Newport City Council
Local Development Plan

Council Response to Matters Arising

Hearing Session 11: East Newport Strategic Development Area
MATTERS ARISING

Hearing Session 11: East Newport Strategic Development Area

1. Provide the Inspector with the following Masterplans:
   - Overarching Masterplan for Glan Llyn
   - Western Area Masterplan for Glan Llyn
   - Indicative Masterplan for Llanwern Village (Already submitted by Gallagher Estates)

   1.1 The Masterplans are attached in Appendix 1 of this paper.

2. Upgrade to “High” priority given in Plan for review and update of Eastern Expansion Area Supplementary Planning Guidance, to reflect the Council’s present aspirations for the area and coordinate development proposals.

   2.1 Paragraph 14.2, Section: Site Specific Development Briefs, SPG: Eastern Expansion Area will be amended to read:

<table>
<thead>
<tr>
<th>SPG</th>
<th>Current Status</th>
<th>Proposed Action to link SPG to the LDP</th>
<th>Priority</th>
</tr>
</thead>
</table>

3. Review SP11 to include all sites considered to be part of the Eastern Expansion Area (whether allocated or committed) and ensure that depiction on Proposals Map is consistent the areas so identified in SP11.

   3.1 Policy SP11 is to be amended to read:

   LAND TO THE EAST OF THE CITY THE EASTERN EXPANSION AREA CONSISTS OF THE FORMER LLANWERN STEELWORKS REGENERATION SITE KNOWN AS GLAN LLYN H1(47) AND EM1(vii), CENTERED ON , AND HOUSING SITES AT LLANWERN VILLAGE H1(3), HARRIDGE HIGH SCHOOL H1(19) AND WOODLANDS SITE H1(55). THIS EASTERN EXPANSION AREA IS IDENTIFIED AS A RESIDENTIAL LED MIXED USE, SUSTAINABLE URBAN EXPANSION AREA AND WHICH WILL BE REQUIRED TO PROVIDE A RANGE AND CHOICE OF HOUSING, EMPLOYMENT LAND AND COMMUNITY USES.

   3.2 Paragraph 2.37 is to be updated to read:

   In addition to the former steelworks site there is also the area to the West of Llanwern Village which has planning permission for 1,100 units. This greenfield development proposes a residential development with associated community facilities such as a school forming part of the overall Eastern Expansion Area. Other land is included within the Eastern Expansion Area.

Two additional housing sites are also identified as part of the Eastern Expansion Area this includes the 65 units at the residential site adjacent to Hartridge High School (H19) and the 200 units at the greenfield site at Woodlands Site (H55) which directly adjoins the Hartridge High School site. Further detail of the overall area can be found in Supplementary Planning Guidance.

4. Council to supply a year on year schedule taken from the JHLAS of forecast completions for Glan Llyn and Llanwern Village, from the date they first figured in the JHLAS return up to the April 2013 study.

4.1 JHLAS – SCHEDULE OF GLAN LLYN AND LLANWERN VILLAGE

The tables below illustrate the year on year schedule with the agreed JHLAS figures for both Glan Llyn and Llanwern Village. Following the year by year data a summary table is set out illustrating the differences in totals over this 10 year period. Please note that from 2003-2006 Glan Llyn has a total of 600 units. This reflects the total that was anticipated to be delivered within the UDP period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Llanwern Village</th>
<th>Glan Llyn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>2012</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Llanwern Village</td>
<td>Glan Llyn</td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2009</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>2010</td>
<td>250</td>
<td>150</td>
</tr>
<tr>
<td>2011</td>
<td>550</td>
<td>150</td>
</tr>
<tr>
<td>2013</td>
<td>740</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>950</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>950</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>550</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>125</td>
<td></td>
</tr>
</tbody>
</table>

**Totals Summary Table:**

<table>
<thead>
<tr>
<th></th>
<th>Llanwern Village</th>
<th>Glan Llyn</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Year Supply</td>
<td>3 (i)</td>
<td>5 Year Supply</td>
</tr>
<tr>
<td>2013</td>
<td>360</td>
<td>740</td>
</tr>
<tr>
<td>2012</td>
<td>150</td>
<td>950</td>
</tr>
<tr>
<td>2011</td>
<td>400</td>
<td>700</td>
</tr>
<tr>
<td>2010</td>
<td>150</td>
<td>950</td>
</tr>
<tr>
<td>2009</td>
<td>200</td>
<td>700</td>
</tr>
<tr>
<td>2008</td>
<td>300</td>
<td>800</td>
</tr>
<tr>
<td>2007</td>
<td>800</td>
<td>300</td>
</tr>
<tr>
<td>2006</td>
<td>550</td>
<td>550</td>
</tr>
<tr>
<td>2005</td>
<td>250</td>
<td>850</td>
</tr>
<tr>
<td>2004</td>
<td>125</td>
<td>975</td>
</tr>
<tr>
<td>2003</td>
<td>125</td>
<td>975</td>
</tr>
</tbody>
</table>

*Completions have taken place in these two years.
APPENDICIES

APPENDIX 1 –

- Overarching Masterplan for Glan Llyn
- Western Area Masterplan for Glan Llyn
GLAN LLYN - WESTERN SUB-AREA

REV J NOVEMBER 2010
"Our vision for Glan Llyn is to deliver for Newport a sustainable community set within an extensive and imaginatively designed landscape, comprising a careful blend of green corridors, parks and water. It will be a benchmark for residential development in the future."

Anthony Glossop (Chairman, St Modwen Properties plc)
Regeneration of the old “Heavy End” of the Llanwern Steelworks is a key local and national objective. St. Modwen has secured outline planning permission for a new neighbourhood called Glan Llyn that will see 4,000 new homes delivered within a transformed, accessible and high quality environment. The development concept is based on a brand new landscape of greenways, parks, blueways and new lakes. This is known as the green grid which will delineate a series of land parcels where high quality new homes and facilities will be built. These areas are served by a clear hierarchy of new roads – including a new tree lined avenue to the north and a contemporary main street to the south.

Glan Llyn is a long term development project requiring a long term commitment. St. Modwen will act as master developer installing the new hard and soft infrastructure (including, all of the roads, paths, the complete green grid, two new schools and a new local centre). Individual home builders, housing associations and other bodies will be responsible for the new homes. A new community management company will be set up to manage the new parks, water bodies and open spaces – introducing a new way to use, manage and sustain this central part of Glan Llyn.

The site is split into three main residential areas – western, central and eastern. This document provides guidance on the design of the Western Sub-area of the site which includes 1,250 new homes, substantial areas of new and improved landscaping, the western park, the first phases of the local centre and the first new primary school.
THE PROJECT TEAM

DEVELOPER
St. Modwen Developments Ltd
King Weston Lane
Avonmouth
Bristol
BS11 8AZ
Contact: Rob Skelston

ENGINEERING & ENVIRONMENTAL
Halcrow
One Kingsway
Cardiff
CF10 3AN
Contact: Christopher James

PLANNING CONSULTANT
GVA Grimley Limited
One Kingsway
Cardiff
CF10 3AN
Contact: Tim Gent

LANDSCAPE ARCHITECT
Munro + Whitten Ltd
56 King Street
Leicester
LE1 6RL
Contact: Don Munro

ARCHITECT & MASTERPLANNER
Stephen George & Partners
Dominion Court
43 Station Road
Solihull
West Midlands
B91 3RT
Contact: Ian Yallop

PROJECT & COST MANAGEMENT
Prosurv Consult Limited
Unit 2
Trentham Business Quarter
Bellringer Road
Trentham
Stoke-on-Trent
Staffordshire
ST4 8GB
Contact: Paul Dunning

The Ordnance Survey used as a base for images within this document is done so under licence number 100020449
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>INTRODUCTION &amp; BACKGROUND</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>INTRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>1.2</td>
<td>THE WESTERN SUB-AREA</td>
<td>2</td>
</tr>
<tr>
<td>1.3</td>
<td>PURPOSE OF THE GUIDANCE</td>
<td>3</td>
</tr>
<tr>
<td>1.4</td>
<td>STRUCTURE &amp; CONTENT</td>
<td>3</td>
</tr>
<tr>
<td>2.0</td>
<td>PLANNING &amp; IMPLEMENTATION</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>PLANNING POLICY CONTEXT</td>
<td>7</td>
</tr>
<tr>
<td>2.2</td>
<td>IMPLEMENTATION - ROLES &amp; RESPONSIBILITIES</td>
<td>8</td>
</tr>
<tr>
<td>3.0</td>
<td>LANDSCAPE FRAMEWORK</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>DEVELOPMENT CONTEXT &amp; LANDSCAPE</td>
<td>12</td>
</tr>
<tr>
<td>3.2</td>
<td>LANDSCAPE CHARACTER</td>
<td>12</td>
</tr>
<tr>
<td>3.3</td>
<td>SURFACE WATER &amp; DRAINAGE</td>
<td>13</td>
</tr>
<tr>
<td>3.4</td>
<td>WESTERN SUB-AREA LANDSCAPE CHARACTER ZONES</td>
<td>14</td>
</tr>
<tr>
<td>3.5</td>
<td>BLUEWAYS</td>
<td>15</td>
</tr>
<tr>
<td>3.6</td>
<td>GREENWAYS</td>
<td>16</td>
</tr>
<tr>
<td>3.7</td>
<td>WESTERN PARK</td>
<td>17</td>
</tr>
<tr>
<td>3.8</td>
<td>THE GATEWAY</td>
<td>18</td>
</tr>
<tr>
<td>3.9</td>
<td>THE AVENUE</td>
<td>19</td>
</tr>
<tr>
<td>3.10</td>
<td>PUBLIC OPEN SPACE</td>
<td>20</td>
</tr>
<tr>
<td>3.11</td>
<td>PUBLIC REALM STRATEGY</td>
<td>22</td>
</tr>
<tr>
<td>3.12</td>
<td>LANDSCAPE SPECIES &amp; SPECIFICATION</td>
<td>28</td>
</tr>
<tr>
<td>4.0</td>
<td>MOVEMENT PRINCIPLES</td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>INTRODUCTION</td>
<td>32</td>
</tr>
<tr>
<td>4.2</td>
<td>STREET HIERARCHY - CONCEPT</td>
<td>33</td>
</tr>
<tr>
<td>4.3</td>
<td>MOVEMENT STRATEGY</td>
<td>34</td>
</tr>
<tr>
<td>4.4</td>
<td>STREETS MATRIX</td>
<td>48</td>
</tr>
<tr>
<td>5.0</td>
<td>WESTERN SUB-AREA DESIGN PRINCIPLES</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>INTRODUCTION</td>
<td>50</td>
</tr>
<tr>
<td>5.2</td>
<td>WESTERN SUB-AREA MASTER PLAN</td>
<td>51</td>
</tr>
<tr>
<td>5.3</td>
<td>DENSITY &amp; MIX</td>
<td>52</td>
</tr>
<tr>
<td>5.4</td>
<td>BUILDING HEIGHTS</td>
<td>53</td>
</tr>
<tr>
<td>5.5</td>
<td>GENERAL DESIGN PRINCIPALS</td>
<td>54</td>
</tr>
<tr>
<td>5.6</td>
<td>ARCHITECTURAL CHARACTER</td>
<td>56</td>
</tr>
<tr>
<td>5.7</td>
<td>MATERIALS</td>
<td>58</td>
</tr>
<tr>
<td>5.8</td>
<td>SUSTAINABILITY</td>
<td>60</td>
</tr>
<tr>
<td>6.0</td>
<td>CHARACTER AREAS &amp; PLOT PARAMETERS</td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>CHARACTER TYPES</td>
<td>64</td>
</tr>
<tr>
<td>6.2</td>
<td>PLOT PARAMETERS</td>
<td>67</td>
</tr>
<tr>
<td>7.0</td>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>7.1</td>
<td>SUSTAINABILITY STATEMENT</td>
<td>80</td>
</tr>
</tbody>
</table>
1.0 INTRODUCTION & BACKGROUND
1.0 INTRODUCTION & BACKGROUND

1.1 INTRODUCTION
Outline planning permission (reference 06/0471) was granted on the 1st April 2010 for the mixed use redevelopment of the Llanwern Regeneration Site. The scheme is the cornerstone of Newport’s growth strategy and will deliver 4,000 new dwellings, along with a substantial new business park. It will generate 6,000 new jobs and provide 2 new primary schools, a local centre containing retail and community facilities and a significant area of new public open space and structural landscaping.

The planning permission is based on a collection of documents, including an Environmental Statement and a Development Framework, which explain the strategies and principles behind the creation of a new neighbourhood on the previously developed site.

Implementation of the development – which has been named Glan Ulyn - is to be guided by a number of further documents. These include a series of masterplans which need to be agreed before detailed proposals are made for each phase of the development. Condition 4 of the outline planning permission makes clear what these sub area masterplans are expected to do. A summary of these requirements (extracted from the condition) is provided below:

Each Sub-Area Masterplan shall accord with the parameters and objectives laid out in the Development Framework Rev E (January 2007) and shall clearly indicate the works for

(i) development parcels and
(ii) infrastructure.

Each Sub-Area Masterplan shall include, where appropriate to that phase or sub-area, the following details for each phase:

(a) details of how the phase is broken down into development parcels;
(b) in the case of phase 2 onwards a full and detailed design analysis of the built form of adjacent previous phases and their key characteristics;
(c) a design approach for each development parcel which reflects and builds on these identified characteristics;
(d) the approximate number of residential units within each development parcel and identification of development blocks with an indication of building heights;
(e) the location of landmark buildings and key frontages;
(f) approximate housing numbers, mix and density within each development parcel;
(g) the approximate location, number and mix of affordable housing within each development parcel;
(h) off-street parking arrangements;
(i) landscaping and planting proposals and boundary treatments;
(j) areas of public open space/recreation space within each development parcel (including the lakes), indicating their function and facilities to be provided and their location;
(k) the hierarchy of access and circulation including roads, footpaths and cycleways and how these link with the surrounding area and previous phases;
(l) sustainable development standards and measures to achieve such standards within each development parcel;
(m) details of sustainable urban drainage systems/flood compensatory/mitigation works including lakes and drainage channels.”

1.2 THE WESTERN SUB-AREA
This document is the Sub-Area Master Plan for the western part of the site and records the next stage in the development process. As required by the condition, it builds upon the approved development framework document and sets out the design principles which will establish the character and nature of the final built form and the landscape it sits within. The basic components of the western area are:

- approximately 1250 new homes, together with local play areas
- the western parts of the green grid
- associated access infrastructure (the main gateway entrance, roads, cycleways and paths)
- the first primary school
- the first part of the local centre
- the western pools, and western lakes, together with new drainage channels
- the western park and the restoration of the old Corus sports club and pitches
1.3 PURPOSE OF THE GUIDANCE

As stated in 1.2, this Sub-Area Master Plan document provides detailed guidance for the Western Sub-Area of the Glan Llyn site. It has three key objectives or functions:

- to allow the planning authority to assess detailed applications for development and other activities and uses to ensure that a comprehensive, high quality and cohesive development is achieved.
- to act as a benchmark for St. Modwen to measure the quality and compliance of schemes proposed by individual developers for the residential parcels within the Glan Llyn site. Selected developers will be obliged to apply for reserved matters approval, and develop the development parcels in accordance with the parameters established in this document.
- to guide the sequence of development, open space and infrastructure and to ensure that it is well connected to its neighbours (both within and on the edge of the main regeneration site).

This document should be read in conjunction with the Development Framework Document which deals with overall issues of land use, massing, density and access (although these are summarised throughout this document to avoid the need for too much cross referencing).

1.4 STRUCTURE & CONTENT

The Master Plan is divided into seven sections. Following this introduction:

Section 2 briefly reviews the planning and delivery context that lies behind the outline planning permission for the site and the preparation of the Western Sub-Area Master Plan. This section also defines the key roles and responsibilities of the main parties involved with the delivery of the scheme.

Section 3 explains the landscape and public realm strategy that lies at the heart of the development concept for the site (and the Western Sub-Area). Section 3 also includes information on drainage principles and techniques and how these have influenced the Master Plan.

Section 4 looks in more detail at the movement principles and strategies that will be adopted. Highways typologies are defined.

Section 5 explains the detailed design principles for the Western Sub-Area, including information on materials and sustainability measures.

Section 6 guidance for the key character areas within the Western Sub-Area and parameters for each of the development parcels that lie within the Western Sub-Area.

Sections 2, 3 and 4 provide guidance and background for the whole scheme, whilst sections 5 and 6 apply mainly to the Western Sub-Area (although the character areas will cross over into later phases and areas).

It should be noted that whilst some guidance is provided on the form and content of the local centre, a separate and specific “mini” sub area masterplan will be produced for the centre. To meet the main objective of condition 4, this will be submitted to the planning authority and agreed in writing before the detailed proposals are submitted for phase 2 of the development. Submission of the details for the first primary school will also be preceded by detailed discussions on the principles, operational requirements and standards to be achieved.
2.0 PLANNING & IMPLEMENTATION
The guidance also establishes a clear preference for the settlements, and vitality to living and working environments. PPW seeks to encourage mixed use developments to include:

- development and sets out a number of key objectives which are set out in Planning Policy Wales (PPW) published in Beyond the Spatial Plan, the land use policies of the NAW

- economic gateway to Wales and because of its strong connections with the Eastern Valleys.

- The City is a key priority to reflect its strategic role as the Primary Key Settlement within the South East Wales

- At a national level, the Wales Spatial Plan identifies Newport as a Primary Key Settlement within the South East Wales Capital Region. The redevelopment and regeneration of the City is a key priority to reflect its strategic role as the economic gateway to Wales and because of its strong connections with the Eastern Valleys.

- Beyond the Spatial Plan, the land use policies of the NAW are set out in Planning Policy Wales (PPW) published in revised format this year. The guidance promotes sustainable development and sets out a number of key objectives which include:

  - making the best and most effective use of previously developed land and buildings;
  - promoting sustainable settlement patterns;
  - locating development to minimise the demand for travel;
  - protecting and enhancing the environment, and
  - improving the standard of living for people in Wales by promoting quality housing, employment, shopping, health, community, leisure and open space.

- PPW seeks to encourage mixed use developments to add activity, choice and community infrastructure to settlements, and vitality to living and working environments. The guidance also establishes a clear preference for the development of brownfield land over greenfield land.

### LOCAL PLANNING POLICY

At a local level, the statutory development plan for Glen Lyn is the Newport Unitary Development Plan (UDP) 1996-2011 which was adopted by Newport City Council in May 2006. The plan has two main parts – one strategic and one more detailed.

#### PART 1 STRATEGIC PROVISIONS;

The UDP’s strategic policies focus on five main principles:

- a) setting Newport on a going for growth strategy which sees the Council respond to economic challenge by promoting the sustainable expansion of the City and the services it can support.

- b) encouraging the re-use of previously developed land in locations that reduce the need to travel and promote a range of accessibility choices.

- c) emphasising that high quality design will be sought in all development proposals and new development should seek to enhance the site and the surrounding area and provide bene fit to the community as a whole.

- d) identifying the strategic housing and employment land requirements for the area to 2011 respectively.

- e) allocating the Glen Lyn site as the cornerstone of an Eastern Expansion Area for mixed use development comprising new housing, employment space, leisure and community uses.

### PART 2 POLICIES;

Part of the UDP sets out more detailed policy guidance. It places the whole of Glen Lyn within Newport’s urban boundary and Policies H1 and ED2 encourage redevelopment of the site for housing and a mix of commercial, distribution, leisure and residential and community uses. Other policies reinforce the commitment to regeneration schemes particularly where the proposals will result in the re-use of vacant and derelict land in the urban area, provided that the design policies of the plan are met. Similarly, Policy CE36 supports the reclamation of derelict land and Policy CE37 encourages the development and positive re-use of unsightly land as a means of achieving environmental improvement.

Policy CE38 encourages good quality sustainable design in all forms of development and Policy CE45 states that safety and security should be taken into account in the design of schemes particularly in relation to matters such as the siting of buildings, design and location of parking.

Policy T1 sets out the provision for a new railway station at Llanwern to serve East Newport. Policy T5 sets out road schemes identified for provision in the City over the plan period which includes the provision of a Southern Distributor Road along Queensway alongside the Steelworks (Policy T5(i)). Policy T13 relates to car parking and states that the Council will seek to influence its location and supply. Policy T14 promotes walking and cycling as an alternative means of transport.

Policy CF2 requires appropriate provision of new sports and recreational facilities, whilst Policy CF16 relates to the provision of new community facilities (such as schools) which may be required to meet the needs of local communities. The provison of such facilities is an integral element of the scheme.

Policy U4 encourages developers to incorporate sustainable drainage systems into development proposals and Policy U6 stipulates that development which could increase the risk of flooding due to additional surface water run off must include appropriate and environmentally sympathetic mitigation measures. Policy U8 encourages development proposals to assist in the conservation of energy.

### NATIONAL POLICY

This policy has informed both the consideration and approval of the outline planning application for Glen Lyn and the content of this Sub-Area Master Plan. The scheme responds positively to national planning policy guidance and wholly accords with the principles of local planning policies which encourage the delivery of sustainable new development, based on the full use of previously developed land, mixed use, self containment and high quality design.

### SUPPLEMENTARY PLANNING GUIDANCE

The scheme and this document also reflects the main features of the supplementary planning guidance prepared for East Newport. It refines and modifies these according to the principles parameters and objectives of the outline planning permission and the illustrative masterplan and development framework that support it.

The Sub-Area Master Plan proposes the same mix and general organisation of development and rests on the same principles and objectives for new development, open space, landscaping, accessibility and social and physical infrastructure. There are some areas where adjustments have been required however the majority of these were recognised when planning permission was granted for the scheme (when it was acknowledged that the main spirit and objectives of the SPG had been followed). The Sub-Area Master Plan continues in that context and applies in more detail the principles behind the series of approved documents.
2.0 PLANNING & IMPLEMENTATION

2.2 IMPLEMENTATION - ROLES & RESPONSIBILITIES

The guidance laid out in this document covers the whole of the Western Sub-Area of the Glan Llyn scheme. As required by condition 4, it includes guidance for the development parcels and the associated infrastructure and open space. Effective implementation of the guidance will rest on three key parties: the planning authority, St. Modwen and the individual developers of the plots and parcels.

THE LOCAL PLANNING AUTHORITY

The first key party is the planning authority. It will have primary responsibility for the consideration and approval of all submissions made to it for the site (including this masterplan, the reserved matters that follow it and the other submissions associated with the discharge of planning conditions). It will also act as a conduit to other organisations and agencies which will have an interest in and responsibility for the redevelopment of the site.

ST. MODWEN

St. Modwen has a long term commitment to delivering the vision for the site. As master developer it will have a critical role at Glan Llyn, which takes in three main tasks.

The first concerns infrastructure, landscaping, open space and enabling works associated with the redevelopment of the site. St. Modwen will devise strategies, submit applications (either for reserved matters or for the discharge of other planning conditions) and install or carry out:

- Ground works, remediation and reclamation
- New reens/SUDS and Lakes
- The new landscaped green and blue grid
- The principal roads
- New services
- The pedestrian and cycle links outside the individual development plots
- The strategic drainage infrastructure including connection points to each development zone
- Structural landscaping covering all areas outside the defined development parcels

Note:
This plan shows the phased approach to development plots and related landscaping. Some elements, such as roads, emergency access routes, cycleways, footpaths and services may extend into other phases to ensure that each phase is adequately served by the on-site infrastructure.
St. Modwen will also build the local centre and the first primary school. In this way a very large part of the public realm will be the responsibility of St. Modwen (in terms of design and implementation).

Critical to this task will be the agreement of the infrastructure phasing plan required under the terms of condition 5 of the outline planning permission. This condition requires the preparation, submission and approval of a plan for each phase of development that specifies the sequence and provision of highways, drainage, pedestrian and cycleways, public transport services, recreation areas and all formal and informal open space and landscaping.

An extract from the overall site wide phasing plan is shown on the facing page. This will form the basis of the infrastructure phasing plan which will sit alongside this masterplan and guide the sequence and timing of development and infrastructure.

The second of St. Modwen’s development management tasks will be to govern the disposal of sites and development parcels to individual housebuilders. It will ensure that each parcel that is offered to the market is accompanied by a detailed development pack which will include a copy of this masterplan and will clearly specify:

- The site area, plot boundaries and levels.
- Extent of the infrastructure to be implemented by St. Modwen, including highway access, pedestrian and cycle access, services and drainage connection points.
- Strategy for connecting into the strategic infrastructure.
- Affordable housing requirements.
- Key design requirements including a fully-compliant plot layout.

The third task for St. Modwen is to establish and run a Community Management Company (CMC) for the site. This is a key and novel obligation and the CMC will need to be in place by the first occupation. The CMC, which will include representatives from the City Council and the new community will oversee the management, maintenance and control of the new open spaces created on the site.

THE HOUSE BUILDERS

The housebuilder is the third key party in the implementation of the guidance. It will be responsible for preparing, agreeing and submitting schemes for new development. It will secure approval from the planning authority and construct the approved development. All works within the development zones will be the responsibility of the individual developers and will accord with the guidance and the parameters drawings/documents outlined in this document. Each individual plot developer will be responsible for the protection of the infrastructure works and will need to obtain the approval of St. Modwen to tie-in or link between the development plots and strategic infrastructure development.

The housebuilders will need to secure approval from St. Modwen and from the planning authority for their proposals (and St. Modwen will rely on the Design Guidance laid out within this document to review and evaluate proposals for each plot from developers and their professional teams). Plot developers and designers are, therefore, advised to work closely with the master development team and the planning authority in advance of the submission of proposals to establish a constructive dialogue and a shared vision.

RESPONSIBILITIES PLAN

A plan showing the broad breakdown of St. Modwen’s and the housebuilders responsibilities with respect to the western sub area is shown opposite. The main responsibilities are reflected in the remainder of this Master Plan, with sections 3 and 4 focusing on landscaping, public realm and movement (which will fall to St. Modwen) and sections 5 and 6 providing more detailed guidance for the main development areas (which will be the responsibility of the housebuilders).
3.0 LANDSCAPE FRAMEWORK

3.1 DEVELOPMENT CONTEXT & LANDSCAPE

The vision for Glan Llyn is based on a transformation of the current environment. At the heart of this is a new landscape that incorporates what is presently on the site and reflects what is around it to create a green framework for the new community that will be built there. As well as providing space and amenity for people and flora and fauna, this landscape orders the site, creating distinctive development parcels and a network of pedestrian and cycle routes. As proposed in the development framework document approved with the outline planning application, this framework will also bring together the different landscape characters of the hills to the north and the levels to the south.

This section of the Sub-Area Master Plan provides a complete guide to the landscaping principles behind the masterplan and the detailed design measures for new soft and hard landscaping that will be used to implement them in the Western Sub-Area. It begins with a description of the key principle - the green grid and the surface water drainage regime that it incorporates (and which condition 4 asks the Master Plan to address) - before moving on to the character areas that fall within the Western Sub-Area.

It continues (again to meet the requirements of the condition) with details of the open space to be provided, before moving onto the public realm strategy, public art and headline species to be used in the new planting.

3.2 LANDSCAPE CHARACTER

The legacy of the demolished Llanwern blast furnace site was that of a destroyed and denuded landscape. The inheritance was limited to the fishing lakes and the tree planting in their vicinity. The remainder is post industrial with no features or landform.

THE GREEN GRID

The first design exercise was the creation of a new structure to define and guide development through a grid, a matrix of landscapes, that would embrace new development and give it a setting. From this the Green Grid concept was born based on defining development plots, the future neighbourhoods and tying together the nodes of major landscape spaces; the parks and lakes.

This has been an overriding principle since the start of the project masterplanning exercise, as defined in the Development Framework document. The changes to the layout of the grid are as a result of the updated flood consequences assessment for the development and the subsequent 2010 addendum to the 2005 FLA. This reduces the volumes to be attenuated from the tidal breach flood events. The reens are now at a higher level nearer to development plot levels creating flatter and more usable corridors for open space. This has in many respects resolved a previous concern of Design Commission for Wales on the viability of the deeper reens. The reens are now in keeping with the physical character of the reens in the Gwent Levels to the south.

To the north the hills of Llanwern dominate the view and offer visual focus and backdrop to the site. The woods and fields of the hills offer a strong and relevant visual generator for landscape corridors with views north up and out of the development. In contrast to the hills the big skies over the Gwent Levels and the Severn Estuary, to the south, draw the eye offering large dramatic cloudscapes.

The east-west axis on the grid are staggered landscape corridors orientated at angles to break up and restrict views east to the existing steelworks. Each corridor leads to a landscape node whether this is a park or lake or indeed both. Opportunities occur for key public realm where the Green Grid intersects roads and streets and where it is adjacent to schools, district and local centres, sports and play facilities. At these nodes the opportunity has been grasped to create public realms of note incorporating hard, soft, formal or informal places.

The Green Grid is key to the success of the transformation of the old steelworks site giving structure and setting to the development within distinctive landscapes offering many and varied amenity and biodiversity opportunities.
3.3 SURFACE WATER & DRAINAGE

Within the green grid are a series of reens and lakes forming a network of waterways through the development. These waterways have both an aesthetic and practical function. On one level they will intercept and distribute flood water that reaches the site should sea¹ or Usk River defences fail; on another they will provide surface water attenuation as part of a sustainable urban drainage system (SUDS).

The system of reens and lakes will convey surface water run-off from the development plots and discharge at an agreed equivalent greenfield run-off rate of 3.5l/s/ha (established in consultation with the Caldicot & Wentlodge Internal Drainage Board) into the Main East West Ditch (Corus private water course) to the south of the site, under a monitoring and maintenance regime to be agreed with Corus. The existing north-south ditch to the north of the site and the five existing underground culverts flowing north to south through the site will predominantly be retained to convey off-site flows from the catchment to the north of the site at their existing rates. Earlier proposals combined these flows with the development runoff within open reens and lakes. However, in order to minimise the earthworks and to make the most economical and sustainable use of the available land, it is now proposed to retain the culverts where possible and locate the reens on predominantly parallel routes with the culverts.

The development contains a number of lakes; three of which are in the Western Sub-Area, one existing and two new:

The Pools;
an existing, well maintained lake which will be retained. This lake is currently used for angling and this use will remain.

The West Lakes;
an aesthetic, formal pair of lakes relating to the Local Centre and public amenity. Also providing surface water attenuation and SUDS.

The shallow reens will be pooled intermittently along their length to create areas of permanent water and provide areas of different character and interest. With gentle gradients to the water, the greenways will function as areas of genuine amenity space. Footpaths and cycleways will run within them, forming pleasant links through the development. The reens, lakes and open spaces will be designed to ensure potential adverse impacts resulting from a tidal breach of the river Usk is mitigated against.

The development levels, water courses, open spaces and lake sizes will be in accordance with the Llanwern Flood Consequences Assessment 2005 and addendum 2010. The sports fields at the western most edge of the site and the ecology park will be allowed to flood and function as storage areas.

Generally water bodies will be accessible with a range of streams, pools, and lakes being formed to provide visual interest throughout the development.

The surface water runoff will have a three tier quality control, by utilising sustainable drainage systems, pollution prevention measures and initial containment of first flush within sections of the reens before discharging freely into the blueways. Control structures regulating flows from the development will be located at southern end of the blueways.

The blueways and greenways, retained culverts and associated structures will be maintained by the CMC.

¹ The area of development affected by a breach of the Goldcliff sea wall is outside the western area.
3.0 LANDSCAPE FRAMEWORK

3.4 WESTERN SUB-AREA LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONES

A The Northern Woods
B The Southern Woods
C Ecology Park
D Western Pools
E The Sports Club and Bowling Green
G The Gateway
H The Avenue
J Main Street
K The Greenways
L The Blueways
M Western Lakes and Park
3.5 BLUEWAYS

Other landscape corridors contain open watercourses forming wide “blueways”. Deeper in form than the greenways they offer greater biodiversity opportunities and a more intensely planted landscape of scrub and woodland on their slopes. These blueways follow the line of the primary flood channel and will receive the run off water from the development and some from the catchment of streams of the Llanwern hills before returning these flows back to the existing surface water network to the south of the development as well as convey flood inundation from tidal breach events.

At around 3-4m deep to the invert of the watercourses these corridors are deeper than the greenways. To economically accommodate this depth the landscape corridor slopes down and into the watercourse with gradients of 1 in 3 to 1 in 5. Whilst capable of maintenance these slopes offer limited amenity value for both children and adults.

The planting to these landscape corridors will be more dense with scattered native woodland blocks and scrubby thickets.

Footpaths and cycleways will tend to cross these corridors with some linear connectivity along the blueway.

The watercourses can be dammed to create small pools to encourage aquatic and marginal vegetation whilst the main channels will receive bankside planting.

Housing and public buildings also front the blueways with informal surveillance of the spaces. Play areas are also located on the edge of the blueways borrowing on the landscape setting and benefiting from a greater informal adventurous space.

Planting will be, in the main native species, however, amenity parkland trees will be introduced to offer a variety of colour, texture and form throughout the seasons.

Paving will be low key self binding gravels or bitmacadam with a bonded gravel surface to create a rural character with the use of timber in site furniture whether benches, seats, bins or sign posts.

The surface water runoff will have a three tier quality control, by utilising sustainable drainage systems, pollution prevention measures and initial containment of first flush within sections of the reens before discharging freely into the blueways. Control structures restricting flows from the development will be located at southern end of the blueways.

The blueways, retained culverts and associated structures will be maintained by St. Modwen.
3.6 GREENWAYS

The Green Grid forms and defines the structure of the sustainable drainage system.

Within some of the landscape corridors are swales at ground level forming broad greenways of open grass and groups of trees and shrub planting.

These swales receive and attenuate storm water run-off from the development before discharge to the existing surface water network to the south of the development. Indeed the swales create a landscape reminiscent of the levels which at 1 to 2m deep reflect the level’s reeds flowing through a mainly native landscape creating not just amenity but important biodiversity opportunities.

Footpaths and cycleways follow the reeds which meander through the landscape corridors.

Housing and public buildings front the greenways and offer informal surveillance of the spaces. Play areas are often located on the edge of the greenways borrowing on the landscape setting and benefiting from a greater informal play space.

Planting will be in the main native species however, amenity parkland trees will be introduced to offer a variety of colour, texture and form throughout the seasons.

Paving will be low key self binding gravels or bitmacadam with a bonded gravel surface to create a rural character with the use of timber in site furniture whether benches, seats, bins or sign posts.

Narrower greenways, no greater than the width of a swale, will follow some of the main roads in the site to take run-off from streets and roofs adjacent.
3.7 WESTERN PARK

This major public open space lies along the eastern boundary of the Western Sub-Area. It is adjacent to the Local Centre and is the setting for the residential neighbourhood around it. It has many important roles in the new community.

The laying out of a formal sports field creates a large grassed space that can also host events and performances. This space allows simple activities to take place like flying kites, chasing the kids or running after the dog.

A cricket pitch can be accommodated on the sports field and could be designed to Sport England standards providing high quality facilities for local clubs, located centrally within the park.

Around the sports field parkland trees define the space and offer shade and a setting for games and activities.

Adjacent the sports field is the Neighbourhood Equipped Area for Play. This facility includes a formal kick about court, fenced, with football goals and basketball hoops. Next to it is the play area designed for older children, with teenagers especially catered for. This NEAP is part of the broader play strategy that includes Locally Equipped Areas for Play (LEAP) sited on Green and Blue Ways and Local Areas for Play (LAP) within the housing areas.

The lakes define and set the north and southern areas of the park. They not only form part of the sustainable drainage system but also provide amenity and habitat features. Viewing areas, interpretation signs and informal seating delineate the waterside for rest, contemplation and experiencing nature at close hand. A blueway sits between the park and the housing forming a soft edge with informal native tree planting along the grass slopes to the reen.

New woodlands will be planted informally around the park. The design and content of the woodland will ensure safety and surveillance are not compromised. Woodland rides and wildflower meadows will provide open clearings with individual ornamental trees providing seasonal colour and interest, set against a backdrop of native woodland blocks. Areas within the woodland will be opened out to allow for opportunities for ecological enhancement, natural play and educational use.

A combined footpath/cycleway circles the perimeter of the park along a tree lined avenue linking into the greenways and blueways connecting together the shops and other facilities of the local centre, the primary school and the residential areas.

WESTERN LAKES
The western lakes define and formalise the north and southern boundaries to the park. Viewing platforms, interpretation signs and informal seating delineate the waterside for rest and contemplation, play and ecological activities whilst enjoying broad vistas across the lakes.

ARRIVAL PLAZA
The plaza creates an open arrival space designed for pedestrian use enjoying vistas over the park and lakes. The space will create a grand entrance from the local centre to the lakes, allowing users to interact with the waterside and venture further into the parkland.

PARKLAND
This is an active and informal, community space for outdoor performances and events located centrally between the two lakes. The area will provide an informal amenity space for visitors to the facilities and the local community. The park land will be able to accommodate shallow flood waters in the event of an extreme tidal breach flood event.

PARKWAY
A formal tree lined linear avenue encircles the eastern boundary, linking together the northern and southern lakes. Forming a pedestrian corridor for walkers and cyclists connecting together the Greenways and development zones and the central lake. Breaks in the tree lined avenue allow for opened out expansive views across the parkland setting.

LOCAL LINK
A key pedestrian and cyclist corridor linking the local centre, key community facilities, primary school and local landmark building into the greenway.

WOODLAND
The woodland forms an informal buffer between the lakes and parkland. Woodland rides and wildflower meadows will provide open clearings with individual ornamental trees providing seasonal colour and interest, set against a backdrop of native woodland blocks. Areas within the woodland will be opened out to allow for opportunities for ecological enhancement, natural play and educational use.

NEIGHBOURHOOD EQUIPPED AREA FOR PLAY (NEAP)
A NEAP will be provided on the Western Park with 1,000m² of play area, 8 pieces of play equipment and a surfaced play zone. A 30m buffer zone will be provided between the NEAP and the nearest residential unit.
3.0 LANDSCAPE FRAMEWORK

3.8 THE GATEWAY

The Welsh Assembly Government (WAG) is committed to delivering the main road (the Queen’s Way) that runs along the southern boundary of the site. The entrance roundabout to the site will therefore be outside the control of St. Modwen, although the company will work with the City Council and WAG and seek to ensure that a high quality and effective gateway into the scheme is secured.

Once within the site, the entrance to the Western Sub-Area will be through its own landscape that is the setting for the road into the development from Queensway.

The Gateway is not, however, just a movement corridor but a landscape space defined by and incorporating the existing fishing lakes to the west and the reen to the east. The mature trees of the fishing lakes anchor the space in the landscape and give it a permanence.

This is the first introduction to the green grid for visitors and residents and making a statement of intent, setting the scene for the new neighbourhood.

The landscape corridor offers a vista north along its length curtailed and drawn on by its curved alignment with a key landmark building at the end acting as vista stop.

New informal parkland tree planting in a linear grass meadow forms the eastern side of the space offering glimpses through to the housing over the reen and beyond the native shrub hedge.

The parkland trees will offer shade, seasonal interest and define the space. Underneath will be a carpet of grass with bulb planting. Frequent shrub blocks will define and direct views out of the space.

Running through the space is the main cycleway into the neighbourhood with points of access off into the neighbourhood. Where the greenway intersects the gateway space the pedestrian crossing will be defined by low shrub planting.

Between the pavement and the road is the verge containing the service routes and lighting. The design of the street furniture and signage will also set the scene and introduce the character of the neighbourhood.

This is a welcoming space where the rural character at the edge of the development gives way to the sub-urban character of the Avenue and streets beyond. This transition is important to the arrival experience drawing on the characteristics of the countryside as a calm threshold leading to the new neighbourhood.
3.0 LANDSCAPE FRAMEWORK

3.9 THE AVENUE

This important corridor runs around the whole site linking urban and sub-urban areas. It is more than a movement corridor, it is a key component of the Greed Grid being a wide space with opportunities to plant both or either sides.

This public realm corridor offers vistas along its length curtailed and drawn on by its curved alignment with key landmark buildings and spaces at the end of axis acting as vista stops.

Tree avenues frame the views and offer shade, seasonal interest and define the space. Changes in species will create new characters and add to legibility and distinctiveness of the place. The trees are within broad margins that have a multitude of functions

- the margin as a green edge to the space leading up to front gardens or the built facade
- the margin as a green edge to the space containing the swales for the sustainable drainage system in front of gardens or buildings
- the margin incorporating on street parking between the trees which may be in planted beds or tree stations in paving
- the margin as an extension of adjacent public spaces, the square running out and up to the road edge or the pocket park bringing soft landscape up to the pavement edge.

Between the pavement and the road is the verge containing the service routes and lighting. At key crossings the verge will be planted with a low ground cover shrub to define the place. Elsewhere the verge will be grass with bulb planting.

The space will be further augmented by the forms of the lighting units, the street furniture and signage.

This is an animated space with movement of people in vehicles, walking or cycling. People crossing the corridor and people populating the spaces along the corridor whether squares or parks, greenways or blueways and finally people shopping, walking to work, dropping off the children at creche or sitting outside of the cafe or bar.

Links between The Avenue and the housing plots are important to the animation of the space. Provision of routes from housing frontages to the footpath will ensure that this road facilitates genuine connections.
3.0 LANDSCAPE FRAMEWORK

3.10 PUBLIC OPEN SPACE

ECOLOGY PARK & NORTHERN WOODS

- The intention is to create visual and acoustic buffer zones separating the new development from the railway line to the north and the Retail Park and Sports Ground to the west. These areas will represent important opportunities to create wildlife habitat and extend the native woodlands. The ecology park will also provide recreation and amenity space for walks and the enjoyment of wildlife.
- In order to restrict human access and to encourage and protect the ecology in these areas, dwellings will not overlook them, rather their gardens will act as additions to them, enhancing their efficiency as both buffer zones and wildlife habitats.
- To ensure the privacy and security of rear gardens it is essential that their boundary treatment be robust, secure fencing interplanted with hedging and anti-vandal shrubs would be appropriate.
- Residential layouts should provide some degree of security to pathways through the ecology park, particularly at entrances. Here, properties could be located to maximise the benefits of natural surveillance along pathways.

WESTERN POOLS

- The existing pools to the west of The Gateway are being retained as a valuable amenity for recreation and fishing.
- Properties will generally be detached houses grouped in clusters of three or four approached by shared drives which also serve as cycle and footpaths giving access to the pools and other areas of the development.
- Housing will look out over open front gardens to provide natural overlooking of the public realm and pools beyond.
- Rear gardens will generally be larger than elsewhere and wherever possible will back onto adjacent gardens, boundary hedges will be encouraged in lieu of fencing or walls.

SOUTHERN WOODS

The Southern Woods will be created along the northern edge of Queensway. They will adopt a number of roles:
- a buffer to noise from and visual intrusion of vehicles on Queensway to the new residential areas
- a soft edge to Queensway to reflect the edge of the Gwent Levels on the southern edge of the road
- to provide an important biodiversity corridor through the planting of native tree and shrub species
- to act as part of the Green Grid of the development setting the residential plots into a distinct and robust landscape setting

SPORTS CLUB & BOWLING GREEN

The Sports Club and Bowling Green will be retained and continue their current role to:
- provide sports facilities for the existing and new communities
- form part of the Green Grid and set the development into a robust landscape setting
- be a green link for walkers and cyclists to the neighbouring areas and roads
- limited new planting will occur to accentuate routes and reinforce the existing vegetation
STRATEGY

A separate document, ‘The Phase 1 Play & Open Space Strategy’ will be submitted that deals in detail with the provision and design of Neighbourhood Equipped Areas for Play (NEAP), Locally Equipped Areas for Play (LEAP) and Local Areas for Play (LAP).

As well as play space, The Western Sub-Area provides a range of recreational, play and sports facilities phased to give access to these facilities as part of the earliest development on site. The facilities provided will be designed in accordance with current guidance and in consultation with the Local Authority. In brief, the facilities will comprise the following:

A. WESTERN LAKES AND PARK
The lakes fall within a park that has been conceived as a formal recreation area. Combining structural planting and open grassed areas the park links the west lake to the local centre. A ‘parkway’ will run around the perimeter of the park providing a circular route for walkers and cyclists. The park is a key link from the school site to the local centre as it embraces a strategic greenway.

B. SPORTS AND BOWLS CLUB
To the west of the site the existing sports pitches and bowls club will be retained giving opportunities for formal team sports. A new pedestrian/cycle link will provide access from the development into the sports facilities.

C. WESTERN POOLS
These existing fishing lakes in the southwest corner will be retained. Linkages will be improved and a management plan implemented for the retained landscaping.

D. ECOLOGY PARK
Along the western boundary a swath of landscaping will be retained to act as an ecological corridor. Low key paths and boardwalks will be introduced sensitively into this area.

E. GREENWAYS
A series of greenways will run through the site linking the different development zones together. These will form linear parks with footpaths and cycleways running along their length. Seating areas and interpretation boards will be added at key nodes to create areas of activity.

F. LOCAL EQUIPPED AREA FOR PLAY (LEAP)
Two LEAPs will be provided within the western area. Each LEAP will have an area of 400m² with a minimum of 5 pieces of play equipment. A 20m buffer zone will be provided between the LEAP and the nearest residential unit.

G. LOCAL AREAS FOR PLAY (LAP)
At least 20 LAPs will be provided to ensure that each dwelling is within a short walking distance of this play facility. Each LAP will contain 100m² of play area and have a 5m buffer zone surrounding it. The location of the LAPs will vary depending on the final residential layouts.

H. NORTHERN WOODS
A linear belt of native trees and shrubs provides shelter, amenity and biodiversity habitats.

I. SOUTHERN WOODS
A linear belt of native trees and shrubs provides shelter, amenity and biodiversity habitats.

J. THE GATEWAY
A tree lined corridor provides an important gateway to the site.

K. THE AVENUE
A tree lined route forming the primary route through the northern portion of the development.

L. MAIN STREET
The primary route through the southern urban area punctuated by shared surface squares.

WESTERN SUB-AREA PUBLIC OPEN SPACE SCHEDULE;

<table>
<thead>
<tr>
<th>Category</th>
<th>Hectares</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FORMAL SPORTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing sports club</td>
<td>6.0</td>
<td>14.8</td>
</tr>
<tr>
<td>Bowling green</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Western school sports (mini football)</td>
<td>1.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Total Formal Sports</td>
<td>7.3</td>
<td>18.0</td>
</tr>
<tr>
<td><strong>AMENITY PUBLIC OPEN SPACE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western park (excl. lakes &amp; NEAP)</td>
<td>4.9</td>
<td>12.1</td>
</tr>
<tr>
<td>Western pools park (excl. pools)</td>
<td>1.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Greenways (linear parks)</td>
<td>4.2</td>
<td>10.4</td>
</tr>
<tr>
<td>Total Amenity Public Open Space</td>
<td>11.4</td>
<td>28.1</td>
</tr>
<tr>
<td><strong>AREAS OF OPEN WATER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 x LAP (100m²)</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>2 x LEAP (400m²)</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>1 x NEAP (1000m²)</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Total Areas of Open Water</td>
<td>11.4</td>
<td>28.1</td>
</tr>
<tr>
<td><strong>BUFFER PLANTING</strong></td>
<td>5.2</td>
<td>12.8</td>
</tr>
<tr>
<td><strong>ECOLOGY PARK</strong></td>
<td>6.1</td>
<td>15.2</td>
</tr>
<tr>
<td><strong>TOTAL PUBLIC OPEN SPACE</strong></td>
<td>33.2</td>
<td>82.0</td>
</tr>
</tbody>
</table>
3.11 PUBLIC REALM STRATEGY

The public realm at Glan Llyn is designed to offer comfortable and stimulating places that encourage social interaction.

The public realm will take many forms from the bold linear space of the Avenue running through the site to the intimate streets and courtyards. Whilst mainly movement spaces these corridors will offer nodes of activity outside shops or schools and at junctions or where they widen into squares.

The strategy at Glan Llyn for the public realm is to ensure detailed attention is given to the structure of the spaces and the elements they contain.

THE SURFACES
- appropriate use of materials to define surfaces which are for vehicles, pedestrian and shared use.
- defining the hierarchy of spaces through the palette of external materials.
- the quality of materials and how materials are used and detailed.

SAFETY & SECURITY
- spaces will be overlooked through natural surveillance and key spaces will be active throughout the day and evening with people passing, gathering and socialising in them.
- reliance on CCTV will be minimized.

PUBLIC ART
- to give character and identity, introduced into the design of the architecture and public realm. Treating the floor space as a “canvas for art” with the innovative use of hard landscaping.
- drawing on the former use as a steelworks, without becoming a slavish pastiche.
- avoiding irrelevant art pieces and instead ensure that art is fully integrated into the public realm.

PLANTING
- to define a space and its function and to create a distinctive identity.
- to create separation or enclosure. Creating different moods or character to enhance the public spaces.

STREET FURNITURE
- a cohesive, high quality suite of furniture based on a simple design language. Usability, robustness, colour and form will be key components.

LIGHTING
- designed to be at a height and level of illumination suited to the particular space.
- providing safety and security without over lighting creating subtle moods as well as theatrical gestures.
- recognising borrowed light from shop windows and building lights.
- light the vertical as well as the horizontal; ie buildings and trees.
- avoid unnecessary light pollution.

SIGNAGE
- making the structure of the place legible so as to minimise the need for signs. A visual logic, with clear messages for pedestrians, cyclists and drivers, avoiding clutter and repeating messages
- consistent and co-ordinated design across neighbourhoods.
3.0 LANDSCAPE FRAMEWORK

The orientation of the spaces is key to the design of the public realm. South facing spaces offer sunny places and with shelter from the wind will encourage people to stop and stay. Rain and sun shelter under overhangs and canopies, sun shelter from trees improve and create a microclimate for gathering and staying. Coupled with views to watch activities and experience the space creates a pleasant and useable place.

THE LOCAL CENTRE
The Local Centre with its shops, cafes, community facilities, and other mixture of uses, is a major gathering place for the new community and a key part of the public realm.

Being only a 10-12 minute walk from the edges of the neighbourhood, many residents will arrive by foot or cycle and will have an anticipated stay of 20-30 minutes.

Squares and courtyards will offer spaces to meet and relax. Break out activities, shop displays, cafes, farmers markets and village fetes will bring activity and life to these spaces.

THE SCHOOL
The School is a 5-10 minute walk from most of the neighbourhood edges and accessible along the safe greenway and blueway links.

An urban square will define the entrance to the school and provide space for children to meet their friends and gather at drop-off and pick-up times.

The square will also be a flexible space catering for bus drop-off, parking and activities such as school fetes.

KEY JUNCTIONS
Key Junctions occur where the main movement corridors intersect especially where they cross the Green Grid, occurring in or on the edge of housing.

The opportunities are grasped to create nodal spaces that embrace the movements in a volume formed by architecture and furnished with planting at a large scale and artefacts at a smaller scale. Spaces are given hard or soft characters and animated by activities happening within them and to their peripheries.

People whether on foot, riding cycles or in cars and buses enter the environments of these places and to a greater or lesser extent experience a change in journey, to stop, look, meet and greet then move on to destinations.
External materials have been largely based on Newport City Council's Supplementary Planning Guidance "Newport Public Realm Strategy" and follow guidance and recommendations set out in "Manual for Streets". The materials palette has been under discussion with Newport City Council highways Department for the last 12 months to formulate a palette which is acceptable to the adopting authority and meets the following requirements:

- easy to maintain
- safe for purpose
- durable
- sustainable
- appropriate to local character

The materials and street furniture used within the public realm, streets and parks will be consistent throughout the development to form a cohesive development with a sense of continuity which allows individuality within the built form and helps to create a legible street hierarchy.

Marshalls materials have been selected to form the majority of the standard paving and kerbing choices available in this Palette. With two plants located in close proximity to the site, one in Newport and one near Weston-Super-Mare, this represents a potentially sustainable supply.

The palette opposite is intended as a guide only and will help to create a continuity of materials across the development. It may be possible to specify additional materials in order to create local interest and impact, but this must be done with the agreement of both St. Modwen and the local authority.

### 3.0 LANDSCAPE FRAMEWORK

<table>
<thead>
<tr>
<th>Paving</th>
<th>Kerbing</th>
<th>Surfacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marshalls conservation textured “silver grey” granite aggregate slab paving</td>
<td>Marshalls tegula “traditional” concrete kerb sett</td>
<td>Bound gravel</td>
</tr>
<tr>
<td>Charcon Appalachian granite aggregate paving</td>
<td>Marshalls tegula “penant grey” concrete sett paving</td>
<td></td>
</tr>
<tr>
<td>Marshalls tegula “traditional” concrete sett paving</td>
<td>Marshalls mistral “silver grey” textured granite sett paving</td>
<td></td>
</tr>
<tr>
<td>Marshalls conservation “silver grey” granite setts</td>
<td>Marshalls conservation “silver grey” granite aggregate kerb</td>
<td></td>
</tr>
</tbody>
</table>
To ensure that Glan Llyn is developed in a cohesive manner, a coordinated approach to the use of street furniture and lighting will be taken. As with the palette of external materials, street furniture is under discussion with Newport City Council Highways Department to ensure that the palette used will be acceptable for adoption.

A palette of street furniture has been proposed that responds to the various characters found across the development plots and landscape areas at Glan Llyn. It will contribute to the sense of continuity across the development, and help to define a local identity.

Seating attracts activity and is of direct benefit to street users, particularly to those with impaired mobility. Seating should be provided along all routes and especially at nodal points such as at squares or outside schools and shops. However, as it can become a focus for antisocial behaviour, seating should be located where there is good light and natural surveillance.

The safety of all users of the streets at Glan Llyn is a major concern. Lighting levels should be appropriate in areas where potential conflict exists between pedestrians (cyclists) and vehicles. Safety and light are closely linked – adequate lighting helps to reduce crime and the fear of it.

At Glan Llyn, it is the intention to create streets for all. The amount and quality of items placed in the public realm should be carefully considered, as should the need for signs and road markings. It may be possible to reduce the impact of street furniture upon the usable space by combining some items. Street names and lighting for example, may be mounted on buildings. With these parameters in mind, a 2m clear zone should be provided on all routes to ensure that wheelchair users are sufficiently catered for.

There are special areas within Glan Llyn that will merit the use of street furniture not identified within this standard palette. The Local Centre for example, is likely to require a more contemporary approach to street furniture.

It is important that proposals for special areas relate to the generic palettes and are suited to the context.
3.0 LANDSCAPE FRAMEWORK

PUBLIC ART STRATEGY

Each reserved matters application that is made will include a public art statement.

Public Art is the practice of commissioning artists to work in the public realm. The public realm is made up of those spaces that are accessible to everyone, including open spaces and the exterior of the buildings that surround them, enclosed public space and public buildings. Public Art involves artists and the public as contributors, creators and commentators.

Within Glan Llyn our vision is to create an integrated public art strategy which is cohesive, reflects the site’s history, engages the public, is innovative and relevant. Our key goals are:

- To create an innovative approach to public art which is fully integrated into the landscape and public realm.
- To pursue an approach to public art that supports quality, innovation and excellence across a range of art forms.
- To set standards of project management to ensure that the Public Art process at Glan Llyn is of as high a quality as the end result can be.
- To use public art to reflect Glan Llyn’s industrial heritage in an innovative way that avoids pastiche.
- To enhance the quality of life for residents of Glan Llyn by providing increased access to the arts and contributing to a high quality environment.

An essential part of this strategy will be the involvement of the local community by:

- Commissioning artists who work with local communities to develop ideas and create actual artworks that will be displayed publicly on either a temporary or permanent basis.
- Engage in public consultation through the use of notice boards, meetings, talks, events and community workshops as appropriate to the proposed scale and location of the project.

A nominated person on the Glan Llyn Community Management Company (which has to be in place before the first house is occupied) will be involved as an Arts Manager. Primary responsibilities will be to discuss the options for a Public Art project and define a way forward with partnering public art bodies.

The nominated person from the management team will coordinate and manage the process being a proactive link with occupiers and owners of properties during the art process.

In most cases, a partnership should be set up to foster effective consultation and ownership. The partnership will be representative of the Glan Llyn community, internal partners and key external organisations appropriate to the aims of the project.

The project manager will aim to put as much control and decision making in the hands of local participants as it practicable.
There are many means of expression in public art, many potential locations and mediums that artists can work in. The following is a non-selective list of examples where art could be seen, incorporated or commissioned:

### Location and Form
- Architectural detailing on buildings and structures
- Bespoke street furniture, inspired functional items
- Water features
- Murals and mosaics
- Light art/projections
- Kinetic and interactive art
- Environmental art, landscaping and “earthworks”

### Permanent Commissions
- The creation of opportunities for professional artists and craftspeople to collaborate with architects, designers, and engineers as equals on the design team and to enhance the kudos, quality, and sustainability of the interior and exterior features of new and existing developments, e.g., overall vision, landscaping, lighting, choice of materials, the makeup of facilities provided.
- 3-Dimensional artwork such as site-specific sculpture, landmark features, water features, focal points and bespoke functional items designed or created by artists such as paving, railings, gateways, seating, lighting, bollards, etc. installed in a public and accessible place.
- Dimensional artwork in the form of mosaics, murals, enamels, photographic works, and stained glass installed in a public and accessible place.
- Artworks produced by artists working in new technologies such as video, web sites, and LEDs installed in a public and accessible place.

### Temporary Commissions
- Artist in Residence.
- Temporary installations and exhibitions held in a public place.
- Performance-based artwork such as music, dance, theatre, or circus arts in a public place.

### Arts Space
- To be provided as part of the community centre or within the public realm.

### Maintenance
- It is essential that the art works are fully maintained so that they remain relevant, fully operational (in the case of kinetic works and water features) and effective over their anticipated lifespan. The exception being those artworks that are intended to decay as part of the artists’ proposition.

- The artist should provide instructions for the maintenance of the artwork. The maintenance plan for the artwork should tie into the maintenance plan for the site in which it is located.

- The materials used should be suitably durable for the purpose of the commission. If deemed necessary, anti-vandal coatings should be applied before or immediately after installation.
3.12 LANDSCAPE SPECIES & SPECIFICATION

WESTERN PARK
A formal green space located immediately north of the District Centre, provides playing fields and formal sports facilities for the adjacent school. Located adjacent the blueway, it provides easy access for the community, in a parkland setting.

**Trees**
- Acer rubrum
- Fagus sylvatica
- Fraxinus angustifolia raywood
- Liquidambar styraciflua
- Pyrus calleryana chicleer
- Tilia cordata
- Quercus robur

**Shrubs**
- Acer campestre
- Cornus sanguinea
- Corylus avellana
- Crataegus monogyna
- Euonymus europaeus
- Hedera helix
- Ilx aquifolium
- Ligustrum vulgare
- Prunus spinosa
- Rosa canina
- Salix viminalis
- Sambucus nigra
- Viburnum lantana
- Viburnum opulus

**Bulbs**
- Galanthus nivalis
- Hyacinthoides non-scripta
- Narcissus spp.

**Grass**
- British Seed Houses Mix A3 Landscape and Embankments
- British Seed Houses Mix A9 General Outfield
- British Seed Houses Mix WF2 Flowering Meadow

THE GATEWAY
Retained mature trees with open views into the Pools, give a soft and scenic setting to the west. This is augmented with new woodland planting to the east to create a ‘green tunnel’ entrance to this new district of Newport.

This natural character then gives way to a formal avenue of specimen trees that is inviting, welcoming and clearly legible as the user approaches the District Centre.

**Trees**
- Alnus glutinosa
- Betula pendula
- Fagus sylvatica
- Fraxinus excelsior
- Tilia cordata ‘Streetwise’
- Quercus robur

**Shrubs**
- Acer campestre
- Berberis darwinii
- Cotoneaster conspicous ‘Decorus’
- Ligustrum ovalifolium
- Lonicera pileata
- Viburnum opulus

**Bulbs**
- Galanthus nivalis
- Hyacinthoides non-scripta
- Narcissus spp.

**Grass**
- British Seed Houses Mix A3 Landscape and Embankments
- British Seed Houses Mix A4 Low Maintenance Areas
- British Seed Houses Mix WF2 Flowering Meadow

THE AVENUE
A key movement corridor and setting for the new housing, the Avenue sets a formal and traditional character. Lines of specimen trees in grass follow the road with a formal hedge planted at the edge of development beyond.

**Trees**
- Acer rubrum
- Alnus glutinosa
- Betula pendula
- Tilia cordata ‘Streetwise’

**Shrubs**
- Berberis darwinii
- Cotoneaster conspicuous ‘Decorus’
- Ligustrum ovalifolium
- Lonicera pileata
- Viburnum opulus

**Bulbs**
- Galanthus nivalis
- Hyacinthoides non-scripta
- Narcissus spp.

**Grass**
- British Seed Houses Mix A3 Landscape Embankments
- British Seed Houses Mix A4 Low Maintenance Areas
- British Seed Houses Mix WF2 Flowering Meadow

THE WOODED BLUEWAY & GATEWAY
Woodland will be planted to provide not only an attractive backdrop to the neighbourhoods but also to create an important new habitat for wildlife. Native trees and shrubs will be planted to mirror the surrounding woodland and form a transition from the rural character to the more urban character around the new neighbourhoods.

**Trees**
- Acer campestre
- Alnus glutinosa
- Betula pendula
- Quercus petrea
- Quercus robur

**Shrubs**
- Acer campestre
- Cornus sanguinea
- Corylus avellana
- Crataegus monogyna
- Euonymus europaeus
- Hedera helix
- Ilx aquifolium
- Salix alba ‘Britzensis’
- Salix viminalis
- Sambucus nigra
- Viburnum lantana
- Viburnum opulus

**Bulbs**
- Prunus avium
- Prunus spinosa
- Rosa canina
- Salix alba ‘Britzensis’
- Salix viminalis
- Sambucus nigra
- Viburnum lantana
- Viburnum opulus

**Grass**
- British Seed Houses Mix A4 Low Maintenance Areas
THE INFORMAL BLUEWAY & GATEWAY

These corridors of greenspace are richly planted to create both a biodiversity and amenity resource placing people within nature. Waterside vegetation follows the reen banks and online pools to create an attractive, ecologically diverse feature. Tree and shrub thickets give structure to these linear spaces with individual and groups of trees offering all year round interest. Paths and cycleways give access to the space. Allowing movement through as well as access to this rich and diverse environment for adults and children to play and recreate.

Trees
- Alnus glutinosa
- Betula pubescens
- Salix fragilis

Woodland mix to be used in thickets which includes:

Trees
- Alnus glutinosa
- Fraxinus excelsior
- Quercus robur

Shrubs
- Acer campestre
- Cornus alba ‘Sibirica’
- Crataegus monogyna
- Euonymus europaeus
- Ilex aquifolium
- Ligustrum vulgare
- Prunus avium
- Prunus spinosa

Grass
- British Seed Houses Mix A3 Landscape and Embankments

THE FORMAL BLUEWAY & GATEWAY

As these corridors enter the urban area they take a more formal character. Waterside vegetation continues to follow the reen banks. However tree and shrub planting species become more ornate with formal lines and blocks of planting offering all year round interest.

Trees
- Alnus cordata
- Castanea sativa
- Liriodendron tulipifera
- Sorbus aria ‘Magnifica’

Shrubs
- Acer campestre
- Cornus alba ‘Sibirica’
- Crataegus monogyna
- Euonymus europaeus
- Ilex aquifolium
- Ligustrum vulgare
- Prunus avium
- Prunus spinosa

Grass
- British Seed Houses Mix A3 Landscape and Embankments
- British Seed Houses Mix R3 Riverflood Plain/Water Meadow

SOUTHERN WOODLAND

This treatment allows views in and out of the adjacent houses from Queens Way. Access to the neighbourhoods are characterised by simple yet robust tree and shrub planting with grass and bulb planting to the verges.

Trees
- Alnus glutinosa
- Betula pubescens
- Fraxinus excelsior
- Populus nigra
- Salix fragilis

Shrubs
- Acer campestre
- Cornus sanguinea
- Crataegus monogyna
- Euonymus europaeus
- Hedera helix
- Ilex aquifolium
- Ligustrum vulgare
- Prunus spinosa
- Rosa canina
- Salix viminalis
- Sambucus nigra
- Viburnum lantana
- Viburnum opulus

Grass
- British Seed Houses Mix A24 Wear and Tear
- British Seed Houses Mix A3 Landscape and Embankments

PLAY AREAS

These areas are sited within generous green spaces within the housing on the edge of blueways and greenways. They provide formal play facilities for children in an environment that is safe, attractive and welcoming.

Trees
- Betula jacquemontii
- Malus hupehensis
- Pyrus calleryana ‘Chanticleer’
- Tilia cordata ‘Streetwise’

Grass
- British Seed Houses Mix A24 Wear and Tear
- British Seed Houses Mix A3 Landscape and Embankments
4.0 MOVEMENT PRINCIPLES
4.0 MOVEMENT PRINCIPLES

4.1 INTRODUCTION

Condition 4 (which this document responds to) asks specifically for information on the infrastructure that will form part of the development (and each phase of it). It also requires details of the hierarchy of access and circulation routes (including roads, footpaths and cycleways and how these link with the surrounding area and with previous and future phases).

This section responds by specifying a street hierarchy to ensure that Glan Llyn is developed in a cohesive and consistent manner throughout the development programme.

It provides detailed guidance on how development will be carried out in accordance with the urban design principles identified in Manual For Streets; The Urban Design Compendium; and Car Parking - What Works Where?

Like the rest of the masterplan, it will also be used as a benchmark by St. Modwen to assess the quality and compliance of schemes submitted by individual developers bidding for the residential plots within Glan Llyn. Selected developers will be obliged to develop the zone infrastructure in accordance with the rules established in this document.

Similarly the guidance will assist the local authority in determining future reserved matters applications to ensure that a comprehensive and cohesive development is achieved.

By setting out design parameters at this stage of the planning process, it is possible to achieve streets that place a priority upon meeting the needs of pedestrians, cyclists and public transport users. Encouraging sustainable modes of travel will be a key development principle.

Furthermore, by establishing a highway design priority that favours pedestrians, streets may once again become places in their own right and not simply corridors for the car.

Although relatively isolated from Newport, a number of connections to the wider area are identified in the master plan. A safe route to Hartridge Farm School is provided which links to the footpath and cycle network at Glan Llyn. A connection is planned to the Local Centre in the west and there is potential for a road bridge over the railway that will provide links to Llanwern village. Land has been reserved to allow for a future north south link from the commercial zone, over the railway line to the north.

A principal ‘Avenue’ will run around the north of the central parks with a more informal Main Street to the south. This circular route will connect to Queen’s Way to the south and will serve a hierarchy of streets, lanes and home zones. Parkway is a route of particular importance, forming the building line for development framing the western central park.

Facilities are located to encourage pedestrian movement. Blocks dimensions will be of a scale that encourages walking and the environment and choice of routes will make this the preferred option over the car.

A comprehensive network of dedicated footpath and cycleways run through the green grid allowing movement through all zones of the development. These routes, on the whole, will be lit and hard surfaced with building frontages located to overlook the routes to allow safe usage throughout the day and night. Clear signage will be provided along with seating and focal points, such as interpretation boards, at key locations throughout the development to encourage pedestrian and cycle, rather than vehicle, usage.

A bus route through the site will provide comprehensive public transport links to the residential and commercial zones with dwellings being located within 400m of a bus stop.

With the exception of The Gateway and The Avenue, which are classed as roads, all other routes should follow the principles set out in Manual for Streets with the ‘place’ function having equal consideration to the ‘traffic’ function. Streets should be designed with junctions, chicanes, tight bends and shared surface spaces to reduce traffic speeds without resorting to speed bumps and raised tables.

Car parking should be designed as an integral part of the streetscene and should not be over dominant. Car spaces should, as a maximum, follow CSS Wales – Wales Parking Standards 2008, and opportunities for reducing overall parking numbers should be fully explored.

Whilst formal and informal on street parking is preferred over large parking courtyards casual parking, for example to cater for school drop off, should be carefully considered to prevent parking on verges, key routes, or in areas which may cause safety or amenity issues.

A palette of materials has been developed that draws upon those mentioned in the Newport Public Realm Strategy. This provides sufficient variety to allow character to develop within the street typologies but will also ensure a degree of consistency is achieved. These materials, together with controls on street elements and dimensions, will provide a movement network that has a legible hierarchy.
4.2 STREET HIERARCHY - CONCEPT

As stated earlier, highway design guidance aims to establish a street hierarchy to ensure that Glan Llyn is developed in a cohesive and consistent manner throughout the entirety of the development process. It is important to ensure that the development has an identity and legibility to create a true ‘sense of place’ which is vital to the success of any new community.

The highways have been arranged into a hierarchical system generally according to their anticipated traffic load. Routes fall into three categories;

PRIMARY ROUTES (ROADS):
These form the principle circulation routes through the development and will be constructed by St Modwen as part of the overall site infrastructure. These routes also define the boundaries of individual development plots.

SECONDARY ROUTES (STREETS):
Forming the main circulatory routes through individual development plots, the secondary routes will be constructed by the individual plot developers in accordance with principles established within this masterplan.

TERTIARY ROUTES (SHARED SPACES):
Providing access to individual houses or groups of houses the tertiary routes will be constructed by the individual plot developers. Four different types of tertiary route are proposed (Lanes, Homezones, Mews and Courtyards) together with a series of urban squares. These will feature throughout the residential development zones. The opportunity exists within the tertiary routes to take an innovative approach to highway design utilising shared surfacing and home zones to help define the development’s character and reduce the dominance of the car.
Secondary and tertiary routes shown are indicative only. Located within development plots, they will be defined as part of detailed plot design and will be delivered by the plot developer. Indicative secondary routes are identified in the Plot Parameters chapter 7.

4.3 MOVEMENT STRATEGY
A WALKABLE NEIGHBOURHOOD

Glan Llyn is designed for ease of walking and cycling.

“Local facilities bring residents together, reinforce community and discourage car use. So the first component of a movement framework should be the walking distances from facilities.”

(Urban Design Compendium)

The neighbourhoods at Glan Llyn are fully connected by walkable and cyclable routes through the vehicle free landscapes of the blueways, greenways and parks with links to the residential streets and spaces beyond.

Within the streets and along The Avenue, the roads are designed to calm the speeds of vehicles so that cyclists may safely ride in the carriageway or in the case of the other main roads on defined cycleways. Cyclists and pedestrians have free access to walk or ride through or around the squares or shared surface junctions and streets.

Residents will be able to walk to the Local Centre within 10-12 minutes. The school is a 5 minute walk from the extremities of the neighbourhoods.

Along these routes within the movement framework are many locations including play areas and shops, post boxes and bus stops all within an enjoyable landscape setting to add interest to the walk or cycle ride or cycle ride and to stitch together a pattern of facilities readily accessible without the use of the car.
4.0 MOVEMENT PRINCIPLES

4.3.1 THE GATEWAY (PRIMARY ROUTE)

The existing roundabout on Queens Way will be upgraded by others to form the principal entrance to Glan Llyn. From this, the Gateway runs through a heavily landscaped area to a new roundabout that links it to The Avenue and into the adjacent residential areas.

Intended as a feature landscaped entrance to the development, this road and associated landscaping creates a transition between the existing Queens Way and Glan Llyn. The existing fishing ‘Pools’ will be enhanced to further define the entrance.

The Gateway will create a transition between the ‘rural’ approach to Glan Llyn and the more urban development itself. In order to maintain the rural feel of this route, houses should not form a dominant frontage onto The Gateway. Instead, glimpsed views through landscaping providing a stepped contextual change is preferred.

By using a low design speed, giving priority to public transport, using different surface materials and the introduction of cycleways and at grade pedestrian crossings, it will be immediately apparent to visitors that they are entering a residential area.

There will be no permanent vehicular connections to this route, other than at the two roundabouts. This will allow a continual traffic flow and reduce congestion around the main access roundabout. However, a temporary access to the retained Corus buildings will be required during the early stages of development. This route will be closed when the offices are no longer operational.

A pedestrian and cycle crossing will be permitted and should act as a traffic calming measure.

Within the development generally, cyclists will be accommodated in the carriageway, as is prescribed in ‘Manual for Streets’, a combined footpath/cycleway is provided along the eastern side of The Gateway.
4.0 MOVEMENT PRINCIPLES

The Avenue extends north from The Gateway and forms the arterial route through the whole of the northern sector of the development. As it continues through the scheme it will connect to the eastern end of Main Street and ultimately re-emerge onto Queens Way in the south-eastern quadrant of the site.

Whilst functioning as the primary access for the majority of dwellings within the site, it is vital to the success of this route that units are plotted to avoid rears fronting it as this could create an inactive and poorly overlooked street.

The Avenue will become a tree lined avenue, typified by wide verges and footpaths. The incorporation of public spaces and small greens protected from traffic will reinforce pedestrian priority and punctuate the route with a series of “events”.

The carriageway width will be a minimum of 6.3 metres and will safely accommodate public transport and cyclists. However, as with elsewhere in the site, the pedestrian will be given priority with frequent crossings and changes in surface materials serving as a continuing reminder of this.

A 2m verge separates pedestrians and cyclists from vehicular traffic and allows street furniture to be positioned such that it does not cause obstruction.

Whilst generally there is to be no on-street car parking along this route in order to maintain the open, clear aspect of the character consideration should be given to a drop off zone adjacent to the school.

A 5m landscaped zone from the back of footpath along this route will force the building line back, creating a varied street enclosure to match the feel of the rural area.

Forming the majority of the primary circulation within the development, The Avenue functions as a route for public transport. Bus stops will be positioned along the route to ensure that residents live within an appropriate radius of a stop.

Junctions along the Avenue to provide access points to development plots should be at least 50m apart. Cross roads along this route are unlikely to be suitable and as they could cause confusion with right of way when two drivers arrive at opposing sides of the road at the same time.
4.0 MOVEMENT PRINCIPLES

4.3.3 MAIN STREET (PRIMARY ROUTE)

The southern portion of the internal loop of primary routes, Main Street is effectively a series of streets connected by squares and feature junctions. Intentionally designed as a disjointed route through a dense residential zone, Main Street provides the primary route in the southern area, whilst maintaining safe traffic speeds by limiting forward visibility and introducing variety to streetscape and building form.

Junctions and squares along Main Street offer the opportunity to create areas of interest which help to create a sense of place.

Whilst opportunities exist along the main street for commercial or retail opportunities these will occur in later phases, particularly within the central zone. Within the Western Area the main street will be fronted by residential development only. To create a vibrant well used and overlooked street principal rooms should overlook the street with front doors addressing the street rather than rear parking areas.

Unconventional carriageway arrangements supplemented by strong definition of spaces created by the built form will create points of interest along the street whilst controlling traffic speeds and aiding legibility.

Car parking should be varied and include both on-street and rear parking. Access to rear parking should be considered with regard to streetscape, with a general preference for continuous frontages.

Leading from this route, the majority of tertiary routes should be urban in character and include Residential Street, Homezone, and Mews. Courtyard parking is also anticipated in this high density area.

Corner radii will be to a minimum along this route in order to maintain direct pedestrian desire lines. Localised widening is likely to be required to accommodate larger vehicles and final road layouts will be track tested to ensure their suitability for service vehicles and buses.

Due to the low design traffic speeds cyclists will be accommodated within the carriageway rather than on a segregated cycle route.

<table>
<thead>
<tr>
<th>FOOTPATH</th>
<th>Kerb</th>
<th>Road</th>
<th>Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charcon Appalachian granite aggregate paving various sizes with concrete tactile paving to match</td>
<td>Marshalls conservation kerb, laid flat (combined kerb drainage where required)</td>
<td>Flexible bituminous material with contrasting chippings Min PSV of 65 (specification to be agreed with Newport DC)</td>
<td>Urbis Pasio lantern with truncated bowl side mounted on ‘parallel bracket’ with strut (indicative subject to final approval by the Local Authority)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTRAST ROAD SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marshalls tegular traditional concrete sett paving (or equivalent)</td>
</tr>
</tbody>
</table>

DESIGN SPEED

1m 4m 6.1m 4m 1m 16.1m 4.8m 5.5m
4.0 MOVEMENT PRINCIPLES

4.3.4 PARKWAY (SECONDARY ROUTE)

Defining the edge of Western Park, this route will form an attractive setting for pedestrians and cyclists, linking northern plots to the south and ultimately to the local centre.

Parkway will not be accessible to vehicles, other than in order to provide maintenance access into the park.

Parkway will be overlooked by housing, benefiting from the security afforded by this. Habitable rooms to these properties should therefore address Parkway where ever possible.

Building form and height along this route can be used to create a distinctive edge to the Park. Buildings should be a minimum of three stories tall.

In order to provide a degree of privacy to residents of properties fronting Parkway, a setback of 8m from the back of the verge must be achieved. This setback will effectively form a constant building line which gives Parkway a formal feel.

Reinforcing the formality of the route, a wall should form the boundary to Parkway on the residential side. This may include railings and should be of a height sufficient to afford the housing a reasonable level of privacy at ground floor level.

A clear width of 5m should be maintained at all times, with space for trees, benches and lighting columns formed in offset bays.

Street trees to the park side of the route will be of a regularised spacing, reinforcing its formal nature.
4.0 MOVEMENT PRINCIPLES

4.3.5 RESIDENTIAL STREET - SUB-URBAN (SECONDARY ROUTE)

Circulation within development plots stems from a main residential street, off which tertiary routes lead. Effectively forming an internal loop within each residential plot, the character of a Residential Street varies according to the character of the area it is in.

The Sub-Urban character Residential Street should be designed with a vehicle speed of 20mph, in accordance with the principles established in Manual for Streets.

This street should be used where on-plot parking is prevalent, utilising both integral and detached garages. This approach forces the building line back from the pavement and creates space for front gardens and street planting.

Building frontages must dictate the route and form of the street and not visa-versa. Changes in direction and the orientation of buildings should be used to limit forward visibility which in turn will reduce traffic speeds. A varied road geometry including informal visitor parking spaces, special junctions and planting islands should be used to create both interest and traffic calming.

The building line, whilst conforming to the preference for a set-back, should not exceed 3.5m from the back of footpath. This restricts the ability of future residents to convert front gardens to additional parking, preserving the character for the long-term.

Garages should be set back to reduce their impact upon the streetscene. This will create space in front of them to allow cars to pull off the road and park before entering the garage. An “L” shaped house allows the building line to be broadly maintained whilst also providing space for on-plot parking. Similarly, units with integral garages should recess the garage such that sufficient on-plot parking is achieved.

Link units are also applicable, allowing cars to be taken off the street whilst also maintaining the building line.
In areas of higher density, Residential Streets become far more enclosed by the built form. Building frontages are tighter to the back of pavement and building heights more commonly increase to three storey.

On-street parking bays, limited to a maximum of four spaces in any one run, help to vary the carriageway width and provide opportunities to introduce planting. Further parking may be sited within blocks to the rear of properties fronting the street, although it is important to achieve a varied parking solution which is mindful of creating and maintaining activity on the street. Too much rear parking can lead to the back door becoming the main entrance to houses.

Junctions should be designed to accommodate pedestrian movement whilst obviously also functioning practically for vehicular traffic. Minimal radii allow pedestrian crossing points that do not require deviation from a straight line in order to cross safely. This approach also forces traffic to slow, although some local widening may be required to facilitate larger vehicles.

These streets should be designed to a vehicle speed of 20mph and be designed in accordance with the principles established in Manual for Streets. The use of road geometry, building line, junctions and urban squares should be used to create both interest and passive traffic calming. The use of the built form to limit forward visibility will also help to reduce traffic speeds.

<table>
<thead>
<tr>
<th>FOOTPATH</th>
<th>Flexible bituminous material</th>
<th>OR</th>
<th>Charcon Appalachian granite aggregate paving various sizes with concrete tactile paving to match</th>
</tr>
</thead>
<tbody>
<tr>
<td>KERB</td>
<td>Precast concrete kerb (combined kerb drainage where required)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROAD</td>
<td>Hot rolled asphalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIGHTING</td>
<td>Marshalls tegular traditional concrete sett paving (or equivalent) to feature areas</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Urbis Aledo Lantern with simple bracket and column (indicative subject to final approval by the Local Authority) |
4.0 MOVEMENT PRINCIPLES

4.3.7 LANE (TERTIARY ROUTE)

Dominated by landscape rather than built form, the Lane is an informal route to be used in lower density areas, around open spaces and toward the edges of development parcels. Lanes will serve a maximum of 20 dwellings.

Irregular building forms and building lines with both pinch points and set-backs creates a route with an organic feel, akin to a village lane.

Vehicles and pedestrians share a level carriageway of which in some instances, verges may meet the road surface without intermediate kerbs to accentuate the rural character.

A 2m verge should be maintained along the road with hedges or low stone walls beyond identifying private ownerships.

A mixture of enclosed and open front gardens should be encouraged.

Parking should be varied and used to create a non-linear carriageway. It may include on-street parking, on-plot parking and detached/attached garages.

The lanes should be track tested to ensure their suitability for service vehicles.
4.3.8 HOMEZONE (TERTIARY ROUTE)

A linear street that is defined by a constant building line, the Homezone is a public space shared by pedestrians, cyclists and vehicles.

Parking bays, street planting and areas for play and communal activity combine to create a route that forces motorists to drive with greater care and at lower speeds.

Occasionally, the building line may become setback to create variety to the streetscape, particularly along more lengthy routes.

The public realm produced in this environment through use of quality materials and landscaping creates a sense of identity for an area, which in turn promotes the possibility that residents may feel a duty of ownership of their shared locale.

This type of street has been created locally as part of a national pilot scheme. Magor village, to the east of Glan Llyn has successfully received a number of Homezone routes.

For further information about Homezones and research into shared space streets, refer to chapter 7 of Manual for Streets.

Homezones should only be used where the vehicle traffic is less than 100 vehicles per hour. If traffic flows exceed this the Residential Street Urban would be more applicable.

Consideration in shared surface streets should be given to partially sighted users and in particular the definition between trafficked and non-trafficked spaces.

Homezone layouts should be track tested to ensure suitability for service vehicles.
4.0 MOVEMENT PRINCIPLES

4.3.9 MEWS ( TERTIARY )

Subservient to Residential Streets, Mews will occur in more dense urban areas.

With a mixture of building frontage and plot boundaries, care should be taken to ensure that the street is overlooked at all times.

Providing a large amount of on-street parking, these routes should be carefully designed such that parked cars do not dominate the space.

A varied building line and creative use of materials and planting should break up parking bays, which should be restricted to a maximum of four spaces in any one bay.

Private garages can be accessed directly from the mews although care should be taken to ensure that these do not sterilise the street scene. Garages should be set back a minimum of 5.5m from the notional highway.

Mews will serve a maximum of 15 dwellings and should be no longer than 45m in length before a suitable turning area. Mews courts should have a single point of vehicle access with a minimum of two points of pedestrian access.
4.3.10 COURTYARDS (TERTIARY ROUTE)

Set within blocks, courtyards are important to the overall parking strategy of an area. It is unlikely that the requirements of a development will be fully satisfied by on street and on plot parking alone. However, it is important that where rear parking occurs, the spaces make a positive contribution to the development and do not simply become unwelcoming back-land areas.

Informal in character and often defined by the backs and sides of plots, these spaces require a degree of activity and should be overlooked wherever possible. In some instances, it may be feasible to include development with frontage to a courtyard. Apartments built over garages offer one such solution. Green spaces or LAPS could be incorporated into the courtyard to create informal play and meeting areas.

Materials within these areas should reflect the character of the space, identifying it as a shared area and highlighting the fact that it is not a through route. Planting may be introduced to soften the impact of parked cars and break up parking bays.

Courtyards may be accessed from Residential Streets either via breaks in the built form or through passageways created by ‘flying-links’. Often difficult to use as developable area, the corner plot of a block may provide an ideal opportunity to access courtyards.

On occasion, by hiding the courtyard from the street, it is possible to create a real impact and sense of arrival, although visual links with active areas should generally be maintained for safety reasons.

To avoid huge areas of parking within any one area of a development, residential courtyards should not provide any more than 25 spaces, and should be used in conjunction with, not in preference to, on-street and on-plot parking. Unless specifically agreed with the local authority, courtyards would not be adopted.
4.3.11 URBAN SQUARES & SUB-URBAN JUNCTIONS

At the intersection of streets around Glan Llyn, the arrangement of junctions will help to create local interest and a sense of place.

Often defined by changes in surface materials and landscaping these spaces may be emphasised by building scale, form and orientation. These factors combine to define them as places within the scheme and naturally reduce traffic speeds.

Building frontages should be active wherever possible, with entrance doors and habitable rooms facing the space specifically encouraged.

Car parking solutions here may require some thought. On-street parking is welcomed, potentially as flexible visitor spaces. However, it is important that parked vehicles are not allowed to dominate the space.

Located at the convergence of routes, these spaces will naturally attract activity. Treatment of the public realm therefore takes on significant importance. The provision of seating is important to the success of these places, giving opportunities to meet or rest.

UBRAN SQUARES

In areas of higher density, along the route of Main Street and Residential Street - Urban, junctions may be used for form “squares”.

Less formal in plan than the name may suggest, these places should be functional reactions to the streets that meet to create the space, often organic in form.

There may be the chance, in larger squares to provide a central island. This will help to give these nodes individual character and provide opportunities for specific landscaping.

Providing space for parking within the square may help to reduce speeds as drivers sense the potential for conflict.

SUB-URBAN JUNCTIONS

Where density is lower, the intersection of streets provides opportunities to create organic spaces.

A softer approach to the landscaping of these spaces can be used to re-inforce the character of the area.
4.3.12 CYCLE PATHS

In accordance with the guidance provided in Manual for Streets, cyclists will generally be accommodated on the carriageway within the residential areas.

However, as an alternative to using the more busy routes within the development, specific cycle routes are to be provided that link key areas into the wider transport network.

Some of these routes will be constructed by St. Modwen as part of the overall site infrastructure, whilst others will be constructed by the developers of individual plots or the local authority. The section along the upgraded Queens Way will be provided by others.

Two characters of cyclepath will be used. Type 1 (shown in red on the plan opposite) will have an informal, countryside feel and is likely to be finished in a bound aggregate. This generally represents the routes forming the leisure use cyclepaths. Character Type 2 (shown in blue on the plan opposite) will be finished in asphalt and generally forms the commuter route.

Leisure use cycle routes complete a comprehensive cycle path network which encourages residents to leave the car at home. Whilst not always lit, the leisure routes include a loop of the central lakes, providing the basis of a safe route to school and linking the local centre to all areas of the development.

The informal (Type 1) cycleways will be set within the overall green grid and would be managed and maintained by the Community Management Company. Cycle routes alongside roads and streets would be adopted by the local authority.

All combined footpath / cycleways will be a minimum of 3m wide.
### 4.4 Streets Matrix

<table>
<thead>
<tr>
<th>Classification</th>
<th>Gateway</th>
<th>Avenue</th>
<th>Main Street</th>
<th>Parkway</th>
<th>Residential Street</th>
<th>Lane</th>
<th>Homezone</th>
<th>Mews</th>
<th>Courtyard</th>
<th>Cycle route</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Secondary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>Primary</td>
<td>Primary</td>
<td>Secondary</td>
<td>Secondary</td>
<td></td>
<td>Secondary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Secondary</td>
<td></td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
<td>Tertiary</td>
</tr>
</tbody>
</table>

**NB:** Quoted widths are minimum desirable widths. Localised widening is anticipated in order to create areas of interest. Vehicular tracking and safety audit to be used to demonstrate accessibility.
5.0 WESTERN SUB-AREA DESIGN PRINCIPLES

GRANTED
5.0 WESTERN AREA DESIGN PRINCIPLES

5.1 INTRODUCTION

For the purposes of masterplanning, St. Modwen has divided the site into three broadly equal residential areas – Western, Central and Eastern. As stated earlier, a separate and smaller area masterplan will be provided for the local centre.

The Western Sub-Area occupies the western part of the site and extends to about 60 hectares (or 150 acres) in size. It is broadly rectangular in shape with two extensions, the first to the north west to accommodate the existing (but unused) Corus sports and social club, and the second to the east to include the proposed western lakes and park.

Like most of the site, the Western Area is flat and, as previously used industrial land, is relatively featureless, together with some sport fields it does however include two of the more interesting existing areas: a woodland which sits beneath the power lines and marks the western edge of the site, and existing pools (and associated trees) at the site’s south western corner. Both of these areas will be retained and managed as part of the redevelopment scheme.

Corus’ offices which sit to the north of the pools will also be retained in the short term but will be redeveloped during phase 2 of the scheme.

The key elements of the Western Area can be summarised as follows:

a) the first 1250 new homes split into five main development areas or phases

b) the first primary school and school play space

c) the entrance road and first section of the radial route around the development, together with the relevant parts of the cycle and pedestrian network and north western connection to the Southern Distributor Road

d) the first part of the local centre (according to the section 106 agreement a surgery, community centre and police station will be required by the time development of the Western Area is completed)

e) the western lakes and park (which will include a Neighbourhood Equipped Area for Play and cricket oval)

f) the relevant parts of the drainage network and green grid

It is currently anticipated that 20% of the housing provided across the Western Area will be provided as affordable accommodation. This will be spread across the site to reflect the requirements of the main social housing providers and, unless otherwise agreed with the planning authority will sit in clusters of no more than 12 houses or 18 apartments.

The masterplan for the Western Area is included on the facing page of this document. The plan shows the main development parcels and areas and how these will face and connect with each other, the Central Area and the surrounding area. It also shows how the development will be organised around the green grid it is currently anticipated that 20% of the housing provided across the Western Area will be provided as affordable accommodation. This will be spread across the site to reflect the requirements of the main social housing providers and, unless otherwise agreed with the planning authority will sit in clusters of no more than 12 houses or 18 apartments.

The remainder of this section provides more detailed guidance on the form and performance of the development to be delivered in the Western Area.
5.0 WESTERN AREA DESIGN PRINCIPLES

5.2 WESTERN SUB-AREA MASTER PLAN

[Image of a master plan diagram with annotations and symbols, including "Phase 1" and "GRANTED" text overlay]
5.3 Density & Mix

A key element of Glan Llyn is the mix of uses and densities used throughout the site. This rich mix creates a vibrant, varied community with a range and mix of housing types to meet the housing demand outlined in the East Newport Development Framework Plan.

Whilst residential densities vary across the site, the majority of the housing falls within a range from 30-50 dwellings per hectare. The exceptions to this are some high density areas around the Main Street with densities of 60 dwellings per hectare and some small areas of low density housing around the lakes and western pools, falling to 20 dwellings per hectare, where open views to the water and larger areas of landscape have been maintained.

The average density across the site is 36 units per hectare which corresponds to guidance given in current planning policy.

Housing types range from 1 bedroom apartments and starter homes through to large detached family housing to ensure that Glan Llyn offers a full range of housing to create a mixed and varied community.

In some key areas, for example the local centre, provision will be made for novel forms of housing to cater for individuals and small start up companies working from home. Generally these units will be zoned to create a lively active frontage during the day and laid out to accommodate visitor parking and servicing.

![Diagram showing density mix]

**KEY**

<table>
<thead>
<tr>
<th>Dwellings per Ha</th>
<th>Dwellings per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 24</td>
<td>up to 10</td>
</tr>
<tr>
<td>25 - 34</td>
<td>10 - 13</td>
</tr>
<tr>
<td>35 - 44</td>
<td>14 - 17</td>
</tr>
<tr>
<td>45 - 60</td>
<td>18 - 25</td>
</tr>
</tbody>
</table>
5.4 BUILDING HEIGHTS

Building heights will generally range from two to four storey within the residential zones with heights of up to 22m in the employment zone.

As a general rule, building heights within the more dense core around the local centre and parts of Main Street will be 2 to 4 storey. Heights within the neighbourhood areas then decrease to generally 2 storeys.

At key nodes building heights may be increased by a storey to create visual interest and allow for focal points within the development. This treatment would be generally used to frame entrances, terminate vistas and mark key corners and nodes. Height may also be used to add definition to character areas, particularly within the high density zones around Main Street.

A varied roofscape should be created to provide visual interest and variety throughout the development.

**KEY:**
- 2-3 storey
- 2-4 storey
5.0 WESTERN AREA DESIGN PRINCIPLES

5.5 GENERAL DESIGN PRINCIPLES

MOVEMENT
Vehicle, cycle and pedestrian routes through Glan Llyn should be clear and legible with a hierarchy based on usage, traffic speed and footfall.
Principle routes should have a clear distinction between vehicular and pedestrian traffic.
Secondary routes should utilise shared surfacing and passive traffic calming to create spaces with pedestrian priority.
Higher density residential areas should be based around Home Zones with shared surfaces to encourage the use of streets as a place of activity and social interaction.
Pedestrian routes should be integrated into the development framework, where possible, should be overlooked by dwellings to provide natural surveillance. This would mean that urban form should clearly relate to all public routes crossing the development.
Pedestrians will be given priority throughout the residential areas creating a safe and pleasant environment to encourage walking and cycling in place of the car.
Bus stops will be provided along both the Avenue and Main Street within 400m of most residential properties.
All properties will provide secure storage for bicycles to encourage their use.
Bicycle racks will be provided at key areas such as the local centre, park and play areas.

CONNECTIVITY
New development should form a layout of inter-connected streets with a clear distinction between fronts and backs i.e. all streets and public spaces should be overlooked by fronts with private areas securely enclosed to the rear.
Linkages between development areas should be clearly defined and legible.

Where private courtyards and cul-de-sacs are used alternative pedestrian exits should be provided to avoid a single access situation.
Seating should be provided at key nodes along the principal pedestrian routes to create informal meeting areas and zones of activity.
Each development plot should have a high degree of permeability based around desire lines linking together both the new development and surrounding areas.

PARKING
Car parking should be designed as an integral part of the development and should not dominate the streetscape.
The proposed parking standards should reflect Newport City Council’s response to changing national policy for a more flexible and sustainable approach to housing density and parking standards. Parking standards will be based on CSS Wales parking standards as a maximum.

ACCESSIBILITY
Consideration should be given to the incorporation of wheelchair accessible housing and residential units designed in accordance with Newport City Council’s relevant design standards. Additionally,
- Floor areas may require to be increased to accommodate the requirements of wheelchair standards, recycling storage or bicycle storage.
- Designs should provide an opportunity to create flexible internal layouts that respond to the changing needs of the occupants.
- The size and layout of the dwelling must take account of the furniture. Adequate space must be designed to allow the appropriate areas of access activity, storage and passing zones.

FLEXIBILITY AND ADAPTABILITY
New buildings should be designed for ease of maintenance and for at least a 30 year life span without major refurbishment.
Room heights must not be less than 2.3m (ground, first and second floors).
Embrace the principles of the Egan report (Rethinking Construction) in terms of product development, project implementation, ‘partnering’ the supply chain and the production of components.
Future utilisation of the volume of roofs should be considered.
Ducting for future IT and photovoltaic systems should be considered.
Floor plans should be designed for flexibility and ease of adaptation.

MIXTURE OF USES & TENURE
Glan Llyn will accommodate a diverse range of densities, land uses and tenures. The range of uses will create areas with their own identity, for example the employment zones, and will be buffered from adjacent uses. Elsewhere such as the local centre a diversity of use can be accommodated within a single zone to create a vibrancy and destination.
Adjacent uses should be complementary in terms of use, scale, access and servicing.
Different tenures, such as sale, affordable, shared equity and low cost housing, within the residential zones should be tenure blind and where practical distributed using a ‘pepperpot’ approach throughout.
THE PUBLIC REALM

To ensure that the development has a strong sense of place it is vital to create an identity through the implementation of strong urban design principles. These principles should create a clear distinction between public realm and private space, create a legible circulation hierarchy and allow a variety of spaces, vistas and focal points. The key design issues to be considered are set out below:

- Identity and sense of place
- Design, shape and scale of public space
- Street pattern
- Development layout, plot sizes and ratios
- Access to the open spaces for use of the public realm
- Indicators of public buildings
- Public art
- Use of natural features including trees, planting and water
- Design and materials to be used in the treatment of hard and soft landscaped areas
- Pavement widths and street furniture
- Lighting and safety

Priority should be given to housing layouts rather than roads. This may mean that less obvious traffic layouts are taken to optimise urban form and balance with the landscape.

The rear of houses must not back onto perimeter roads, nor should the urban form present distinctive areas of rear functions such as car parking or servicing to the perimeter landscape. In particular the interface between urban areas and the perimeter landscape must be carefully considered and integrated.

Building style and landscaping must unite to make places. This would mean that there is no sudden change between individual types of housing or uses and areas blend together relatively seamlessly.

Important activity nodes should be identified by landmark buildings. The location of buildings should be carefully considered in order to provide a robust and coherent composition of built form relative to the street, public spaces and main access routes.

Corner elements of buildings must be designed to reinforce entrance points or “gateways” into the area and provide emphasis to focal points within the development.

SECURITY

The detailed design and layout should take into account good practice measures relating to surveillance, defensible space and control of space. The Police Architect Liaison Officer must be consulted at an early stage in the detail design of the scheme and Secured by Design approval should be obtained.

Layout of dwellings should provide for natural surveillance and minimise features which could be used for concealment or provide access to upper floors of buildings. Common areas, including landscaped areas and car parking are to be designed so that the maximum natural overlapping is achieved. Careful consideration must be given to defining function and ownership of open spaces and to creating a legible distinction between public and private realms.

- All dwellings should be designed to incorporate a full range of security measures as recommended by Secured by Design, including special attention to ironmongery specification and the design of entrance and rear doors and windows.
- The lighting of the public realm should be carefully designed to avoid dark areas without creating a bland lighting scheme.
- Wherever possible design should be such that it inhibits crime by the use of gated access to rear gardens, ensuring maximum natural surveillance of the public realm and the provision of adequate and effective lighting.

PRIVACY

Boundary treatment is fundamental to the appearance and image of the development as well as to its security and safety within both the private and public realm; it also provides the barrier or means of communication between individual dwellings, private rear gardens and semi private gardens to the street. Boundary treatment can therefore be divided into two categories:

REAR BOUNDARIES

Rear Boundaries will not vary in principle across the development irrespective of character area, except when they abut the public realm. Rear boundaries adjoining the public realm should be avoided whenever possible. If however a private garden or communal amenity area must back onto public space then security, privacy and appearance are all of paramount importance. The boundary should be a wall rather than a fence, and constructed of materials to match or enhance those used within the public realm.

Almost exclusively, rear boundaries will lie between private gardens or between private gardens and communal amenity areas for apartments. In this circumstance the focus is on privacy and security, a wall or fence can be employed but it should be to a minimum height of 1.8m and of both solid and sturdy construction.

Where rear boundaries adjoin rear parking courts or shared access paths, then circumstances change again. Here there is a need for privacy but also a requirement for overlooking, to be able to see into the car park or see who is walking up the shared access. Here the approach should be to provide a combination of open trellis at higher level and solid fencing or wall at lower level.

SIDE BOUNDARIES

As with rear boundaries, side boundaries will not change in principle because of their location but the materials with which they are built may do so.

Side boundaries between private gardens should be around 1.8-2.1m in height. Within a minimum of 3m from the dwelling the wall or fence should be solid. However, towards the back of the garden the top third of the fence could be comprised of trellis to allow for communication with neighbours and to soften the fence’s linear appearance. Where the side boundary of a garden or communal garden abut the public realm, then the wall or fence should form an extension to building walls and be constructed of the same or a complementary material to those used in the public realm. To afford privacy and security the boundary should be 2.1m in height and where possible, windows should be incorporated into the dwelling side wall to provide animation and informal natural surveillance of the street.
5.6 ARCHITECTURAL CHARACTER

NEWPORT'S CHARACTER & CONTEXT

The Western Sub-Area Masterplan assesses the existing built form in Newport and concludes that there is no overriding vernacular style. Instead, Newport has developed in line with the typical industrial European city with a built form that is rich in diversity with evidence of Norman, Regency, Georgian, Victorian and late 20th century developments. Within the rural hinterland, a stronger Welsh vernacular can be found but this is more characterised by the use of local materials. Welsh building materials are self evident within the built forms found in this major sea-port which has drawn on a far greater catchment of cultural and architectural influences for its diverse built heritage.

The post industrial landscape of the Glan Llyn development site is devoid of design generators being isolated from any adjacent built form, apart from the remaining steelworks to the east, lacking any topographical relief and with very limited landscape and ecological constraints. In this context, the development site can be seen as a blank canvas on which to create a new sense of place with a distinctive character that is true to itself but respectful of regional influences.

Newport has a history of embracing current urban and architectural styles which is evident from the changing street patterns and diverse styles visible throughout the city. The city has not shied away from bold experiments in design such as the Duffryn Estate and latterly has embraced strong contemporary developments such as West Nash Road, the Inmos Factory and the Riverfront. It is this willingness and enthusiasm to embrace current styles and forms that has created Newport's rich architectural character. It is this verve that we wish to reflect and embrace within the new district of Newport that is Glan Llyn.

A CHARACTER FOR GLAN LLYN

As previously stated, our vision for Glan Llyn is one of transformation from a post industrial landscape to a vibrant community which 'surpasses anything achieved in Newport to date'. To achieve this, we firmly believe that our precedents should embrace 'Best Practice' in residential development from throughout the United Kingdom as well as drawing on local Welsh materials and the positive legacy within the diverse regional vernacular. This approach continues Newport's tradition of embracing modern development and allows us to draw from the best examples available to avoid the pitfalls of the past.

Our approach will therefore draw on:

- the diversity of urban styles found within Newport to give a rich mixture of architecture presented through a controlled variety of façade, height, mass and roofscape;
- utilise local materials where appropriate and particularly in the public realm to benefit from the colour form and texture inherent in their nature;
- combine a current contemporary approach with a considered interpretation of the traditional to create a unique character for Glan Llyn.

We anticipate that in terms of the overall development, this will translate into a strong 'contemporary' urban core centred around the parks and lakes with the periphery of the site developing a contemporary sub-urban, or progressive-traditional, character. Key will be the flexible transition of one character into the other allowing special areas and places to develop and form as the new district grows and forms itself.
GLAN LLYN URBAN

The Urban areas within Glan Llyn will have a more contemporary feel with fewer buildings based around the historic forms of Newport and the surrounding district. Street forms and urban grain will be tighter and utilise a higher proportion of hard landscaping. Home zones and shared spaces will be more prominent in these areas. The Urban areas will create a strong contemporary core relating to the green spaces and water frontages.

Characteristics of these zones will be:

- A crisp palette of materials
- Bold forms and clean lines
- A more radical interpretation of traditional forms

GLAN LLYN SUB-URBAN

The Sub-Urban areas within Glan Llyn will reflect the historic richness of form and style found within and around Newport merged with a more contemporary approach to detailing and the utilisation of materials. Street forms and urban grain will be more open, based on traditional street patterns, creating interest and diversity and in line with the principles established in the Manual for Streets. The Sub-Urban areas are seen as a transition between the existing built form of Newport and the Urban core to Glan Llyn.

Characteristics of these zones will be:

- A variety of roof forms and heights
- Subtle re-interpretation of traditional building forms
- Traditional place making
5.0 WESTERN AREA DESIGN PRINCIPLES

5.7 MATERIALS

EXISTING MATERIALS

As well as displaying a wide range of urban form and style, Newport has a diversity of materials consistent with a major sea port. Older buildings within the city tend to utilise local materials, predominately stone, slate and render, whereas later buildings utilise a much wider range of materials with far less local influence.

Historically stone is one of the most widely used building materials and can be seen in random and dressed forms. Stone detailing is very evident on bay windows, window heads, sills, keystones and string courses.

Render is also a popular finish in both smooth form and roughcast and often in bold colour combinations.

Red and buff brickwork is also common, particularly on Victorian and post-Victorian buildings. The use of contrasting brickwork as framing elements, string courses and feature panels is also a recurring theme.

Roof materials are predominantly slate or clay tiles with concrete interlocking tiles being used in recent times.

The key theme running through Newport is one of richness, diversity and variety.
PROPOSED USE OF MATERIALS

Our approach at Glan Llyn will be to draw from the local palette of materials where possible to both aid sustainability and reflect the local context. Materials will be chosen for their suitability, durability and longevity as well as visual considerations.

Whilst Glan Llyn will respond to the diversity of Newport’s materials palette the principal materials used within the Sub-Urban areas will be render, buff and red brickwork and stone for key buildings. Nearer to the Urban core neutral renders will be more dominant with smaller areas of contrasting materials; timber, stone and brickwork, being used in key areas.

The innovative use of materials is encouraged to create a unique identity for Glan Llyn.

Use of traditional materials in Bryngwyn Village Gorseinon in Swansea

A reinterpretation of traditional materials in Llanwerin Village

A mixture of materials can reflect Newport’s rich diversity

Traditional use of materials in some areas to reflect Newport’s past

The innovative use of traditional materials is encouraged
5.0 WESTERN AREA DESIGN PRINCIPLES

5.8 SUSTAINABILITY

BACKGROUND

Condition 4 of the outline planning permission (which triggers the preparation and submission of the Sub Area Masterplan) asks for a description of the sustainability standards and measures that the development will use and apply.

Sustainability is at the core of the scheme which seeks the transformation of a substantial derelict and under performing area, the creation of a new environment, the delivery of homes and social infrastructure and the creation of a large number of new jobs (and hence a lifting of economic prosperity).

St. Modwen is committed to delivering fundamentally sustainable development and has commissioned a sustainability strategy for the scheme. This will make an important contribution to ongoing as progress is made and a condition has been placed in the outline planning permission for the scheme that is to be updated at each stage of development. A copy of the current sustainability strategy is contained as an appendix to the Sub Area Masterplan to explain the overarching approach that St. Modwen has and is taking at Glen Llyn.

The headlines from sections 3 and 6 of the strategy address the requirements of the condition (for a description of standards and measures). However, the general thrust of the strategy is important because it explains a wider approach to sustainability (than current national measures allow).

This provides essential context for the standards and measures that are proposed in the Sub Area Masterplan, to ensure that the full range of factors are considered in the measurement of performance and to confirm that sustainability has been very thoroughly examined at Glen Llyn. This takes in carbon performance and water efficiency, but extends outwards to the use of local materials and skills, creating new ecological habitats and delivering facilities, homes and jobs that will support the new community (and Newport as a whole) into the future.

SUSTAINABILITY STANDARDS

A key objective for the Western Sub-Area, is to deliver the first 300 houses as soon as possible to support Newport’s Growth Strategy and the Wales Spatial Plan, and to generate funding for the next development stages. To reflect the very challenging economic circumstances that face the scheme (together with the urgent need for the homes and jobs it will generate) a staggered approach has been proposed. As a concession to the particular conditions facing the site, the approach allows the first phase of 300 homes to achieve code (for sustainable homes) level 1. This only applies to phase 1 and all later phases in the Sub Area are to comply with the new Code which will be designed to meet increasing code standards for Sustainable Homes and carbon reduction requirements as appropriate at the time of detailed design submission.

This will be addressed in subsequent Sustainability Statements and Carbon Reduction Strategy reports for each sub-area.

The staggered approach is summarised in Table 1 which specifies the minimum standards for each phase.

Meeting Code levels will be greatly supplemented by the intrinsic sustainability measures in the scheme (but which lie outside the code criteria and operational carbon performance) such as the community benefits, socio economic attributes and integrated transport and access approach that is embedded in this scheme.

Included within Phase 2b/a will be the development of the primary school which will be designed to meet the sustainability standards shown in Table 2.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Function</th>
<th>No. of residential units</th>
<th>Approx. construction period</th>
<th>Building Regulations</th>
<th>Codes for Sustainable Homes</th>
<th>Carbon reduction (% below 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>300</td>
<td>2011-2013</td>
<td>2006</td>
<td>Level 1</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Phase 2b</td>
<td>140</td>
<td>2012-2015</td>
<td>2010</td>
<td>Level 3</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Phase 2a</td>
<td>380</td>
<td>2014-2017</td>
<td>2013</td>
<td>Level 3</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Phase 2c/d</td>
<td>405</td>
<td>2016-2020</td>
<td>2016</td>
<td>Level 4</td>
<td>zero carbon</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Schedule of Minimum Sustainability performance for successive development phases of the Western Sub-area

<table>
<thead>
<tr>
<th>Phase 2b</th>
<th>Function</th>
<th>Approx. construction period</th>
<th>Building Regulations</th>
<th>BREEAM</th>
<th>EPC rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2b</td>
<td>Primary School</td>
<td>2013-2014</td>
<td>2010</td>
<td>Very Good</td>
<td>&lt;40</td>
</tr>
</tbody>
</table>

Table 2 Non-domestic sustainability performance standards for the Western Sub-area
5.0 WESTERN AREA DESIGN PRINCIPLES

MEASURES

Condition 4 also asks for the measures that will be employed to achieve the performance and standards.

A carbon reduction strategy has been developed that adopts an hierarchical approach by emphasising passive design, installing energy efficient systems and providing the tools and controls with which occupants can conserve energy during operation. Having minimised energy demand using these measures, photovoltaic arrays, amongst other measures, could be employed to deliver zero carbon electricity supplies. The later plots will include other renewable generation technologies as the development strives towards the zero carbon standard from 2016.

Principal measures to be employed are listed in section 6 of the sustainability strategy which is included as an appendix to this masterplan. This deals with each of the current code measures associated with:

Energy and carbon dioxide emissions;
- reducing fossil fuel use by energy efficient design, making good use of renewable energy
- the reduction of CO2 emissions
- improvement in thermal insulation in construction
- the use of low energy light fittings
- the use of intelligent lighting control systems
- new homes should achieve the highest practical National Home Energy Rating

Water use and rainwater harvesting;
- low flush wc
- provision of rainwater butts
- showers and spray taps to bathrooms/cloakrooms
- drought-resistant planting
- recycle rainwater, to water landscaped areas

Materials selection performance and sourcing;
- maximise the use of renewable resources and the re-use of non-renewable resources
- where practical, timber and timber products to be sourced from sustainably managed forests, independently certified by the FSC
- consider timber frame, steel frame and other frame type construction as they are more flexible and have reduced embodied energy
- use insulation products with a zero ozone depletion potential - Fcfc and HfCcfc free
- water based paints and stains are preferred
- use modern methods of construction to reduce waste

Surface water run off;
- a sustainable urban drainage system
- capturing and cleansing water run-off

Health and Well Being;
- dwelling design should take maximum advantage of daylight
- adequate sound insulation to be provided between dwellings themselves and between dwellings and the external environment, to ensure quality of life and privacy
- dwelling design should ensure visual privacy and provide either semi-private communal amenity space or private garden space

Management;
- a construction management plan to minimise waste
- use of local labour where possible
- an ongoing management company to maintain quality

Ecology
- protection and enhancement of existing flora and fauna
- creation of new habitat
- effective long-term management of nature conservation measures

As stated at the beginning of this section, other measures will be relevant to the measurement of sustainability at Glan Llyn. We would expect this to reflect work that is underway on neighbourhood sustainability and which starts at Climate change and energy and code levels, but takes in Community networks and management, place making and the efficient use of land, transport and movement initiatives, ecological improvement rather than avoidance, a wider definition of resource utilisation (including the recycling of land) and business and employment (with a strong emphasis on local labour)

The proposed development for the Western Sub-area, and Glan Llyn has these factors at its core. Regeneration of currently derelict and contaminated land to create a community set within a new natural landscape is fundamentally sustainable. Partnered with the development of key access links using sustainable transport methods, new employment opportunities and the sustainable management of surface water creates an ambitious and potentially thriving scheme that will serve and enhance Newport into the future.
GRANTED
GRANTED
6.0 CHARACTER AREAS & PLOT PARAMETERS

6.1 CHARACTER TYPES

Building upon the Development Framework Document and the development Design Principles outlined in the previous section, the Design Guidance suggests the sub division of The Western Sub-Area of the Site into distinct Character Areas, these will subsequently be carried through and expanded upon in all following Phases of development at Glan Llyn.

The broad character types are introduced below and explained in greater detail in the following pages. These are expanded on by the Plot Parameter pages which identify specific requirements, design parameters and character on a plot by plot basis.

The character types therefore provide the starting point, the design of the development plots character through the use of the highway typologies set out in section 3 and the landscape character outlined in Section 3.

The five character types are:-

1. THE GATEWAY

The principle entrance to the site will be formed by the creation of an improved roundabout on the existing Queensway. The Gateway will be designed to carry the large volume of traffic likely to be created by the regeneration process, and will lead into the Avenue.

Landscaping will enhance the existing fishing 'Pools' and provide definition at the entrance, a punctuated mark between the existing built up suburbs of Newport and the new development of Glan Llyn. The Gateway will create a clear and legible gateway into the development and instil a sense of pride for the proposed community.

Buildings here will be a mix of semi's and detached houses of 2-3 storeys in height with landmark buildings at key locations. Hillages would have principle rooms and entrances facing the public realm, providing natural surveillance to the street edge.

Where pitched roofs are utilised, ridge orientation should vary, with breaks introduced to vary the roofscapes, gables, dormers and chimneys should also be encouraged to provide further interest.

A range of building materials is also envisaged, brick, stone and render walls, slate and plain tile reflecting the variety of architecture evident within the local area.

The key character here is one of glimpsed views through woodland planting of larger 'aspirational' housing.

2. THE AVENUE

Beginning at the northern end of The Gateway, this route continues around through the rest of the development, linking up to Main Street and ultimately through to Queensway in the south eastern quadrant of the site. The Avenue will be a vibrant thoroughfare serving the majority of the dwellings proposed in the regeneration.

Buildings will generally be 2-3 storey with active frontages facing The Avenue.

Generally, the Avenue will be tree lined, typified by wide verges and footpaths. The incorporation of public spaces and small greens protected from traffic will reinforce pedestrian priority.

A 5m landscaped zone from the back of footpath along this route will force the building line back, creating a varied street enclosure that responds to the context.

On occasion, The Avenue may become more urban in feel, where context dictates. Here, buildings sit close to the back of pavement, defining the route. The wide grass verges here could be replaced by zones of on-street car parking.

The built form should reflect local diversity and tradition by the use of a range of materials such as slate, stone and brick. In addition more modern materials should also be incorporated such as glass, steel or composites. Key buildings may also use traditional materials in less conventional ways and there may also be the opportunity to combine old with new.

3. MAIN STREET

Main Street forms the main east-west link across the southern sector of the site, completing the internal loop formed by the Avenue. Development plots within this area are intended to be higher density, creating a different character to elsewhere at Glan Llyn. This route will become an urban corridor punctuated by a series of squares and defined at its edge by taller buildings.

Secondary streets leading from squares and junctions along Main Street will provide access to the development plots and offer opportunities to create the sense of place desired here. Urban squares and interesting junction arrangements will punctuate the route, forced directional changes being key to controlling traffic speeds.

Whilst Main Street will be fronted predominantly by residential units, it does pass through the local centre where the character may change (see separate character area description).

Whilst the majority of this road typology will create a dense, urban character, the stretch within the western area must also respond to its context. In particular, where a Greenway crosses it. Similarly, as the road exits the western side of the local centre, it crosses Julian’s Reen at the base of the Western Lakes Park. Here, the character may become less urban in feel and relate more to the park setting. However, in order to maintain the hierarchy of streets, this part of the route must maintain the key elements of Main Street in order to create a degree of consistency. Similarly, the character of this area should be clearly urban, but may respond differently to the street edge.
4. NEIGHBOURHOOD

The Neighbourhoods are further split into two general character types Sub-Urban and Urban with each individual development plot having key design characteristics as set out later in this section. Whilst the character for different areas of ‘neighbourhood general’ will be encouraged to vary, to provide legibility and individuality, certain overriding principles will generally apply:

Sub-Urban

- Storey heights will generally be 2 to 2½, with the opportunity of increasing to 3-5 storey at junctions or to emphasise key locations.
- Generally detached and semi-detached dwellings with some short terraces typically 6 dwellings.
- A finer urban grain with a wide building line in order to better define the public realm, roofs should be designed to provide some overlooking.
- A variety of roof forms and orientations to create a varied roofscape.
- Although a range of dwelling sizes will be accommodated from one bedroom starter homes to four and five bedroomed family houses the Sub-Urban areas will be predominated by larger family housing.
- Car parking will be provided in a number of ways. On-street and driveway parking is the preferred method, with occasional instances of secure rear courtyard parking where appropriate.
- Where rear parking courts are used, care should be taken in their design to ensure their security as well as their ability to be overseen from adjacent dwellings.
- Principle rooms will overlook the public realm and main entrances will face onto the street to provide animation and overlooking.
- Affordable housing will be pepperotted and tenure blind, ensuring that the same high quality is maintained seamlessly throughout the site.
- Wherever practicable, dwellings will be designed to accommodate change, to allow for home working or future expansion.
- Streets will be planned upon the principles set out in Manual for Streets, with priority being given to the pedestrian and cyclist.
- Orientation should be considered carefully to maximise opportunities for passive solar design, PV and Solar Thermal integrated within the building form.

Urban

- Density within the Urban neighbourhoods will be denser than the Sub-Urban areas, this being achieved by the tighter more formal street layout.
- Storey heights will generally be 2 to 4, with the opportunity of increasing to 3-5 storey at junctions or to emphasise key locations or public spaces.
- A courser urban grain will characterise these areas with more terraced units and apartments.
- Front gardens will typically be 1.2-1.8 metres in depth, this is less than the back of pavement, however, where space allows, set backs can be varied further to provide terraces in meadows or court situations, the front garden height can be increased to two storey, or perhaps just a row of granite sets defining the boundary.
- Landscaping will generally be quite urban, hard surfaces interspersed with trees set in grilles, or seating areas with raised beds, or car parking bays, all devices used to reinforce pedestrian priority and reduce vehicle speeds.
- The residential streets, homezones and mews will provide a network of interconnected routes throughout the whole of Glan Lyn.
- At key junctions or to augment the required play provision, a variety of public open spaces will be created, small squares or greens, wider verges to accommodate a bus pull-in or provide car parking for a local shop.
- In order to better define the public realm, roofs should generally follow the street and balconies and bays encouraged to increase its overlooking.
- As with the buildings, boundary treatment should be urban brick walling or railings to define front gardens and close boarded timber fencing to rear gardens.
- Where rear parking courts are used, care should be taken in their design to ensure their security as well as their ability to be overseen from adjacent dwellings.
- Orientation should be considered carefully to maximise opportunities for passive solar design, PV and Solar Thermal integrated within the building form.
- Units should be designed to be flexible; for example mews units with integral garages capable of being turned into workshops or studios.

5. NEIGHBOURHOOD EDGE

The character zone of Neighbourhood Edge will be typified by a lower density and fine urban grain allowing landscape ‘fingers’ to penetrate into the development plots.

The diversity of ‘edge’ within the western area requires that this character zone be sub-divided further:

Ecology Park & Northern Woods

- These edges border dense woodland areas with limited public access. As a result dwellings will generally back onto these areas with rear fences forming the boundaries.
- Where pedestrian and cycle routes provide access into the woodland areas dwellings should be designed to provide some overlooking.

Park Edge

- Dwellings here should be more urban and contemporary in nature. High quality semi-detached villas or short terraces of 3 storey town houses would be an appropriate response to create a sense of enclosure to the park.
- Dwellings would be rear parked with frontages facing into the park and parkway.

Western Pools

- A high quality, low density zone of larger detached and semi-detached properties characterised by a high quality, rural, landscape.

Greenways & Blueways

- Dwelling should face onto the greenways and blueways to provide passive surveillance of these key routes and amenity spaces. A variety of building forms and heights will be appropriate to respond to the varied landscape character of these routes. In the Sub-Urban areas front drives, serving no more than 6 dwellings, facing onto the greenways would be acceptable. In Urban areas rear parking will be required.
THE LOCAL CENTRE

The Local Centre will become the focus for Phase One and indeed the whole of Glan Llyn. Situated to the south of Western Lake Park, the local centre straddles Main Street and is directly accessed from Queensway.

Whilst the Local Centre contains commercial, retail and community facilities it forms part of a wider network of facilities. In particular the Local Centre gives a focus to the southern end of the site and the primary school a focus to the north. High quality pedestrian and cycle routes link these two hubs, through the Western Park, to provide a spread of activity throughout the Western Sub Area.

A mix of uses may be provided, including commercial, retail, community and residential. The Local Centre could be arranged around a square on Main Street, forming a key arrival point upon entering the development from the second Queensway junction. It will also have an important bearing upon the local primary school plot. The super market will serve for the local centre the indicative master plan suggests creating a strong focus link. This arrangement offers the opportunity to provide secure car parking areas that do not visually impact upon the area.

The Local Centre will be characterised by its distinctive, well designed buildings which together with the well thought through high quality public realm will produce a ‘flagship’ development in which the whole community can take pride.

At the heart of the community, the Local Centre will become the focal point for gatherings and events as well as acting as the front door to all the retail, commercial and community services on offer.

Development within this area will be:-

- Predominantly 3-4 storey storeys, generally retail or other usage at ground floor level with potential for residential apartments or offices above, away from the main thoroughfare townhouses designed with live work in mind may be appropriate.
- Buildings and frontages will face the public realm, not only providing natural overlooking but also framing, guiding and providing glimpses through to the other facilities which lie beyond.
- Its character will be urban, with hard landscaping interspersed with street trees set in grilles or guards, co-ordinated street furniture and signage, changing surface materials, paving, cobbles and setts, bonded aggregates etc.
- As mentioned above, longer stay car parking will be available but short stay, drop off and bus pull-ins should also be provided within the main thoroughfare to ensure continuing success and sustainability.

The Local Centre will be developed through a separate Sub-Area Master Plan which expands upon the principles outlined above.
6.2 PLOT PARAMETERS

Whilst the general development characteristics are set out in section 5.0, Western Area Design Principles, it is acknowledged that these are general principals and they do not adequately portray the individual characteristics of each plot and additional information is required to define the style and character of the development.

This additional information will identify:

- Key movement parameters, roads and street typologies
- Landscape parameters
- Public open Space and provision of play spaces
- Urban design principles such as key frontages, focal buildings, and vistas
- Density and heights
- Character and Style of specific parts of the plot

The parameters plans are intended to be flexible to enable individuality in design within the overall parameters established within the WSAMP.
6.0 CHARACTER AREAS & PLOT PARAMETERS

6.2.1 PHASE 1

PLOT CHARACTER

Glimpsed views of high quality aspirational housing through a deep belt of woodland planting. Generally larger detached properties.

A Homezone should link the urban square on Main Street to the Western Park to give a glimpse of the park as you drive east along Main Street.

Urban squares provide key focal points along the Main Street. Squares will be shared spaces to slow traffic speeds. Dwellings should face onto the square to provide activity and overlooking. Dwellings should be designed as focal points to terminate vistas along the street.

A combination of 2 and 3 storey houses along main street. Continuous frontages, ridges generally along the line of the street, wide pavements and urban landscape will all contribute to the character of the Main Street. The street will make the transition between the eastern 'Sub-Urban' character to the 'Urban', contemporary character of the Local Centre.

Glimpsed views of high quality 'aspirational' housing through a deep belt of woodland planting. Generally larger detached properties.

PLOT PARAMETERS SUMMARY

<table>
<thead>
<tr>
<th>Character Area</th>
<th>Development Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORTH: 10.67 Acres / 4.32 Hectares</td>
<td>A Large detached houses should front Queensway behind a wide belt of structural landscaping. This area is not perceived as a gateway into the development but rather a glimpse of the character and nature of Glan Llyn.</td>
</tr>
<tr>
<td>SOUTH: 10.82 Acres / 4.40 Hectares</td>
<td>B Glimpses of detached housing fronting The Gateway. Housing to be served by shared drives or lanes set behind a woodland belt.</td>
</tr>
<tr>
<td>TOTAL: 21.49 Acres / 8.72 Hectares</td>
<td>C Creating a gateway at the end of The Pools and woodland planting a strong 3 storey unit should mark the transition from rural to Sub-Urban.</td>
</tr>
<tr>
<td>Density Range N = 14 units/acre - 17 units/acre S = 10 units/acre - 13 units/acre 25 units/ha - 34 units/ha</td>
<td>D To the north of The Gateway small blocks of 3 or 4 units should front The Gateway to create a more formal frontage to The Gateway.</td>
</tr>
<tr>
<td>N = 35 units/ha - 44 units/ha</td>
<td>E 3 storey units creating the entrance into Main Street and creating a focal point top the south of The Avenue.</td>
</tr>
<tr>
<td>S = 25 units/ha - 34 units/ha</td>
<td>F The first Urban Square on Main Street links to a prominent Homezone giving glimpses of the Western Park. Units generally 2.5 to 3 storeys.</td>
</tr>
<tr>
<td>Approximate Total Dwellings NORTH: 149-190 / SOUTH: 108-150 TOTAL: 257 - 340</td>
<td>G Main Street 2-3 storey development, tight urban street, on street and rear parking.</td>
</tr>
<tr>
<td>Residential Mix A wide variety of detached, semi-detached and semi-detached units.</td>
<td>H A key gateway framing the Western Sub Area as you cross Julians Reen. 3 or 4 storeys would be appropriate.</td>
</tr>
<tr>
<td>Architectural Style This plot forms the transition from the traditional to contemporary. The majority of the plot falls within the &quot;Neighbourhood general&quot; character zone type, though there are some elements of 'The Gateway', 'Main Street' and 'Park Edge'.</td>
<td>I Frontage to Western Park, contemporary detached houses with a strong rhythm and enclosure to the park.</td>
</tr>
<tr>
<td>Affordable Housing 15-20% of total dwellings.</td>
<td>J Frontage to Julians Reen (Blueway) detached housing with shared drives or rear parking.</td>
</tr>
<tr>
<td>Urban Form Informal arrangement of buildings creating an organic feel to spaces in the west, giving way to a more urban structured layout in the east.</td>
<td>K A focal point to make the transition between Julians Reen frontage and the Woodland belt along Queensway.</td>
</tr>
<tr>
<td>Building Heights 2, 2½ and 3 storey buildings.</td>
<td>L A dense woodland belt screens Queensway. Units to back onto the woodland.</td>
</tr>
<tr>
<td>Movement Principles Anticipated relevant street typologies; - The Avenue - Main Street - Residential Street (Sub Urban) - Residential Street (Urban) - Lane - Homezones - Mews - Courtyard</td>
<td>M Housing should front the Greenway and LEAP.</td>
</tr>
<tr>
<td>Car Parking Parking spaces are to be provided in accordance with local authority standards. Within this plot, the car parking solution may include garages, allocated private spaces and on-street parking.</td>
<td></td>
</tr>
</tbody>
</table>
6.0 CHARACTER AREAS & PLOT PARAMETERS

KEY
- Important building line: This identifies key frontages and defines important spaces and routes. It must be followed in layout proposals.
- Indicative route of primary road
- Indicative route of secondary street
- Indicative route of tertiary street
- Indicative route of temporary access, forming long term footpath/cycleway link
- Indicative route of important footpath/cycleway
- Location of area of play
- Important existing or proposed trees
- Landmark building
- Location of proposed bus shelter
- Important views into/out from development plots
### 6.0 CHARACTER AREAS & PLOT PARAMETERS

#### 6.2.2 PHASE 2A (SOUTHERN)

<table>
<thead>
<tr>
<th><strong>PLOT PARAMETERS SUMMARY</strong></th>
<th><strong>PLOT CHARACTER</strong></th>
<th><strong>DEVELOPMENT PRINCIPLES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross Site Area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximate</td>
<td>4.79 Acres</td>
<td></td>
</tr>
<tr>
<td>Total Dwellings</td>
<td>1.94 Hectares</td>
<td></td>
</tr>
<tr>
<td><strong>Density Range</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 10 units/acre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 24 units/Ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Residential Mix</strong></td>
<td>Predominantly detached with the potential for some semi-detached.</td>
<td></td>
</tr>
<tr>
<td><strong>Architectural Style</strong></td>
<td>This plot should take on a traditional style. The entire plot falls within the “Neighbourhood Edge” character zone type.</td>
<td></td>
</tr>
<tr>
<td><strong>Affordable Housing</strong></td>
<td>15-20% of total dwellings.</td>
<td></td>
</tr>
<tr>
<td><strong>Urban Form</strong></td>
<td>Informal arrangement of buildings creating an organic feel to spaces.</td>
<td></td>
</tr>
<tr>
<td><strong>Building Heights</strong></td>
<td>2 storey with opportunities for 2½ story feature buildings.</td>
<td></td>
</tr>
<tr>
<td><strong>Movement Principles</strong></td>
<td>Anticipated relevant street typologies; - Residential Street (Sub Urban) - Lane</td>
<td></td>
</tr>
<tr>
<td><strong>Car Parking</strong></td>
<td>Parking spaces are to be provided in accordance with local authority standards. Within this plot, garages with spaces in front should be the preferred method of delivering private parking. Visitor parking should be accommodated within the street.</td>
<td></td>
</tr>
<tr>
<td><strong>Play Provision</strong></td>
<td>NEAP - none required, nearest provided in the western park. LEAP - none required, nearest provided in Phase 1 and Phase 2a. LAP - 1 required.</td>
<td></td>
</tr>
</tbody>
</table>

**Existing view of the western pools from the southern boundary. The Pools are subject to a group Tree Preservation Order and development must avoid tree routes and tree canopies.**

A number of mature trees are present within the boundary of this plot which should be retained in order to maintain the mature setting. These trees should not be enclosed within private rear gardens.

- **Two or three detached properties fronting Queensway viewed through a high quality landscaped foreground. Access via a shared driveway. 2.5 storeys would be appropriate.**

- **Properties to back onto the dense wood and scrubland of the Ecology Park with solid rear fences. The ecology park to the west of the plot forms a buffer between the plot and the existing District Centre and also provides some relief from the overhead power lines. The boundary to this park should be formed predominantly by rear gardens in order to reduce disturbance to this wildlife habitat.**

- **To the north of the plot, housing should address the footpath and cycle link that will connect west to the existing District Centre. A LAP will is also planned in this route within the boundary of phase 2a.**

- **Design proposals must relate directly to the western pools, creating an active frontage along the banks of the pools, overlooking a footpath around the perimeter of the pools and a local area of play (LAP). This frontage should also consider the long views across the pools from The Gateway and Queensway.**

**Detached housing with simple parallel frontages. Traditional forms using local materials. Predominantly 2 storey with occasional 2.5 storey units. Front gardens, on plot parking and larger gardens.**
6.0 CHARACTER AREAS & PLOT PARAMETERS

KEY

- Important building line. This identifies key frontages and defines important spaces and routes. It must be followed in layout proposals.
- Indicative route of secondary street
- Indicative route of tertiary street
- Indicative route of important footpath/cycleway
- Location of area of play
- Important existing or proposed trees
- Location of proposed bus shelter
- Important views into/out from development plots

Location Plan

Phase 2a (Northern)

Ecology Park

Potential future link to District Centre

The Gateway

Phase 1

Western Pools

Queens Way

Phase 2a (Southern) Parameters Plan
Addressing the western pools to the south, this plot benefits from one of the few mature landscape settings within the entire Glan Llyn development. The built form along this southern edge should front onto the pools, overlooking the footpath that winds around their perimeter. Additionally, in order to benefit from the character of the western pools, a link is to be provided that creates a vista from the heart of the plot to the pools. “Pool Walk” should be fronted on both sides and must provide a link that deals with cyclists and pedestrians as a priority. Vehicular access to housing fronting this route is a viable option, but this must incorporate the principals of the homezone.

“The Ride” is a similar key linking route, connecting this plot to the western primary school and western park beyond, but will be for pedestrian and cyclists only.

Within the plot, the north-south secondary street that is intersected by The Ride should continue the “green” theme. Street trees and interesting soft landscaped junctions should form a natural link between the blueway to the north and the Western Pools to the south.

The ecology park to the west of the plot forms a buffer between the plot and the existing district centre and also provides some relief from the overhead power lines. The boundary to this park should be formed predominantly by rear gardens in order to reduce disturbance to this wildlife habitat. Occasional overlooking of routes through this area will be provided along the length of the park to increase safety.

The northern boundary is formed by a blueway and includes a Local Equipped Area of Play (LEAP). Both the blueway and NEAP must be overlooked by housing in order to provide natural surveillance.

To the east, the plot fronts The Gateway and The Avenue. Direct access to these primary roads is not permitted and must be provided via secondary streets starting at the roundabout forming the junction between them.

In the south-eastern corner, the plot shares an opportunity with phase 1 to create an entrance feature along The Gateway which should begin the arrival experience. This climaxes at the northern end of The Gateway where the built form of three plots comes together to form an area of special quality.

Travelling north along The Avenue, housing should provide a continuous frontage.

### PLOT PARAMETERS SUMMARY

<table>
<thead>
<tr>
<th>Approximate Gross Site Area</th>
<th>25.13 Acres 10.17 Hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density Range</td>
<td>14 units/acre - 17 units/acre 35 units/Ha - 44 units/Ha</td>
</tr>
<tr>
<td>Approximate Total Dwellings</td>
<td>352 - 447 dwellings</td>
</tr>
<tr>
<td>Residential Mix</td>
<td>A wide variety of detached, semi-detached and terraced units.</td>
</tr>
<tr>
<td>Architectural Style</td>
<td>This plot should take on a traditional style. The majority falls within the “Neighbourhood Edge” character zone type, whilst some rear classes are “Neighbourhood General”.</td>
</tr>
<tr>
<td>Affordable Housing</td>
<td>15-20% of total dwellings</td>
</tr>
<tr>
<td>Urban Form</td>
<td>Informal arrangement of buildings creating an organic feel to spaces.</td>
</tr>
<tr>
<td>Building Heights</td>
<td>2 storey with opportunities for 2½ or 3 storey feature buildings.</td>
</tr>
<tr>
<td>Movement Principles</td>
<td>Anticipated relevant street typologies; - The Gateway - The Avenue - Residential Street (Sub Urban) - Lane - Homezones</td>
</tr>
<tr>
<td>Car Parking</td>
<td>Parking spaces are to be provided in accordance with local authority standards. Within this plot, the car parking solution should include garages, allocated private spaces and on-street parking.</td>
</tr>
<tr>
<td>Play Provision</td>
<td>NEAP - none required, nearest provided in the western park. LEAP - 1 required LAP - 7 required.</td>
</tr>
</tbody>
</table>
6.0 CHARACTER AREAS & PLOT PARAMETERS

**KEY**
- Important building line. This identifies key frontages and defines important spaces and routes. Properties along these building lines must front the public realm.
- Indicative route of secondary street
- Indicative route of tertiary street
- Indicative route of important footpath/cycleway
- Location of area of play
- Important existing or proposed trees
- Landmark building / area of special interest
- Location of proposed bus shelter
- Important views into/out from development plots
6.2.4 PHASE 2b

Centre around an urban square at the heart of the plot that terminates the link from Phase 2a formed by "The Ride", this plot is also largely influenced by the presence of the Western Primary School.

The secondary street that forms the frontage to the school will be subject to further development as proposals for the school develop. It will be critical to the success of this area that housing overlooks the street and that the environment feels safe.

The tertiary street running east west is an important link forming the main pedestrian and cycle route from the school to the local Centre.

The urban square that is formed at the junction of the main streets also sees the convergence of several pedestrian and cycle links to the Western School. Whilst of a smaller scale to those proposed along Main Street, the space should offer opportunities for interaction. It may become an area that sees parents congregating at the start and end of the school day.

The Avenue forms the western edge to the plot. This edge must be fronted by housing and access directly from The Avenue will not be permitted.

The southern part of the plot should relate to Main Street and the homezone space to be provided between the end of Main Street and the Western Park. The Western Park frontage should see a continuation of the 'villa' forms required further south along this edge and should consist detached and semi-detached units.

The shape of this plot and sub-division caused by the proposed route of secondary streets leads to the likelihood that perimeter block formations will be the over-riding structure. Internal mews streets and courtyards should be laid out with care to ensure quality is maintained.
6.0 CHARACTER AREAS & PLOT PARAMETERS

KEY
- Important building line. This identifies key frontages and defines important spaces and routes. It must be followed in layout proposals.
- Indicative route of primary road
- Indicative route of secondary street
- Indicative route of tertiary street
- Indicative route of important footpath/cycleway
- Location of area of play
- Important existing or proposed trees
- Landmark building
- Location of proposed bus shelter
- Important views into/out from development plots

Location Plan

GRANTED
### 6.0 CHARACTER AREAS & PLOT PARAMETERS

#### 6.2.5 PHASE 2C & 2D

<table>
<thead>
<tr>
<th>PLOT PARAMETERS SUMMARY</th>
<th>PLOT CHARACTER</th>
<th>DEVELOPMENT PRINCIPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approximate Gross Site Area</strong></td>
<td><img src="image" alt="Contour image showing the northernmost plot within the Western Sub Area." /></td>
<td><strong>A</strong> This plot is the northern-most plot within the Western Sub Area and should respond to the context with views of Llanwern village and the foothills to the north, segregated from the site by the railway. There is the potential for a future footpath and cycleway link from The Avenue that follows the greenway separating the two halves of this plot and this route must be fronted by housing to provide surveillance.</td>
</tr>
<tr>
<td><strong>Density Range</strong></td>
<td><img src="image" alt="Dwellings image showing the plot characterised by lower density family housing." /></td>
<td><strong>B</strong> The northern end of the ecology park to the west of the plot forms a buffer between the plot and the retained sports fields and also provides some relief from the overhead power lines. The boundary to the park should be formed predominantly by rear gardens in order to reduce disturbance to this wildlife habitat. Surveillance of the route through the park and sports pitches must be provided by housing in the south western corner of the plot.</td>
</tr>
<tr>
<td><strong>Approximate Total Dwellings</strong></td>
<td><img src="image" alt="Dwellings image showing the plot charactcrised by lower density family housing, predominantly detached and semi-detached." /></td>
<td><strong>C</strong> The northern boundary of the plot is formed by the railway. For this reason, housing will back on to this boundary and rear gardens in this location are likely to be longer than elsewhere.</td>
</tr>
<tr>
<td><strong>Residential Mix</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>D</strong> Frontage onto The Avenue along the south-eastern boundary should be continuous with parking to these dwellings located to their rear.</td>
</tr>
<tr>
<td><strong>Architectural Style</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>A</strong> This plot is the northern-most plot within the Western Sub Area and should respond to the context with views of Llanwern village and the foothills to the north, segregated from the site by the railway. There is the potential for a future footpath and cycleway link from The Avenue that follows the greenway separating the two halves of this plot and this route must be fronted by housing to provide surveillance.</td>
</tr>
<tr>
<td><strong>Affordable Housing</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>B</strong> The northern end of the ecology park to the west of the plot forms a buffer between the plot and the retained sports fields and also provides some relief from the overhead power lines. The boundary to the park should be formed predominantly by rear gardens in order to reduce disturbance to this wildlife habitat. Surveillance of the route through the park and sports pitches must be provided by housing in the south western corner of the plot.</td>
</tr>
<tr>
<td><strong>Urban Form</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>C</strong> The northern boundary of the plot is formed by the railway. For this reason, housing will back on to this boundary and rear gardens in this location are likely to be longer than elsewhere.</td>
</tr>
<tr>
<td><strong>Building Heights</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>D</strong> Frontage onto The Avenue along the south-eastern boundary should be continuous with parking to these dwellings located to their rear.</td>
</tr>
<tr>
<td><strong>Movement Principles</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>A</strong> This plot is the northern-most plot within the Western Sub Area and should respond to the context with views of Llanwern village and the foothills to the north, segregated from the site by the railway. There is the potential for a future footpath and cycleway link from The Avenue that follows the greenway separating the two halves of this plot and this route must be fronted by housing to provide surveillance.</td>
</tr>
<tr>
<td><strong>Car Parking</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>B</strong> The northern end of the ecology park to the west of the plot forms a buffer between the plot and the retained sports fields and also provides some relief from the overhead power lines. The boundary to the park should be formed predominantly by rear gardens in order to reduce disturbance to this wildlife habitat. Surveillance of the route through the park and sports pitches must be provided by housing in the south western corner of the plot.</td>
</tr>
<tr>
<td><strong>Play Provision</strong></td>
<td><img src="image" alt="Dwellings image showing dwellings to be rear parked or accessed by shared drives." /></td>
<td><strong>C</strong> The northern boundary of the plot is formed by the railway. For this reason, housing will back on to this boundary and rear gardens in this location are likely to be longer than elsewhere.</td>
</tr>
</tbody>
</table>

**Table:**

<table>
<thead>
<tr>
<th>Plot Parameters</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approximate Gross Site Area</strong></td>
<td>25.78 Acres</td>
</tr>
<tr>
<td><strong>Density Range</strong></td>
<td>14 units/acre - 17 units/acre</td>
</tr>
<tr>
<td><strong>Approximate Total Dwellings</strong></td>
<td>361 - 459 dwellings</td>
</tr>
<tr>
<td><strong>Residential Mix</strong></td>
<td>A wide variety of detached, semi-detached and terraced units.</td>
</tr>
<tr>
<td><strong>Architectural Style</strong></td>
<td>This plot should take on a traditional style.</td>
</tr>
<tr>
<td><strong>Affordable Housing</strong></td>
<td>15-20% of total dwellings.</td>
</tr>
<tr>
<td><strong>Urban Form</strong></td>
<td>Informal arrangement of buildings creating an organic feel to spaces, relating to the foothills in the north and Llanwern village.</td>
</tr>
<tr>
<td><strong>Building Heights</strong></td>
<td>2 storey with opportunities for 2½ feature buildings. Potential for up to 3 storey along the frontage to The Avenue.</td>
</tr>
<tr>
<td><strong>Movement Principles</strong></td>
<td>Anticipated relevant street typologies; - The Avenue - Residential Street (Sub Urban) - Lane - Homezones</td>
</tr>
<tr>
<td><strong>Car Parking</strong></td>
<td>Parking spaces are to be provided in accordance with local authority standards. Within this plot, the car parking solution should include garages, allocated private spaces and on-street parking.</td>
</tr>
<tr>
<td><strong>Play Provision</strong></td>
<td>NEAP - none required, nearest provided in the western park. LEAP - none required, nearest provided in plots R1b. LAP - 8 required.</td>
</tr>
</tbody>
</table>
6.0 CHARACTER AREAS & PLOT PARAMETERS

KEY
- Important building line. This identifies key frontages and defines important spaces and routes. It must be followed in layout proposals.
- Indicative route of primary road
- Indicative route of secondary street
- Indicative route of tertiary street
- Indicative route of important footpath/cycleway
- Location of area of play
- Important existing or proposed trees
- Landmark building
- Location of proposed bus shelter
- Important views into/out from development plots

Location Plan

GRANTED
GRANTED
7.0 APPENDIX

GRANTED
7.1 SUSTAINABILITY STATEMENT

GRANTED
EXECUTIVE SUMMARY

St. Modwen’s vision for Glan Llyn strives to meet and exceed expectations against the full breadth of the sustainability agenda. From carbon performance and water efficiency, to the use of local materials and skills, creating new ecological habitats and delivering facilities that will support the new community into the future. The full range of impacts, influence and benefits that a development of this scale can incur have been, and continue to be, considered to derive a robust and aspirational sustainability strategy.

The Western Sub-area is the 1,250-house first phase of the full 4,000-house development, and will establish the approach going forward across the whole site. The sub-area includes a primary school, a host of public realm amenities and green space.

New development in Wales will need to perform against high sustainability standards that apply over the entire site. As phases within the Western Sub-Area are designed, specified and constructed, the sustainability standards achieved will be increasingly stringent. A key objective for the Western Sub-area is to deliver the first 300 houses as soon as possible to support Newport’s Growth Strategy and the Wales Spatial Plan, and to generate funding for the next development stages.

Subsequent phases will be designed to meet increasing Code for Sustainable Homes and carbon reduction standards in line with proposed updates in Building Regulations. This will be in addition to the full range of sustainability features and measures that are outside the scope of Code and operational carbon performance such as the community benefits, socio-economic attributes and integrated transport and access approach that is embodied in this scheme.

The overall approach to the scheme is founded on the introduction of a Green Grid of landscaped routes for pedestrians, cyclists, surfers and wildlife in a network of ‘greenways’ and ‘blueways’. Integrated into the Green Grid will be the infrastructure for road and public transport, the various amenities for the new community, and plots of housing.

A carbon reduction strategy has been developed that adopts an hierarchical approach by employing passive design, installing energy efficient systems and providing the tools and controls with which occupants can conserve energy during operation. Having minimised energy demand using these measures, photovoltaic arrays will be considered for houses to deliver zero carbon electricity supplies. The later plots will include other renewable generation technologies as the development strives towards the zero carbon standard from 2016.

The carbon reduction strategy also encapsulates the strategy for minimising consumption of potable water using efficient fittings and rainwater harvesting for irrigation; encouraging and facilitating sustainable transport solutions with a safe and convenient cycle route network and bus stop locations; and including embodied carbon as a key criterion for building and public realm materials selection in a Sustainable Procurement Policy.

By adopting such a comprehensive and far-sighted approach to delivering a new sustainable community for Newport, with the design and development phase of the development, the resulting scheme presents an optimal and enduring solution for Glan Llyn that meets or exceeds sustainability objectives for Newport and Wales.

1. INTRODUCTION

The sustainability strategy for the Glan Llyn has been derived by St. Modwen in response to the national, regional and local development policies, and in response to consultation with the Newport City Council Planning Authority and the Design Commission for Wales (DCfW), to provide a sustainable solution for the Urban regeneration scheme.

The overall scheme offers predominantly residential development with some employment space on brownfield land released by the Corus steelworks. The Western Sub-area, which is the focus of this report, comprises residential development and a school.

1.1 GLAN LLYN REGENERATION PRINCIPLES FOR SUSTAINABILITY

The proposed regeneration of the Glan Llyn site contains a number of key sustainability principles at the core of its conception. Using previously developed brownfield land, remediated to a standard appropriate for residential areas, and incorporating substantial green amenity space and ecological habitats as an integral element of the community design, establishes strong sustainability principles for all phases of the development.

The sustainability performance of the scheme as a whole, and the Western Sub-Area, uses the Code for Sustainable Homes, BREEAM and operational carbon emissions as key parameters of performance. Added to this, however, is a range of supporting sustainability criteria that are explored in this Statement that demonstrate the high levels of overall sustainability standards that are to be attained.

1.2 OBJECTIVES OF THIS SUSTAINABILITY STATEMENT

In the Notice of Decision (01/04/2010) on the Outline Planning Application, Newport City Council (NCC) stated in Condition 39 that “each development parcel as defined under Condition 04 shall include a Carbon Reduction Strategy and Sustainability Statement for that development parcel which will be submitted to and approved in writing by the local planning authority. Each development parcel shall be implemented in accordance with the approved Carbon Reduction Strategy and Sustainability Statement.”

This document sets out part of the response to planning condition 39, for the Western Sub-area, in support of national, regional and local planning policy, and following consultation with DCfW (18/08/2010) to present the sustainability strategy for the Western Sub-area, and the contribution that this will make to the site as a whole.

As detailed design progresses for each development parcel, further definition of sustainability features incorporated and performance levels achieved will be presented in supplementary sustainability reports. Updates to the Building Regulations, planning policy and the Code for Sustainable Homes (Code) guidance will be integrated to inform design decisions towards achieving the optimal sustainability performance level for the Glan Llyn regeneration site.

2.0 SUSTAINABLE POLICY AND CONTEXT

The relevant planning policy context for this scheme is set at national, regional and local level.

2.1 UK NATIONAL POLICY

“Sustainability is the future. Sustainable development can guide our choices to get us there and create a place we want to live in.” (DEFFA, 2009)

The UK Government priorities for sustainable development, as set out in Securing the Future – UK Government sustainable development strategy (2005), are stated as sustainable consumption and production; climate change and energy; natural resource protection and environmental enhancement; and sustainable communities. From this standpoint, a number of policies and strategies have been developed towards the overarching goals set out in 2005, with much focus on the built environment, the performance of buildings and the way they serve their respective communities and neighbours. Much of this is now captured in planning policy.

Planning Policy Statements and Guidance Notes set out the key issues at a national level for new development. The following are of most relevance for the Glan Llyn Regeneration scheme:

- PPS1: Delivering Sustainable Development sets out the principles which underpin the delivery of sustainable development through the planning system
- Supplement to PPS1: Planning and Climate Change
- PPS4: Planning for Sustainable Economic Growth

A recently completed consultation has been undertaken to add a further supplement to PPS1 regarding Planning for a Low Carbon Future in a Changing Climate. The proposed PPS will update existing planning policy on climate change and renewable energy from two documents into one.

The UK Low Carbon Transition Plan (DECC, 2009) summarises the Government’s aspirations to transforming building energy and carbon performance. All new houses and apartments must meet a progressive carbon performance targets linked to increasing certification standards of the Code for Sustainable Homes, and will be ‘zero carbon’ from 2016 onwards. New schools similarly must meet zero carbon requirements from 2016, while all new buildings must meet the same standard from 2019.

Building Regulations 2006 require that all new domestic buildings are assessed under Code for Sustainable Homes, although there is no stated rating to be achieved. Proposals for Building Regulations 2010 to be adopted from 1st October 2010 include requirements to achieve the mandatory Energy section requirements of Code for Sustainable Homes level 3. This will increase to the mandatory energy requirements of Code level 4 from 2013, and level 6 from 2016, as shown in Table 1 overleaf.
2.2 WELSH ASSEMBLY GOVERNMENT

"Sustainable development in Wales means enhancing the economic, social and environmental well-being of people and communities, achieving a better quality of life for our own generations in ways which promote social justice and equality of opportunity; and enhance the natural and cultural environment and respect its limits using only our fair share of the earth’s resources and sustaining our cultural legacy.”

Planning Policy Wales (July 2010)

Planning Policy Wales (July 2010) describes in Chapter 4: Planning for Sustainability the approach adopted to encourage local authorities to strive for sustainable development in the built environment. A range of sustainability issues are embedded cover climate change adaptation and mitigation; re-use of land; ecological footprint and carbon footprint; rural and urban areas; location and design; and includes a section on ‘good design’ that incorporates sustainable attributes. Section 4.11: Planning for Sustainable Buildings sets out the procedures to be adopted in meeting these requirements. TAN 12: Design includes the following standards for larger schemes of new buildings to incorporate approaches to development which create new opportunities to enhance biodiversity.

The preferred strategy for the Newport Local Development Plan 2011 – 2026 put forward in January 2010 summarises key features, trends and issues for anticipated development for Newport. The Plan provides a framework within which detailed policies and proposals will be developed in a Sustainable Development Strategy, which presents those policies that will deliver sustainable development for Newport.

The LDP presents the following objectives, which are also captured in our Community Strategy Vision and Objectives for Newport.

The Objectives are aligned with LDP policy SP1: Sustainability that states that proposals will be required to make a positive contribution to sustainable development, and will be assessed by their contribution to:

- Re-using previously developed land
- Providing integrated transportation systems, as well as encouraging the co-location of housing and services, which together will minimise the overall need to travel, reduce car usage and encourage a modal shift to more sustainable modes of transport
- Reducing energy consumption, increasing energy efficiency and encouraging the use of low and zero carbon energy sources
- The minimisation, re-use and recycling of waste
- Minimising the risk of and from flood risk, sea level rise and the impact of climate change
- Improving facilities, services and overall social and environmental equality of existing and future communities
- Encouraging economic diversification and in particular improving the vitality and viability of the city centre
- Protecting and enhancing the built and natural environment
- Conserving and ensuring the efficient use of resources such as water and minerals.

Other policies (SP2 to SP19) set out in the LDP describe in greater detail expected responses to aspects of sustainability.

2.3 NEWPORT CITY COUNCIL

"As a gateway to Wales, Newport will be a centre of regeneration that celebrates its culture and heritage, while being a focus for diverse economic growth that will strengthen its contribution to the region. It will be a place that people recognise as a lively, dynamic, growing city, with communities living in harmony in a unique natural environment.” The Vision, Newport LDP 2011 – 2026 (January 2010)

The preferred strategy for the Newport Local Development Plan 2011 – 2026 put forward in January 2010 summarises key features, trends and issues for anticipated development for Newport. The Plan provides a framework within which detailed policies and proposals will be developed in a Sustainable Development Strategy, which presents those policies that will deliver sustainable development for Newport.
3.0 WESTERN SUB AREA SUSTAINABILITY STANDARDS

The proposed development for the Western Sub-area, and Glen Llyn as a whole, embodies a range of sustainability issues at its core. Regeneration of currently derelict and contaminated land to create a community set within a new natural landscape is fundamentally sustainable. Partnered with the development of key access links using sustainable transport methods, new employment opportunities and the sustainable management of surface water creates an ambitious and potentially thriving scheme that will serve and enhance Newport into the future.

In light of planning policy, and given the context of the previously permitted extent of the Glen Llyn, the minimum sustainability performance standards described in Table 3, which specifies the minimum levels to be achieved. These summary performance standards, combined with the policy requirements described above, are applied to the sustainability strategy for the Western Sub-area as a whole.

The key objective to progress the development is to deliver the first phase of housing at the earliest opportunity to best support the growth priorities of NCC, and to generate funding towards the delivery of the remaining phases in the most sustainable manner achievable. To this end and in the context of the very difficult economic conditions faced by the scheme, phase 1 will be built to meet Code Level 1, with all subsequent development meeting higher code levels. These are set out in Table 3 which specifies the minimum levels to be achieved.

Included within Phase 2b/a will be the development of the primary school which will be constructed to meet the sustainability standards shown in Table 4.

For other sub-areas, a similar approach will be followed whereby the sustainability standards for each plot will be defined by the progression of Building Regulations, the Code for Sustainable Homes and carbon reduction requirements as appropriate at the time of detailed design submission. This will be addressed in subsequent Sustainability Statements and Carbon Reduction Strategy reports for each sub-area.

<table>
<thead>
<tr>
<th>No. of residential units</th>
<th>Approx. construction period</th>
<th>Building Regulations</th>
<th>Code for Sustainable Homes</th>
<th>Carbon reduction (% below 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>300</td>
<td>2011-2013</td>
<td>2008</td>
<td>Level 1</td>
</tr>
<tr>
<td>Phase 2b</td>
<td>140</td>
<td>2012-2013</td>
<td>2010</td>
<td>Level 3</td>
</tr>
<tr>
<td>Phase 2a</td>
<td>380</td>
<td>2014-2017</td>
<td>2013</td>
<td>Level 3</td>
</tr>
<tr>
<td>Phase 2c/d</td>
<td>405</td>
<td>2016-2020</td>
<td>2016</td>
<td>Level 4</td>
</tr>
</tbody>
</table>

Table 3: Schedule of minimum sustainability performance standards for successive phases of the Western Sub Area

<table>
<thead>
<tr>
<th>Function</th>
<th>Approx. construction period</th>
<th>Building Regulations</th>
<th>BREEAM</th>
<th>EPC rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2b</td>
<td>Primary School</td>
<td>2013-2014</td>
<td>2010</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

Table 4: Non-domestic sustainability performance standards for the Western Sub-area
4.0 THE SITE AND SCHEME

4.1 SITE LOCATION
Glan Llyn is located to the east of Newport and the A465, and South of the M4 corridor, on generally flat brownfield land previously used by Corus as part of the steelworks industrial area. The development site is separated into the Western Area, the Central Area, the Eastern Area and Queensway Road. The Western Area is first for development, and is the focus of this report.

4.2 Development functions, facilities and amenities
The Glan Llyn scheme is the cornerstone of Newport's growth strategy and will deliver 4,000 new dwellings, along with around 150,000m² of employment space. It will generate 6,000 new jobs and provide 2 new primary schools, a local Centre containing retail and community facilities and a significant area of new public open space and structural landscaping.

The Western Sub-area of the Glan Llyn scheme, incorporates approximately 1,250 new homes and associated road, cycleway and footpath infrastructure; the first primary school; the first part of the district centre; the western pools and lakes, together with new drainage channels; the western park and the restoration of the old Corus sports club and pitches. As a result, while Glan Llyn is predominantly focused on new residential development, there will also be a range of community and ecological amenity embedded in the first phases that will offer valuable benefits from the outset.

4.3 Management and operation
During the construction phases, St. Modwen will act as development manager and carry out the infrastructure, landscaping, open space and enabling works associated with the redevelopment of the site. St Modwen will devise strategies, submit applications and install or carry out:

- Ground works, remediation and reclamation
- New reens/SUDS and lakes and the new green grid
- The principal roads, and pedestrian and cycle links outside the individual development plots
- New infrastructure including connection points to each development phase
- Structural landscaping covering all areas outside the defined development phases.

As each phase comes into occupation, the Glan Llyn site will be served by a Community Management Company (CMC), or similar management entity that employs residents and employment area representatives. The functions of the management team will be to interact with municipal provision to ensure that all grounds and landscape; energy, water and waste; and public, retail and residential facilities are fit for purpose and operate efficiently and effectively. The CMC will be in operation from first occupation of Phase 1.

Delivery of individual aspects of the management scope would be provided through specific sub-contracts or by an external facilities management company or multi-utility services company (MUSCO), or will be managed directly through on-site general management or the CMC.

Each building will be provided with a Home (or Building) User Guide that describes how the various building systems work and the materials used, and how they are best operated and maintained by the user. The Guide will be maintained and issued to subsequent occupants by the management and operation team.
5.0 GLAN LLYN SUSTAINABILITY STRATEGY

5.1 A SUSTAINABLE VISION FOR GLAN LLYN

There is great need for housing in the Newport area to serve both Newport, and the wider region. Glan Llyn, while derelict and contaminated, offers a brownfield development opportunity ideally located for Newport, for the M4, and for employment centres across the region.

Glan Llyn is a national priority and features in the Wales Spatial Plan. The size and position of the site means that it will make the largest single contribution to Newport’s Growth Strategy and will dramatically improve the local environment. All this can be achieved on previously developed or brownfield land.

To deliver this vision, the remainder of this section describes the solutions proposed for Glan Llyn against the NCC Vision and Objectives as set out in the ldp 2011 – 2026 (Feb 2009; Jan 2010). The headings in this section are based to match the Objectives (as listed in Table 2), and incorporates the features and measures that respond to NCC policies and WAg policy and expectations, as well as the sustainability vision of St Modwen for the site.

5.2 SUSTAINABLE USE OF LAND

Objective 1 - “To ensure that all development makes the most efficient use of natural resources by seeking to locate in the most sustainable locations, minimises the impact on the environment and makes a positive contribution to local communities.”

NCC policy SP1(i) emphasises the importance of re-using previously developed land for new development in preference to greenfield sites. The Glan Llyn site is almost entirely brownfield land with areas of contamination resulting from its past life as part of the corus steelworks industrial site, as shown in Figure 1.

As part of the proposed scheme, the site will be remediated to a standard suitable for residential functions; large areas of the site will be landscaped for green amenity functions and to introduce new ecological habitats; existing trees and wildlife corridors at the boundary of the site will be retained; and the remainder will be developed sensitively to include extensive garden areas.

Prior to the construction stages, a pre-demolition survey of each phase will reveal any materials that can be retained and recycled off site. These could include concrete and brick to be crushed and re-used as recycled aggregates in sub-layers to roads and paths, and as blinding concrete. Any uncontaminated topsoil will be stockpiled within the site for re-use in the landscaping scheme. Other materials discovered that can be re-used or recycled will be directed as defined in the Site Waste Management Plan (SWMP) towards the lowest environmental impact outcomes, in line with NCC policy SP1(iv).

Construction environmental impacts will be managed and closely monitored using a Construction Environmental Management Plan (CEMP) that addresses pollution to air, watercourses and land to avoid further contamination and nuisance impacts. The SWMP will be embedded within the CEMP to ensure all construction waste is segregated appropriately with targets set for re-use and recycle rates. Hazardous materials will be minimised through careful procurement as part of a Sustainable Procurement Plan (SPP), and waste disposed to landfill will be reduced to a minimum with targets and regular reporting to demonstrate performance.

The Glan Llyn scheme will raise the land quality of the whole site from the current derelict and contaminated condition to one of high social, economic and ecological value.
5.3 CLIMATE CHANGE

Objective 2 - “To ensure that development and land uses in Newport make a positive contribution to helping to minimise the causes of climate change and to mitigating the impacts, by incorporating the principles of sustainable design, reducing the need to travel, providing safe and active travel routes, and managing the risks and consequences of flooding.”

The Carbon Reduction Strategy for the Western Sub-area details the approach to mitigating and minimising the impact of the scheme on climate change. The strategy addresses all direct carbon emissions associated with the development of buildings and the public realm, including:

- Operational energy consumption and supply
- Potable water consumption
- Transport emissions
- Embodied carbon associated with new and zero carbon (LZC) generation
- External lighting

The carbon emissions associated with the operational consumption and supply of energy in the form of heating, cooling and power represents the greatest source of greenhouse gases that this development will produce. ICC policy Sp1(iii) encourages the reduction of energy consumption, increasing energy efficiency and the encouragement of low and zero carbon energy sources as a key contribution towards a sustainable development. The Carbon Reduction Strategy for each Phase will be further defined as detailed design progresses, and will adopt the principles identified below.

In summary, and in light of forthcoming changes to the regulatory regime covering this issue, the following hierarchical approach has been adopted:

1. Building orientation and fenestration design will, as far as practical, make use of passive solar gains for winter heating, natural daylight and natural ventilation benefits, while avoiding risks of summer overheating. This will be achieved through appropriate orientation of houses and glazing relative to the sun path; use of shading where required to minimise overheating; providing openable windows which encourage cross-flows of fresh air, and the use low emissivity glass.

2. Building fabric will meet a high standard of thermal performance in terms of insulation effectiveness, air tightness of the envelope, and minimising thermal bridging. All houses will achieve a Heat Loss Parameter (HLP) of less than 1.3, with later phases achieving an HLP of less than 1.1.

3. Gas-fired boilers will be very efficient (SEDBUK ‘A’) condensing and low-NOx systems with time and temperature controls linked to TRVs on radiators.

4. Efficient lighting systems will be installed throughout with the specification of at least 75% low energy lamps (fluorescent, CFL or LED). External lighting will be automatically controlled for time, daylight, and where appropriate motion, with lower illumination levels during the night to minimise light pollution.

5. Occupants will have use of effective and zoned controls for lighting and heating. Any communal areas will be automatically controlled.

6. A feasibility study will be conducted to explore the options for cHP, or a solar (pV) farm on land to the south of the site.

7. Where the density of development and mix of functions allows, a district heating approach will be considered as part of a low carbon feasibility study. This would be supplied from an energy centre that can contains gas-cHP, biomass boilers and efficient gas boilers to supply heated water, perhaps cooling via absorption chillers to commercial buildings, and a contribution to meeting electricity demand.

8. There will be an investigation into the use of waste heat from the remaining industrial processes from Corus adjacent to the later phases of the scheme. This could provide low carbon heating and cooling to the new commercial district and adjacent Phase 3 housing, and preliminary discussions regarding this have commenced.

9. Other stand-alone renewables options will also be explored, primarily focused on near-site opportunities for wind turbines, biomass production, anaerobic digestion to produce biogas for CHP, or a solar (PV) farm on land to the south of the site. A feasibility study will be conducted to explore the options as this will have to be addressed to meet the zero carbon standards for new housing from 2016.

The energy hierarchy above, which will be presented in greater detail in the Carbon Reduction Strategy for each phase, will facilitate compliance to the sustainability standards listed in Table 3, and will deliver a low (operational) carbon built environment for Glen Llyn. As mentioned above, there are additional considerations captured in any Carbon Reduction Strategy that guide the scheme towards comprehensive low carbon performance.

Supplying potable water has a significant carbon impact through the processing and pumping of water resources to provide clean and safe drinking-quality supplies, and this will be captured in the detailed Carbon Reduction Strategies. ICC policy Sp3 partly covers the re-use of rainwater to minimise potable water demand, and careful consideration of quantities abstracted by embedding efficient water-consuming appliances.

To this end, all buildings in the Glen Llyn scheme will apply water efficiency principles in the specification of sanitary fittings – WC’s, taps, showers, baths and, if applicable, white goods – that achieve high levels of water efficiency. In addition, each house will be connected to a 150 – 200 litre water butt for garden irrigation and other non-potable functions. Soft landscaping will only use native planting requiring low, or no, watering once established.

The Water Management Strategy will incorporate procedures for maintaining water-consuming systems; irrigation procedures using stored rainwater; and management of the SUDS network installed across the site. The Construction Environmental Management Plan (CEMP) will include procedures to minimise water consumption during the construction process.

An integrated and sustainable transport solution is embedded in the Glen Llyn scheme, and is critical to achieving substantial carbon reduction over the lifespan of the scheme as a whole.

The Western Sub-area will be nearest to Newport, and will be used to establish public transport connections from the outset. A new bus service is to be provided that links Glen Llyn residential, the proposed new railway station and employment areas to Newport city centre with a minimum frequency of two services per hour. This integrated transport approach will deliver substantial carbon savings when compared to the traditional car-based transport solutions, and is aligned to ICC policies Sp1(ii) and Sp12.
The new rail halt is to be provided (by other) on the London to Swansea line to serve the Glan Llyn community with a fast rail link to Newport, and which includes a park and ride facility.

In addition, the scheme is to be well served with dedicated cycle routes and footpaths, both offering a safe and convenient route to key locations within and beyond the development boundary such as the District centre, the Railway Station, and between the various residential zones and the employment area to the west. Figure 6 shows the proposed cycle routes across the site, with blue routes offering a direct 'commuter' link, while red routes a greener more rural feel. The Local Centre will incorporate clusters of cycle storage hoops, with routes clearly demarcated and segregated from the busiest traffic flows.

To support the use of cycling as an easy commuting option, all commercial buildings will include, or have easy access to, secure and covered cycle storage hoops, changing and shower facilities. The majority of houses will also include space to store cycles.

The selection of materials for construction of buildings and the public realm also has a significant impact on the total carbon profile of a new development. While the Code for Sustainable Homes encourages the use of the Green Guide for Specification to determine and select appropriate materials of low environmental impact, this does not directly reflect the embodied carbon associated with material manufacture and installation. NCC policies SP1(iii & iv) and SP19 refer to minimising virgin materials extraction through the re-use and recycling of materials, and this approach, which will be adopted at Glan Llyn where feasible, would contribute towards the reduction of embodied carbon. However, a Sustainable Procurement Policy will be developed that emphasises a preference for materials that are of inherently low embodied carbon, as determined by Inventory of Carbon and Energy (ICE) by the University of Bath, and similar industry standards as they become established. Such materials would include the use of timber and lightweight materials, seeking materials with a high recycled content such as steel and aluminium, pre-cast and prefabricated elements, and encouraging soft landscaping ahead of hard surfaces where possible. The embodied carbon performance of house designs will be monitored through the design stages, and delivered through the procurement process to contribute towards a low carbon development at Glan Llyn.

Not covered in the Carbon Reduction Strategy, flood risk is a symptom of climate change requiring adaptation, rather than the mitigation measures described above. NCC policies SP1(v) and SP2 deal with the risk of flooding that is expected to increase as the climate changes. To combat potential flood events, and minimise the risk of flooding, the Glan Llyn scheme has adopted a comprehensive sustainable urban drainage scheme (SUDD/SUDS) that minimises attenuates run-off within the site.

Surface water run-off will adopt a three tier quality control approach, utilising sustainable drainage systems, pollution prevention measures and initial containment of first flush within sections of the reens before discharging freely into the blueways.

Control structures restricting flows from the development will be located at southern end of the blueways. Swales will run alongside foot paths and cycle routes as defined by the Green Grid across the site, as shown in Figure 7.

Figure 6 Cycle routes across the Glan Llyn site

Figure 7 Use of swales as part of the SUDD approach to managing flood risk at Glan Llyn
5.4 Economic Growth

Objective 3 - “To enable a diverse economy that meets the needs of the people of Newport and those of the wider South East Wales economic region.”

Glan Llyn will make a significant impact to Newport and to the South East Wales region in terms of providing a large amount of good quality housing in an easily accessible location, with associated employment opportunities, within a new development designed to offer all the amenities and facilities necessary for a thriving community scheme. The location of the site offers good links to Newport via the A455, and to the M4 junctions 24 and 23a, offering benefits to both residential and employment occupants. By introducing an additional 4,000 new houses with such good access to employment and business destinations, plus the incorporation of commercial and retail activity in the later phases of the scheme, the scheme acts as a significant catalyst to economic growth of Newport and the surrounding area.

The scheme will contribute towards NCC policy P1 by providing 23% of the Council’s requirement for employment land for 2011 – 2026. The regenerating nature of the development also supports NCC policy SP7 with the re-use of vacant, underused or derelict land to create residential and business opportunities.

During the construction phase, through the specification of local materials and the encouragement of the use of local labour and skills, there will be a sustained boost to the local economy from the delivery of Glan Llyn, commencing from the start of the Western Sub-area. The site is of sufficient scale and duration to warrant new businesses being set up to specifically deliver aspects of the construction process, and the Sustainable procurement Policy will incorporate the support of local business as a key selection criteria.

5.5 Housing

Objective 4 - “To ensure that there is an adequate supply of land for housing in the most sustainable locations, and to ensure that the quantity, quality and variety of housing provision meets the needs of the population. Also to foster the creation of places which contribute to local distinctiveness and thriving communities.”

The Glan Llyn Regeneration scheme will provide 4,000 new houses, equating to 42% of the Council’s total requirement for 2011 – 2026 across Newport, as set out in NCC policy SP8. Of these 1,250 are located within the initially developed Western Area.

The houses are located on a site that is inherently sustainable, being brownfield requiring remediation, well located for transport links, and close to existing amenities and employment opportunities. All buildings within the development will be built to a high standard using the design principles set out in the Western Area Masterplan and in compliance to the increasing standards of the Code for Sustainable Homes and the carbon emissions targets adopted.

The design principles demonstrate that the local vernacular and characteristics of the region, and local Newport area, will be captured in the house and street designs, while incorporating an element of local distinctiveness. The architectural vision is to create a contemporary re-interpretation of traditional and local design forms within a living landscape.

The scheme includes a Local Centre that will provide a host of community amenities, and there will be green space and green areas as a success to development that will encourage a thriving and robust community. The association with the new commercial area that forms part of this scheme, and the surrounding employment sites from Corus and Canute to the east, to the range of commercial and retail establishments to the west, and on into Newport will ensure that employment opportunities are ample.

5.6 Conservation and the Environment

Objective 5 - “To ensure that all development or use of land does not adversely affect, and seeks to preserve or enhance, the quality of the built environment.”

The existing site, as shown in Figure 4, is devoid of any built environment being entirely derelict. The surrounding neighbourhoods are a mixture of commercial and retail units interspersed with a variety of residential styles. While there is little locally to define the vernacular of the area, Newport has some distinctive style characteristics stemming from Victorian roots. The vision for Glan Llyn is to deliver a transformation from the current derelict post-industrial landscape to a vibrant community set within a ‘green and blue’ living landscape.

The Western Area Masterplan shows the range of building styles that will inform the adopted housing and Local Centre form and frontage. While Glan Llyn will develop its own style of housing within a Green Grid, it will be designed to avoid aesthetic conflict with the existing character of the area, in line with NCC policy SP7. Landscaping materials will be selected according to the Sustainable Procurement Policy to utilise local characteristics and skills where possible and to define a public realm that exceeds the expectations of the new community.

Objective 6 - “To protect and enhance the quality of the natural environment, including protected and non-protected species and habitats, regardless of greenfield or brownfield status, and also including the protection of controlled waters.”

The existing site is of very low ecological value, with only the trees at the south-west, west and north perimeters offering any form of biodiversity habitat. These habitats are to be retained, while the remainder of the site will undergo a landscaping and habitat transformation embedded within the housing scheme.

Central to the proposals for Glan Llyn and the vision behind them is the creation of a green grid of parks and greenways which will form a consistent framework and definition to the scheme. Together the different development zones will provide routes for footpaths and cycleways, space for informal recreation and wildlife corridors linked to the retained habitats at the perimeter, as illustrated in Figure 8. Surrounding the development is a dense belt of new planting which acts as a visual buffer and wildlife habitat.

Management of the soft landscaping and green spaces will be provided as a key element of the operational management regime, and will be defined in a rolling Landscape and Habitat Management Plan (LHMP) updated each year that covers the next five year period as the development expands from Phase 1 to 4 and forwards into full operation of the site. The LHMP will ensure that all retained habitats are protected; new and retained habitats are managed appropriately into the future, and will set out detailed procedures for habitat and landscape management for the distinctive areas within the site.

The LHMP will also inform the CEMP to ensure that all construction activities adhere to the Plan requirements, contractors are trained and informed of key ecological issues relating to the site and their activities, and ecological influence is minimised and closely monitored through all phases.
5.7 COMMUNITY FACILITIES AND INFRASTRUCTURE

Objective 7 - “To ensure the provision of appropriate new, and/or enhanced existing, community facilities.”

Within the site, the predominantly residential development will be served by a Local Centre in line with NCC policies Sp1(vi) and Sp9. This Centre will contain the following facilities, as shown in Figure 9:

- Health and fitness facility
- Community centre
- Supermarket
- Library
- Retail units and fast food outlets
- Surgery/pharmacy
- Bars/pubs
- Police station
- Offices for local business
- Nursery

The central parks and sports fields that form part of the Green Grid provide ample opportunity for sport and recreation with facilities for team sports, tennis, fishing and water based activities in three zones; the existing sports ground to the west; a new sports ground to the east and a sports and games field close to the Local Centre. Local play space is also an integral part of the proposals. The site will contain a minimum of two Neighbourhood Equipped Areas for Play (NEAPs) and 10 Local Equipped Areas for play (LEAPs) in accordance with the National Playing Fields standards.

There are a number of existing community facilities in close proximity to the site, such as a cinema; sports facilities and stadia; the City of Newport College campus and Golf Club. There are also a variety of shops, entertainment and recreational venues to the west of the site.

Figure 9 Proposed layout of the Local Centre

5.8 CULTURE AND ACCESSIBILITY

Objective 8 - “To ensure that development proposals and uses are socially and physically accessible to all, taking account of the needs of all individuals.”

As the landscaping design and building layouts are further defined, careful consideration will be given to the incorporation of wheelchair accessible housing and residential units designed in accordance with Newport City Council’s relevant design standards and NCC policy Sp1(vi). Floor areas to houses will to be over-sized to accommodate the requirements of wheelchair standards, recycling storage or bicycle storage. Designs will adopt flexible internal layouts that respond to the changing needs of the occupants, and the size and layout of the dwelling will take account of potential furniture arrangements. Adequate space will be designed to allow the appropriate areas of access, activity, storage and passing zones.

A number of houses will be designed to meet the Lifetimes Homes standards with manoeuvring space for wheelchairs in washrooms, the ability to install stair lifts, and avoiding raised thresholds. All Local Centre buildings and facilities will comply with the requirements of the Disability Discrimination Act and the forthcoming Equality Act (due in October 2010). This will include easy wheelchair access and lifts where required.

The principles of Secure by Design will be adopted from Phase 2 onwards, and discussions with an Architectural liaison Officer will commence shortly. Where greenways are being used as principal pedestrian and cycle routes these will be overlooked to provide security from adjacent residential units. The provision of seating areas and interpretation boards will provide areas of focus at key locations to encourage their use for walking and recreation.
6.0 CODE FOR SUSTAINABLE HOMES

This section summarises the strategies and solutions proposed for the Glan Llyn scheme using the Code for Sustainable Homes requirements sought by the development in response to the expectations described in Planning Policy Wales (4.11) and in support of LDP policy SP1. For a detailed summary of Code for Sustainable Homes performance, refer to Appendix 1: Code for Sustainable Homes.

This section describes the key features that are to be adopted and combine to deliver Code performance levels as set out in Table 3.

6.1 ENERGY AND CARBON REDUCTION ISSUES

The energy strategy for the Glan Llyn scheme is described in the Carbon Reduction Strategy submitted alongside this report. In summary, the approach has followed an energy hierarchy by firstly minimising energy and carbon emissions through high density and mix of functions allow, an alternative energy centre containing a combination of gas-chp, biomass boilers and gas boilers will be considered. The fuel mix will be determined by the carbon reduction requirement for that phase.

The result is that Phase 1 houses will achieve carbon reductions below the 2006 TER of at least 10%; Phase 2 houses achieve a 31% carbon reduction in line with WAG policy; Phase 3 houses will attain a 44% carbon reduction; and Phase 4 will strive to meet the zero carbon standard as it is defined for the 2016 Building Regulations.

Houses will have drying lines installed in each garden. A Home User Guide is to be provided containing further information regarding the scheme.

Cycle storage is to be provided to all units. For houses this will be in the form of secure garden sheds or garage space; for any apartments, dedicated cycle storage space and secure, covered indoor storage will be provided.

All houses will contain sufficient facilities to accommodate a home office including providing adequate space, power, telephone/broadband sockets and daylight in an appropriate room in each unit.

6.2 WATER

The specification of sanitary fittings will ensure that efficient appliances are procured and installed. This will include dual-flush or low volume WCs; low-flow and aerating taps and showers; and limits to bath volumes.

Externally, rainwater will be harvested from building roofs and stored in water butts for garden irrigation purposes. House gardens will contain a dedicated water butt per garden sized at 150 - 200 litres.

6.3 MATERIALS

Many of the main construction elements – roof, external and internal walls, floors, windows, floor finishes, hard landscaping – will endeavour to specify and procure materials that achieve an ‘A/A+’ rating in the Green Guide to Specification. Insulation materials, timber for the structural frame, floors and other elements, and other major elements will strive to be responsibly sourced using an audit procedure for the Environmental Management Systems adopted in the supply chain. Timber will be procured from FSC, or similar, certified sources.

A Sustainable Procurement Policy will define the selection criteria for materials used across the public realm and to inform building material choices. The policy will be based on the requirements to consider the locality of extraction and manufacturing; performance with regards to the Green Guide for Specification; the embodied carbon performance; durability and longevity, and the potential for disassembly and re-use.

6.4 SURFACE WATER RUN-OFF

There will be substantial green space providing effective infiltration across the site using the Green Grid of greeneways and blueways to carry, detain and attenuate run-off across the site. To mitigate for flood risk, and where further surface water mitigation is required, sustainable drainage systems such as reens, swales and attenuation ponds, will be installed. These measures will work in concert with the water butts to offer a durable water management regime.

6.5 WASTE

From Phase 2 onwards, each house will contain sufficient space for internal storage of recyclable waste in line with the Council waste collection streams. Segregated waste bins will be installed in each kitchen.

Construction site waste management procedures are to be adopted that deliver a Site Waste Management Plan that complies with regulatory requirements and, in addition, meets the specific requirements and commitments set out in the Code guidance. This involves a commitment to sort, re-use and recycle construction waste either on-site or through a licensed external contractor, and will be embedded in the CEMP for the scheme as a whole.

6.6 POLLUTION

All thermal and acoustic insulation will be sourced from materials that have a GWP <5 and ODP of zero. This includes fabric and pipework insulation in fibre and hard forms.

All heating and hot water is to be provided using very efficient, low NOx, condensing gas boilers. The NOx emissions from each boiler will be specified to achieve dry emissions <40mg/kWh. For later Phases, where biomass boilers may be adopted to meet zero carbon commitments, the NOx levels will increase, although every effort will be made to mitigate for these impacts.

6.7 HEALTH AND WELL-BEING

Building elevations will be designed to make best use of available daylight, although actual performance will depend on the orientation and neighbouring buildings. Every effort is to be made to maximise the benefits of daylight across the scheme. This is combined with efficient and effective lighting designs that are automatically controlled for daylight and presence in communal and external areas.

Acoustic performance of each house and apartment is critical to the success of any scheme, and there will be in place procedures to deliver and demonstrate sound attenuation of at least 3dB improved on Building Regulations Approved Document E standards.

Each house will have a garden offering private outdoor space for residents. Apartments will have access to communal gardens that are separate from the public realm and public green space within the development.
6.8 MANAGEMENT
The construction site will be registered on the Considerate Constructors Scheme (CCS) and will aim to exceed an audit score of 24 to 32 out of 40. Construction site impacts, encompassing energy, water and timber consumption and emissions to air, land and water, will be closely monitored following procedures set out in the CEMP. Materials storage procedures will minimise wastage due to spoilt materials.

From Phase 2 onwards, a Home User Guide for each resident will be provided to describe the operation of the house and controls, the environmental performance of the home, and covering information relating to the building and its surroundings in terms of transportation links, access for leisure and other amenities.

An Architectural Liaison Officer will be consulted during the detailed design phase to derive appropriate measures to improve site and building security. These measures will be incorporated into the design and infrastructure of the site.

6.9 ECOLOGY
The existing site is derelict brownfield land with areas of contamination, and is considered to be of very low ecological value. There are ecological features worthy of protection in the trees that border some of the site, and these will be retained. Following Ecologist recommendations, measures have been adopted to enhance the ecological value across the site in the form of green parks and amenity space, wildlife corridors, and native vegetation planting to such a degree as to transform the site in terms of biodiversity benefits and green amenity.

6.10 SUMMARY
The measures described above demonstrate the current strategy to achieving Code for Sustainable Homes compliance to meet target ratings for successive phases of the Glan Lyn Regeneration scheme. Phase 1 achieves Code level 1; Phases 2a and 2b attain Code level 3; and Phases 2c and 2d will achieve Code level 4. The individual measures may change as the detailed design emerges, but the overall rating level achieved will remain.

For details of the scoring for the generic house and apartment concepts, refer to the summary sheet in Appendix 1: Code for Sustainable Homes.
GRANTED