road Accessibility and Infrastructure Improvements

Development in the Adamstown SDZ will be supported by several major road improvement schemes outside the SDZ lands. Links to these roads, constructed as part of the SDZ development, will provide road and public transport access to Adamstown. Road accessibility to Adamstown will be via the strategic local road network. Planned improvements to the road network will have the effect of dispersing road-based trips to and from Adamstown across a number of north-south and east-west strategic roads.

Table 5.2. provides a list of the major road infrastructure improvements, directly servicing the proposed development, and time scales for planned completion.

Additional planned road schemes that will have an impact on accessibility to Adamstown include the M50 Widening and Junction Improvements Scheme (completion 2006).

Road Improvement Scheme outside SDZ	New Infrastructure / Upgrading	Opening Date	Link Road to Adamstown	Proposed / Existing
Outer Ring Road N81 to N7 and N7 to N4	New Infrastructure / Upgrading Existing Road	2004	Adamstown Link Road 9m wide single carriageway, bus lanes in each direction	Proposed
N4 between M50 and Leixlip Interchange	Upgrading	2006	Newcastle Road and Mills Stream Road	Existing
Celbridge/ Leixlip West interchange on N4	New Infrastructure	End 2002	Celbridge Link Road (to R403 leading to N4) 9m wide single carriageway	Proposed

Table 5.2: Planned Road Improvements

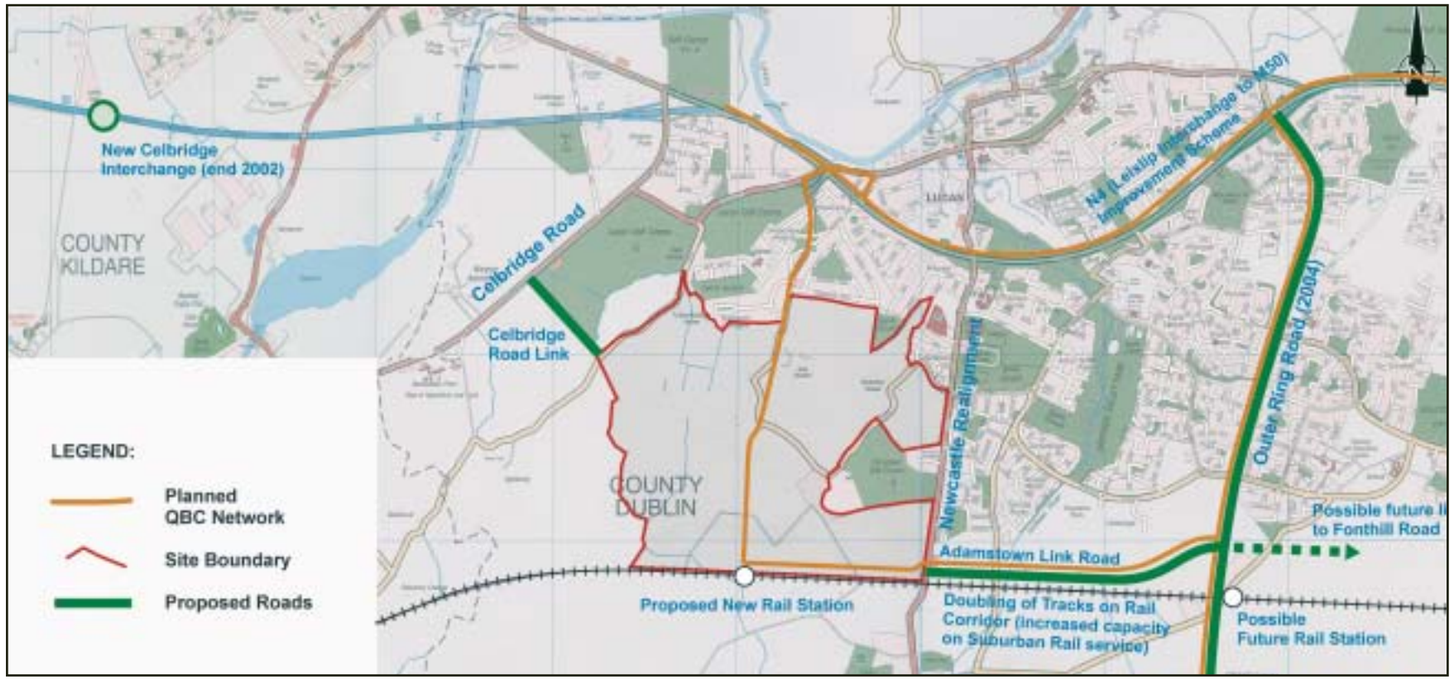


Figure 5.2. Proposed Transport Infrastructure

Suburban Rail

The two most significant elements rail infrastructure development for Adamstown are:

- The provision of a new railway station on the existing two-track railway line at Adamstown post 2003.
- The doubling of existing tracks on the Kildare railway line, scheduled for completion by 2007.

As indicated in Section 2.4 of the Planning Scheme, the Dublin (Heuston Station) to Kildare suburban rail service is currently being upgraded by Iarnrod Eireann. This work is being undertaken as part of a phased programme of improvement.

Stations improvements and additional railcars will increase capacity on the suburban service from 800 passengers per hour in each direction to 3000 passengers per hour in each direction. Proposals to double the tracks (i.e. segregate suburban services from inter-city services) would facilitate an increase in capacity to 8000 passengers per hour in each direction.

The Planning Scheme includes for the provision of a new station at Adamstown. The railway station would facilitate a transport interchange between all modes of transport including rail, bus, car, walking and cycling. Provision will be made for bus and taxi waiting areas, car drop off and car parking.

The development of accessibility to the SDZ lands by rail-based transport, particularly to and from Dublin City Centre, is considered integral to the sustainable development of the area and would reduce the number car-based trips generated by the development. The development of improved links between Heuston Station and Dublin City centre (Bus, Luas and the proposed Heuston – Connolly Rail Inter-connector), planned under the 'DTO Platform for Change Strategy' will significantly improve city centre rail accessibility from Adamstown.

Bus Network / Quality Bus Corridors

It is proposed that the Adamstown SDZ will be serviced by high capacity bus links, through the provision of 'Quality Bus Corridors', connecting to the Greater Dublin Area Quality Bus Network. There are two specific proposals with regard to future QBC access links:

- A busway to the south east of the SDZ between the railway station and the proposed Outer Ring Road QBC.
- A dedicated north-south busway through the centre of Adamstown, via Mills Stream Road, Dodsboro and the Celbridge Road. This will provide linkage to the N4 QBC.

Bus infrastructure within the Adamstown SDZ will be designed to a high standard, in terms of bus stop provision, interaction with pedestrian and cycle facilities and the design of a rail / bus interchange.

The provision of bus links from Adamstown SDZ to the strategic radial (e.g. N4 QBC) and orbital (e.g. ORR QBC) will provide an attractive and viable alternative to car-based trips in the area.

Walking and Cycling

The Planning Scheme provides for public transport and local centres within 5-10 minutes walking distance. Provision will be made for a network of direct, safe, secure and pleasant pedestrian and cyclist routes by all future development proposals. Development within the proposed SDZ, will allow for 'permeable' and direct access routes for cyclists and pedestrians. High quality, safe crossings points will be provided at road interfaces as appropriate. Traffic calming measures within residential areas will be provided as appropriate to create a safe environment for pedestrians and cyclists.

Internal Road Layout

The internal distributor and residential road network within the Adamstown SDZ will be developed in accordance with the guidelines set down in the Planning Scheme (see Section 2.3). A hierarchical road network will be designed to discourage through traffic from residential areas. Road types and cross section requirements, as outlined in the Planning Scheme, have been set to ensure appropriate use for each road type.

Car Parking

Car parking standards set out in the Planning Scheme (see Section 2.4) are designed to provide a balanced approach to dependence on private cars for accessibility to the Adamstown SDZ. The standards outlined are considered to be maximum standards, aimed at promoting sustainable modes of transport, proposed under the Planning Scheme for the SDZ.

5.3.6 Evaluation of Potential Impacts

5.3.6.1 Construction Impacts

Construction traffic would be generated by the following sources:

- Workers on specific development sites within the SDZ
- General materials deliveries
- Removal and disposal of materials off site.

The development of the SDZ Lands will however be undertaken on a phased basis. As such the impact of construction traffic on the surrounding existing local and strategic road network will be dispersed over a long period of time.

Material excavated during site clearance will be reused on site for landscaping as much as is possible, thereby reducing the amount of disposal and generated traffic movement off site.

Each development will be subject to approval of a construction traffic management plan. Access routes for materials deliveries, disposal, etc. will be agreed in advance, so as to prevent unsuitable or residential roads being used.

Construction Traffic Management Plans for development within the SDZ will require the following;

- Details and agreement on proposed construction access routes (site access routes will be confined to the strategic local road network and avoid areas of residential development)
- Agreed methodology for maintenance of access routes (road and wheel washing facilities), including noise and air quality control measures
- Restrictions on working hours adjacent to existing or new residential areas

The completion of the Adamstown Link Road from the Outer Ring Road and the new link road to the Celbridge Road, initially to haul road standard, will also facilitate access for construction traffic and will be utilised as such.

5.3.6.2 Post Development

The complete development of the Adamstown SDZ will generate a significant number of additional trips to the local and strategic road and public transport network. The development will however be facilitated by significant public transport infrastructure provision and linkage.

The development of a new station on the Kildare Railway Line (and Arrow suburban service), together with planned railway capacity improvements will provide a high capacity public transport service for trips into and out of Dublin. Similarly north-south and east-west bus priority links from Adamstown SDZ to the strategic Quality Bus Corridor network will provide an attractive public transport alternative to the private car.

The residual trips generated by the SDZ will be catered for by the local (development proposals) and strategic road network. The existing road network does not have capacity to facilitate increased trips generated by the full development of the SDZ lands. Planned road infrastructure improvements however, will provide sufficient capacity to facilitate the levels of development proposed.

The promotion of public transport, cycling and walking within the development, together with the development of a 'self contained' sustainable community is considered to be a positive impact of the proposed development.

5.3.7 Mitigation Measures

Mitigation of traffic and transportation impacts generated by the Adamstown SDZ will be provided by the development of supporting road and public transport infrastructure and the implementation of demand management policies such as phasing of development.

The planned improvements to the rail infrastructure and proposed new rail station directly servicing the SDZ Lands will have a significant positive impact in terms of mitigating potential impacts on the surrounding strategic road network.

The most significant mitigation measure recommended is the phasing / development control of the Adamstown SDZ Development, based on the programme for completion of supporting road and public transport infrastructure. The development of rail and bus public transport links, together with the supporting road infrastructure outlined, are integral to mitigating traffic impacts of the development on the existing and planned road network.

The implementation of demand management policies, such as the car parking standards outlined and the promotion of sustainable transport modes, will also seek to minimise traffic impacts of the Adamstown SDZ development.

5.4 Geology, Hydrology and Hydrogeology

5.4.1 Introduction

This section assesses the potential impacts of the development on the geology, hydrology and hydrogeology of the area

5.4.2 Methodology

Ground conditions in the area have been interpreted based on desk study information. Reference is made to the Outer Ring Road EIS (2001) and the Geological Survey of Ireland series – *Geology of Kildare-Wicklow Sheet 16*.

5.4.3 The Existing Environment

5.4.3.1 Geology

The Geology of the Adamstown area is characterised by the presence of Carboniferous limestone bedrock overlain by glacial till deposits common to the Greater Dublin Area. Reference to the Bedrock Maps of the "Geological Survey of Ireland" indicates that bedrock in the Adamstown area is referred to as Calp Limestone and can be generally described as dark grey, fine grained, graded limestone with interbedded black, poorly fossiliferous shales. An extract from the Bedrock Geology Map, covering the extent of the area, is reproduced as Figure 5.5. The overlying soils are grey brown podzolics and gleys derived from glacial till of Irish Sea origin with limestone and shale. There are no rock outcrops noted in the area.

5.4.3.2 Hydrology

Adamstown SDZ is currently drained by a number of streams and ditches (Figure 5.4). The Tobermaclugg Stream flows northwards through the western part of the site. The Tobermaclugg Stream is joined by the Backstown Stream on leaving the SDZ and continues along Tubber Lane and under the N4 via a culvert before discharging to the River Liffey in the vicinity of Lucan village. The north-east Griffeen tributary flows in a north-easterly direction across the north-east of the site and later discharges to the main channel of the Griffeen River. The south-east Griffeen Tributary flows east through the south-eastern corner of the site and later discharges to the Griffeen River. The Griffeen River feeds into the River Liffey at Lucan and the Grand Canal is situated to the south of the site. No watercourses in the Adamstown SDZ lands drain into to Grand Canal.

Figure 5.3. Bedrock Geology

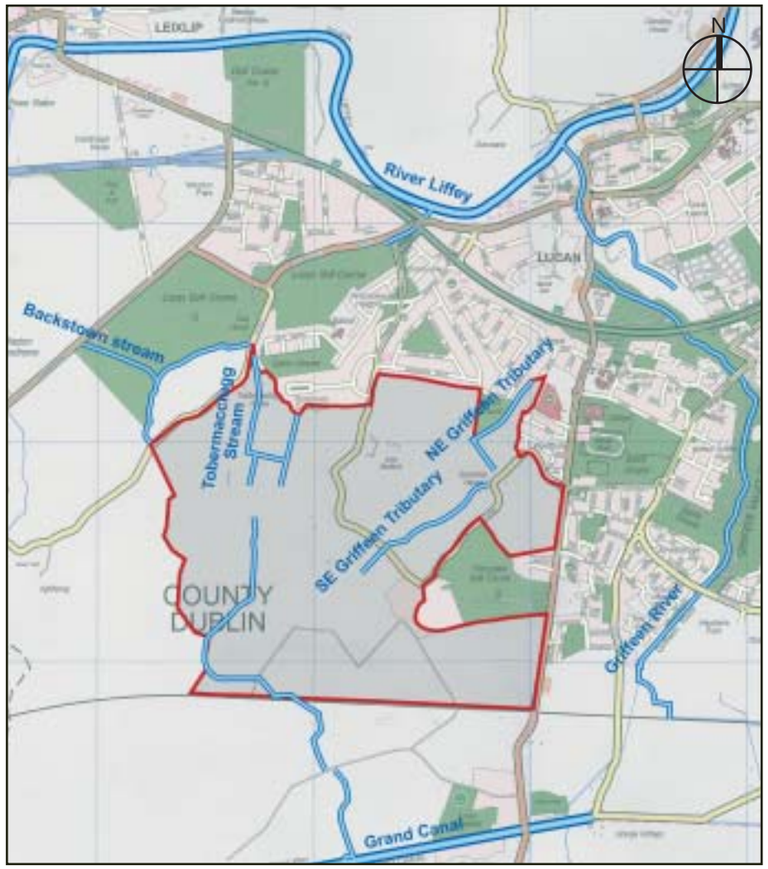


Figure 5.4. Hydrology

5.4.3.3 Hydrogeology

The Calp limestones are generally dominated by low permeability, fine grained and argillaceous limestones and shales. They are generally unproductive but there are certain strata in the South Dublin area that are more permeable and are classified as minor aquifers. They can usually produce yields sufficient to produce a domestic water supply. Reference to the Bedrock Maps of the "Geological Survey of Ireland" indicates that a number of warm springs occur in the Lucan-Celbridge area. The site of Tobermaclugg Holy Well was examined during the archaeological investigation (Section 5.9). However, water temperatures were not recorded during the investigation and no records were found to indicate that the well originates from a warm spring. The area was wet and marshy and appeared to be subject to periodic flooding.

The overlying quaternary boulder clays generally act as an "aquaclude" (confining layer) to the underlying bedrock. Perched pockets of water-saturated gravels may occasionally be encountered within the boulder clays.

5.4.4 Evaluation of Potential Impacts

5.4.4.1 Construction

It is envisaged that some works will be carried out below the existing ground levels. These works will include site clearance, re-routing of the existing services crossing the site, construction of foundations and installation of new services. Topsoil will be removed as part of the development. However, construction would involve very little excavations other than site clearance and topsoil stripping. There would generally be no dewatering activities required and consequently there would be no alteration of the groundwater table. The lack of excavations would also minimise the potential for impacts on the bedrock geology or pollution of groundwater.

There is the potential for run-off from the development which could cause contamination of watercourses by means of accidental spillages of diesel, etc. and silting as a result of disturbance while upgrading culverts etc. It is also proposed to divert some of the existing watercourses. This may result in pollution or silting.

5.4.4.2 Operation

Following the complete development of this site, it is envisaged that there will be no impact to geology, hydrogeology or hydrology (Section 5.2 deals with potential impacts on services such as surface water and foul water).

5.4.5 Mitigation Measures

- Topsoil will be stockpiled and generally used for landscaping.
- Construction impacts on watercourses will be kept to an absolute minimum by ensuring that good environmental working practices and policies are employed on site. For example, the storage of all fuels would be undertaken in accordance with recognized best practice and remote from sensitive watercourse receptors.
- Diversion of watercourses will be subject to the agreement of the Eastern Regional Fisheries Board and the Environmental Services Department of South Dublin County Council.
- The surface water system will be designed to ensure that it does not contribute to downstream flooding or pollution of watercourses (Refer to Section 5.2).

5.5 Air Quality

5.5.1 Introduction

This section assesses the potential impacts of the development on air quality in the area.

5.5.2 Methodology

Reference is made to previous air quality studies carried out in the surrounding area including those undertaken for the Outer Ring Road EIS and the Wyeth Medica Ireland Biotechnology Campus EIS.

5.5.3 The Existing Environment

In the region of the proposed development, current and projected pollution sources will be dominated by traffic emissions and burning of fuel for space heating. Specifically, these sources will emit pollutants, which are currently of concern due to their effect on human health and their potential to reach significant concentrations in ambient air. The pollutants of concern from these sources include nitrogen dioxide (NO_2), benzene, particulate matter of less than 10-micron size, (PM_{10}), carbon monoxide (CO) and sulphur dioxide (SO_2) due to their potential impact on human health. In addition carbon dioxide (CO_2) and nitrous oxide (N_2O) are of concern due to their potential impact on the climate.

Legislation changes have ensured that levels of black smoke and SO_2 (both historically from home heating) and lead (from leaded petrol), are small fractions of historical levels and now rarely approach the limit values. SO_2, smoke and lead are unlikely to be exceeded at locations such as the current one and thus these pollutants do not require detailed monitoring to be carried out.

Air quality in urban areas is expected to improve generally as a result of reductions of emissions from vehicles (NO_2, benzene CO and PM_{10}) despite increases in traffic volumes over the next few years. This is due to ongoing legislative-driven technical improvements to vehicle engines and emission-controlling devices on vehicle exhausts.

Existing residential areas comprise individual dwellings situated along Tandy's Lane, Dodsboro Road and Tubber Lane Road. Surrounding communities are predominantly low-density suburban housing and include Dodsboro cottages, Hillcrest and Meadowview Grove to the north, Lucan Village to the northeast, and various communities off Newcastle and Lock Road to the east.

A detailed modelling study undertaken for the Outer Ring Road EIS to the east of Adamstown has shown that concentrations of nitrogen dioxide, carbon monoxide, benzene and fine particles (PM_{10}) are currently below the significance criteria. In addition, the study has shown that compared to baseline conditions (year 2002), levels will generally decrease or remain at low levels in future years, as a result of legislation-driven technical improvements. Studies carried out for the Wyeth Medica Ireland Biotechnology Campus EIS indicate a good quality of ambient air in the general area with low levels of emissions from combustion, traffic and industrial sources

5.5.4 Evaluation of Potential Impacts

5.5.4.1 Construction

In common with all large construction sites, there is potential for dust emissions from the proposed development. Construction vehicles, generators etc., would also give rise to some exhaust emissions. These would be of short duration.

5.5.4.2 Operation

There is the potential for a number of emissions to atmosphere once the development is complete. This would include atmospheric emissions from the buildings and from generated traffic.

Emissions from the buildings will be related to the types of uses and occupancy within the development. The proposed development is not expected to generate atmospheric emissions that will require either an air pollution licence or an integrated pollution control licence. Boilers used for heating systems may cause emissions to atmosphere of pollutants including carbon monoxide, carbon dioxide, sulphur dioxide, oxides of nitrogen and particulates. Air conditioning may be required for some non-residential uses and may generate atmospheric emissions.

Road traffic would be expected to be the dominant source of emissions in the vicinity of the scheme. Emissions from particulates as well as nitrogen oxides and hydrocarbons can be considerable along roads, which are heavily congested. Potential receptors of traffic related pollutants would include nearby existing and future residential areas.

5.5.5 Mitigation Measures

5.5.5.1 Construction

Management measures will need to be taken to ensure that dust levels are minimised. Such measures will include the following:

- Dust repression techniques will be used if necessary.
- Site roads and local roads will be cleaned and maintained as appropriate.
- Contractors will be required to use water sprays and a wheel wash facility if necessary.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind.
- Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
- Vehicles delivering material with dust potential will be enclosed or covered with tarpaulin at all times to restrict the escape of dust.
- During movement of soil both on and off site, trucks will be covered with tarpaulin.

5.5.5.2 Operation

Developers will be encouraged to use low polluting means of central heating. Provided that adequate consideration is given to the environmental impact of space heating at the design stage and that heating systems are operated in accordance with principles of best practice or within consent conditions, then the effect of space heating on air quality is not considered likely to be significant. High specification and filtration procedures will be employed to ensure that emissions resulting from air-conditioning will be minimal. Developers will be encouraged to maximise usage of natural ventilation and passive solar ventilation.

Emissions of pollutants from road traffic can be controlled most effectively by either limiting the number of road users or by controlling the flow of traffic. Adamstown has been designed to facilitate the use of public transport as an attractive and reliable alternative to car use and to encourage walking and cycling. The proposed road network has been designed to adequately serve the development whilst discouraging unnecessary through-traffic and to ensure a free flow of traffic (Proposals for transportation are detailed in Section 2.4). As a result of the above measures, the generation of traffic related pollutants would be minimised. The potential pollution from traffic generated by the development will require to be monitored in the same manner as for the rest of the South Dublin County Council area.

It is not anticipated that the nature of the proposed development will lead to significant climate change in the area.

5.6 Noise and Vibration

5.6.1 Introduction

This section assesses the potential impacts of the development on noise and vibration.

5.6.2 Methodology

Information was drawn from assessments for previous studies. This included noise surveys carried out for the Outer Ring Road EIS and the Wyeth Medica Ireland Biotechnology Campus EIS.

5.6.3 The Existing Environment

Land use in the general area is largely agricultural, with increasing residential development and amenity use. There is some light industry and retail development in the surrounding area.

There are a number of noise sensitive property types in the area. Existing residential areas comprise farmhouses and individual dwellings situated along Tandy's Lane, Dodsboro Road and Tubber Lane Road. Surrounding communities are predominantly low-density suburban housing and include Dodsboro cottages, Hillcrest and Meadowview Grove to the north, Lucan Village to the northeast, and various communities off Newcastle and Lock Road to the east.

5.6.4 Evaluation of Potential Impacts

5.6.4.1 Construction

Due to the nature of the activities undertaken on a large construction site, there is potential for generation of considerable levels of noise. The flow of vehicular traffic to and from a construction site is a potential source of relatively high noise levels. Excavators, lifting equipment, dumper trucks, compressors and generators may be in use. The potential for vibration at neighbouring sensitive locations during construction is typically limited to excavation works, piling operations and lorry movements on uneven road surfaces. The more significant of these is the vibration from excavation and piling operations; the method of which will need to be selected and controlled to ensure there is no likelihood of structural or even cosmetic damage to existing neighbouring dwellings.

Due to the fact that the construction programme has been established in outline form only, it is not possible to calculate the actual magnitude of noise emissions to the local environment. However, the impact due to construction activities will be transient in nature.

5.6.4.2 Operation

The potential for noise impact once the development is complete includes noise emissions generated from traffic and car parking and noise emissions generated from electrical or mechanical plant. It is not envisaged that noise generated from electrical or mechanical plant will exceed noise standards or require noise barriers. The development of a hierarchical road network within the Adamstown SDZ will ensure that through traffic is discouraged from residential areas, thereby minimising traffic noise impacts. Similarly, road access to and from Adamstown will be via the appropriate strategic road network.

It is not estimated that there will be any significant sources of vibration once the development is complete.

5.6.5 Mitigation Measures

5.6.5.1 Construction

Construction noise will be controlled in accordance with British Standard 5228: Noise control on construction and open sites, which offers detailed guidance on the control of noise and vibration from demolition and construction activities. Measures will include:

- Appointing a site representative responsible for matters relating to noise and vibration.
- Establishing channels of communication between the contractors/developers, Local Authority and residents.
- Limiting the hours during which site activities likely to create high levels of noise and vibration are permitted.
- Erection of barriers as necessary around items such as generators or high duty compressors.
- All site access roads will be kept even so as to mitigate the potential for vibration from lorries.
- Monitoring typical levels of noise and vibration during critical periods and at sensitive locations.
- Piled foundations may be required. The type of pile used will determine the extent of any vibrations. The piling operation is expected to be of short duration.
- Selection of plant with low inherent potential for generation of noise and/or vibration.
- Siting of noisy/vibratory plant as far away from sensitive properties as permitted by site constraints.

5.6.5.2 Operation

The development of a hierarchical road network and appropriate road access to Adamstown will ensure that traffic noise impacts are minimised. Building design and noise operation guidelines shall be applied to ensure that noise emission standards are adhered to.

5.7 Landscape and Visual

5.7.1 Introduction

This section assesses the potential landscape and visual of the proposed development.

5.7.2 Methodology

Reference has been made to the South Dublin County Development Plan 1998, Adamstown Local Area Plan (2001) and available aerial photography of the area.

5.7.3 The Existing Environment

Land use in the general area is largely agricultural, with increasing residential development and amenity use. There is some light industry and retail development in the surrounding area. The general area is bordered by the village of Lucan to the north, the Cork-Dublin railway line to the south, Tubber Lane Road to the west and the Newcastle and Lock Roads to the east (Figure 5.1.). There is a nine-hole golf course at Finnstown and a public open space with sports fields adjoining Hillcrest Walk, north of the site boundary. Some residential properties are located within the area. These comprise mainly of farmhouses and individual dwellings situated along Tandy's Lane, Tubber Lane Road and Dodsboro Road. Protected structures in the area include two early 19th Century houses at St. Helen's (REF 071) and Somerton (REF 069). Airlie House, although not protected is considered to be of local amenity value (Refer to Figure 5.6 and Section 5.9).

The development lands comprise level pasture fields and lie between the 50m and 70m contours. Land use is predominantly used for agricultural purposes, with potatoes the main crop and a lesser area under wheat. Remaining agricultural land is under grass with individual fields bounded by hedgerows. These field boundaries form an intrinsic part of the landscape. There are a number of mature trees that are listed for protection and preservation in the 1998 County Development Plan. These are mainly concentrated in the vicinity of Tandy's Lane. These trees are shown on Figure 5.5. Two streams are contained within the lands, the Tobermaclugg Stream and a tributary of the Griffeen River.

There are no listed views for preservation in the 1998 County Development Plan in the SDZ area. The development lands are characterised by a descending topography northwards to the Liffey Valley and a gently ascending topography southwards to the foothills of the Dublin Mountains. These mountains provide the most significant landscape features in terms of a point of reference and orientation. Some residential areas adjoining the plan lands currently enjoy a clear and uninterrupted view of the mountains.

5.7.4 Evaluation of Potential Impacts

A temporary visual impact will arise during the construction of the development. This will be associated with general site activity, the movement of vehicles and plant, construction compounds with assorted site huts, fencing, hoardings and construction cranes.

The likely effect of this development will be to create a new town of high to medium density with associated services, road network etc. This will result in a transition from a rural environment to an urban-suburban environment.

The existing perceived character of the development site is of an area of low density agricultural land bounded by hedgerows and interspersed with mature trees. Existing land-use patterns will be removed for the development and thus change the character of the area. However the carefully designed landscape will be created to provide a setting for a contemporary built environment, while attempting to create an appropriate context for existing buildings.

There may be a possible impact on local views of the Dublin Mountains and of protected structures.

5.7.5 Mitigation Measures

Proposals for landscaping and amenities are detailed in Section 2.6. However general mitigation measures would include:

- The remote siting of construction compounds from existing residential developments.
- The erection of a hoarding around the site perimeter during the construction phase to minimise the visual impact of the site works.
- The maintenance of existing established walking routes where possible.
- Landscaping and planting will be designed to encourage the evolution of diverse habitats to support the development of the ecological environment.
- Sensitive architectural design and layout of buildings and spaces to preserve local views.
- Incorporation of existing landscape features into the Planning Scheme.
- The provision of an integrated belt of parks and open spaces to preserve local views and environment.
- Preservation of protected trees within the development area
- Protection of mature trees on Tandy's Lane and incorporation of Tandy's Lane as a natural amenity and walking route.
- Protected structures will be retained.

5.8 Flora and Fauna

5.8.1 Introduction

This section assesses the impacts of the development on the flora and fauna in the area.

5.8.2 Methodology

The information presented here on flora and fauna is taken directly from a report prepared for the area in June 1999 by Eleanor Mayes, Ecological Consultant. Reference is also made the Flora and Fauna report prepared for the Outer Ring Road EIS in February 2001 by Natura.

The area was surveyed in late June 1999 using the Phase 1 Habitat Survey Methodology (Joint Nature Conservation Committee, 1993). Some grassland had been mown prior to the survey, reducing the identification of a number of species. In addition some small properties were not accessed, but this did not affect the general accuracy of the survey.

Early morning site visits were made to determine breeding bird communities at the site. Birds were recorded as breeding if any of the following were observed: territorial song, adults carrying food or nesting material and presence of young.

The presence of mammals on site was assessed by field signs such as droppings, evidence of feeding, tracks and burrows. Invertebrate fauna was not systematically surveyed, but indicator species such as butterflies, damselflies and dragonflies were recorded when observed.

Colour aerial photography was used as an aid to habitat mapping.

5.8.3 The Existing Environment

5.8.3.1 Flora

A total of nine habitats/vegetation types were recorded at the Adamstown site as follows:

- Hedgerows.
- Plantation woodland and mature trees.
- Neutral Grassland.
- Improved grassland.
- Amenity grassland.
- Arable land.
- Tall herbaceous vegetation.
- Ephemeral and short perennial vegetation of disturbed ground.
- Aquatic vegetation of streams, ditches and wet ground.

Each of the habitats/vegetation types is described in the report and the location marked on Figure 5.5.

The County Development Plan lists a number of trees for protection and preservation, which were not mentioned in Flora and Fauna assessment report 1999. These trees are shown on Figure 5.5. Trees identified for preservation should be the subject of a more detailed tree survey at planning application stage.

Hedgerows

Hedgerows form the field boundaries at the site. Almost all are intact and most are tall, occasionally trimmed with mature shrubs and trees. Species composition varies somewhat between properties.

Plantation Woodland and Mature Trees

There is a small area of plantation woodland at Finnstown House, which was not surveyed in detail. Finnstown House lies just outside the western boundary of the site. It is dominated by beech, ash, sycamore and cypress. A number of trees are considered worthy of preservation and include those on Tandy's Lane between St. Helens house and Somerton House

Neutral Grassland

Neutral grassland occurs to the north of Tandy's Lane. Much had been mown prior to survey, and because of this some species may have been unrecorded. The flora is grass dominated with species including rough-stalked meadow grass, smooth stalked meadow grass, yorkshire fog, ryegrass, red fescue and occasional cock's foot, meadow foxtail and false oat-grass.

Other species include creeping thistle, spear thistle, nettle, common ragworth, curled dock, red clover, creeping buttercup, meadow buttercup, field horsetail and occasional field scabious, creeping cinquefoil and field forget-me-not. The presence of one or two year old ash and sycamore plants suggests that these fields may have been fallow for some time prior to mowing.

Improved Grassland

Improved grassland occurs in the eastern portion of the subject site. It is intensively managed, but has not been re-seeded in recent years. Improved grassland can be regarded as intermediate between intensive grassland/amenity grassland and neutral grassland with regard to species diversity. Improved grassland is dominated by ryegrass.

Amenity Grassland

Amenity grassland is species poor and intensively managed. The public open space adjoining Hillcrest Walk is dominated by ryegrass and white clover.

Figure 5.5. Habitat Map

Arable Land

Arable ground is intensively managed, including the use of herbicides for weed control. Arable weeds were extremely sparse. Species recorded include silverweed, common couch-grass, creeping bent-grass, ryegrass and nettle.

Tall Herbaceous Vegetation

Tall herbaceous vegetation occurs in the headlands of arable fields, between hedgerows and cultivated land. The dominant species are nettle, cow parsley, hogweed, creeping and spear thistle, clustered and curled dock, cleavers, cocks foot and false oat grass. Meadow sweet and bush vetch are occasional. In some areas, tall herbaceous vegetation has been controlled by herbicides.

Ephemeral and short Perennial Vegetation of Disturbed Ground

Ephemeral and perennial vegetation was recorded in one area of disturbed ground. Species recorded typical opportunistic plants of disturbed ground including good king henry, wild turnip, creeping thistle, corn poppy, nipplewort, red dead nettle, sun spurge, common fumitory, cut-leaved crane's bill and knotgrass. Annual meadow-grass was the dominant grass species.

Aquatic Vegetation of Ditches, Streams and Wet Ground

Ditches which held water during the survey were vegetated with common duckweed, watercress, fools watercress, brooklime and floating sweet grass. Bittersweet, meadow sweet and occasional great willowherb occurred on ditch side slopes above water level. Self-heal, creeping cinquefoil, meadowsweet and grasses grew on higher ground along the ditch banks

Only one stream channel held water during the survey. This was shaded by overhanging mature hawthorn and blackthorn. Dry ditches were vegetated with great willowherb, bittersweet and nettle.

5.8.3.2 Fauna

Birds

Bird species recorded as breeding at the site were great tit, coal tit, blue tit, starling, blackbird, song thrush, wren, robin, house sparrow, dunnock, magpie, chaffinch, greenfinch, yellowhammer, pied wagtail and rook. Birds recorded as present, and probably breeding around farm and residential buildings which were not included in the survey were jackdaw, swift, house martin and swallow. There was evidence of birds of prey but no birds were observed. The bird species are typical of rural areas with intensive agriculture and without wetland and extensive woodland habitats.

Mammals

Fox, hare and rabbit were observed at Adamstown. Rabbits were numerous, with small warrens frequent in hedgerows and railway embankment scrub. Badgers or hedgehogs were not sighted but their presence was not ruled out. Rats were frequent in arable land especially potato fields. Two species of butterfly were recorded at the site. No damselflies or dragonflies were observed.

5.8.4 Evaluation of Potential Impacts

A primary aim of the site management will be to ensure the protection of watercourses and wildlife, at all times during construction.

No protected or rare plants occur in the Adamstown area (Curtis and McGough 1988). The hedgerows and mature trees provide the main habitat of ecological value. The grassland areas are generally not species rich however neutral grassland is relatively diverse in comparison to the improved grassland and arable grassland, which are of very limited ecological value.

There will be no drainage into the Canal Grand Canal NHA situated to the south of the site.

There is likely to be an impact upon indigenous flora and fauna, as a result of transition from a rural to an urban/suburban environment. There will be a loss of habitat and some native species may no longer inhabit the Plan lands. While some mature trees and good quality hedgerows will be preserved, natural vegetation will be removed.

5.8.5 Mitigation Measures

- Provision of an integrated belt of parks and open spaces to reduce impacts on indigenous flora and fauna.

- Preservation of mature trees and good quality hedgerows.

- Maintain trees highlighted in the County Development Plan and shown on Figure 5.8, subject to a more detailed tree survey at planning application stage.

- Additional planting along any of the retained hedgerows should consist of native species, which occur in the area.

- Provision of petrol interceptors in surface water system before discharging to watercourses.

- Any ponds, which are developed to provide storage and attenuation of surface water run-off should be designed so that water levels fluctuate with rainfall. They should have a central depth of at least 2m, so that there will be areas of open water free from vegetation. The pond margins should be gently sloping to provide habitat for aquatic and marginal vegetation. Native species suitable for planting include common reed, bulrush and bur-weed. Species suitable for planting along the margins include flowering species such as purple loosestrife, yellow iris, brooklime, celery-leaved buttercup, marsh marigold, water mint and meadowsweet. Tree species suitable for planting at wetland margins are willow, alder and birch.

5.9 Archaeology and Cultural Heritage

5.9.1 Introduction

This section assesses the potential impact of the development on the archaeology and cultural heritage of the area. Mitigation measures are proposed to minimise potential impacts.

5.9.2 Methodology

A review of the available documentation in relation to the archaeology at Adamstown SDZ site was carried out. The documents reviewed included the following:

- Proposed Development at Adamstown, Lucan, Co. Dublin. Preliminary Archaeology Report, June 1999, Rosanne Meenan.
- Archaeological Assessment, Site Adjacent to Adamstown Castle (RMP DU017:029), Adamstown, Co. Dublin, Margaret Gowen & Co. Ltd.
- Archaeological Assessment, Site of Tobermaclugg House and Holy Well, Co. Dublin (RMP DU017:027), Margaret Gowen & Co. Ltd.

A preliminary assessment of archaeology at the site was carried out in 1999, and following this a more detailed investigation was carried out on two sites within the proposed development area.

The preliminary assessment was conducted by consulting the following sources:

- Sites and Monuments Records, Dúchas, The Heritage Service, Dublin.
- First Edition of Ordnance Survey 6” map (Sheet 17).
- Aerial Photography commissioned by the developer.
- Geological Survey aerial photography.

A walkover survey of the site was carried out in June 1999 as part of the preliminary archaeology investigation. A detailed investigation was carried out at the site adjacent to the site of Adamstown Castle and at the site of Tobermaclugg House and Holy well. Investigation at the site adjacent to Adamstown Castle included the excavation of seven test trenches by mechanical digger. Investigation at the site of Tobermaclugg House and Holy Well included excavation of eight test trenches by mechanical digger.

5.9.3 The Existing Environment

The development area comprises part or all of the following townlands: Tobermaclugg, Dodsboro, Finnstown, Aderrig and Adamstown. The area is located on reasonably flat ground bounded to the south by the Dublin – Cork railway line, to the north and west by agricultural land and to the east by the Newcastle road.

The SMR (sites and monuments records) files recorded three sites in the vicinity of the development site as follows: Tobermaclugg House and Holy Well (DUO17:027), Aderrig Church, enclosure and graveyard (DUO17:028) and the site of Adamstown Castle (DUO17: 029) (Figure 5.6).

5.9.3.1 Tobermaclugg House and Holy Well (DUO17:027)

The site of Tobermaclugg House and Holy Well is located in a field of rough grassland and dense overgrowth at the northwest boundary of the development site (Figure 5.9). The holy well is a recorded monument and is registered in the Record of Monuments and Places (RMP) of Duchas (DUO17:027). It is also a protected structure (REF 064) under the County Development Plan 1998. The site of the house is not included in the RMP but is a protected structure.

The survey for the structural remains of Tobermaclugg House uncovered a large building surrounded to the north and northwest by a range of outbuildings. The buildings probably date from the nineteen-century and are the remains of those shown on the OS maps of that period.

It cannot however, be ruled out that the largest of these structures, i.e. the main house, may have been built on the site of an earlier structure, the full extent of the Tobermaclugg building depicted on the first and second edition OS maps. According to local residents, the house was demolished in the 1970s.

Stone pillars at the entrance to the site consisted of one modern concrete structure and one circular, well-formed cut limestone pillar. The foundations of a low wall extended sporadically from the limestone pillar back into the site for about 18m where the remains of a second limestone pillar of similar style were uncovered in the undergrowth. The limestone pillars may be associated with the eighteen century Tobermaclugg House.

The remains of a well-formed cut limestone structure (1m square) was identified in a trench that was dug in the area reputed to be the location of the Tobermaclugg Holy Well. The structure was abutted on the eastern side by three stone steps. There was a constant flow of water from beneath the structure into a stream further east. Although the structure was not fully exposed, the form and construction of the remains suggested that it may form part of the remains of the holy well.

5.9.3.2 Aderrig church, enclosure and graveyard (DUO17:028)

It should be noted that the site boundary shown in the Preliminary Archaeological Report (1999) includes additional fields in Aderrig, which are now not part of the Adamstown site. The Aderrig site is located in these fields (Figure 5.6).

The site comprises the remains of a medieval church within an enclosing bank and fosse. The enclosing feature may represent the remains of a ringfort. A preliminary paper survey found that Simms and Fagan (1992) mark a castle 'in repair' at Aderrig on a map showing Co. Dublin in the 17th Century.

No other references to the castle were found in the preliminary paper survey. It is possible that it was located close to the church thereby suggesting the possibility of a medieval nucleated settlement. This group of monuments lies outside the western boundary of the development area.

However there is a possibility of survival of archaeological material, associated with the monuments within the development area. The site is listed in the South Dublin County Development Plan as *Ecclestiastical Remains, Church (ruin), Graveyard and Enclosure possible*.

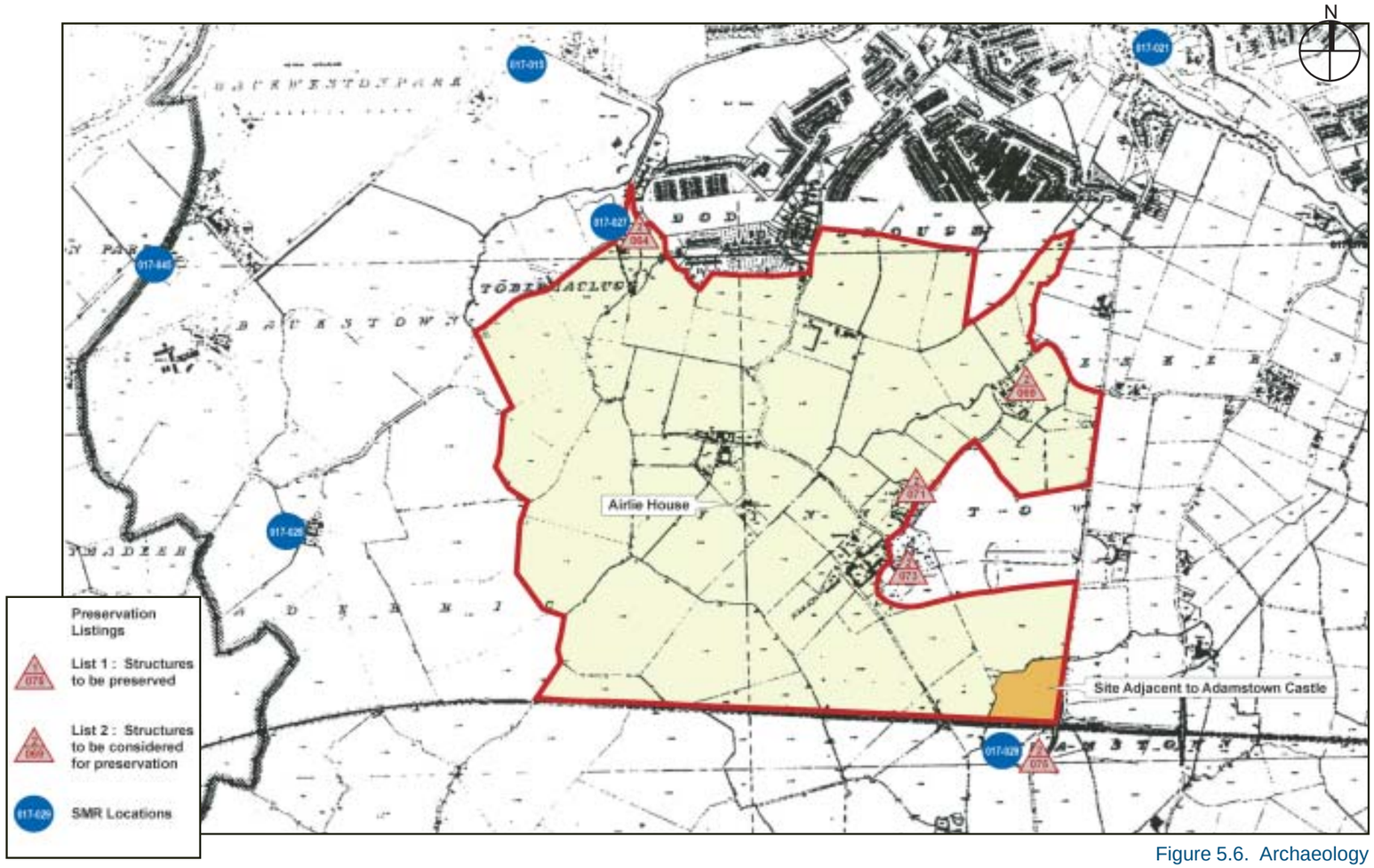


Figure 5.6. Archaeology

5.9.3.3 Site Adjacent to Adamstown Castle (DUO17:029)

The site of Adamstown Castle, a registered monument (DUO17:029) and protected structure (REF 075), lies on the south side of the railway line just outside the south-eastern boundary of the development area (Figure 5.6). The area adjacent to the site within the development area was examined. It is a roughly square-shaped level green field of good quality pasture. No known archaeological monuments are located on the site, however test excavation was requested due to the site's proximity to the site of Adamstown Castle. The castle derives its name from a family by the name of Adam that, according to Ball (1906) was established in the sixteenth century in the parish of Esker.

The castle was demolished in the 1960s, and no visible trace remains at surface ground level. Any outer defensive structures may have been destroyed by the construction of the railway line. Seven test trenches were excavated at the site adjacent to Adamstown Castle and in no trench were finds, features or structures of any archaeological significance uncovered.

5.9.3.4 Protected Structures

There are three protected structures on the development site all of which were identified on List 2 of the South Dublin County Development Plan 1998. These are the site of Tobermaclugg House and Holy Well (REF 064), St. Helens House (REF 071) and Somerton House (REF 069) (Figure 5.9). The two protected early 19th Century houses at St. Helen's and Somerton and their remaining privately owned land grounds together comprise 2.5 hectares and are located off Tandys Lane. Airlie House, located off Tandys Lane is not a protected structure but is a feature of Adamstown that is of local and historic interest. It is in architectural terms, typical of a mid-19th Century farmhouse and the original part of the House is considered to be of local amenity value (Figure 5.6). Finnstown House and Castle (REF 073) lies just outside the western boundary of the site and is also a protected structure. The site of Adamstown Castle is also a protected structure (REF 075).

5.9.4 Evaluation of Potential Impacts

- The development of a pumping station in the area of Tobermaclugg House and holy well may be possible without disturbing the surviving remains.
- Infringement on the setting of protected structures and historic buildings.
- There are no predicted impacts (construction or operational) at Aderrig church, enclosure and graveyard or at the site adjacent to Adamstown Castle. \

5.9.5 Mitigation Measures

- Development of the SDZ lands will require Archaeological monitoring during construction.

- A full excavation of the area should precede any development in the vicinity of Tobermaclugg House and Holy well.
- Preservation and incorporation of all protected structures into areas of open space.
- It is proposed to retain Airlie House. Appropriate uses could include community, residential or commercial activities.

5.10 Socio-Economics

5.10.1 Introduction

This section assesses the potential socio-economic impacts associated with the development.

5.10.2 Methodology

Information was drawn from assessments from previous studies including the Adamstown Local Area Plan, Strategic Planning Guidelines for the Greater Dublin Area 1999, the Outer Ring Road EIS, the Wyeth Medica Ireland Biotechnology Campus EIS, the 1996 Census Report and the 2002 Preliminary Census Report.

5.10.3 The Existing Environment

The *Preliminary Census Report 2002* states that the population of South Dublin has increased by 9.7% in recent years from 218,728 in 1996 to 239,887 in 2002. This increase has been more noticeable in the Lucan area where the population of the Lucan-Esker Electoral Division (ED) area has almost trebled in 6 years to reach a figure of 21,785 in 2002 compared to 7,451 in 1996.

The Adamstown Local Area Plan defines the *Greater Lucan* area as the area to the west of Fonthill Road and to the north of the Dublin-Cork railway, extending north and west to the South Dublin County boundaries with Fingal and Kildare.

The Adamstown Local Area Plan estimates that the average household occupancy level in *Greater Lucan* was approximately 2.8 persons per dwelling in 2000. This compares with average figures of 3.3 persons per dwelling in the overall South Dublin County Council Area and 3.0 persons per dwelling in the Greater Dublin Area. The *Strategic Planning Guidelines* project that the average household occupancy levels will decrease to 2.7 persons per dwelling in South Dublin by 2011. It is assumed that *Greater Luca*n will experience a similar decrease (2.5 persons per dwelling or less) over the same period.

The Adamstown Local Area Plan estimates that the number of dwellings in the *Greater Lucan* area have increased significantly in recent years from 6,300 dwellings in 1996 to 10,500 in 2000 respectively. However the residential density has remained low (15 dwellings or 42 people per hectare in 2000). (Residential density is the number of people or dwellings in a given area, usually measured in persons or dwelling units per hectare or acre). As average house occupancy rates fall, the corresponding figures could be less than 37 people per hectare by 2011.

The existing community within the Adamstown development lands is small and dispersed. There are ten existing habitable dwellings and consist mainly of farmhouses and individual dwellings situated along Tandys Lane, Dodsboro Road and Tubber Lane Road.

Surrounding communities are predominantly low-density suburban housing and include Dodsboro cottages, Hillcrest and Meadowview Grove to the north, Lucan Village to the northeast, and various communities off Newcastle and Lock Road to the east. The Cork-Dublin railway borders the southern part of the site.

There is limited employment associated with the current agricultural use of the SDZ Lands. The Adamstown Local Area Plan estimates that there were approximately 3,000 jobs and 29,500 people in the *Greater Lucan* area in 2000.

There are three existing purpose built retail centres in the vicinity of the SDZ Lands that also function as local centres of service and employment. In addition to Dublin City Centre, major centres of employment in the vicinity of Adamstown include Grange Castle International Business Park (2km), Hewlett Packard (4km), Clondalkin (5km), Intel (6km), Park West (6km), City West (7km) and Tallaght (10km).

Low residential densities, combined with a relatively low ratio of employment to population (i.e. one job for every ten residents), are the principal reasons for the dispersed pattern of development, difficulties in public transport provision, reliance on the private car and ultimately, traffic congestion.

Local parks and amenities in the area include the Griffeen Valley Regional Park, the Grand Canal and the River Liffey, all of which are 1km distant or less from the Adamstown SDZ.

5.10.4 Evaluation of Potential Impacts

In general, the predicted impacts of the development of the Adamstown SDZ will be beneficial to the surrounding community. The likely significant impacts of the development include an increase in population of approximately 20,000 people, an increase in local based employment and a greater but more concentrated demand for services, amenities, transport and travel. Proposals for the provision of amenities, facilities and services for the community are detailed in Section 2.6. Facilities will include the following:

- Railway station/transport interchange and dedicated Quality Bus Corridor (QBC) with a link to the existing N4 QBC.
- Shopping and retail services concentrated in one new district centre, two new local centres and an extension to existing district centres and several individual shops/local parades.
- Two primary schools, one secondary school and significant childcare provision and various childcare facilities.
- High quality parks and public open spaces to include pitches courts and play facilities.
- Central/civic amenity building.
- Two enterprise centres.
- A series of community meeting rooms/drop in centres.
- A site for a fire station.
- The provision for greater employment, leisure, cultural and civic space uses.In general, the Adamstown development will provide a beneficial impact to the Greater Lucan Area. Medium residential densities will support the establishment of viable services, community facilities and public transport. The average housing density throughout the plan lands will be in excess of 50 dwellings per hectare. In addition, 15% of residential dwellings will be provided as social and/or affordable units.

The public open space and walking/cycling network has been designed to preserve existing historic features including protected structures and listed trees. Each of the schools will be situated adjoining a local centre as well as a major park, thus incorporating local walking and cycling networks.

The Adamstown District centre will be focused around the transport interchange and will be the core area within Adamstown for retail, leisure, employment and cultural uses. A development such as the District centre, with a range of diverse activities and non-residential uses encourages the generation of local employment and thus reduces the need for travel to work.

The public transport system will provide an attractive and reliable alternative to car use. The creation of construction jobs (direct and indirect) throughout the period of construction will be of beneficial effect.

5.10.5 Mitigation Measures

Proposed mitigation measures to accommodate the increase in population include:

- Adequate provision of supporting services, facilities and amenities in association with new residential development. Such services would include educational and childcare facilities, various parks and open spaces, retail services and shopping facilities. Services, facilities and amenities are further detailed in Section 2.6.
- Adequate infrastructure will be provided. This will include services such as water supply, surface water drainage, foul sewerage, solid waste, and information technology. Services are detailed in Section 2.5 and 5.2.
- Provision of an integrated network of walking and cycling routes and improved road network. Provision of an adequate public transport system. Transportation is detailed in Section 2.4.
- There will be a high quality architectural design, layout and landscape treatment of all buildings. There will be a range and choice of dwelling types and sizes to accommodate the increase in population. Development design is further detailed in Section 2.3.

Proposed mitigation measures to ensure adequate provision of employment opportunities include:

- The availability of non-residential floorspace for employment activities such as offices, leisure, cultural and civic uses.
- A mix of activities and uses focused on a hierarchy of identified centres with opportunities for non-residential development will be dispersed throughout the development area.

5.11 Interaction of Effects and Cumulative Impacts

5.11.1 Introduction

This section examines the interaction of environmental effects caused by the development, in order to ensure that the impacts of the development are considered cumulatively.

A summary of the key environmental impacts is presented in section 5.11.2. These are set out as either construction impacts or operational impacts and the main interactions between different environmental impacts are examined. A summary of the key mitigation measures is presented in section 5.11.3. Similarly, these are set out as either construction mitigation measures or operational mitigation measures and the key interactions between each other are examined. Conclusions and Recommendations are detailed in Section 5.12.

5.11.2 Summary of Potential Impacts

5.11.2.1 Construction

Geology, Hydrology, Hydrogeology, Nature Conservation and Archaeology

- Surface water drainage during construction may contribute to run-off from the development, which could cause surface water or groundwater pollution. Diversion of some of the existing watercourses may result in pollution or silting.
- There is a potential for impact on watercourses and wildlife during construction. A primary aim of the site management will be to ensure the protection of these at all times.
- Materials excavated during site clearance will require disposal. However, the majority of materials will be reused on site for landscaping thereby reducing the amount of disposal and generated traffic movement off site.
- Construction will involve very little excavations other than site clearance, re-routing of the existing services crossing the site, topsoil stripping, construction of foundations and installation of new services. As a result, the potential impact for pollution of groundwater or bedrock geology will be minimised.
- Without mitigation measures, there is potential for an impact on Tobermaclugg House and Holy well as a result of construction activities.

Traffic, Air Quality, Noise and Vibration and Visual Impact

- There is potential for generation of increased levels of noise from construction traffic. However as the development of the SDZ Lands will be undertaken on a phased basis, the impact of construction traffic on sensitive receptors and on the surrounding existing local and strategic road network will be dispersed over a long period of time.
- There is potential for dust emissions from the proposed development. Construction vehicles, generators etc., would also give rise to some exhaust emissions. These would be of short duration and mitigation through good construction practices.
- The potential for vibration at neighbouring sensitive locations during construction is typically limited to excavation works, piling operations and lorry movements on uneven road surfaces. The more significant of these is the vibration from excavation and piling operations; the method of which will need to be selected and controlled to ensure there is no likelihood of structural or even cosmetic damage to existing neighbouring dwellings.
- A temporary visual impact will arise during the construction of the development. This will be associated with general site activity, the movement of vehicles and plant, construction compounds with assorted site huts, fencing, hoardings and construction cranes.

Employment and Construction

- The creation of construction jobs (direct and indirect) throughout the period of construction will be of beneficial effect.

5.11.2.2 Operation

Services, Geology, Hydrogeology, Hydrology and Nature Conservation

- Potential impacts from the development could include pollution of existing watercourses and culverts from surface water run-off.
- The impact of connecting the new water supply network to existing mains may result in pipe bursts due to increased pressures and the possible reversal of flows across existing meters and district metering. Once the new water network is fully installed it is envisaged that any initial technical difficulties will be resolved.
- The introduction of screening facilities at both new and existing pumping stations could potentially lead to risk of odour problems.
- The development of Adamstown will lead to increased waste generation and requirement for disposal of this waste. The main waste streams associated with a development of this nature, once construction is finished will generally be of domestic or commercial wastes.

Traffic, Air Quality, Noise and Vibration

- There is the potential for a number of emissions to atmosphere once the development is complete. This would include atmospheric emissions from the buildings and from generated traffic. The potential for noise impact includes noise emissions generated from traffic and car parking and noise emissions generated from electrical or mechanical plant.

Traffic and Human Beings

- The complete development of the Adamstown SDZ will generate an increased number of additional trips to the local and strategic road and public transport network. The development will however be facilitated by significant public transport infrastructure provision and linkage.

- The promotion of public transport, cycling and walking within the development, together with the development of a 'self contained' sustainable community is considered to be a positive impact of the proposed development.

- The development of a new train station together with planned railway improvements will provide access to a high capacity public transport service for trips into and out of Dublin. Similarly north-south and east-west bus priority links from Adamstown SDZ to the strategic Quality Bus Corridor network will provide an attractive public transport alternative to the private car.

- Planned road infrastructure improvements will provide sufficient capacity to facilitate the levels of development proposed.

Landscaping and Visual, Nature Conservation and Archaeology

- The likely effect of this development will be to create a new town of medium residential density with associated services, road network etc. This will result in a transition from a rural environment to an urban-suburban environment.

- There is likely to be an impact upon indigenous flora and fauna, as a result of transition from a rural to an urban/ suburban environment. There will be a loss of habitat and some native species may no longer inhabit the Plan lands. While some mature trees and good quality hedgerows will be preserved, natural vegetation will be removed.

- Existing land-use patterns will be removed for the development and thus change the character of the area. However the carefully designed landscape will be created to provide a setting for a contemporary built environment, while attempting to create an appropriate context for existing buildings.

- There may be a possible impact on local views of the Dublin Mountains and of protected structures and historic buildings. However, the proposed public open space and walking/ cycling network has been designed to preserve existing historic features including protected structures and listed trees.

Human Beings and Operation

- In general the predicted socio-economic impacts will be beneficial to the surrounding community. The likely significant impacts of the development include an increase in population of approximately 20,000 people, an increase in employment and a greater demand for housing, services, amenities, transport and travel.

5.11.3 Summary of Mitigation Measures

5.11.3.1 Construction

Geology, Hydrology, Hydrogeology, Nature Conservation and Archaeology

- Construction impacts on watercourses will be kept to an absolute minimum by ensuring that good environmental working practices and policies are employed on site. For example, the storage of all fuels would be undertaken in accordance with recognized best practice and remote from sensitive watercourse receptors. Petrol interceptors will be provided in the surface water system before discharging to watercourses.
- Diversion of watercourses will be subject to the agreement of the Eastern Regional Fisheries Board and the Environmental Services Department of South Dublin County Council.

- Subsoil from excavations will be reused on site where possible but there may be excess material to be disposed of off-site. These materials will be disposed of or recovered, to licensed landfills or waste recovery facilities. Topsoil will be stockpiled and generally used for landscaping.

- A regular programme of site tidying will be established to ensure a safe and orderly site. Scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind.

- Development of the SDZ lands will require Archaeological monitoring during construction. A full excavation of the area will be required to precede any development in the vicinity of Tobermaclugg House and Holy well.

Traffic, Air Quality, Noise and Vibration and Visual

- Each development will be subject to approval of a construction traffic management plan. Access routes for materials deliveries, disposal, etc. will be agreed in advance, so as to prevent unsuitable or residential roads being used. The completion of the Adamstown Link Road from the Outer Ring Road and the new link road to the Celbridge Road will also facilitate access for construction traffic and will be utilised as such.
- Management measures will need to be taken to ensure that dust levels are minimised. Dust repression techniques will be used if necessary. Site roads and local roads will be cleaned and maintained as appropriate. Contractors will be required to use water sprays and a wheel wash facility if necessary. Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods. Vehicles delivering material with dust potential will be enclosed or covered with tarpaulin at all times to restrict the escape of dust. During movement of soil both on and off site, trucks will be covered with tarpaulin.

- Construction noise will be controlled in accordance with British Standard 5228. Measures will include the selection of appropriate plant, construction methods and programming. Barriers will be erected as necessary around items such as generators or high duty compressors. All site access roads will be kept even so as to mitigate the potential for vibration from lorries.
- Piled foundations may be required. The type of pile used will determine the extent of any vibrations. The piling operation is expected to be of short duration. Noisy/vibratory plant and construction compounds will be sited as far away from sensitive properties as permitted by site constraints.
- Hoarding will be erected around the site perimeters as appropriate during the construction phase to minimise the visual impact of the site works.

5.11.3.2 Operation

Services, Geology, Hydrology, Hydrogeology and Nature Conservation

- A number of measures intended to alleviate potential flooding along the Tobermaclugg Stream from the Backstown Stream include replacing the small diameter culverts with larger culvert sections, regrading and increasing the existing channel size to increase capacity along Tubber Lane and augmenting the capacity of the culvert under the N4.

- A complete topographical survey of the Griffeen Tributary and Tobermaclugg Stream downstream of the development will be carried out. This will further lead to the development of a hydroworks model to facilitate the detailed assessment of flood alleviation and attenuation requirements and any necessary adjustments to the storm water drainage master plan.

- Storm water generated in both the North-East and South-East Griffeen Tributary catchments will require attenuation due to the limited available capacity of the existing down steam pipework. The provision of underground storm water storage tanks will ensure that the downstream capacity of the Griffeen stream is not exceeded.

- Adequately sized hydrocarbon interceptors will be installed to reduce inputs of pollutants and suspended solids into the surface water drainage system. Catchpits will be provided upstream of each storage facility within the development to prevent the discharge of sediments and other settable matter into the water courses.

- Any odour problems associated with the proposed screening measures will be resolved through the detailed design and development of Operation and Maintenance procedures.

- Refuse and commercial waste will be disposed of or recovered, to licensed landfills or waste recovery facilities. The disposal system will be designed to facilitate the segregation and separate collection of recoverable wastes if required. Reduction and recycling of waste will be encouraged.

Traffic, Air Quality and Noise and Vibration

- The most significant mitigation measure recommended is the phasing / development control of the Adamstown SDZ Development, based on the programme for completion of supporting road and public transport infrastructure. The development of rail and bus public transport links, together with the supporting road infrastructure, are integral to mitigating traffic impacts of the development on the existing and planned road network. As a result of the above measures, the generation of traffic related pollutants and noise would be minimised.
- The development of a hierarchical road network and appropriate road access to Adamstown will ensure that traffic noise and atmospheric impacts are minimised. Building design and noise operation guidelines shall be applied to ensure that noise emission standards are adhered to.

- Developers will be encouraged to use low polluting means of central heating and to maximise usage of natural ventilation and passive solar ventilation. High specification and filtration procedures will be employed to ensure that emissions resulting from air-conditioning will be minimal.

Traffic and Human Beings

- Mitigation of traffic and transportation impacts generated by the Adamstown SDZ will be provided by the development of supporting road and public transport infrastructure and the implementation of demand management policies.

- The implementation of demand management policies, such as the car parking standards outlined and the promotion of sustainable transport modes, will also seek to minimise traffic impacts of the Adamstown SDZ development.

Landscaping and Visual, Nature Conservation and Archaeology

- Mature trees and good quality hedgerows will be retained where possible. Trees highlighted in the County Development Plan will be maintained. Tandy's Lane will be incorporated as a natural amenity and walking route. Other existing established walking routes will be maintained where possible. Additional planting along any of the retained hedgerows should consist of native species, which occur in the area.

- Landscaping and planting will be designed to encourage the evolution of diverse habitats to support the development of the ecological environment. Existing landscape features will be incorporated into the design. An integrated belt of parks and open spaces will be provided to reduce impacts on indigenous flora and fauna and to preserve local views and environment

- Sensitive architectural design and layout of buildings and spaces to preserve local views.

- Preservation and incorporation of all protected structures into areas of open space.

Human Beings and Services

Proposed mitigation measures to accommodate the increase in population include:

- Adequate provision of supporting services, facilities and amenities in association with new residential development. Such services would include educational and childcare facilities, various parks and open spaces, retail services and shopping facilities. Services, facilities and amenities are further detailed in Section 2.6.

- Adequate infrastructure will be provided. This will include services such as water supply, surface water drainage, foul sewerage, solid waste, and information technology. Services are detailed in Section 2.5 and 5.2.

- Provision of an integrated network of walking and cycling routes and improved road network. Provision of an adequate public transport system. Transportation is detailed in Section 2.4.

- There will be a high quality architectural design, layout and landscape treatment of all buildings. There will be a range and choice of dwelling types and sizes to accommodate the increase in population. Development design is further detailed in Section 2.3.

Employment and Design of Development

Proposed mitigation measures to ensure adequate provision of employment opportunities include:

- The availability of non-residential floorspace for employment activities such as offices, leisure, cultural and civic uses.

- A mix of activities and uses focused on a hierarchy of identified centres with opportunities for non-residential development will be dispersed throughout the development area.

5.12 Conclusions and Recommendations

The Adamstown SDZ will create a new sustainable residential community in West Dublin. The Planning Scheme sets out the type and extent of development permitted within the SDZ area. Proposals include a sustainable mix of residential development, including social and affordable housing, community/commercial, retail, employment and office, leisure, cultural and civic development.

The Planning Scheme promotes the use of public transport and will be facilitated by new road, bus and rail infrastructure. It is envisaged that the proposed development will have an overall positive socio-economic impact on the West Dublin Area.

The Environmental Appraisal seeks to identify overall impacts of the complete development and recommend mitigation measures as appropriate to minimise any adverse impacts. It is intended to be a framework for future specific development projects within the SDZ.

Impacts on the receiving environment (landscape, flora, fauna and archaeology) during construction will be minimised though the implementation and monitoring of best construction practices. Development proposals will include for a high level of landscape design and the creation of public parks and open spaces.

Proposed services provision (water supply, foul and surface water), road and public transport infrastructure are considered adequate to facilitate the development. The development of the SDZ will however be progressed on a phased manner to ensure that the appropriate service requirements are in place at each stage.

This Environmental Appraisal takes a view of the overall development of the area and does not therefore address specific development proposals within the Adamstown area. It is recommended that future proposed development types within the SDZ, which may have considerable environmental impacts, are individually assessed.

This framework appraisal does not also preclude the requirement for preparing Environmental Impact Statements for any prescribed development type within the SDZ, in accordance with the threshold criteria set out in the EU Environmental Impact Assessment Regulations 1985 to 2000.

Acknowledgements

This Planning Scheme was prepared under the direction of Kieran Kennedy, Director of Planning, South Dublin County Council, by:-

Project Team

South Dublin County Council

Paul Hogan, Senior Executive Planner, Overall Project Co-ordinator;
Eddie Conroy, Senior Architect;
Larry Mc Evoy, Senior Executive Technician;

with additional input from:-

Adrian O'Gorman, Law Agent;
John McLoughlin, Senior Engineer, Roads and Traffic Department;
Tom Moyne, Senior Engineer, Environmental Services Department;
John Bird, Senior Planner;
Michael Kenny, Senior Planner
Muiris O'Keeffe, Senior Engineer, Roads and Traffic Department;
Tony O'Grady, Senior Engineer, Roads and Traffic Department;
Tom O'Neill, Senior Executive Engineer, Roads and Traffic Department;
Michael Hannon, Senior Executive Parks Superintendent, Parks Department;
Donna Lakes, Senior Executive Engineer, Roads and Traffic Department;
Anne Hyland, Senior Executive Planner;
Paddy McNamara, Administrative Officer, Planning Department;
Marie-Therese McCoy, Executive Planner;
Louise Kiernan, Executive Planner;
Jane O'Reilly, Assistant Planner;
Colin King, Architect;
Sonja Reidy, Conservation Officer;
Irenie McLoughlin, Conservation Officer;
Geraldine Fitzgerald, Technician;
Tess Behan, Staff Officer, Planning Department;
Liz Miller; Assistant Staff Officer, Planning Department;

Environmental Appraisal

Donal McDaid; Fiona Duggan, Ove Arup & Partners Ltd.;

Additional Design Input

John O'Mahony; Orlaith O'Callaghan, O'Mahony Pike Architects;
Seosamh O'Ruairc; Justin Hughes, PHMcCarthy & Partners Consulting Engineers;
David Bagnall; Eimear Fox, Brady Shipman Martin Landscape Consultants;

with additional input from:-

Stephen Little, RPS McHugh Planning and Environmental Consultants;
Shay Fenton; Brian McConville; Fenton Simons, Architects and Planning Consultants;
Grainne Mallon; Vera Blake; Grainne Mallon and Associates, Architects and Planning Consultants;
Alan Bailes, Paul McKee, Howard Potter, Transportation Planning International Ltd., Transportation Consultants.

Project Steering Group

Kieran Kennedy, Director of Planning, South Dublin County Council, Chairperson;
Tom Doherty, Deputy Manager and Director of Development, South Dublin County Council;
Frank Coffey, Director of Transportation and County Engineer, South Dublin County Council;
Mick MacAree, Senior Planner, Dublin Transportation Office (DTO);
Norita Griffin*, Housing Supply Unit, Department of the Environment and Local Government;
Eddie Conroy, Senior Architect, South Dublin County Council;
John Bird, Senior Planner, South Dublin County Council;
Tom Moyne, Senior Engineer, South Dublin County Council;
Paul Hogan, Senior Executive Planner, South Dublin County Council.

***Dympna Butler, August 2001 – April 2002; Niamh Martin, May – September 2002;**

Image Acknowledgements

Figure 2.1. 'Mixing Uses' - *Urban Design Compendium,* Llewelyn Davies on behalf of English Partnerships, 2000
Figure 2.3. 'Integration between Type and Extent of Development and Transportation' - *Urban Design Compendium,* Llewelyn Davies on behalf of English Partnerships, 2000;
Figure 2.5. 'Design and Layout Principles: Concept' - *Towards an Urban Renassiance*, Andrew Wright Associates on Behalf of the Department of Environment, Transport and the Regions (UK), 1999;
Figure 2.7. 'The Relationship between Hierachy and Urban Capacity' - *Towards an Urban Renassiance,* Andrew Wright Associates on Behalf of the Department of Environment, Transport and the Regions (UK), 1999;
Figure 2.14. 'Illustrative Corner/Feature/Landmark Building with Ground Floor Shop Unit' - Howley Harrington Architects, Dublin 1;
Figure 2.16. 'Variety of Modern Building Forms and Styles, Homes for the Future Demonstration Project, Glasgow' - *Homes for the Future*, Glasgow, 1999 UK City of Architecture and Design, Glasgow Festival Company Limited, 1999;
Figure 2.39. 'Local Open Space and Childcare Facility as a Community Focus' - *Towards an Urban Renassiance*, Andrew Wright Associates on Behalf of the Department of Environment, Transport and the Regions (UK), 1999;
Figure 2.48. 'Illustrative Retail Centre Formats indicating Frontage Development' - *Urban Design Compendium,* Llewelyn Davies on behalf of English Partnerships, 2000;
Figure 2.49 'Illustrative Retail Centre Formats indicating Frontage Development' - David Malushizky - The Lawerence Group, Congress for the new Urbanism Image Bank, www.cnu.org, USA, 2004;
Page 51 'Frontage to Park' - *City of Zoetermeer, The Planned City that Works,* The Municipality of Zoetermeer, 1999;
Page 67 'Boulevard Scale Water Feature' - *Bo01, City of Tommorow,* Malmo, Sweden, 2001.

Cover Design

Principle Concepts, 24 Fitzwilliam Lane, Dublin 2.

Printing

New Wave Digital Imaging, 22 Rathmines Rd Lr, Dublin 6.
Principle Concepts, 24 Fitzwilliam Lane, Dublin 2.

Strategic Development Zone Planning Scheme

Key

- SDZ Planning Scheme Boundary (gross development area)
- SDZ Planning Scheme Boundary (where outside gross development area)
- Road
- Dedicated QBC Busway
- Railway Station
- Park and Ride Carpark
- Possible Access Point to Backland Development in Dodsboro
- Perimeter Building
- Courtyard Building
- Reduced Height Building
- Flexible Use Building
- School/Civic Building
- Traveller Accomodation Site
- Opportunity for Landmark Building
- Hard Landscaped Public Space
- Public Open Space
- Private Open Space
- Established Tree to be Preserved
- Protected Structures not included in the Planning Scheme

0 50 100 200 300 400 m

South Dublin County Council **Planning Department**

adamstown


N
Hillcrest
Dodsboro
Tobermaclugg Park
Shopping Centre
Westbury
Local Centre
Primary School
Somerton
Local Centre
Airlie Park
Primary School
Tandys Lane Park
Finnstown Fairways
Central Boulevard
District Centre
Primary and Post Primary Schools
Station
Railway

South Dublin County Council
Planning Department
County Hall
Town Centre
Tallaght
Dublin 24

Phone : (01) 4149000
Fax: (01) 4149104
E-mail: adamstownsdz@sdublincoco.ie
Web: www.southdublin.ie