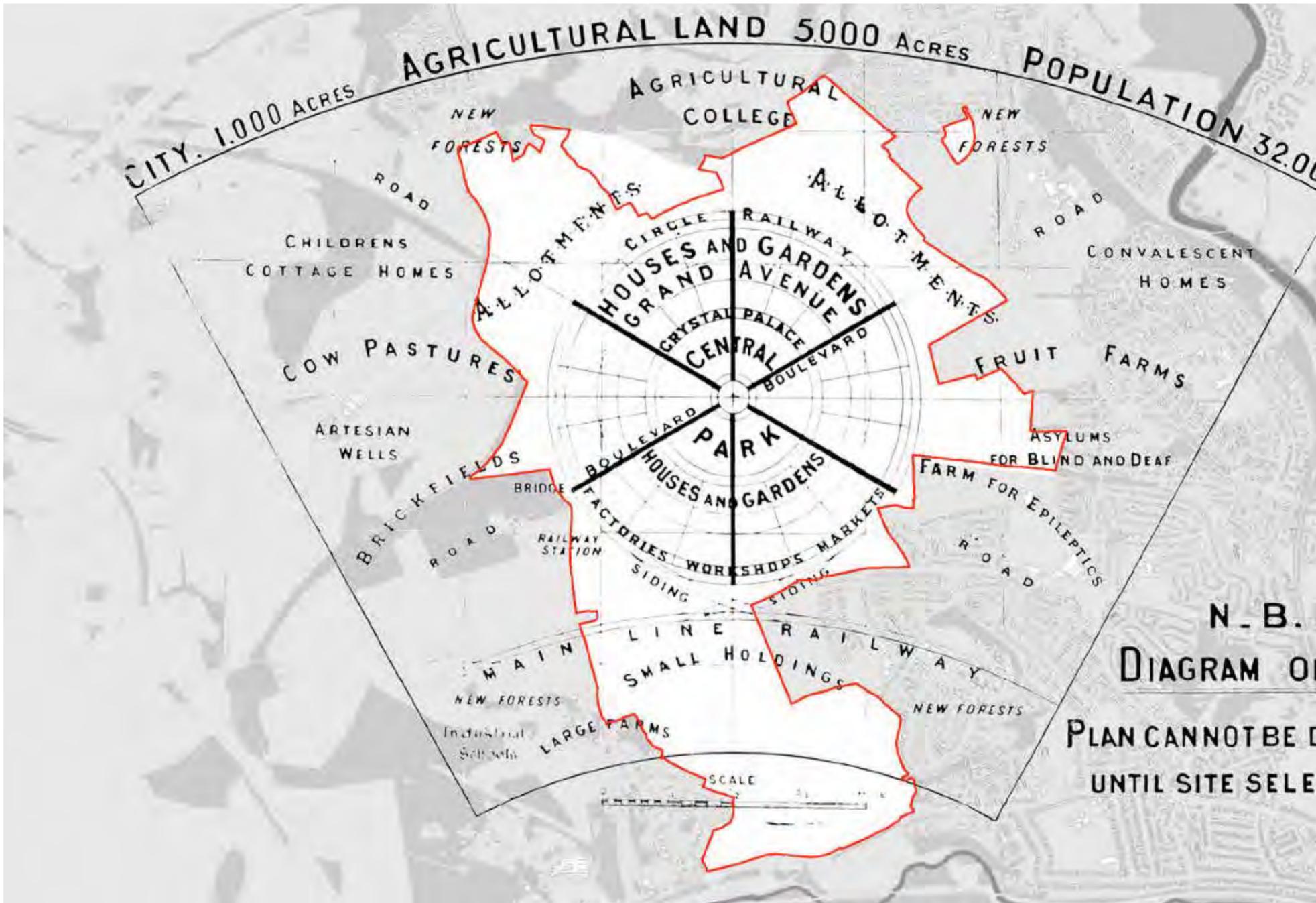


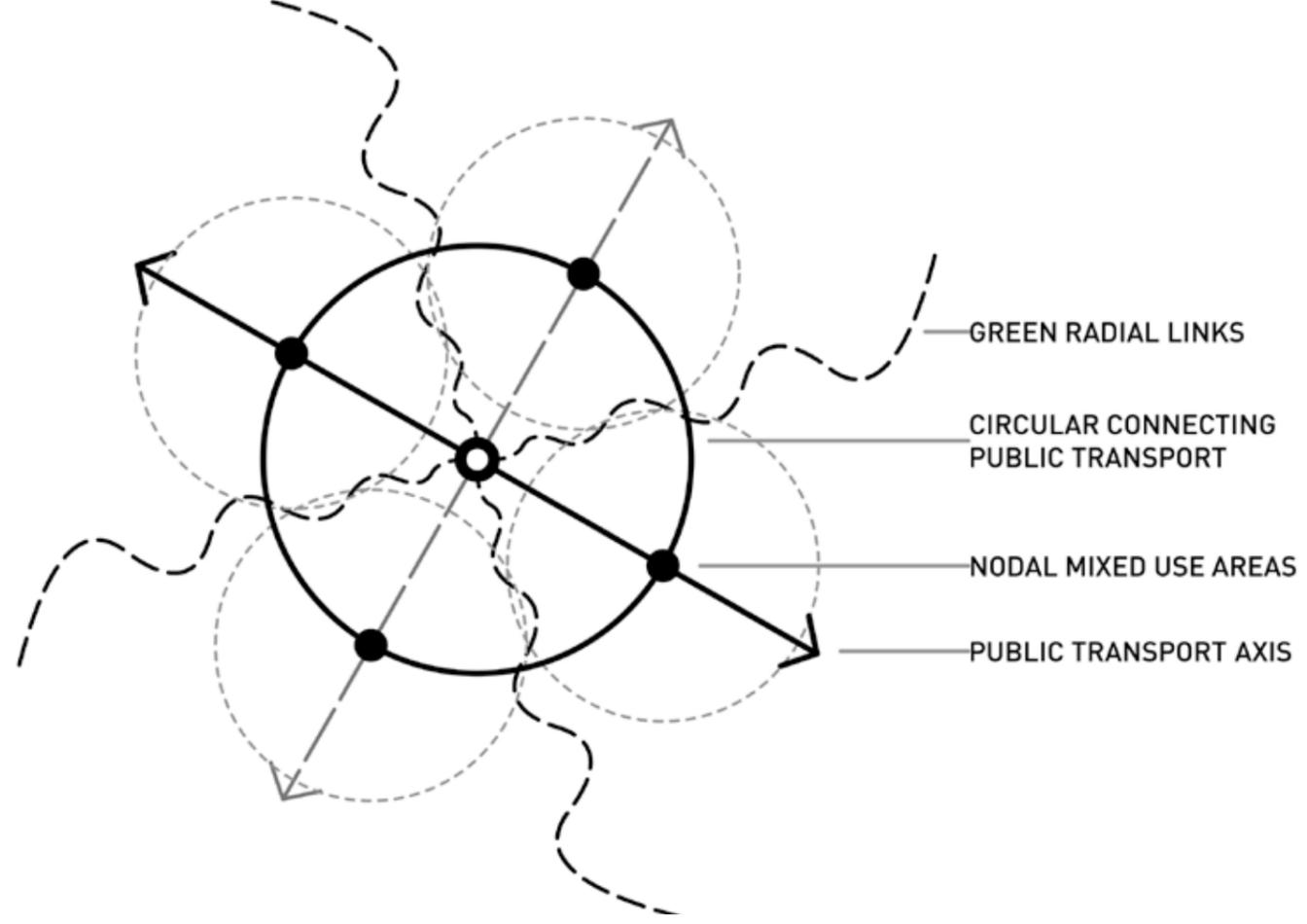


DEVELOPING
THE VISION

03



EBENEZER HOWARD'S GARDEN CITY MODEL DIAGRAM OVERLAID ONTO THE SITE



INITIAL CONCEPT DIAGRAM FOR PLASDWR SHOWING THE CENTRAL FOCUS, RADIAL LINKS AND NODAL POINTS

3.1 Plasdwr takes its inspiration from the successful design elements of the Garden City movement, existing Cardiff districts and UK and European precedents.

3.2 The design principles have been derived from a combination of the site assessment, site evaluation and design evolution. In line with National and Local Government Guidance and Policy, considerable importance has been placed on achieving a high standard of design. Urban design objectives are intended to ensure a high quality layout, whilst the identification of the constraints and opportunities will ensure that the proposals are sensitively assimilated on the site and into the surrounding landscape and urban fabric. Successful urban design is dependent upon achieving an appropriate relationship between community needs, development principles, development form and a positive response to local conditions.

GARDEN CITY PRINCIPLES

3.3 As part of the masterplan development, research was undertaken into the Garden City movement.

3.4 The father of the Garden City movement, Ebenezer Howard, did not prescribe a definitive set of principles or guidelines for the purposes of planning new Garden Cities. Whilst a number of 20th century interpretations stand testament to evolving national priorities for design and delivery of large housing projects, it is the qualities of the original developments and the sentiments expressed by Howard, which drive contemporary policy makers and urban designers, such that:

“The advantages of the most energetic and active town life, with all the beauty and delight of the country, may be secured in perfect combination”.

3.5 As the ancestor of the Garden Cities Association, the Town and County Planning Association (TCPA) has reviewed Garden City principles with a view to promoting their use within planning and delivery of new residential development. The TCPA's report considers lessons learned from previous garden city development including:

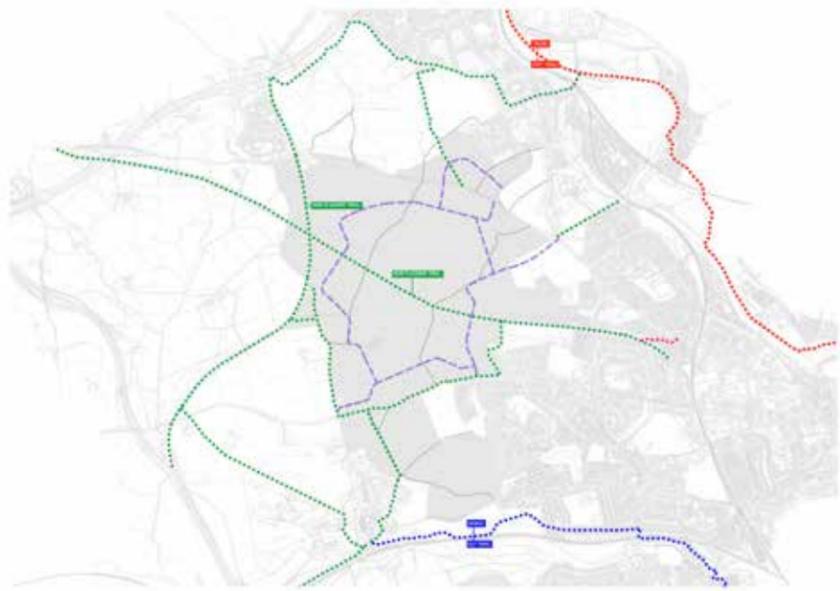
1. Strong vision, leadership and community engagement;
2. Land value capture for the benefit of the community;
3. Community ownership of land and long-term stewardship of assets;
4. Mixed-tenure homes that are affordable for ordinary people;
5. A strong local jobs offer in the Garden City itself, with a variety of employment opportunities within easy commuting distance of homes;
6. High-quality imaginative design (including homes with gardens), combining the very best of town and country living to create healthy homes in vibrant communities;
7. Generous green space linked to the wider natural environment, including a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces;
8. Opportunities for residents to grow their own food, including generous allotments;
9. Access to strong local cultural, recreational and shopping facilities in walkable neighbourhoods; and
10. Integrated and accessible transport systems - with a series of settlements linked by rapid transport providing a full range of employment opportunities.

3.6 In the 21st century, Plasdwr needs more, better-quality and sustainable housing to meet changing social needs and an increasingly low-carbon economy: affordable family housing, an increased range of accommodation for older people looking to 'downsize', and truly local services and employment opportunities to provide the basis for a strong community with identity and interaction. These aspirations chime with the Garden City ethos; people of all ages want to live in a living and working community; positive, healthy and vibrant with access to high-quality green spaces and the countryside. Some of the strategic design principles for the layout of Garden City's has been followed including:

1. Concentric model;
2. Central Park;
3. A well planned development structure with clearly defined movement routes through the development;
4. A mix of complementary land uses that are conveniently located within the development proposals;
5. Enhanced natural environment;
6. Tree lined landscaped streets;
7. A landscape design approach adopted within the development blocks so that improvements to biodiversity and wildlife settings can be incorporated;
8. High quality homes that aid in creating variety and character to the area, but also provide a mix of homes to cater for the existing communities needs;
9. Strong links to the wider countryside with a harmonious relationship created between the built form and the wider landscape; and
10. Integrated and accessible transport systems, where care is taken over the design of the streets to create attractive routes for pedestrian/cyclist movement .

3.7 The Garden City principles provide some good precedents for the strategic layout of the development but are based on car movement and car ownership and some face problems with high speed routes due to the width of streets and high visibilities. The detailed layout of streets therefore needs to look at more contemporary examples such as those promoted by manual for streets.

3.8 The density at Plasdwr will also be higher to allow the creation of walkable neighbourhoods. Existing Garden Cities have lower densities and greater land take, this promotes the use of the car to access facilities and is the opposite aspiration of Plasdwr which wishes to provide walkable facilities and inclusive communities.



STRUCTURING ELEMENT:
CREATION OF A CYCLE HIERARCHY



STRUCTURING ELEMENT:
CREATION OF NODAL POINTS WITHIN APPROPRIATE WALKING DISTANCES



STRUCTURING ELEMENT:
CREATION OF RADIAL GREEN LINKS WITH CENTRAL GREENSPACE



STRUCTURING ELEMENT:
CREATION OF CO-LOCATED FACILITIES AND MULTI FUNCTIONAL SPACES



STRUCTURING ELEMENT:
GREEN INFRASTRUCTURE



STRUCTURING ELEMENT:
SUSTAINABLE DRAINAGE



STRUCTURING ELEMENT:
MIXED USE AREAS

10 MASTERPLANNING GENERAL PRINCIPLES

3.9 City of Cardiff Council have developed 10 Masterplanning General Principles that they consider essential to create new sustainable neighbourhoods. These are:

1. **Masterplanning approach** - Development schemes that are planned in a comprehensive and integrated manner reflecting partnership working and setting out the phasing of development along with timely provision of supporting infrastructure. Masterplans will need to encompass the whole of a development area regardless of land ownership patterns, and this will require partnership working, involving all relevant parties.
2. **Development density** - High density residential and mixed-use development is focused along public transport corridors and in neighbourhood centres with lower densities provided elsewhere to deliver an overall range and choice to meet different needs.
3. **Sustainable transport corridors** - Dedicated sustainable transport corridors including provision for public transport, cycling and walking which will form key elements of the overall master plan and effectively link into the wider network.
4. **Sustainable travel choices** - Walking, cycling and public transport will be attractive, practical and convenient travel choices for all.
5. **Neighbourhood centres** - Provision of a full range of social and community facilities will be concentrated within mixed use neighbourhood centres located along public transport corridors and easily accessed walking and cycling.
6. **High Quality Sustainable Design and Distinctive Character** - The masterplanning process effectively responds to the local context and the context of climate change, to create new well designed neighbourhoods with a distinctive character which residents will be proud of.
7. **Integrating with Neighbouring Areas** - New development responds to local deficiencies and provides good connectivity to adjoining areas and is informed by feedback from existing communities.
8. **Connected strategic green open spaces** - Multi-functional and connected green open spaces form strategically important links to the surrounding area to provide routes for people and wildlife and open spaces for sports, recreation and play.
9. **Landscape, biodiversity and heritage** - Sympathetically integrate existing landscape, biodiversity and historic features of the site into the development taking opportunities to protect, enhance and manage important features along with mitigation and enhancement measures to provide satisfactory compensatory measures.
10. **Resource efficiency** - Innovative and creative energy, management of surface water and waste management solutions are adopted to make new developments more environmentally sustainable.



STRUCTURING ELEMENT:
CO-LOCATED SCHOOLS



STRUCTURING ELEMENT:
FUTURE ABILITY TO DELIVER TRAM TRAIN



STRUCTURING ELEMENT:
NETWORK OF STREETS

3.10 From these key themes, details have been developed to achieve the criteria set out at Figure 1 of TAN12.

ACCESS

“Ensuring ease of access for all”

Figure 1, TAN 12

- Creation of convenient, safe and direct access for all residents to the local facilities;
- Provision of multiple vehicular access points into the development and additional pedestrian accesses forming part of a permeable network of streets which assists in dispersing traffic (vehicular and pedestrian);
- Creation of a clear movement hierarchy providing easily recognisable routes which balances the street as a space alongside its function as a movement corridor;
- The connectivity of Plasdwr to St. Fagan’s is maintained and enhanced wherever possible. This is achieved through retaining existing public rights of way as an integral part of the development, or providing attractive alternatives and diverting routes and providing additional linkages;
- Maintaining a human dimension in terms of scale to the built form for ease of orientation;
- Provision of buildings that assist in navigation through the development as well as signify the gateway points:
- A comprehensive approach which is responsive to local need. This comprehensive approach combines movement, leisure, economic, educational and ecological issues in order to demonstrate a holistic response;
- The new community must be integrated with the existing urban fabric, both physically and socially. This could be achieved through sympathetic design, strong movement links and shared use of new facilities; and
- The masterplan must also seek to integrate the development by providing a high level of accessibility for all users, specifically promoting access for pedestrians, cyclists and public transport, as well as the needs for vehicles.

CHARACTER

“Sustaining or enhancing local character, Promoting legible development, Promoting a successful relationship between public and private space, Promoting quality, choice and variety, Promoting innovative design” Figure 1, TAN 12.

- Integration of the development with the existing built form of Cardiff in relation to scale, height and massing. The approach should begin with an understanding of the existing area and its design should evolve from the area’s landscape and built heritage. It is necessary fully to understand the special characteristics of the site;
- The development should respect local context and historical character and strengthen and enrich local identity, character and distinctiveness;
- Consideration of views in and out of the site;
- Protection of existing and proposed residential amenity through the use of frontage development thereby enclosing rear gardens;
- Other physical and visual connections should also be incorporated into the development proposals by the approach to landscape design and consideration of views and vistas;
- Varying building heights and materials by encouraging high quality design to create variety and visual interest to assist in creating diversity and distinctiveness;
- A response to the existing landscape context must be ensured through the retention of significant existing trees, hedgerows and other ecological features. Important views into and out of the site should be established and incorporated into the development layout;
- The development should respond to the local topography by proposing movement corridors and built form which aligns with existing contours in order to minimise earthworks and to emphasise the natural landform;
- Opportunity to establish a new distinctive identity to the development, whilst having its own character and integrating with the landscape context;
- Minimise the impact of the development on the surrounding context.
- Integration of a strong landscape structure;
- Establishment of a strong identity; and
- Ensure a ‘sense of place’ to the development.

COMMUNITY SAFETY

“Ensuring attractive, safe public spaces and Security through natural surveillance”

Figure 1, TAN 12

- The creation of a safer environment for all must be considered throughout the design process including the perception or fear of crime. This can be achieved through the layout of the development itself as well as the form and type of facilities and services provided;
- Strong landscape and open space structure;
- Provision of a clear hierarchy of connected spaces and places, including streets, accessible by a variety of users which consider the design of the space as well as its function as a movement corridor;
- Creation of a clearly defined public realm through the provision of strong building frontage lines and variations in enclosure of private spaces;
- Control of access to private areas, particularly rear gardens and parking courts;
- Provision of accessible public open space to meet the needs of the local community whilst encouraging social activity;
- Inclusion of family friendly environments, activities and facilities; Ensuring pedestrian and cyclist safety; and
- Building to high standards.

ENVIRONMENTAL SUSTAINABILITY

“Achieving efficient use and protection of natural resources, Enhancing biodiversity and Designing for change”

Figure 1, TAN 12

- Creation of new landscape features and wildlife habitats on the site;
- Creation of a sustainable urban drainage strategy;
- Achieving environmental sustainability and healthy living;
- Diversity should be considered in relation to people and their activities as much as to built form, and public spaces, as built form helps shape the life of a place but it is people who add liveliness and fun;
- Variety is fundamental to creating a place with its own character, visual interest and activity, so a well functioning place should cater for a range of lifestyles and activities and should respond to the local community;
- Diversity can be achieved through mixed use developments, to encourage a vibrant local economy. It can be introduced through mixes, with residential development as a key component by introducing a range of housing types, tenures and densities responding to local needs. Opportunities for variety and choice, within the local context, should be maximised and proposals should incorporate the principles of mixed use development, including the provision of conveniently located community infrastructure;
- Provision of, and easy access to, green spaces encompassing various forms of recreational activities for different age groups;
- Use of energy efficient building techniques;
- Achievement of high levels of passive solar gain through the careful orientation of buildings.
- Introduction of different types of play areas as an integral part of the open space strategy;
- Creation of green links to act as wildlife corridors through the site linking wildlife habitats off and on the site; and
- Integration of proposed landscape features in order to soften the built form.

MOVEMENT

“Promoting sustainable means of travel”

Figure 1, TAN 12

- Encouragement of walking, cycling and public transport use rather than the use of the private car thereby reducing the reliance on natural resources;
- Provision of a variety of sports and play facilities;
- Locating facilities within walkable catchments;
- Creation of jogging/walking routes or 'trim trails';
- Accessible greenspace both formal and informal; and
- Integration between the Plasdwr and the existing community on the north west of Cardiff.

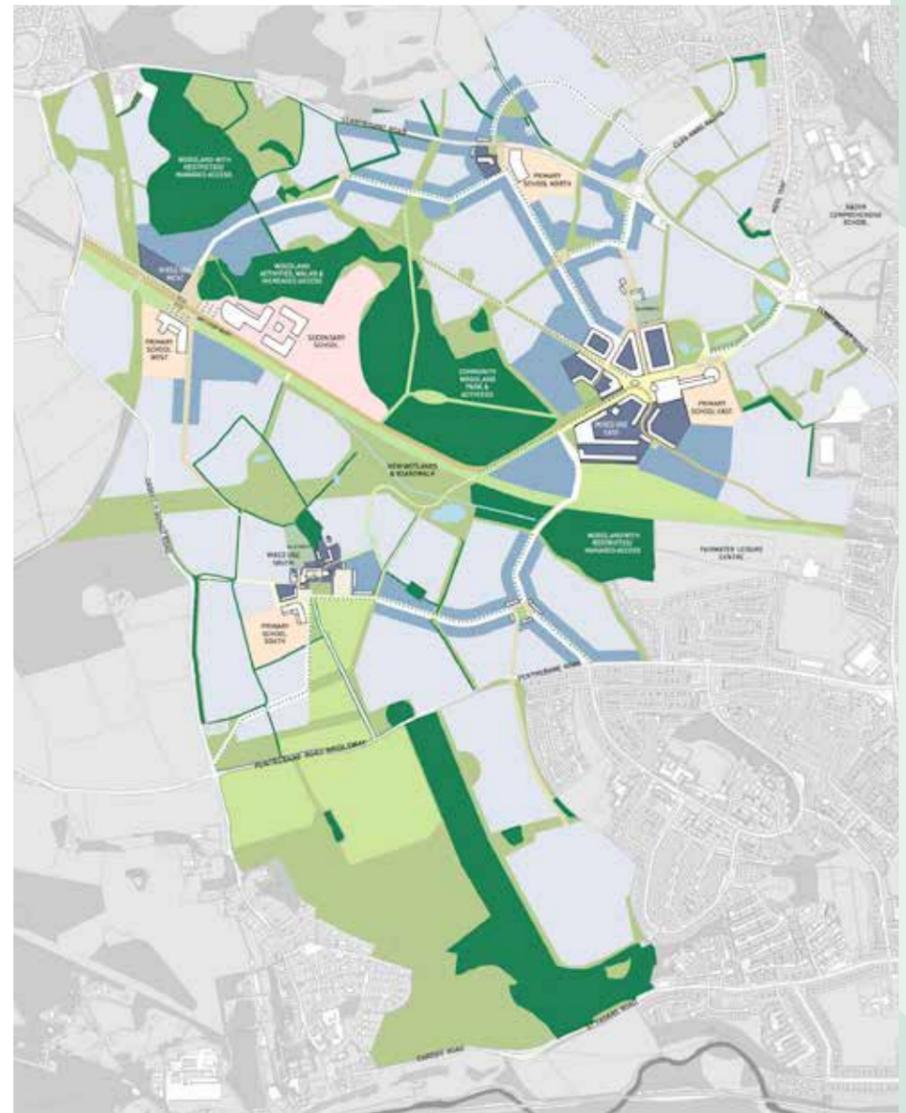
DESIGN EVOLUTION

3.11 In addressing the constraints and opportunities and progressing the scheme with the team and Cardiff Council, the opportunities to incorporate the following revisions have been identified:-

- Revised design of the main movement corridors to follow the topography and maintain appropriate gradients;
- Relocation of district centre further north away from the dismantled railway to create better population catchment, easier access for all and to use top of hill for landmark buildings
- Realignment of future tram/train to pick up three of the mixed use areas;
- Relocation of secondary school to west of site to sit better within catchments of existing secondary schools;
- Green corridor and view provided to listed farmhouse at Pentrebane Farm;
- The new 'spine road' has been redesigned to accommodate more axial links and become less of a 'loop' compared to previous design approaches.
- Enhanced Sustainable Drainage SUDS are now proposed to reduce surface water run off and flood risk downstream, and also provides biodiversity and amenity opportunities.



MASTERPLAN JUNE 2014



MASTERPLAN AUGUST 2014

WESTERN QUARTER EARLY DEVELOPMENT



PENTREBANE FARM EARLY DEVELOPMENT



DISTRICT CENTRE EARLY DEVELOPMENT



