Non-Technical Summary

Land at Llantarnam

Redrow Homes South Wales Division

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1.0 Introduction

1.1 Purpose of the Document

This document is an update of the Non-Technical Summary of an Environmental Statement (ES) (June 2012) and ES Addendum (September 2014) prepared on behalf of Redrow Homes South Wales. Outline planning permission is sought for residential and employment-led mixed use development at Land at Llantarnam.

1.2 The ES and Addendum sets out the results of an Environmental Impact Assessment (‘EIA’) of the proposed development. The EIA process aims to ensure that any significant effects arising from a development are systematically identified, assessed and presented to help local planning authorities in determining planning applications. If measures are required to minimise or reduce effects then these are clearly identified.

1.3 For the Llantarnam project, an EIA has been carried out due to the scale and nature of the proposals. It has been completed in accordance with best practice and relevant legislation and has addressed those matters agreed with Torfaen County Borough Council as being required to assess the impacts of the proposed development. These matters comprise:

- Socio Economic Effects
- Transport
- Ground Conditions
- Water Resources
- Ecology
- Landscape and Visual
- Noise and Vibration
- Air Quality
- Cultural Heritage

1.4 The Outline Application

The application which has been submitted is an ‘outline’ application which seeks approval, in principle, of the development proposal. The application reserves all detailed elements of the project which will be submitted at a later date.

1.5 Need for the Development

The majority of the application site has historically been allocated for employment development, with Llantarnam identified within the Gwent Structure Plan as an important strategic employment area. However, since the original submission was made, the Local Development Plan (LDP) has now been formally adopted by TCBC. The site considered by this Environmental Statement and Addendum is allocated within the adopted LDP as part of Site
SAA3 - Llantarnam Strategic Action Area, Cwmbran. The consultation process on the LDP has therefore been completed and the proposals are in accordance with the adopted Development Plan.

1.6 The site is allocated within the adopted LDP for:

1.7 “the construction of 450 dwellings, 8 hectares of employment land, a neighbourhood centre and informal recreation provision aided by strategic highway infrastructure improvements”.

1.8 To provide further details on the development of the Llantarnam Strategic Action Area a Development Framework has been prepared which sets out land use and design guidance for each of the development land parcels that make up the application site. The Development Framework also provides an overall vision and the key development principles for the site, which are:

“To unite the fragmented employment and residential areas in south Llantarnam through the creation of a quality mixed use community with a new neighbourhood centre providing facilities for both the existing and future community.”

1.9 There is therefore a clear commitment by Torfaen County Borough Council for the site to be developed for mixed use development.

1.10 In addition, the residential element of development is important as it contributes significantly to the Council’s housing land supply.

1.11 There is also a need for accessible employment opportunities throughout the County Borough. The employment development will build upon the existing and established Llantarnam Business Park and will provide around 1,240 jobs.

1.12 Together with a new local neighbourhood centre, the development will create a balanced, mixed use and sustainable community that meets the needs of existing and future residents of Llantarnam.

**Consideration of Alternatives**

1.13 It has been necessary to consider whether there are alternative options to the development of these proposals on this site. One scenario is to ‘do nothing’ but this is not considered an appropriate option given the allocation of the site for development and the strategic need for employment and residential development within Torfaen.

1.14 Full employment use would not create a balanced community and would have a greater landscape and visual impact. It would also not secure the cross-subsidy from the residential element of development which will allow for the development to be of higher quality.
Full residential use is also not appropriate as it would not deliver the sustainable mixed use employment and residential development that the Council seeks in its adopted Local Development Plan.

In terms of the design and layout of the scheme, the application submission has been considered in great detail and is most appropriate for the site and its surroundings.
**The Site and Its Surroundings**

2.1 The application site (see Site Location Plan at Appendix NTS1) extends to some 24 hectares and is divided into the following four distinct areas:
   - Malthouse North;
   - The Welsh Government Site;
   - Malthouse South; and
   - The Cottage Site.

2.2 The site is located to the south of Llantarnam, between Cwmbran to the north and Newport to the south in an area bounded by the A4042 to the east and the A4051 to the west. Newport Road runs through the site on a south west-north east alignment.

2.3 The site is positioned between existing residential development and the Llantarnam Industrial Estate. It is currently vacant land, although parts of the site are used for agricultural grazing.

2.4 An aerial photograph is attached as Appendix NTS2 which puts the site in context.

2.5 The Malthouse North land parcel is 8.9 hectares and is bounded by the A4042(T) to the east, the A4051 (Cwmbran Drive) to the west, Malthouse Road to the south and the access road to Llantarnam Abbey to the north. The Dowlais Brook also runs along the northern boundary of the site whilst a 2.5 metre high stone wall runs continuously along the western and southern boundaries. The land is undulating and is currently used for grazing. It also contains a number of mature trees and small watercourses. A Public Right of Way continues through the site adjacent to the eastern boundary.

2.6 The Welsh Government Site is broadly diamond shaped and is approximately 2.5 hectares in size. It sits at the centre of the wider application site and is enclosed by Ty Coch Lane to the west, Pentre Lane to the south, Newport Road to the east and employment development to the north. The land is currently overgrown with dense vegetation and trees around its southern fringes.

2.7 Malthouse South is approximately 2.5 hectares in size and is bounded by Malthouse Road to the north, the A4042(T) to the east and residential development to the south west. It is currently used as grazing land and includes a woodland belt in the south west corner of the site.

2.8 At approximately 9.4 hectares The Cottage site forms the largest development parcel. It is bounded by Cwmbran Drive to the west, the rear of existing properties along Pentre Lane and Ty Coch Lane to the east and the electricity sub station to the north. There is a natural tree belt that runs east-west through the middle of the field and splits the site in two.
3.0 The Proposed Development

3.1 Redrow Homes South Wales is applying to Torfaen County Borough Council for outline planning permission for the following:

“Development of vacant land at Llantarnam for employment (B1), residential (C3), a neighbourhood centre (including A1 retail and D1 community uses), together with vehicular and pedestrian/cycle access including new highway junction on Newport Road, realignment of Malthouse Road, re-grading of site to form new site levels and associated infrastructure works, parking, servicing, landscaping, and public open space provision (including sports pitches).”

3.2 The application site comprises an area of approximately 24 hectares which includes the following key areas (see Character Area Plan at Appendix NTS3):

a Malthouse North: This area will comprise housing and open space.

b Welsh Government Site: This will form a mixed use ‘heart’ of the Llantarnam development proposal and will provide retail units, other small commercial units, residential development, car parking and public amenity space including a junior sports pitch. The aim of the District Centre development is to create a vibrant and attractive destination as well as a hub for both new and existing communities.

c Malthouse South: This area will comprise housing and open space.

d The Cottage Site: This area, between existing residential and employment development, will provide employment and residential development, as well as open space.

3.3 The overall mix of uses includes up to:

- 14,500 sq m employment/office space;
- 450 residential units;
- 900 sq m ancillary retail uses (i.e. food and non-food retail);
- 900 sq m community uses (i.e. crèche); and
- 8.7 hectares public open space.

3.4 A set of parameter plans is provided at Appendix NTS4 which provide details of where the various uses are proposed as part of this planning application as well as movement and access, landscape and open space and building height details.

3.5 An illustrative masterplan which provides a view of how the site could be developed within the set parameters is attached as Appendix NTS5.
4.0 EIA Methodology and Scope

4.1 The EIA process is intended to ensure that any significant environmental effects, either beneficial or adverse, arising from a proposed development are identified so that they can be taken into account when reaching a decision on a planning application. This allows any adverse impacts to be identified and, if necessary, measures put in place to address them.

4.2 The scope of this EIA has been informed through engagement with the Council and consultees via a request for a Scoping Opinion to clarify the potential significant environmental effects which require assessment as the scheme has been developed. The assessment of environmental effects has been carried out in accordance with current legislation and best practice guidance.

4.3 The ES considers each ‘environmental subject’ in separate chapters. Each of these chapters follows a similar format whereby a methodology is set out, the current conditions identified (‘the baseline conditions’), and the potential effects of the development considered.

4.4 Where adverse impacts arise, measures are suggested to reduce or avoid these effects. These are known as ‘mitigation measures’. The chapters conclude by describing the resulting impacts following implementation of the mitigation measures. A summary of each of the technical ES chapters is provided in the following sections of this Non Technical Summary.
5.0 Socio Economic Effects

5.1 The Socio Economic assessment focuses on how the proposed development is likely to directly affect the local and regional economies during its construction and operation in terms of capital investment, employment generation and the local labour market. It also considers the effects of the proposed housing element within the local area on population, housing, commuting patterns, education, health, retail, leisure and community facility provision.

5.2 The assessment first establishes the baseline position in terms of local economic conditions, current employment on the site, and the provision of education, health and community facilities in the area, before examining the potential impacts of the Proposed Development and their significance. Opportunities for the mitigation of any adverse effects and the enhancement of positive effects are then examined.

Baseline Conditions

5.3 The number of working age people is projected to fall from 57% to 49% of the total population of Torfaen whilst the number of older people is expected to rise from 16% to 25% of the total population. Such changes will have a significant bearing upon the area in terms of the potential pool of labour, requirements for education, health care provision and housing needs.

5.4 Between April 2010 and March 2011, the economic activity rate in Torfaen was 71%. This is slightly below the average for Wales (72.5%) and Great Britain (76.2%). The model based unemployment in Torfaen in the year between April 2010 and March 2011 was 9.4%. This is above the Wales average (8.5%) and the national average (7.6%). These patterns reflect the economic crisis which struck Great Britain during this period, evidently impacting more significantly upon Torfaen.

5.5 Although the proposed development site is greenfield land and no jobs presently exist on site, it is located next to Llantarnam Park Industrial Estate which offers a good range of high quality employment opportunities. Llantarnam Park is identified as a prestigious employment site in the Torfaen Employment Land Study (2011). The success and importance of the business park has a positive economic impact and this is demonstrated through the existing direct and indirect employment it creates. The existing benefits of the surrounding employment offer can be further developed to continue to improve Llantarnam and Torfaen’s employment offer in the area.

5.6 The primary schools within close proximity to the development site can demonstrate a total surplus capacity of 516 places (2010 data), whilst the secondary schools located in Torfaen (ranging from less than 1 miles from the application site to over 8 miles from the site) have a total existing capacity of 840 places (2010 data).
5.7 A good provision of GP surgeries, hospitals and pharmacies are located within a reasonable distance from the development site providing a very good range of local provision. Torfaen also offers a good range of leisure and recreation centres across the County.

**Impacts of the proposed development**

5.8 It is estimated that the Proposed Development would accommodate a total population of 1,040. Of this figure, approximately 650 will be of working age and 450 will be economically active.

5.9 It is estimated the proposed employment uses would accommodate approximately 1,240 new jobs. The level of direct employment associated with the Proposed Development has been estimated from a consideration of the ratio between job numbers and floorspace of similar existing facilities in the UK, as well as from published studies of employment densities of such developments.

5.10 Based on the characteristics of the Proposed Development, its local economic context and labour market, a combined employment multiplier of 1.2 is considered appropriate to estimate indirect and induced employment within the local area. A multiplier of 1.4 is assumed for an assessment of job impact in the wider region. On this basis, an additional 217 “spin off” jobs will be provided in local services and firms in the local area whilst an additional 434 spin off positions across Torfaen.

5.11 In addition, the estimated construction cost indicates that the development would be expected to create 635 person-years of construction employment over the 7.5 year build period. This equates to 85 permanent direct jobs in the construction industry over this build period.

5.12 The potential net increase of jobs is the most significant positive impact. It should be possible to further increase the benefit associated with this gain by encouraging local recruitment for the new job opportunities that are created by the construction and operation phases.

5.13 Financially, the proposed development will offer considerable local benefits. It will represent a total capital investment of £56m by Redrow Homes over the 7.5 year construction period and going forwards, the scheme will deliver an additional £610,000 in Council Tax each year following completion. Furthermore, the additional value of the development can be measured through its contribution to local GVA – a measure of the value that a specific sector or industry adds to the local economy. It is estimated that the scheme will deliver an additional £5.5m of direct GVA over the build period.

5.14 The Proposed Development at Llantarnam has been recognised as a Strategic Action Area in the LDP for the construction of 450 dwellings, 8 hectares of employment land, a neighbourhood centre and recreation provision. Given this, the Council’s vision is to create a mixed use community which will also provide a large contribution to the housing requirement in Torfaen.
As the proposed development will be phased over a given period of time and includes provision for community facilities, it will not create any significant short term adverse impacts upon the current facilities in Torfaen. Given the education in Torfaen is currently undergoing a major review, re-organisation of the schools to reduce numbers only seeks to illustrate further that more than enough capacity exists to accommodate this development. It is assumed that the Council is taking account of its own LDP allocations as part of its review of education provision.

A key element of the proposed development scheme will be the provision of large areas of high quality open space. The development of the site creates significant opportunity to provide high quality areas of public open space to the benefit of both the existing and future community of Llantarnam. The provision of open space and ‘green areas’ will also assist in maintaining a semi-rural feel to the development.

The proposed neighbourhood centre has the potential to accommodate a new doctor’s surgery should it be required as a result of the additional demand created by the population increase. A range of A1 services (food and non-food) are also proposed ensuring a sustainable and integrated community.

Whilst the new A1 retail unit is expected to take some top-up food shopping trips away from existing supermarkets nearby, it will also have a positive impact on existing retail facilities as new residents will undertake their main food shopping in these larger stores.

The social and economic impacts of the proposed development are principally on employment generation, the labour market, housing (including affordable housing) and population. Since the impacts on these matters are assessed as positive, there is no requirement for mitigation in these cases. Similarly, other socio-economic effects (relating to nursery, health and leisure and recreation) are also positive although the scale of these benefits is less significant but
6.0 Transport

6.1 This assessment has considered the impact of the proposed development in terms of traffic and transportation. The study area for the purposes of assessing the transportation impacts of the development has been defined to include the A4042, A4051, Cwmbran Drive, Newport Road and Llantarnam Park Way.

6.2 Impact Magnitudes have been defined for the development and construction phases with regard to “Guidelines for the Environmental Assessment of Road Traffic”, which states that a significant environmental impact may occur when traffic flows increase by more than 30%. This has, for the purposes of this assessment, been considered to represent a major adverse impact significance.

6.3 The forecast traffic flows in 2022 after completion (ten years from the date of registration in accordance with ‘Guidance on Transport Assessment’ will generally have negligible adverse impact significance. A package of measures has been proposed to mitigate any adverse impacts such that no significant negative residual impacts would occur. Measures include physical capacity improvements, improved pedestrian links and Travel Plans. The impact of traffic during completion is considered to be of negligible adverse significance, although mitigation will be provided in the form of a Construction Environmental Management Plan to reduce any residual impacts.

6.4 There are therefore no highways or transportation reasons which should prevent the proposed development of this site.
Ground Conditions

7.0

7.1 The Environmental Protection Act 1990, Part IIa (amended by the Environment Act 1995) sets out the regime for Contaminated Land.

7.2 Reference is made in this assessment to various codes of practice for the identification and assessment of contaminated land published by DEFRA and the Environment Agency for contaminated land, BRE for building industry, and NHBC for the housing industry.

7.3 This assessment follows a risk-based framework, in line with the Model Procedures for the Management of Land Contamination (DEFRA and Environment Agency 2004) document.

7.4 The baseline condition appraisal comprised a review of:

1. Envirocheck Reports obtained for the site (dated 2007 and 2011)

2. Old Ordnance Survey maps covering the site

3. Geological maps of the area produced by the British Geological Survey

4. The Environment Agency groundwater vulnerability map for the area

5. Available site investigation data from previous site investigations

7.5 Based on the available geological information, it is considered that the ground conditions are likely to be similar across much of the site. Generally, red brown silty clays with mudstone and siltstone lithorelicts, grade downwards into weathered mudstones and siltstones of the Raglan Marl Group.

7.6 The shallow ground conditions that have been encountered across the area within trial pits, can generally be summarised as follows:

<table>
<thead>
<tr>
<th>Depth (m) From</th>
<th>To</th>
<th>Stratum</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL 0.2/0.4</td>
<td>TOPSPOIL: Soft/firm dark brown silty CLAY/clayey SILT, slightly sandy in places</td>
<td></td>
</tr>
<tr>
<td>0.2/0.4</td>
<td>0.4/3.1</td>
<td>Firm to stiff/stiff red brown with grey mottling silty CLAY, slightly sandy in places, with gravel size lithorelicts of weathered mudstone and siltstone becoming increasingly frequent with depth</td>
</tr>
<tr>
<td>0.4/3.1</td>
<td>2.0/3.5</td>
<td>Red brown and purple, very weak to moderately weak weathered MUDSTONES, SILTONES and SANDSTONES generally recovered as angular</td>
</tr>
</tbody>
</table>
Within the Cottage Site, some localised made ground of reworked natural soils was encountered in TP11 down to 1.1m depth in the vicinity of a former field boundary. Some disturbed ground was found in TP24 down to 1.3m depth.

Two large, overgrown soil stockpiles on the WG Site, were found to comprise topsoil, which is understood to have been derived from the development of the adjacent business park.

No made ground was found on the Malthouse North and Malthouse South Sites.

The presence of lithorelicts within shallow depths indicates that the underling bedrock is generally present at shallow depths beneath much of the site, and, many of the pits encountered weathered mudstones and siltstones within shallow depths. Deeper excavations generally became difficult below approximately 2 to 3m depth.

No groundwater was encountered in most of the trial pits, although occasional seepages of what was thought to be trapped water were noted.

The site has remained almost entirely Greenfield, with the only developments being the Cottage Farm outbuildings and two large topsoil stockpiles on the WG Site. Nevertheless, areas have been identified and sampled within Cottage Farm where it was thought that made ground and/or contaminated ground might be present. In addition the topsoil stockpile on the WG land has been sampled. No evidence of any contamination was detected by the laboratory analyses of these samples.

No made ground or potential for contaminated ground, or other possible sources of ground contamination, have been identified within the Malthouse North and Malthouse South Sites.

Since no evidence of any contaminated soils has been found within the site, it is considered there is minor/negligible risk of ground contamination affecting the water courses within or near to the site.

There are two recorded former landfill sites to the north-west (Ty Coch No 2 Tip) and east (Penyparc Tip), which are both further than 250m away from the site (280m and 330m respectively). The risk of associated land gasses migrating as far as the site is therefore thought to be minor. Nevertheless, gas monitoring has recently been carried out in the field to the north of the Cottage Site and the sub-station, in order to investigate whether any land gasses are migrating from the nearer Ty Coch landfill site. However, no significant gases were detected during the monitoring programme.

Should any hitherto unidentified areas of contaminated made ground be found, they will be risk assessed in accordance with current best practice and strategies agreed with the regulators. If required, the site will subsequently be
appropriately remediated and certified to the satisfaction of all the regulators. Such works will be entirely beneficial to the environment and the development.

7.17 The site will be geotechnically evaluated and appropriate ground treatment works will be designed to achieve a satisfactory development. This may require local re-grading works to create suitable plateaux for the development.

7.18 Although the nature of the development will require some changes to the topographic features of the site, the current proposals allow most of the existing major features to remain intact. Housing is proposed to be constructed in small development areas and, as far as possible, to conform to existing ground levels, thereby minimising the need for cut and fill operations.

7.19 The site is not located within a particular sensitive or vulnerable area with regard to the groundwater.

7.20 The proposed development will involve some cutting into the ‘slopes’ to form access roads. However, there are no primary aquifers that might be affected and therefore groundwater depletion is not considered an issue.

7.21 The proposed development does not include any site uses which could cause potential significant harm to the groundwater environment. Therefore it is considered that there would be no additional risk to the groundwater from the proposed development.

7.22 The development will include buildings, roads and hardstandings which will all increase surface run off from the site. This additional run off should be managed via a suitable surface drainage system, such as attenuation tanks and balancing ponds.

7.23 During construction, potential contamination sources will be present on site, e.g. fuel tanks, cement etc. Therefore good site housekeeping should be employed to ensure that no contamination of the surface water courses occurs.

7.24 Construction phase impacts associated with earthworks and foundation construction will be mitigated by appropriate design and engineering consideration, prior to construction.

7.25 Residual effects are considered to be negligible due to the proposed scheme design generally enabling the re-use of materials on site, and assuming that stable designs are achieved.
8.0 Water Resources

8.1 The assessment of water resources considers: water supply and efficiency; flood risk to and from the development; water quality and pollution control; and foul drainage provision.

8.2 The potential effects of the proposed development on water resources have been assessed for 'During construction' and 'After completion' phases.

8.3 Potential environmental receptors include the River Usk Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), which is located approximately 1.9km south-east of the site. There are also thought to be white-clawed crayfish in the Dowlais Brook adjacent to the site, this issues is covered in detail in the biodiversity chapter.

Construction Impacts

8.4 The construction of the development could result in contamination of local watercourses and fauna due to events such as spills or leaks from fuels and chemicals stored on site, or silt-laden run-off entering watercourses.

8.5 These occurrences may be prevented by the implementation of good environmental construction practice, as set out in documents such as CIRIA report C562 “Environmental Good Practice On Site” (1999) and Environment Agency Pollution Prevention Guidelines (notably PPG5 and PPG6).

8.6 It is recommended that a Construction Environmental Management Plan is developed and implemented in accordance with this best practice guidance.

8.7 Overall, with appropriate planning and management of the works including good practice in terms of run-off management, the potential effects would be short-term and highly localised.

Operational Impacts

8.8 Operation of the proposed development will generate additional demand on local water supply and sewer networks and sewage treatment systems.

8.9 These effects may be mitigated if necessary by the implementation of agreed improvement works to increase the capacity of the sewer system and waste water treatment works. Furthermore, the proposed development will be designed and built in accordance with current best practice to use water efficiently and therefore be more sustainable than many existing developments.

8.10 Without mitigation the development itself would be a receptor at risk of flooding from surface water and nearby watercourses. This would be caused by increased rainfall intensities as a result of climate change over the lifetime of the development, combined with increased areas of hard surfacing, leading to increased rates of surface run-off.
8.11 The design and layout of the development will enable the risk and consequences of flooding to be kept within tolerable limits. The rainfall run-off from the development will be controlled by a surface water management system designed and constructed in accordance with best practice to allow for the predicted effects of climate change over the lifetime of the development, including increased rainfall rates and volumes.

8.12 The surface water management system will incorporate pollutant treatment and removal devices which will prevent potentially harmful pollutants reaching ecological receptors via hydrological links.

8.13 Overall, particularly due to the duration of the positive impacts, the proposed development after completion will result in a moderate beneficial impact on water resources.
9.0 **Ecology**

9.1 Ecology Solutions was commissioned by Redrow Homes in 2009 and 2011 to undertake an ecological assessment of land at Llantarnam, Cwmbran, Gwent. Further survey work has also been completed in Summer 2014.

9.2 The assessment is based on results from field surveys undertaken by Ecology Solutions with further information obtained through consulting the recognised bodies involved in nature conservation.

9.3 The results of surveys completed on parts of the Assessment Site by Barry Stewart & Associates in 2006 have also been used as part of this assessment.

9.4 The application is for a mixed use development that will include residential dwellings, employment, and public open space.

9.5 There are no statutory designated nature conservation sites within or adjacent to the Assessment Site. The nearest statutory site designated for nature conservation is the River Usk Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) which is located approximately 1.9km to the southeast of the Assessment Site and it is considered that there will be no residual effects either alone or in combination with other plans or projects upon this statutory site.

9.6 There are no non-statutory designated sites within the Assessment Site. The nearest non-statutory site designated for its nature conservation is Ty Coch Tip SINC, which is located approximately 0.3 km to the northeast of the Assessment Site.

9.7 The masterplan has been designed in order to create the minimum amount of impact upon Ty Coch Tip Site of Importance for Nature Conservation (SINC) as possible. No direct access will be made from the Assessment Site to the SINC, alternative areas of open space will be provided within the Assessment Site, and the areas of residential development will be separated from the SINC by areas of employment.

9.8 Furthermore, a number of construction safeguards will be implemented to reduce any effects from noise, dust and pollution.

9.9 It is considered that the majority of habitats which are to be lost to the Proposed Development are of little ecological importance, even at the local level and that therefore their loss would be of minor adverse significance.

9.10 The habitats that are of ecological interest to some extent are the hedgerows, mature trees and wooded areas, and these habitats are, in the main, being retained and enhanced under the proposals.

9.11 An ecological management plan will be created for the created and retained habitats within the Assessment Site ensuring their function and ecological value is retained and enhanced.
Any losses to ecologically important habitats such as the hedgerows and trees will be compensated for through the provision of extensive areas of new landscape planting. Following completion of the development there will be a net gain in the number of trees present.

No bat roosts have been recorded within the Assessment Site.

Although no roosts were indentified, as a precautionary measure the trees with bat roosting potential will be felled in a bat friendly manor.

The bat activity surveys completed in 2011 and 2014 recorded low levels of common species foraging and commuting along the boundary features of the Assessment Site.

The enhancement of existing habitats and the provision of new landscape planting will provide enhanced foraging opportunities for bats and will maintain connectivity across the Assessment Site and to the wider area.

Where lighting is necessary, the use of low spillage or UV filtered lights will be employed and the spillage of the lights can be reduced further through use of low-level lights and the employment of lighting 'hoods'.

The provision of up to twenty artificial bat boxes will provide a net increase in roosting opportunities post-development.

Information relating to Badgers and the Assessment Site has also been updated in Summer 2014 and is detailed within a confidential Badger appendix.

Based on the surveys completed at the Assessment Site, the habitats present and its size it is not considered to be of any special ornithological interest.

In order to avoid a potential offence, any clearance of suitable habitat will be undertaken outside the breeding season (March – July inclusive). In addition, up to twenty bird boxes will be provided and the provision of native fruit and seed bearing species within the landscape scheme will increase the foraging opportunities for bird species.

No evidence of any other protected species was recorded from within the Assessment Site.

Based on the ecological survey work undertaken there is no evidence to suggest that the Proposed Development would lead to a significant impact on any known protected species or ecological features. The development proposals conform to national, county and local policy and there is no current evidence to suggest that there are any overriding ecological constraints in relation to Land at Llantarnam, Cwmbran, Gwent.
10.0 **Landscape and Visual**

10.1 A comprehensive landscape and visual assessment has been conducted to establish how the visual amenity of the town and surrounding countryside of Llantarnam and its neighbouring settlements would be affected by the proposals and how the landscape infrastructure of the study area would be altered in terms of character and appearance.

10.2 The study area is a landscape which has a transitional character that relates to both the urban fringe of Newport to the south, the more open rural landscape to the east and west, and the industrial areas to the north. The northern and southern halves of the study area are heavily influenced by urban fringe uses such as, commercial and residential premises. The western and eastern parts of the study area retains agricultural use but is still influenced by the urban fringes and some major roads. The majority of views of the study area are limited to medium to close range view points from within the study area.

10.3 Proposals to extend the urban fringe across the northern and southern parts of the application site would relate well to the pattern of existing development, providing scope for some positive enhancement of the appearance of the urban fringe. The edges of the application site would be retained as rich vegetation and a buffer of open space, which would be seen as a continuation of the landscape character of the area.

10.4 The removal of certain landscape features to be replaced by built form, would affect a minority of landscape resources, as the site itself is predominantly open fields, which would be compensated by the replacement of landscape features such as trees and hedgerow planting, as part of the development proposals.

10.5 With regards to landscape resources, the proposals would require the removal of some site vegetation including an Oak tree. The removal of the unmanaged, scrubby hedgerows is not regarded as significant. The proposals would however compensate for these loses through the provision of a large number of individual trees, substantial amenity shrub groundcover and 1365 linear metres of hedgerow.

10.6 Where visual receptors are within a rural context looking south west and north east towards the study area, the effect of the proposals would be to bring the urban edges to the north and south closer together. Sympathetic planting along the perimeters of the development and within areas of public open space, would help to screen elements of the development. For receptors within an urban fringe context looking south and north across the study area, their views would change as the site is changed from open fields to mixed development. These views would be limited by existing vegetation and topography that restricts views from the south west. From Llantarnam Abbey to the north west proposed planting would reinforce the existing landscape buffer that exists between the site and the Abbey grounds.
The mitigation of the effects on landscape and the character would aim to re-create the inherent landscape features that contribute to local character and distinctiveness and the development itself would occur in an area where there is evidence that the local character has already become degraded through urban fringe influences. The development therefore has the capacity to improve the immediate landscape character of the site. Mitigation of visual effects would not aim to totally screen the development from views from the north east and south east by dense planting, as this would be at variance with the local character of the landscape. Therefore, the mitigation strategy looks to improve the appearance of the urban fringe and with partial screening of the development, thereby providing an attractive setting for those who currently reside in the area.

A new high quality mixed use scheme would provide a new attractive urban edge to the Llantarnam Industrial Estate to the north. Set within a strong landscape framework, the scheme would also provide new facilities for the community, including areas of public open space and extensions to the local footpath network, allowing for greater access through the site. The proposals would be in accordance with planning policy as it relates to landscape issues, safeguarding environmental assets which contribute to the local area.
11.0 Noise and Vibration

Noise

11.1 A noise impact assessment of the proposed residential, commercial and neighbourhood centre development has been undertaken.

11.2 The main elements of the noise assessment relate to: noise impacts caused by road traffic generated by the proposal on the local road network; impacts from noise generated by mechanical plant such as refrigeration equipment associated with the proposed neighbourhood centre and commercial buildings; and the impact of existing traffic noise on the proposed new dwellings.

11.3 In order to assess the impact of these noise sources it was necessary to conduct a baseline noise survey to determine the existing noise level at the nearest of the potentially affected properties, and also the level of existing traffic noise at the site.

11.4 Noise levels from future traffic generated by the site, mechanical noise from machinery associated with the neighbourhood centre and temporary construction activities were then predicted and compared to the existing noise levels. An assessment of the potential noise impact (i.e. the increase or decrease compared to existing noise levels) of these various aspects was then conducted in terms of relevant legislation, guidance and assessment methodologies.

Temporary Impacts Due To Construction

11.5 During construction of the proposed development there will be brief times when construction noise will be relatively high at residences to the south of the site on Ty Coch Lane, Pentre Lane and Malthouse Lane. The durations of these noise impacts will be short however and the temporary noise impact is considered minor. A noise management plan will be produced to minimise noise levels due to construction.

Impacts of Traffic Generated by the Development

11.6 The noise impacts on existing residential receptors resulting from traffic generated by the development, being less than 1dBA, will be negligible on all roads in the area. This is lower than the smallest change in noise level detectable by the human ear.

Impacts Due To Mechanical Plant

11.7 Mechanical plant noise associated with the neighbourhood centre will be designed to ensure that it has no noise impact on nearby residences and the noise impact will also be negligible.
**Existing Traffic Noise Impact On The Site**

11.8 In relation to the impact of existing noise levels of the proposed new development, the site layout and design of noise mitigation will ensure that the impact of existing noise levels resulting from traffic on the A4051 and A4042 and other roads in the area on the proposed new residences is negligible. This noise mitigation will take the form of noise mitigating glazing combined with alternative ventilation to certain dwellings closest to the A4051 and A4042 combined with a 2m high noise barrier along the eastern boundary of the site.

**Vibration**

11.9 Vibration Levels during construction and operation of the proposed development will be imperceptible at all residential locations and the impacts are therefore considered negligible.
12.0 **Air Quality**

12.1 With respect to air quality, the assessment considers vulnerable residential properties and a local river with a special ecological designation. The construction assessment focused on changes in air quality from construction dust, whereas the operational assessment considered the potential for the proposed development to influence traffic numbers and generate air pollutants.

**Construction Impacts**

12.2 The construction phase could result in on-site dust emissions arising from construction activities and on-site vehicle movements. The first stage of the assessment has involved the identification of construction activities that have the potential to cause dust emissions, and the degree of dust potential. In the second stage of the assessment, all sensitive receptors with the potential to be significantly affected by construction dust emissions, within 200 metres of the construction boundary, have been identified and their sensitivity to effects determined in accordance with UK policy guidance.

12.3 Although outside of London, Best Practicable Means (BPM) mitigation measures for controlling dust at construction sites included within the ‘Greater London Authority and London Councils Best Practice Guidance - The Control of Dust and Emissions from Construction and Demolition’ (2006) have been recommended. Such measures include damping down stock piles of earth, wheel washing and covering up of supplies, enclosing rubble chutes, use of prefabricated materials to minimise grinding, sawing and cutting on site and ensuring compliance through site inspections. The contractor will be required to strictly adhere to these dust control measures. The application of such measures will mean that there are no significant air quality impacts to the local population.

**Operational Impacts**

1.1 Operation of the proposed development will generate additional traffic on the local road network, resulting in changes to emissions of combustion related pollutants. Access to the site will be from Malthouse Lane, east of the proposed development. Assessment of traffic change, as a result of the proposed development has been carried out and compares the pre- and post-development pollutant concentrations at key receptor locations. Overall results are predicted to be small, therefore no significant changes to the surrounding local population or ecological designation have been predicted.
Cultural Heritage

13.1 The eastern part of the proposed development site is situated in the south-western corner of a Grade II Registered Park, at Llantarnam Abbey. The park was laid out in 1836-7, in the probable location of an earlier post-medieval park. Llantarnam Abbey itself is a post-medieval building, on the location of an earlier medieval Cistercian structure. A stone-built park wall is present along the western and part of the southern boundaries of this part of the site, which retains a parkland landscape appearance. This area of the site has, however, been severed from Llantarnam Abbey itself and the majority of the surrounding parkland, by the construction of the A4042, a major dual carriageway.

13.2 As such, development within the site is considered unlikely to impact upon the coherence, integrity, and significance of the remaining elements of the Registered park, which lie to the east of the A4042 and will not be impacted by development. In addition, the proposed residential development offers greater scope for sympathetic design in a future detailed planning application than the existing commercial planning permission. It is anticipated that the proposed development is compatible with the conditions attached to the existing commercial permission. When considered in isolation, the proposed development would have an effect of Moderate significance on the Registered Park, although when considered against the baseline of the existing permission, the significance of effect will be Neutral.

13.3 Two stretches of the park wall will be removed in the proposed development. The residual impact of this impact, following building recording, is anticipated to be of minor significance.

13.4 Two drains within the site have been suggested as water management features associated with the original Cistercian Llantarnam Abbey, potentially of medieval date. However, these features are considered to most likely be drainage features of post-medieval and modern date and, as such, are considered to be of negligible cultural heritage value. The residual effect of impacts upon these features would be of Minor significance.

13.5 A small farm building, Cottage Farm, lies in the western area of the site. Its location within the landscape suggests it may have been previously occupied during the medieval period. If any archaeological remains are present, they would be subject to a programme of archaeological recording prior to development in this area. The residual effect of this would be of Minor significance.

13.6 Several outbuildings associated with Cottage Farm, considered to be of negligible heritage value, will be demolished. Following their recording, the significance of effect of their demolition is considered to be Neutral.

13.7 A number of wartime features have been recorded on aerial photographs of the site, situated in the eastern area of the site. However, there is no extant evidence of these features, and any below-ground remains are considered to
be of negligible cultural heritage value. The residual effect of disturbance in this area is considered to be neutral.
Conclusions

14.1 The Environmental Impact Assessment (EIA) that is presented in full in the June 2012 Environmental Statement (ES) document and the Addendum (September 2014) has considered a number of topics and assessed the potential for significant effects to occur. These topics include:
- Socio Economic
- Transport
- Ground Conditions
- Water Resources
- Ecology
- Landscape and Visual
- Noise and Vibration
- Air Quality
- Cultural Heritage and Archaeology

14.2 The separate papers within the full ES and the addendum contain the detailed analysis of impacts and mitigation and should be referred to for the complete assessment. Detailed mitigation strategies where appropriate will be controlled via the use of planning conditions and/or a legal agreement.

14.3 The ES and addendum also assesses the potential for interaction of environmental effects and concludes that the construction period holds the greatest potential for impacts which are proposed to be extensively mitigated. This will be particularly important when new residential units are occupied and construction continues across the remaining phases of the development.

14.4 The overall construction is likely to last in the order of 7 years and as a result there is the potential for a number of effects to occur if not managed correctly. The earthworks proposed in the early stages of the construction process are likely to result in a number of interrelated impacts such as noise, air (predominantly dust), visual, ecology, ground conditions and transport impacts.

14.5 Key environmental effects during this period include:
- Dust associated with the earthworks activity
- Visual impact of the construction site
- Construction noise
- Emissions from construction vehicles and construction workers traffic
- Ecological impacts from site clearance

14.6 The proposed phased approach is likely to control these impacts and along with the measures proposed through the Construction Environmental
Management Plan (CEMP), it is envisaged that impacts will be sufficiently minimised to avoid significant environmental effects.

14.7 During the full operational phase (2020 onwards), it is predicted that there will be some residual environmental effects however these are predicted to be predominantly beneficial following the implementation of mitigation measures. The main beneficial impacts are associated with socio economic and transport benefits, as well as making a significant contribution towards meeting the employment and housing needs of Torfaen County Borough.
Appendix NTS1  Site Location Plan
Appendix 1  Site Context Plan
Appendix 2  Character Areas
Appendix 3  Parameter Plans

- Parameter Plan 1: Land use
- Parameter Plan 2: Movement and Access
- Parameter Plan 3: Landscape and Open Space
- Parameter Plan 4: Building Heights
Appendix 4  Illustrative Masterplan
Non-Technical Summary

Land at Llantarnam

Redrow Homes South Wales Division

September 2014

30373/02/MH/LM

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1.0 Introduction

Purpose of the Document

1.1 This document is an update of the Non-Technical Summary of an Environmental Statement (ES) (June 2012) and ES Addendum (September 2014) prepared on behalf of Redrow Homes South Wales. Outline planning permission is sought for residential and employment-led mixed use development at Land at Llantarnam.

1.2 The ES and Addendum sets out the results of an Environmental Impact Assessment (‘EIA’) of the proposed development. The EIA process aims to ensure that any significant effects arising from a development are systematically identified, assessed and presented to help local planning authorities in determining planning applications. If measures are required to minimise or reduce effects then these are clearly identified.

1.3 For the Llantarnam project, an EIA has been carried out due to the scale and nature of the proposals. It has been completed in accordance with best practice and relevant legislation and has addressed those matters agreed with Torfaen County Borough Council as being required to assess the impacts of the proposed development. These matters comprise:

- Socio Economic Effects
- Transport
- Ground Conditions
- Water Resources
- Ecology
- Landscape and Visual
- Noise and Vibration
- Air Quality
- Cultural Heritage

The Outline Application

1.4 The application which has been submitted is an ‘outline’ application which seeks approval, in principle, of the development proposal. The application reserves all detailed elements of the project which will be submitted at a later date.

Need for the Development

1.5 The majority of the application site has historically been allocated for employment development, with Llantarnam identified within the Gwent Structure Plan as an important strategic employment area. However, since the original submission was made, the Local Development Plan (LDP) has now been formally adopted by TCBC. The site considered by this Environmental Statement and Addendum is allocated within the adopted LDP as part of Site
SAA3 - Llantarnam Strategic Action Area, Cwmbran. The consultation process on the LDP has therefore been completed and the proposals are in accordance with the adopted Development Plan.

1.6 The site is allocated within the adopted LDP for:

1.7 “the construction of 450 dwellings, 8 hectares of employment land, a neighbourhood centre and informal recreation provision aided by strategic highway infrastructure improvements”.

1.8 To provide further details on the development of the Llantarnam Strategic Action Area a Development Framework has been prepared which sets out land use and design guidance for each of the development land parcels that make up the application site. The Development Framework also provides an overall vision and the key development principles for the site, which are:

“To unite the fragmented employment and residential areas in south Llantarnam through the creation of a quality mixed use community with a new neighbourhood centre providing facilities for both the existing and future community.”

1.9 There is therefore a clear commitment by Torfaen County Borough Council for the site to be developed for mixed use development.

1.10 In addition, the residential element of development is important as it contributes significantly to the Council’s housing land supply.

1.11 There is also a need for accessible employment opportunities throughout the County Borough. The employment development will build upon the existing and established Llantarnam Business Park and will provide around 1,240 jobs.

1.12 Together with a new local neighbourhood centre, the development will create a balanced, mixed use and sustainable community that meets the needs of existing and future residents of Llantarnam.

**Consideration of Alternatives**

1.13 It has been necessary to consider whether there are alternative options to the development of these proposals on this site. One scenario is to ‘do nothing’ but this is not considered an appropriate option given the allocation of the site for development and the strategic need for employment and residential development within Torfaen.

1.14 Full employment use would not create a balanced community and would have a greater landscape and visual impact. It would also not secure the cross-subsidy from the residential element of development which will allow for the development to be of higher quality.
1.15 Full residential use is also not appropriate as it would not deliver the sustainable mixed use employment and residential development that the Council seeks in its adopted Local Development Plan.

1.16 In terms of the design and layout of the scheme, the application submission has been considered in great detail and is most appropriate for the site and its surroundings.
The Site and Its Surroundings

The application site (see Site Location Plan at Appendix NTS1) extends to some 24 hectares and is divided into the following four distinct areas:

- Malthouse North;
- The Welsh Government Site;
- Malthouse South; and
- The Cottage Site.

The site is located to the south of Llantarnam, between Cwmbran to the north and Newport to the south in an area bounded by the A4042 to the east and the A4051 to the west. Newport Road runs through the site on a south west-north east alignment.

The site is positioned between existing residential development and the Llantarnam Industrial Estate. It is currently vacant land, although parts of the site are used for agricultural grazing.

An aerial photograph is attached as Appendix NTS2 which puts the site in context.

The Malthouse North land parcel is 8.9 hectares and is bounded by the A4042(T) to the east, the A4051 (Cwmbran Drive) to the west, Malthouse Road to the south and the access road to Llantarnam Abbey to the north. The Dowlais Brook also runs along the northern boundary of the site whilst a 2.5 metre high stone wall runs continuously along the western and southern boundaries. The land is undulating and is currently used for grazing. It also contains a number of mature trees and small watercourses. A Public Right of Way continues through the site adjacent to the eastern boundary.

The Welsh Government Site is broadly diamond shaped and is approximately 2.5 hectares in size. It sits at the centre of the wider application site and is enclosed by Ty Coch Lane to the west, Pentre Lane to the south, Newport Road to the east and employment development to the north. The land is currently overgrown with dense vegetation and trees around its southern fringes.

Malthouse South is approximately 2.5 hectares in size and is bounded by Malthouse Road to the north, the A4042(T) to the east and residential development to the south west. It is currently used as grazing land and includes a woodland belt in the south west corner of the site.

At approximately 9.4 hectares The Cottage site forms the largest development parcel. It is bounded by Cwmbran Drive to the west, the rear of existing properties along Pentre Lane and Ty Coch Lane to the east and the electricity sub station to the north. There is a natural tree belt that runs east-west through the middle of the field and splits the site in two.
3.0 The Proposed Development

3.1 Redrow Homes South Wales is applying to Torfaen County Borough Council for outline planning permission for the following:

“Development of vacant land at Llantarnam for employment (B1), residential (C3), a neighbourhood centre (including A1 retail and D1 community uses), together with vehicular and pedestrian/cycle access including new highway junction on Newport Road, realignment of Malthouse Road, re-grading of site to form new site levels and associated infrastructure works, parking, servicing, landscaping, and public open space provision (including sports pitches).”

3.2 The application site comprises an area of approximately 24 hectares which includes the following key areas (see Character Area Plan at Appendix NTS3):

a) Malthouse North: This area will comprise housing and open space.
b) Welsh Government Site: This will form a mixed use ‘heart’ of the Llantarnam development proposal and will provide retail units, other small commercial units, residential development, car parking and public amenity space including a junior sports pitch. The aim of the District Centre development is to create a vibrant and attractive destination as well as a hub for both new and existing communities.
c) Malthouse South: This area will comprise housing and open space.
d) The Cottage Site: This area, between existing residential and employment development, will provide employment and residential development, as well as open space.

3.3 The overall mix of uses includes up to:

• 14,500 sq m employment/office space;
• 450 residential units;
• 900 sq m ancillary retail uses (i.e. food and non-food retail);
• 900 sq m community uses (i.e. crèche); and
• 8.7 hectares public open space.

3.4 A set of parameter plans is provided at Appendix NTS4 which provide details of where the various uses are proposed as part of this planning application as well as movement and access, landscape and open space and building height details.

3.5 An illustrative masterplan which provides a view of how the site could be developed within the set parameters is attached as Appendix NTS5.
4.0 EIA Methodology and Scope

4.1 The EIA process is intended to ensure that any significant environmental effects, either beneficial or adverse, arising from a proposed development are identified so that they can be taken into account when reaching a decision on a planning application. This allows any adverse impacts to be identified and, if necessary, measures put in place to address them.

4.2 The scope of this EIA has been informed through engagement with the Council and consultees via a request for a Scoping Opinion to clarify the potential significant environmental effects which require assessment as the scheme has been developed. The assessment of environmental effects has been carried out in accordance with current legislation and best practice guidance.

4.3 The ES considers each ‘environmental subject’ in separate chapters. Each of these chapters follows a similar format whereby a methodology is set out, the current conditions identified (‘the baseline conditions’), and the potential effects of the development considered.

4.4 Where adverse impacts arise, measures are suggested to reduce or avoid these effects. These are known as ‘mitigation measures’. The chapters conclude by describing the resulting impacts following implementation of the mitigation measures. A summary of each of the technical ES chapters is provided in the following sections of this Non Technical Summary.
Socio Economic Effects

5.1 The Socio Economic assessment focuses on how the proposed development is likely to directly affect the local and regional economies during its construction and operation in terms of capital investment, employment generation and the local labour market. It also considers the effects of the proposed housing element within the local area on population, housing, commuting patterns, education, health, retail, leisure and community facility provision.

5.2 The assessment first establishes the baseline position in terms of local economic conditions, current employment on the site, and the provision of education, health and community facilities in the area, before examining the potential impacts of the Proposed Development and their significance. Opportunities for the mitigation of any adverse effects and the enhancement of positive effects are then examined.

Baseline Conditions

5.3 The number of working age people is projected to fall from 57% to 49% of the total population of Torfaen whilst the number of older people is expected to rise from 16% to 25% of the total population. Such changes will have a significant bearing upon the area in terms of the potential pool of labour, requirements for education, health care provision and housing needs.

5.4 Between April 2010 and March 2011, the economic activity rate in Torfaen was 71%. This is slightly below the average for Wales (72.5%) and Great Britain (76.2%). The model based unemployment in Torfaen in the year between April 2010 and March 2011 was 9.4%. This is above the Wales average (8.5%) and the national average (7.6%). These patterns reflect the economic crisis which struck Great Britain during this period, evidently impacting more significantly upon Torfaen.

5.5 Although the proposed development site is greenfield land and no jobs presently exist on site, it is located next to Llantarnam Park Industrial Estate which offers a good range of high quality employment opportunities. Llantarnam Park is identified as a prestigious employment site in the Torfaen Employment Land Study (2011). The success and importance of the business park has a positive economic impact and this is demonstrated through the existing direct and indirect employment it creates. The existing benefits of the surrounding employment offer can be further developed to continue to improve Llantarnam and Torfaen’s employment offer in the area.

5.6 The primary schools within close proximity to the development site can demonstrate a total surplus capacity of 516 places (2010 data), whilst the secondary schools located in Torfaen (ranging from less than 1 miles from the application site to over 8 miles from the site) have a total existing capacity of 840 places (2010 data).
5.7 A good provision of GP surgeries, hospitals and pharmacies are located within a reasonable distance from the development site providing a very good range of local provision. Torfaen also offers a good range of leisure and recreation centres across the County.

**Impacts of the proposed development**

5.8 It is estimated that the Proposed Development would accommodate a total population of 1,040. Of this figure, approximately 650 will be of working age and 450 will be economically active.

5.9 It is estimated the proposed employment uses would accommodate approximately 1,240 new jobs. The level of direct employment associated with the Proposed Development has been estimated from a consideration of the ratio between job numbers and floorspace of similar existing facilities in the UK, as well as from published studies of employment densities of such developments.

5.10 Based on the characteristics of the Proposed Development, its local economic context and labour market, a combined employment multiplier of 1.2 is considered appropriate to estimate indirect and induced employment within the local area. A multiplier of 1.4 is assumed for an assessment of job impact in the wider region. On this basis, an additional 217 “spin off” jobs will be provided in local services and firms in the local area whilst an additional 434 spin off positions across Torfaen.

5.11 In addition, the estimated construction cost indicates that the development would be expected to create 635 person-years of construction employment over the 7.5 year build period. This equates to 85 permanent direct jobs in the construction industry over this build period.

5.12 The potential net increase of jobs is the most significant positive impact. It should be possible to further increase the benefit associated with this gain by encouraging local recruitment for the new job opportunities that are created by the construction and operation phases.

5.13 Financially, the proposed development will offer considerable local benefits. It will represent a total capital investment of £56m by Redrow Homes over the 7.5 year construction period and going forwards, the scheme will deliver an additional £610,000 in Council Tax each year following completion. Furthermore, the additional value of the development can be measured through its contribution to local GVA – a measure of the value that a specific sector or industry adds to the local economy. It is estimated that the scheme will deliver an additional £5.5m of direct GVA over the build period.

5.14 The Proposed Development at Llantarnam has been recognised as a Strategic Action Area in the LDP for the construction of 450 dwellings, 8 hectares of employment land, a neighbourhood centre and recreation provision. Given this, the Council’s vision is to create a mixed use community which will also provide a large contribution to the housing requirement in Torfaen.
5.15 As the proposed development will be phased over a given period of time and includes provision for community facilities, it will not create any significant short term adverse impacts upon the current facilities in Torfaen. Given the education in Torfaen is currently undergoing a major review, re-organisation of the schools to reduce numbers only seeks to illustrate further that more than enough capacity exists to accommodate this development. It is assumed that the Council is taking account of its own LDP allocations as part of its review of education provision.

5.16 A key element of the proposed development scheme will be the provision of large areas of high quality open space. The development of the site creates significant opportunity to provide high quality areas of public open space to the benefit of both the existing and future community of Llantarnam. The provision of open space and 'green areas' will also assist in maintaining a semi-rural feel to the development.

5.17 The proposed neighbourhood centre has the potential to accommodate a new doctor's surgery should it be required as a result of the additional demand created by the population increase. A range of A1 services (food and non-food) are also proposed ensuring a sustainable and integrated community.

5.18 Whilst the new A1 retail unit is expected to take some top-up food shopping trips away from existing supermarkets nearby, it will also have a positive impact on existing retail facilities as new residents will undertake their main food shopping in these larger stores.

5.19 The social and economic impacts of the proposed development are principally on employment generation, the labour market, housing (including affordable housing) and population. Since the impacts on these matters are assessed as positive, there is no requirement for mitigation in these cases. Similarly, other socio-economic effects (relating to nursery, health and leisure and recreation) are also positive although the scale of these benefits is less significant but Transport
6.0   **Transport**

6.1   This assessment has considered the impact of the proposed development in terms of traffic and transportation. The study area for the purposes of assessing the transportation impacts of the development has been defined to include the A4042, A4051, Cwmbran Drive, Newport Road and Llantarnam Park Way.

6.2   Impact Magnitudes have been defined for the development and construction phases with regard to “Guidelines for the Environmental Assessment of Road Traffic”, which states that a significant environmental impact may occur when traffic flows increase by more than 30%. This has, for the purposes of this assessment, been considered to represent a major adverse impact significance.

6.3   The forecast traffic flows in 2022 after completion (ten years from the date of registration in accordance with ‘Guidance on Transport Assessment’ will generally have negligible adverse impact significance. A package of measures has been proposed to mitigate any adverse impacts such that no significant negative residual impacts would occur. Measures include physical capacity improvements, improved pedestrian links and Travel Plans. The impact of traffic during completion is considered to be of negligible adverse significance, although mitigation will be provided in the form of a Construction Environmental Management Plan to reduce any residual impacts.

6.4   There are therefore no highways or transportation reasons which should prevent the proposed development of this site.
7.0 Ground Conditions

7.1 The Environmental Protection Act 1990, Part IIa (amended by the Environment Act 1995) sets out the regime for Contaminated Land.

7.2 Reference is made in this assessment to various codes of practice for the identification and assessment of contaminated land published by DEFRA and the Environment Agency for contaminated land, BRE for building industry, and NHBC for the housing industry.

7.3 This assessment follows a risk-based framework, in line with the Model Procedures for the Management of Land Contamination (DEFRA and Environment Agency 2004) document.

7.4 The baseline condition appraisal comprised a review of:

1. Envirocheck Reports obtained for the site (dated 2007 and 2011)
2. Old Ordnance Survey maps covering the site
3. Geological maps of the area produced by the British Geological Survey
4. The Environment Agency groundwater vulnerability map for the area
5. Available site investigation data from previous site investigations

7.5 Based on the available geological information, it is considered that the ground conditions are likely to be similar across much of the site. Generally, red brown silty clays with mudstone and siltstone lithorelicts, grade downwards into weathered mudstones and siltstones of the Raglan Marl Group.

7.6 The shallow ground conditions that have been encountered across the area within trial pits, can generally be summarised as follows:

<table>
<thead>
<tr>
<th>Depth (m)</th>
<th>Stratum</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL 0.2/0.4</td>
<td>TOPSPOIL: Soft/firm dark brown silty CLAY/clayey SILT, slightly sandy in places</td>
</tr>
<tr>
<td>0.2/0.4 0.4/3.1</td>
<td>Firm to stiff/stiff red brown with grey mottling silty CLAY, slightly sandy in places, with gravel size lithorelicts of weathered mudstone and siltstone becoming increasingly frequent with depth</td>
</tr>
<tr>
<td>0.4/3.1 2.0/3.5</td>
<td>Red brown and purple, very weak to moderately weak weathered MUDSTONES, SILTONES and SANDSTONES generally recovered as angular</td>
</tr>
</tbody>
</table>
Within the Cottage Site, some localised made ground of reworked natural soils was encountered in TP11 down to 1.1m depth in the vicinity of a former field boundary. Some disturbed ground was found in TP24 down to 1.3m depth.

Two large, overgrown soil stockpiles on the WG Site, were found to comprise topsoil, which is understood to have been derived from the development of the adjacent business park.

No made ground was found on the Malthouse North and Malthouse South Sites.

The presence of lithorelicts within shallow depths indicates that the underling bedrock is generally present at shallow depths beneath much of the site, and, many of the pits encountered weathered mudstones and siltstones within shallow depths. Deeper excavations generally became difficult below approximately 2 to 3m depth.

No groundwater was encountered in most of the trial pits, although occasional seepages of what was thought to be trapped water were noted.

The site has remained almost entirely Greenfield, with the only developments being the Cottage Farm outbuildings and two large topsoil stockpiles on the WG Site. Nevertheless, areas have been identified and sampled within Cottage Farm where it was thought that made ground and/or contaminated ground might be present. In addition the topsoil stockpile on the WG land has been sampled. No evidence of any contamination was detected by the laboratory analyses of these samples.

No made ground or potential for contaminated ground, or other possible sources of ground contamination, have been identified within the Malthouse North and Malthouse South Sites.

Since no evidence of any contaminated soils has been found within the site, it is considered there is minor/negligible risk of ground contamination affecting the water courses within or near to the site.

There are two recorded former landfill sites to the north-west (Ty Coch No 2 Tip) and east (Penyparc Tip), which are both further than 250m away from the site (280m and 330m respectively). The risk of associated land gasses migrating as far as the site is therefore thought to be minor. Nevertheless, gas monitoring has recently been carried out in the field to the north of the Cottage Site and the sub-station, in order to investigate whether any land gases are migrating from the nearer Ty Coch landfill site. However, no significant gases were detected during the monitoring programme.

Should any hitherto unidentified areas of contaminated made ground be found, they will be risk assessed in accordance with current best practice and strategies agreed with the regulators. If required, the site will subsequently be
appropriately remediated and certified to the satisfaction of all the regulators. Such works will be entirely beneficial to the environment and the development.

7.17 The site will be geotechnically evaluated and appropriate ground treatment works will be designed to achieve a satisfactory development. This may require local re-grading works to create suitable plateaux for the development.

7.18 Although the nature of the development will require some changes to the topographic features of the site, the current proposals allow most of the existing major features to remain intact. Housing is proposed to be constructed in small development areas and, as far as possible, to conform to existing ground levels, thereby minimising the need for cut and fill operations.

7.19 The site is not located within a particular sensitive or vulnerable area with regard to the groundwater.

7.20 The proposed development will involve some cutting into the ‘slopes’ to form access roads. However, there are no primary aquifers that might be affected and therefore groundwater depletion is not considered an issue.

7.21 The proposed development does not include any site uses which could cause potential significant harm to the groundwater environment. Therefore it is considered that there would be no additional risk to the groundwater from the proposed development.

7.22 The development will include buildings, roads and hardstandings which will all increase surface run off from the site. This additional run off should be managed via a suitable surface drainage system, such as attenuation tanks and balancing ponds.

7.23 During construction, potential contamination sources will be present on site, e.g. fuel tanks, cement etc. Therefore good site housekeeping should be employed to ensure that no contamination of the surface water courses occurs.

7.24 Construction phase impacts associated with earthworks and foundation construction will be mitigated by appropriate design and engineering consideration, prior to construction.

7.25 Residual effects are considered to be negligible due to the proposed scheme design generally enabling the re-use of materials on site, and assuming that stable designs are achieved.
8.0 Water Resources

8.1 The assessment of water resources considers: water supply and efficiency; flood risk to and from the development; water quality and pollution control; and foul drainage provision.

8.2 The potential effects of the proposed development on water resources have been assessed for ‘During construction’ and ‘After completion’ phases.

8.3 Potential environmental receptors include the River Usk Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), which is located approximately 1.9km south-east of the site. There are also thought to be white-clawed crayfish in the Dowlais Brook adjacent to the site, this issue is covered in detail in the biodiversity chapter.

Construction Impacts

8.4 The construction of the development could result in contamination of local watercourses and fauna due to events such as spills or leaks from fuels and chemicals stored on site, or silt-laden run-off entering watercourses.

8.5 These occurrences may be prevented by the implementation of good environmental construction practice, as set out in documents such as CIRIA report C562 “Environmental Good Practice On Site” (1999) and Environment Agency Pollution Prevention Guidelines (notably PPG5 and PPG6).

8.6 It is recommended that a Construction Environmental Management Plan is developed and implemented in accordance with this best practice guidance.

8.7 Overall, with appropriate planning and management of the works including good practice in terms of run-off management, the potential effects would be short-term and highly localised.

Operational Impacts

8.8 Operation of the proposed development will generate additional demand on local water supply and sewer networks and sewage treatment systems.

8.9 These effects may be mitigated if necessary by the implementation of agreed improvement works to increase the capacity of the sewer system and waste water treatment works. Furthermore, the proposed development will be designed and built in accordance with current best practice to use water efficiently and therefore be more sustainable than many existing developments.

8.10 Without mitigation the development itself would be a receptor at risk of flooding from surface water and nearby watercourses. This would be caused by increased rainfall intensities as a result of climate change over the lifetime of the development, combined with increased areas of hard surfacing, leading to increased rates of surface run-off.
The design and layout of the development will enable the risk and consequences of flooding to be kept within tolerable limits. The rainfall run-off from the development will be controlled by a surface water management system designed and constructed in accordance with best practice to allow for the predicted effects of climate change over the lifetime of the development, including increased rainfall rates and volumes.

The surface water management system will incorporate pollutant treatment and removal devices which will prevent potentially harmful pollutants reaching ecological receptors via hydrological links.

Overall, particularly due to the duration of the positive impacts, the proposed development after completion will result in a moderate beneficial impact on water resources.
9.0 Ecology

9.1 Ecology Solutions was commissioned by Redrow Homes in 2009 and 2011 to undertake an ecological assessment of land at Llantarnam, Cwmbran, Gwent. Further survey work has also been completed in Summer 2014.

9.2 The assessment is based on results from field surveys undertaken by Ecology Solutions with further information obtained through consulting the recognised bodies involved in nature conservation.

9.3 The results of surveys completed on parts of the Assessment Site by Barry Stewart & Associates in 2006 have also been used as part of this assessment.

9.4 The application is for a mixed use development that will include residential dwellings, employment, and public open space.

9.5 There are no statutory designated nature conservation sites within or adjacent to the Assessment Site. The nearest statutory site designated for nature conservation is the River Usk Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) which is located approximately 1.9km to the southeast of the Assessment Site and it is considered that there will be no residual effects either alone or in combination with other plans or projects upon this statutory site.

9.6 There are no non-statutory designated sites within the Assessment Site. The nearest non-statutory site designated for its nature conservation is Ty Coch Tip SINC, which is located approximately 0.3 km to the northeast of the Assessment Site.

9.7 The masterplan has been designed in order to create the minimum amount of impact upon Ty Coch Tip Site of Importance for Nature Conservation (SINC) as possible. No direct access will be made from the Assessment Site to the SINC, alternative areas of open space will be provided within the Assessment Site, and the areas of residential development will be separated from the SINC by areas of employment.

9.8 Furthermore, a number of construction safeguards will be implemented to reduce any effects from noise, dust and pollution.

9.9 It is considered that the majority of habitats which are to be lost to the Proposed Development are of little ecological importance, even at the local level and that therefore their loss would be of minor adverse significance.

9.10 The habitats that are of ecological interest to some extent are the hedgerows, mature trees and wooded areas, and these habitats are, in the main, being retained and enhanced under the proposals.

9.11 An ecological management plan will be created for the created and retained habitats within the Assessment Site ensuring their function and ecological value is retained and enhanced.
9.12 Any losses to ecologically important habitats such as the hedgerows and trees will be compensated for through the provision of extensive areas of new landscape planting. Following completion of the development there will be a net gain in the number of trees present.

9.13 No bat roosts have been recorded within the Assessment Site.

9.14 Although no roosts were indentified, as a precautionary measure the trees with bat roosting potential will be felled in a bat friendly manor.

9.15 The bat activity surveys completed in 2011 and 2014 recorded low levels of common species foraging and commuting along the boundary features of the Assessment Site.

9.16 The enhancement of existing habitats and the provision of new landscape planting will provide enhanced foraging opportunities for bats and will maintain connectivity across the Assessment Site and to the wider area.

9.17 Where lighting is necessary, the use of low spillage or UV filtered lights will be employed and the spillage of the lights can be reduced further through use of low-level lights and the employment of lighting 'hoods'.

9.18 The provision of up to twenty artificial bat boxes will provide a net increase in roosting opportunities post-development.

9.19 Information relating to Badgers and the Assessment Site has also been updated in Summer 2014 and is detailed within a confidential Badger appendix.

9.20 Based on the surveys completed at the Assessment Site, the habitats present and its size it is not considered to be of any special ornithological interest.

9.21 In order to avoid a potential offence, any clearance of suitable habitat will be undertaken outside the breeding season (March – July inclusive). In addition, up to twenty bird boxes will be provided and the provision of native fruit and seed bearing species within the landscape scheme will increase the foraging opportunities for bird species.

9.22 No evidence of any other protected species was recorded from within the Assessment Site.

9.23 Based on the ecological survey work undertaken there is no evidence to suggest that the Proposed Development would lead to a significant impact on any known protected species or ecological features. The development proposals conform to national, county and local policy and there is no current evidence to suggest that there are any overriding ecological constraints in relation to Land at Llantarnam, Cwmbran, Gwent.
Landscape and Visual

10.1 A comprehensive landscape and visual assessment has been conducted to establish how the visual amenity of the town and surrounding countryside of Llantarnam and its neighbouring settlements would be affected by the proposals and how the landscape infrastructure of the study area would be altered in terms of character and appearance.

10.2 The study area is a landscape which has a transitional character that relates to both the urban fringe of Newport to the south, the more open rural landscape to the east and west, and the industrial areas to the north. The northern and southern halves of the study area are heavily influenced by urban fringe uses such as, commercial and residential premises. The western and eastern parts of the study area retain agricultural use but is still influenced by the urban fringes and some major roads. The majority of views of the study area are limited to medium to close range view points from within the study area.

10.3 Proposals to extend the urban fringe across the northern and southern parts of the application site would relate well to the pattern of existing development, providing scope for some positive enhancement of the appearance of the urban fringe. The edges of the application site would be retained as rich vegetation and a buffer of open space, which would be seen as a continuation of the landscape character of the area.

10.4 The removal of certain landscape features to be replaced by built form, would affect a minority of landscape resources, as the site itself is predominantly open fields, which would be compensated by the replacement of landscape features such as trees and hedgerow planting, as part of the development proposals.

10.5 With regards to landscape resources, the proposals would require the removal of some site vegetation including an Oak tree. The removal of the unmanaged, scrubby hedgerows is not regarded as significant. The proposals would however compensate for these loses through the provision of a large number of individual trees, substantial amenity shrub groundcover and 1365 linear metres of hedgerow.

10.6 Where visual receptors are within a rural context looking south west and north east towards the study area, the effect of the proposals would be to bring the urban edges to the north and south closer together. Sympathetic planting along the perimeters of the development and within areas of public open space, would help to screen elements of the development. For receptors within an urban fringe context looking south and north across the study area, their views would change as the site is changed from open fields to mixed development. These views would be limited by existing vegetation and topography that restricts views from the south west. From Llantarnam Abbey to the north west proposed planting would reinforce the existing landscape buffer that exists between the site and the Abbey grounds.
The mitigation of the effects on landscape and the character would aim to re-create the inherent landscape features that contribute to local character and distinctiveness and the development itself would occur in an area where there is evidence that the local character has already become degraded through urban fringe influences. The development therefore has the capacity to improve the immediate landscape character of the site. Mitigation of visual effects would not aim to totally screen the development from views from the north east and south east by dense planting, as this would be at variance with the local character of the landscape. Therefore, the mitigation strategy looks to improve the appearance of the urban fringe and with partial screening of the development, thereby providing an attractive setting for those who currently reside in the area.

A new high quality mixed use scheme would provide a new attractive urban edge to the Llantarnam Industrial Estate to the north. Set within a strong landscape framework, the scheme would also provide new facilities for the community, including areas of public open space and extensions to the local footpath network, allowing for greater access through the site. The proposals would be in accordance with planning policy as it relates to landscape issues, safeguarding environmental assets which contribute to the local area.
11.0 Noise and Vibration

Noise

11.1 A noise impact assessment of the proposed residential, commercial and neighbourhood centre development has been undertaken.

11.2 The main elements of the noise assessment relate to: noise impacts caused by road traffic generated by the proposal on the local road network; impacts from noise generated by mechanical plant such as refrigeration equipment associated with the proposed neighbourhood centre and commercial buildings; and the impact of existing traffic noise on the proposed new dwellings.

11.3 In order to assess the impact of these noise sources it was necessary to conduct a baseline noise survey to determine the existing noise level at the nearest of the potentially affected properties, and also the level of existing traffic noise at the site.

11.4 Noise levels from future traffic generated by the site, mechanical noise from machinery associated with the neighbourhood centre and temporary construction activities were then predicted and compared to the existing noise levels. An assessment of the potential noise impact (i.e. the increase or decrease compared to existing noise levels) of these various aspects was then conducted in terms of relevant legislation, guidance and assessment methodologies.

Temporary Impacts Due To Construction

11.5 During construction of the proposed development there will be brief times when construction noise will be relatively high at residences to the south of the site on Ty Coch Lane, Pentre Lane and Malthouse Lane. The durations of these noise impacts will be short however and the temporary noise impact is considered minor. A noise management plan will be produced to minimise noise levels due to construction.

Impacts of Traffic Generated by the Development

11.6 The noise impacts on existing residential receptors resulting from traffic generated by the development, being less than 1dBA, will be negligible on all roads in the area. This is lower than the smallest change in noise level detectable by the human ear.

Impacts Due To Mechanical Plant

11.7 Mechanical plant noise associated with the neighbourhood centre will be designed to ensure that it has no noise impact on nearby residences and the noise impact will also be negligible.
**Existing Traffic Noise Impact On The Site**

11.8 In relation to the impact of existing noise levels of the proposed new development, the site layout and design of noise mitigation will ensure that the impact of existing noise levels resulting from traffic on the A4051 and A4042 and other roads in the area on the proposed new residences is negligible. This noise mitigation will take the form of noise mitigating glazing combined with alternative ventilation to certain dwellings closest to the A4051 and A4042 combined with a 2m high noise barrier along the eastern boundary of the site.

**Vibration**

11.9 Vibration Levels during construction and operation of the proposed development will be imperceptible at all residential locations and the impacts are therefore considered negligible.
12.0 Air Quality

12.1 With respect to air quality, the assessment considers vulnerable residential properties and a local river with a special ecological designation. The construction assessment focused on changes in air quality from construction dust, whereas the operational assessment considered the potential for the proposed development to influence traffic numbers and generate air pollutants.

Construction Impacts

12.2 The construction phase could result in on-site dust emissions arising from construction activities and on-site vehicle movements. The first stage of the assessment has involved the identification of construction activities that have the potential to cause dust emissions, and the degree of dust potential. In the second stage of the assessment, all sensitive receptors with the potential to be significantly affected by construction dust emissions, within 200 metres of the construction boundary, have been identified and their sensitivity to effects determined in accordance with UK policy guidance.

12.3 Although outside of London, Best Practicable Means (BPM) mitigation measures for controlling dust at construction sites included within the ‘Greater London Authority and London Councils Best Practice Guidance - The Control of Dust and Emissions from Construction and Demolition’ (2006) have been recommended. Such measures include damping down stock piles of earth, wheel washing and covering up of supplies, enclosing rubble chutes, use of prefabricated materials to minimise grinding, sawing and cutting on site and ensuring compliance through site inspections. The contractor will be required to strictly adhere to these dust control measures. The application of such measures will mean that there are no significant air quality impacts to the local population.

Operational Impacts

1.1 Operation of the proposed development will generate additional traffic on the local road network, resulting in changes to emissions of combustion related pollutants. Access to the site will be from Malthouse Lane, east of the proposed development. Assessment of traffic change, as a result of the proposed development has been carried out and compares the pre- and post-development pollutant concentrations at key receptor locations. Overall results are predicted to be small, therefore no significant changes to the surrounding local population or ecological designation have been predicted.
Cultural Heritage

The eastern part of the proposed development site is situated in the south-western corner of a Grade II Registered Park, at Llantarnam Abbey. The park was laid out in 1836-7, in the probable location of an earlier post-medieval park. Llantarnam Abbey itself is a post-medieval building, on the location of an earlier medieval Cistercian structure. A stone-built park wall is present along the western and part of the southern boundaries of this part of the site, which retains a parkland landscape appearance. This area of the site has, however, been severed from Llantarnam Abbey itself and the majority of the surrounding parkland, by the construction of the A4042, a major dual carriageway.

As such, development within the site is considered unlikely to impact upon the coherence, integrity, and significance of the remaining elements of the Registered park, which lie to the east of the A4042 and will not be impacted by development. In addition, the proposed residential development offers greater scope for sympathetic design in a future detailed planning application than the existing commercial planning permission. It is anticipated that the proposed development is compatible with the conditions attached to the existing commercial permission. When considered in isolation, the proposed development would have an effect of Moderate significance on the Registered Park, although when considered against the baseline of the existing permission, the significance of effect will be Neutral.

Two stretches of the park wall will be removed in the proposed development. The residual impact of this impact, following building recording, is anticipated to be of minor significance.

Two drains within the site have been suggested as water management features associated with the original Cistercian Llantarnam Abbey, potentially of medieval date. However, these features are considered to most likely be drainage features of post-medieval and modern date and, as such, are considered to be of negligible cultural heritage value. The residual effect of impacts upon these features would be of Minor significance.

A small farm building, Cottage Farm, lies in the western area of the site. Its location within the landscape suggests it may have been previously occupied during the medieval period. If any archaeological remains are present, they would be subject to a programme of archaeological recording prior to development in this area. The residual effect of this would be of Minor significance.

Several outbuildings associated with Cottage Farm, considered to be of negligible heritage value, will be demolished. Following their recording, the significance of effect of their demolition is considered to be Neutral.

A number of wartime features have been recorded on aerial photographs of the site, situated in the eastern area of the site. However, there is no extant evidence of these features, and any below-ground remains are considered to
be of negligible cultural heritage value. The residual effect of disturbance in this area is considered to be neutral.
Conclusions

14.1 The Environmental Impact Assessment (EIA) that is presented in full in the June 2012 Environmental Statement (ES) document and the Addendum (September 2014) has considered a number of topics and assessed the potential for significant effects to occur. These topics include:

- Socio Economic
- Transport
- Ground Conditions
- Water Resources
- Ecology
- Landscape and Visual
- Noise and Vibration
- Air Quality
- Cultural Heritage and Archaeology

14.2 The separate papers within the full ES and the addendum contain the detailed analysis of impacts and mitigation and should be referred to for the complete assessment. Detailed mitigation strategies where appropriate will be controlled via the use of planning conditions and/or a legal agreement.

14.3 The ES and addendum also assesses the potential for interaction of environmental effects and concludes that the construction period holds the greatest potential for impacts which are proposed to be extensively mitigated. This will be particularly important when new residential units are occupied and construction continues across the remaining phases of the development.

14.4 The overall construction is likely to last in the order of 7 years and as a result there is the potential for a number of effects to occur if not managed correctly. The earthworks proposed in the early stages of the construction process are likely to result in a number of interrelated impacts such as noise, air (predominantly dust), visual, ecology, ground conditions and transport impacts.

14.5 Key environmental effects during this period include:

- Dust associated with the earthworks activity
- Visual impact of the construction site
- Construction noise
- Emissions from construction vehicles and construction workers traffic
- Ecological impacts from site clearance

14.6 The proposed phased approach is likely to control these impacts and along with the measures proposed through the Construction Environmental
Management Plan (CEMP), it is envisaged that impacts will be sufficiently minimised to avoid significant environmental effects.

During the full operational phase (2020 onwards), it is predicted that there will be some residual environmental effects however these are predicted to be predominantly beneficial following the implementation of mitigation measures. The main beneficial impacts are associated with socio economic and transport benefits, as well as making a significant contribution towards meeting the employment and housing needs of Torfaen County Borough.
Appendix 1    Site Context Plan
Appendix 3 Parameter Plans

- Parameter Plan 1: Land use
- Parameter Plan 2: Movement and Access
- Parameter Plan 3: Landscape and Open Space
- Parameter Plan 4: Building Heights