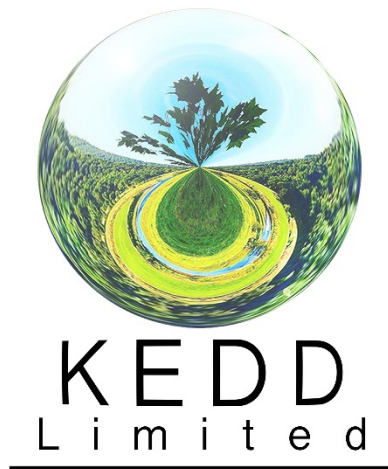




LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Section 73 Planning Application for 3No. Proposed Changes to the
Extraction Boundary of Ballswood Quarry
Relating to Planning Permission ref. P/2016/0110

at

Ballswood Quarry, off Gegin Lane, Llay, Wrexham LL12 0NU

May 2021

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Drawings

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Appendix B

Methodology

1.0 INTRODUCTION

- 1.1 This document is a Landscape and Visual Impact Assessment (LVIA) in respect of proposals for 3No. Proposed Extensions to the Permitted Extraction Boundary of Ballswood Quarry, situated off Gegin Lane, Llay, Wrexham. The proposals forming part of a proposed variation to Planning Permission ref. P/2016/0110, under Section 73.
- 1.2 The report has been prepared by Kedd Limited, a Planning, Landscape Architectural and Environmental Design Consultancy. The practice specialises in landscape architectural design and assessment works relating to environmental planning and the minerals, recycling and waste industries.
- 1.3 This assessment report has been produced in liaison with the client for the works (the Applicant).
- 1.4 The aim of the report is to understand the baseline landscape and visual resources and receptors within the Site and the local area and to assess their value and sensitivity to change resulting from the proposed development type. From this baseline position, to then assess the specific magnitude of effect of the detailed development proposed on landscape and visual resources/receptors and to determine the Level of Significance of Effect on Landscape and Visual matters (which could be potentially adverse/ or beneficial).
- 1.5 For reference purposes, the application site (the Site) is shown outlined on the Location Plan, Drawing No KD.BLWQ.1.D.001, within Appendix A. The Site is located ~0.5km to east of Llay, ~0.4km to 0.6km north west of Gresford and Marford, and ~0.4 to 2.7km to the north east of Wrexham, within the authority boundary of Wrexham County Borough Council.
- 1.6 The Site area is approximately 54.89Ha.
- 1.7 The Site is accessed off Gegin Lane, which links onto Croeshowell Lane and then onto the A483, linking Wrexham to the south with Chester to the north / north east.

2.0 METHODOLOGY

- 2.1 This Landscape and Visual Impact Assessment (LVIA) has been carried out in accordance with the Landscape Institute and the Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment (GLVIA3), and Photography Technical Guidance Note TGN 06/19 -

Visual Representation of Development Proposals, published 17th September 2019.

- 2.2 *“LVIA is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource, in its own right, and on people’s views and visual amenity” GLVIA3.*
- 2.3 Data collation and assessment has been carried out utilising both desktop and Site survey works, to identify the baseline Landscape Character and Visual Nature and Condition of the Site and its local area. Initial desktop survey analysis helped to identify the potential areas that the Proposed Development may influence / change in respect of character and viability. A 1:25,000 Ordnance Survey map was used to identify potential areas of visibility from roads, properties, public rights of way and open access land. Utilising Site and Site context topographical 3D data the Zone of Theoretical Visibility (ZTV) of the existing Site and the potential proposed development was undertaken. See Figures 4 and 5 within Appendix A. These were then used to inform and help define a study area within which the proposed development could influence / change both Landscape Character and Visual Amenity. It is worth noting that the ZTV’s are a worst-case scenario in assessing the geographical land area from which the existing / proposed Site development could be observed / influence Landscape Character as this method of analysis, and does not account for existing built form or vegetation structure which would affect / could screen views towards the Site from landscape and visual receptors.
- 2.4 The desktop appraisal helped form the basis for Site survey works which were carried out in Winter 2019/2020 and Summer 2020.
- 2.5 A description of the full Methodology and Assessment Process used is detailed within Appendix B of this report.
- 2.6 In summary and in highlighting the main assessment process the GLVIA3 states that when undertaking an LVIA, this should consider:
- i) Landscape effects i.e. the effects on the landscape as a resource; and
 - ii) Visual effects i.e. the effects on views and visual amenity.
- 2.7 It also states that *“LVIA must deal with both and should be clear about the difference between them”* (GLVIA3 para 2.2.2 para 21).
- 2.8 The Guidelines explain that both landscape and visual effects are dependent upon the sensitivity of the landscape resource or visual receptors and the magnitude of impact.

Sensitivity – is the term applied to specific receptors, combining judgements of the susceptibility of the receptor to the type of change or development proposed, and the value related to that receptor.

Susceptibility – is the ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Landscape Value – being the relative value that is attached to different landscape by society. A landscape may be valued by different stakeholders for a whole variety of reasons. Value attached to views – The recognition of the value attached to particular views e.g. in relation to heritage assets or through planning designations.

Magnitude (of effect) – the term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.

Assessed Overall Level of Significance of Effect – this term relates to the final judgement about whether each effect identified is significant or not. It is a measure of the importance or gravity of the environmental effect, defined by the significance criteria specified within Appendix B.

- 2.9 The assessment process and its findings are detailed within sections 4, 5, 6 and 7 of this report.

3.0 PROPOSED DEVELOPMENT

- 3.1 As illustrated in Drawing No. KD.BL.BQ.D.003 (Strategic Proposals Plan) the proposals for the working and restoration of the development are all contained within the existing permitted application boundary. The reason for this application being to avoid the sterilisation of on-site mineral.
- 3.2 The Strategic Proposals Plan represents a combination of the proposals including both working and restoration, and it should not be read that these works would all take place at the same time.
- 3.3 The plan illustrates that the site vehicle access will remain as is, with a new internal road created within the quarry/void progressively eastwards to the location of a proposed new wash plant and leading to the existing main processing plant and areas of mineral extraction.

- 3.4 The Strategic Proposals Plan highlights that there are three areas of remaining in-situ mineral which are within the permitted planning boundary but outside of the current phased mineral extraction area:
- Area A – 303,000 tonnes;
 - Area B – 300,000 tonnes; and
 - Area C – 564,000 tonnes.
- 3.5 Area A located to the south west of the site covers a strip of land between ~20 to 80m in width. The overburden, interburden, clay and mineral deposit in this area ranging from ~25 to 50m in thickness. It is estimated that the area could release an additional ~303,000 tonnes of mineral.
- 3.6 Area B located within the north western area of the quarry covers previously disturbed ground/ back filled land with materials which were considered unviable by a previous operator, but which have been reassessed and are now a commercial product along with in-situ sand and gravel. The thickness of overburden, interburden, clay and mineral to base of extraction being ~40m. It is estimated that this area will release ~300,000 tonnes of sand and gravel.
- 3.7 Area C located to the central eastern area of the quarry is currently undisturbed agricultural land adjoining the existing extracted quarry void. It is estimated that this area will release ~564,000 tonnes of sand and gravel with the thickness of the deposit varying from ~6m to 17m.
- 3.8 All mineral will be worked dry i.e. above the local ground water table. The base of extraction to be no lower than 25m aOD.
- 3.9 This mineral to be combined with the existing mineral reserve of ~1,100,000 tonnes to amount to ~2,267,000 tonnes. Based upon an annual production and sales rate of 500,000 tonnes, this results in a quarry life of ~4.5 years, with a further year for restoration.
- 3.10 It is important to note that although extensive drilling and geological assessment has taken place, the nature of the deposit is very variable. All mineral tonnages and overburden volumes are therefore estimates.

Concept Restoration

- 3.11 The sites permitted restoration scheme is illustrated on Drawing No. DPW/BW/ROMP/16-03. The restored land use being to a mix of agriculturally managed grassland, with blocks of existing and proposed woodland, areas of wet/marshy habitat, willow planting and natural regeneration. It is noted on this plan that there are no restoration levels.
- 3.12 The proposed woodland species planting including Ash, Beech, Willow, Hawthorn and Alder. This mix of plants can be assimilated into the proposed restoration scheme excluding Ash species which are currently subject to Ash Dieback disease.
- 3.13 The Proposed Restoration Scheme as illustrated on Drawing No. KD.BL.BQ.D.004 has been re-designed to reflect the proposed mineral extraction and the available on-site restoration materials to create final landforms and topographical levels. The landform of the restored site will integrate into in-situ surrounding boundary land via a combination of minor ~1:40 agricultural gradient slopes to the west at upper level of ~31m aOD, 1:3 species rich grassland slopes to the north and west at upper levels of ~56 to ~73 m aOD and south at upper levels of 50m aOD and ~ 1:3 slopes of new tree and shrub woodland linking into blocks of ancient woodland along and within the sites southern boundary at levels of ~34 to 56m aOD. The base of the restored quarry to fall at gentle gradients from the north, west and south to an ephemeral wet grassland and wildlife/ water surface set of management pools/soakaway areas.
- Existing Woodland 9.9 Ha
 - Proposed Woodland 8.7 Ha
 - Existing Agriculture 7.1 Ha
 - Proposed Agriculture 17.2 Ha
 - Proposed Sandy Substrate 0.3 Ha
 - Proposed Species Rich Grassland 7.2Ha
 - Ephemeral Wet Area 1.2 Ha
 - Section of River Alyn 0.2 Ha
 - Residential Land 0.6 Ha
 - Commercial and Industrial Activities 2.5 Ha
 - TOTAL: 54.9 Ha (54.89 Ha)
- 3.14 All restored land is to be subject to a 5-year Aftercare and Management Plan.

4.0 LANDSCAPE ORIENTATED DESIGNATIONS AND PLANNING POLICIES

Landscape Designations

- 4.1 The Site is not located within a Nationally Designated Landscape; it is not within a National Park or Area of Outstanding Natural Beauty. There are no Listed Buildings, Scheduled Ancient Monuments, or Sites of Special Scientific Interest within the Site itself. Drawing ref KD.BLW.002 and KD.BLW.003 illustrate the Landscape Orientated and Nature Conservation designations within the Study Area.
- 4.2 The following designations are located within a 2km radius of the Site:
- Site of Special Scientific Interest (SSSI) – Marford Quarry is located 1km to the east of the site. Within the sites buffer zone is Chwarel Singret a geological SSSI designated in 2002.
 - Listed Buildings - There are circa 50 grade II listed buildings within 2km of the site. The closest one, Mount Alyn Lodge, being within the application boundary. The biggest cluster of listed buildings are 1km east of the site in Gresford, north of Marford Quarry.
 - Country Parks- The most north easterly tip of the Alyn Waters Country Park falls within 2km to the south west of the site.
 - Conservation Areas- Three conservation areas are within 2km - Rossett Conservation Area, Marford Conservation Area and Gresford Conservation Area. All of these being located to the southern / eastern side of the A483.
 - Biodiversity Conservation Area- Marford Quarry is a biodiversity conservation area designated within the Wrexham Unitary Development Plan. Also, Chwarel Singret SSSI is a biodiversity conservation area within the mineral buffer zone surrounding Ballswood quarry.
 - Ancient Woodland- There is one linear area of ancient woodland within the application boundary which stretches NE to SW away from the site. The opposite side of the A483 is another stretch of ancient woodland called Marford Wood.
- 4.3 The Site is also within the northern part of the locally designated Green Barrier. Also found to the north and east of the quarry is a Special Landscape Area, where a narrow strip of this designated area falls within the permitted planning boundary (eastern boundary). There is a mineral safeguarding zone and buffer zone surrounding the current quarry boundary.
- 4.4 Wrexham Local Development Plan (Deposit Plan) has been submitted, as of March

2018, to the inspector. There is an updated proposals map with the submission. There are some changes in designations between the adopted and proposed proposal map. The proposed map removes the designations: Biodiversity Conservation Areas and Green Barriers. It also altered proximity to Special Landscape Areas.

4.5 The designations in which is adds, within a 2km radius are:

- Green Wedges- replaces Green Barriers and are smaller in size
- Non Energy Mineral Extraction Exclusion Area
- Local Search Area- Solar Energy Development- Adjacent and within Ballswood quarry
- Sand and Gravel Safeguarding Zone- boundaries are altered compared to the adopted proposals map mineral safeguarding
- Local Designated Sites of Nature Conservation and Geological Importance- The entirety of Ballswood quarry and the abutting Ancient Woodland has this classification.

Landscape Orientated Planning Policy

4.6 The Site is located within the administrative boundary of Wrexham County Borough Council. The following relevant landscape and environmental planning policies have been identified within the borough councils Unitary Development Plan (1996 to 2011) and Local Development Plan 2 (Deposit Plan March 2018):

Wrexham Unitary Development Plan (1996 to 2011):

- 4.7 The following policies relate to the landscape designations and general landscape of the site area as identified both from the extant Unitary Development Plan and its supporting Proposals Map.
- 4.8 Policy PS2 - One of four strategic policies focused on the location of development within the Wrexham area. It states that “Development must not materially detrimentally affect countryside, landscape / townscape character, open space, or the quality of the natural environment.
- 4.9 Policy PS11 - Regarding Biodiversity “encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced”.

- 4.10 Policy EC1- Green Barriers- Within Green Barriers, development will only be granted planning permission if it is for agriculture, forestry, essential facilities for outdoor sport and recreation, cemeteries and other uses of land which maintain the openness of the Green Barrier and do not conflict with the purpose of including land within it.
- 4.11 Policy EC2 - Agricultural Land- Development on agricultural and of grades 1, 2 or 3a will only be permitted if it does not lead to the irreversible loss of that land.
- 4.12 Policy EC4 - Hedgerows, Trees and Woodland- Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.
- 4.13 Policy EC5 - Special Landscape Area - Within Special Landscape Areas, priority will be given to the conservation and enhancement of the landscape. Development, other than for agriculture, small-scale farm-based and other rural enterprises, and essential operational development by utility service providers, will be strictly controlled. Development will be required to conform to a high standard of design and landscaping, and special attention will be paid to minimising its visual impact both from nearby and distant viewpoints.
- 4.14 Policy EC6 - Biodiversity Conservation- Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.
- 4.15 Policy EC7 - Within, and in close proximity to, conservation areas, the priority will be to preserve and/or enhance those buildings, structures, streets, trees, open spaces, archaeological remains, views, and other elements which contribute to the unique character of the area. New buildings and alterations or additions to existing buildings in conservation areas, whether listed as of special architectural or historic interest or not, must reflect the design and character of the area as a whole and the form, scale, detailing and materials of existing buildings.

Wrexham Local Development Plan 2 (Deposit Plan, March 2018)

- 4.16 Policy SP15 - Natural Environment- Development will only be supported where it protects, conserves and enhances the natural environment, including:
- Internationally protected Special Areas of Conservation, Special Protection Areas, and Ramsar Sites,
 - Nationally protected Sites of Special Scientific Interest and National Nature Reserves;
 - The quality of natural services including water, air and soils
 - Local Nature Reserves
 - Special Landscape Areas recognised for their outstanding local landscape character
 - Natural landscape features such as trees, hedges and woodland and the green networks between them which contribute to the quality and diversity of the natural environment and play an important role in mitigating the impact of climate change
- 4.17 Policy SP17 - Minerals Supply and Safeguarding- Minerals will be sustainably managed through the protection of minerals from unnecessary sterilisation by directing non mineral development away from areas of mineral where possible. The council will also aim to avoid conflicting development through the use of buffer zones. Proposals must include restoration and aftercare schemes which enhance and provide linkages with the natural environment.
- 4.18 Policy NE1 - Internationally and Nationally Designated Nature Conservation Sites- Development likely to significantly affect any site of international importance will be subject to a Habitats Regulations Assessment (HRA).
- 4.19 Policy NE2 - Locally Designated Sites of Nature Conservation and Geological Importance- Development which impacts on the above will only be permitted in exceptional circumstances where it can be demonstrated that there is not alternative location and compensation measures are in place to mitigate effects and ensure there is no reduction in overall value of a site.
- 4.20 Policy NE3 - Trees, Woodlands and Hedgerows- Development will only be permitted where it does not cause unacceptable harm to tree, woodlands and hedgerows of significant importance. Development which do affect woodlands should protect woodland and boundary edges, promote sustainable management to deliver multiple benefits and support relevant aims and objectives of the Wrexham Tree & Woodland Strategy 2016-2026 and subsequent amendments.

- 4.21 Policy NE5 - Special Landscape Areas- Priority will be given to protecting, managing and enhancing the character and quality of the Special Landscape Areas shown on the proposals map. Within SLA's, development will be permitted where proposals include measures to protect and enhance the character and quality of the particular landscape features for which the SLA has been designated having regard to cumulative impact and ability of the development to provide mitigation and enhancement.
- 4.22 Policy MW1 - Minerals Safeguarding- Non-mineral development within Mineral Safeguarding Areas as defined on the proposals map will only be permitted where it can be demonstrated that: The mineral underlying does not merit extraction, need for non-mineral development outweighs the need to protect the resource, mineral can be extracted prior to the development, development is a temporary nature or essential infrastructure that supports the supply of minerals would not be comprised or would be provided elsewhere.
- 4.23 Policy MW2 - Mineral Buffer Zones- Development in the mineral buffer zones will only be permitted if demonstrated that it would not compromise current or planned mineral extraction. Application for mineral extraction within buffer zones will only be permitted where it can be demonstrated that a sufficient buffer between mineral extraction and sensitive development can be maintained.
- 4.24 Policy MW3 - Sustainable Supply of Minerals- Areas where proposals for mineral extraction are unlikely to be acceptable are identified on the Proposals Map as Extraction Exclusion Area.

5.0 LANDSCAPE CHARACTER

- 5.1 Landscape Character is described at three levels within this section. These being National Level and Regional Level and the Site and its surroundings in order to fully appreciate its component elements, features, interactions and susceptibility to change.

National Landscape Character

- 5.2 The site is located within the Deeside and Wrexham Number 13 National Landscape Character Area. This character area is described as a border area (England) which includes many several settlements and centres of population, principally Chirk and Wrexham. Historically the area formed part of hinterland of Chester. The Wrexham area was industrialised, taking advantage of its resources of: coal, iron-ore, clay and limestone.

- 5.3 Its key characteristics are that it is formed of lowland, foothills and levels. It is mainly carboniferous coal interspersed with Holywell Shales and Cefn-y-Fedw Sandstones. There are gentle landform variations due to it forming part of the Dee floodplain with several tributaries dissecting the area. In terms of flora there are narrow woodland tributary valleys and mixed pasture, somewhat arable, farmland. As previously mentioned, the entire region has a strong industrial character. Many of the smaller villages and settlements which litter the landscape are derived from the areas mining history.
- 5.4 Visual and Sensory Profile - The area contains the main concentration of built up areas along the Dee and foothills of Wales. There is contrast between the open estuary and built up areas of Connah's Quay, Queensferry and Wrexham. It is well serviced by transport links such as the A55 Expressway, A458 coast road and A483 and A494 trunk roads. There are small distinct landscapes created by historic industry such as Broughton's aircraft factory. The majority of the area remains open lowland countryside.
- 5.5 Geological Landscape Influences - Bedrock is dominated by Carboniferous rocks deposited in cyclical sequences. The bedrock contains frequent coals collectively known as the Productive Coal Measures. These are overlain by the Red Measures comprising red, brown, purple and green mudstone followed by siltstone and sandstone. The carboniferous rocks do not have much impact upon the landscape due to ice sheets blanketing the top of them with clay, sand and gravels. Low rounded sandstone protrudes. A long history and mining, quarrying and brickworks has left its mark on the landscape. Soils vary throughout the region, with seasonally wet, deep red loams and clays evident in areas overlaying sandstone.
- 5.6 Landscape Habitats Influences - Due to the river Dee and new habitats formed from former mining and quarrying uses there is a rich, diverse fauna within the region, notably a thriving population of the protected Great Crested Newt. The area as a whole is well wooded, particularly within the valleys of the small tributaries draining north into the Dee, much of the lower course of the Dee is tree lined. The major influence in the Dee estuary is sand and mud from the Dee itself. This area is protected as a RAMSAR, SAC, SPA and SSSI.
- 5.7 Historic Landscape Influences- There are a range of period buildings / monuments within the region from Medieval to Edwardian. There are also many parks and gardens throughout the landscape, some which date back to Medieval times as represented by irregular field patterns. The varied geology stems from the mining past. Coal mines were common across the entirety of the region, so too was brick, tile and pottery industries using shallow pits. In the northern part of the area, the

Gwespyr Sandstone has also been quarried for building stone. It was considered by Pugin as a possible stone for the construction of the Houses of Parliament.

- 5.8 Cultural Landscape Influences- The relationship between North Wales and Chester had influenced the coastal area of the region with mining and industry dominating. The early iron-working, coal-mining and limestone-quarrying of areas around Wrexham depended on the West Midlands and Severn Valley.

LANDMAP

- 5.9 In addition to the above, LANDMAP is a national landscape character database which evaluates landscape in terms of its components. These being; Visual and Sensory Landscape, Landscape Habitats, Geological Landscape, Historic Landscape and Cultural Landscape. Each local landscape character area is assigned an Aspect Area Code. This code is specific to both each area and the component (from the aforementioned list) assessed. Please see Drawing No. KD.BWE.0014 for site / site local identified Aspect Areas.
- 5.10 For the purpose of this assessment the Visual and Sensory data will be utilised.
- 5.11 **Aspect Area WRXHMVS058** - Ballswood Quarry, along with Caia Farm and Borrass Quarries have a unique landscape classification. This area is characterised by bare disturbed sand which is constantly changing due the nature of its land use. Where restoration has taken place it is immature, out of scale and artificial in its appearance. It is an area of economic importance to the area. The area has low value due to its current use however it is noted that it does exhibit features and qualities that are relatively rare to the throughout the wider Wrexham area. The character of the area is moderate but distinct in nature as it is a quarry.
- 5.12 **Aspect Area WRXHMVS054** - This area runs the eastern border of the quarry. It is characterised by clearly defined and well-maintained arable farming landscape with narrow lanes, roadside and field ditches and ponds. It is a peaceful yet industrious farming landscape which, due to its openness, has a sense of space and distance. The only disruption within the area is the A483 running through area. The area is moderate value in good condition. It is not a rare area which prevents it being a highly valuable landscape. It is however well maintained and unspoilt from large scale visually intrusive development. It is void of defining or unique landscape features.
- 5.13 **Aspect Area WRXHMVS0057** - This Aspect Area covers stretches north of the site and is similar in use to WRXHMVS054 with its farmed landscape. It is an undulating

landform with sandy soils. The area rises from Dee Terraces in the east to the escarpment peak between Llay and Marford to the north and Cefn Park to the east of Wrexham. There are long views stretching into Cheshire and the Mersey Estuary. The is of moderate value and is in fair condition but is seen as declining. It is seen as declining due to large scale, relatively visually intrusive, sand and gravel workings.

- 5.14 **Aspect Area WRXHMVS069** - The final area abuts the western and southern borders of Ballswood. It is characterised as a narrow river valley with strong wooded vegetation cover. It is the lower reaches of the River Alyn which meanders through the undulating plateau of the adjacent Wrexham Delta. The A483 trunk road follows the river course. Public access is good throughout. The area has moderate value although the area is noted to play an important regional role to play for the adjacent communities as recreational space. The area is generally unspoilt however the proximity of settlements and the A483 detracts from the value of the area.

Local Level Landscape Character

- 5.15 The Wrexham Landscape Character Area describes the landscape character of the site and surrounding area in further detail than the national guidance. The site is contained within three of 27 separate local landscape areas within the Wrexham LANDMAP Supplementary Planning Guidance. These are areas 8, 9b and 13c. Drawing No. KD.BWE.0013 for site / site local identified character areas.

Local Landscape Character 8 - Gwersyllt, Llay, Gresford, Borras

- 5.16 This area is a lowland plateau of drained agricultural land, sand and gravel extraction. It is considered that the character is threatened by sand and gravel quarrying and urban growth. It is formed of glacial sand and gravels. It is fast changing with active sand and gravel quarries and areas of restored land. There is an unusual and distinctive landscape of kettle holes from glacial origins. The east and west side of this character area is separated by River Alyn valley. There is well drained agricultural land with few ponds and ditches. A key visual characteristic of the area is the highly visible Ballswood sand quarry. Also, the villages are semi-rural with extensive suburban development. The area is part of the Wrexham Delta Terrace, which contains deep deposits of fluvio-glacial sand and gravel. The sand quarries provide disturbed land and areas of natural regeneration of value for wildlife. The sand also provides grade 1 and 2 soils.
- 5.17 The landscape is under very high pressure. It is highly vulnerable to further sand and gravel quarrying. There would be irreversible loss of character from any major schemes and the high-quality arable land is therefore under threat.

5.18 The management guidance is as follows:

Aims	Guidelines
Conserve special features and visual qualities	● Restrict and mitigate environmental impact from quarrying ● Retain and protect landscape with distinctive kettle hole topography ● Protect physical and visual integrity of scarps from inappropriate development
Conserve geological features	● Maintain continuity and integrity of exposures and landforms ● Maintain integrity of glacial landforms, kettle holes and fluvial landforms
Conserve and extend habitats for wildlife	● Promote agri-environment agreements, encourage sustainable farming on high quality farmland ● Plant new hedgerow trees, particularly oaks to replace overmature trees ● Protect raised bogs
Preserve known archaeological sites	● Preserve in situ any surviving banks and ditches of Y Gaer Hillfort in Llay ● Evaluate industrial sites before development, preserve disused railway and tram lines ● Development which adversely affected the site or setting of Wat's Dyke would not be permitted - contact CADW
Preserve historic landscape features and survey / assess the historic resource	● Avoid draining and improvement of kettle hole bogs, carry out archaeo-environmental study ● Carry out further field assessment of Gresford and Marford and surrounding fieldscape ● Evaluate moat site at Horsely Hall ● Preserve important elements of designed landscapes, and seek to reinstate original design intent, where in decline or degraded
Develop recreational potential of area	● Continue existing management of Alyn Waters country park and consider links with area of former Llay Hall colliery and Bryn Alyn area ● Refer to Green Network Strategy due March 2007 and implement new links
Strengthen cultural heritage of area	● Preserve sense of community and industrial history in former mining villages

Figure 1 - Management Guidelines for Landscape Character Area 8

Local Landscape Character 9b - River Alyn Valley

5.19 This area is a Valley of the River Alyn which is cut into the sandy lowland plateau on which Wrexham, Gresford and Llay are situated. The area contains much broadleaved Woodland of high biodiversity value and a variety of other important habitats particularly grasslands and aquatic or damp habitats. The area partly features the Chester and Shrewsbury railway and part of Mold road, it has fragmented land use patterns and Wilderness Tip is a locally prominent feature. This area is one of several wooded River valleys which have been affected by industrial uses both past or present. The geological character of the area is deep Sandy gravel lowland plateau known as the Wrexham Delta terrace. There are artificial landforms caused by mining, quarrying and reclamation works throughout the area.

5.20 The area is a small-scale linear character area and is vulnerable to any inappropriate built development within it or on its edge. It already suffers a loss of tranquility and accessibility due to major roads.

5.21 The management guidance is as follows:

Aims	Guidelines
Enhance existing visual character	● Avoid large scale and inappropriate development ● Retain and strengthen wooded character
Conserve geological features	● Maintain continuity and integrity of exposures and landforms ● Maintain integrity of fluvial and glacial landforms
Enhance and extend wildlife habitats	● Maintain and develop woodland corridors, expand native woodlands types, increase diversity in woodland structure and retain old/dead trees ● Enhance river bank habitats and minimise hard bank engineering such as canalisation or retaining walls ● Protect otters, water voles and bats - refer to River Habitat Action Plan and Otter Species Action Plan ● Enhance lowland pastures and protect and manage lowland meadows
Conserve historical features	● Preserve Bryn Alyn hillfort in situ, encourage removal of woody vegetation, assess in relation to wider historic ● No development on or near Wat's Dyke - contact Cadw ● Conserve and assess fieldscape
Enhance and interpret cultural heritage	● Improve public access to Bryn Alyn area, with low key interpretation - consider links with Alyn Waters Country Park (refer to green network Strategy due March 2007 for other links) ● Preserve visible reminders of regional coal industry at Alyn Industrial Park ● Continue existing management of Alyn Waters Country Park, consider incorporating former Llay Hall colliery site ● Support community history initiatives ● Improve linkage of routes for recreational access generally

Figure 2- Management Guidelines for Landscape Character Area 9b

Local Landscape Character 13c - Dee Terraces

5.22 This area is one of three rural lowland landscapes within the Wrexham Landscape Character Assessment. The area is above the floodplain even though it is low-lying, flat land which has been intensively farmed. Field ponds, roadside and field ditches are common and there is an abundance of hedges and hedgerow trees. Farms, hamlets and villages are scattered throughout the landscape and most common form is of red brick.

5.23 There is a strong ecological character within the area. Much of the area is agriculturally improved grassland, intensively farmed with some arable cultivation. There is little biodiversity within the region apart from the hedgerows, hedges and small areas of woodland.

5.24 The integrity of the Dee Terraces landscape is highly vulnerable to continuing development and recreational pressures, and to economic changes which threaten traditional farming.

5.25 The management guidance is as follows:

Aims	Guidelines
Conserve rural character	● The character of barns and farmsteads are particularly sensitive to residential conversion - resist ● Areas for Horsiculture are to conserve traditional field boundaries and avoid the proliferation of fences, structures and buildings within the countryside, where this would erode character
Preserve geodiversity	● Maintain integrity of landform and assess new exposures
Manage farmland for increased biodiversity	● Maintain and enhance ponds ● Maintain and enhance hedgerows - allow development of new hedgerow trees ● Protect species associated with farms eg bats, barn owls, swallows and swifts
Preserve and evaluate archaeological heritage	● Encourage preservation of surviving landscape features ● Carry out field and desk study of ridge and furrow, mills, leats, communications and wider landscape ● Assess villages - Holt, Isycoed, in wider context i.e. field systems, lanes ● Preserve town structure of Holt, evaluate in advance of development
Maintain and support cultural character	● Maintain existing character of Rossett, consider Conservation Area status ● Support existing local community initiatives

Figure 3- Management Guidelines for Landscape Character Area 13c

Site Level Landscape Character

5.26 The Site covers an area of ~ 54.89ha. Much of the Site is operational / disturbed in nature due to a requirement to extract varying types / qualities of mineral at any one time. The internal vegetation structure is minimal, with vegetation primarily being limited to the Site boundaries, other than a small block of isolated woodland adjacent to the quarry offices, welfare facilities and car parking to the north. Generally, the site comprises a series of excavation areas, operational plant and mineral stocking areas, water management lagoons, and on-going restoration placement areas to the north east and west, connected by a series of internal vehicular routes. Land levels fall from approximately 73m aOD in the north west at Gegin Lane, to ~27m aOD in the south east where the shallow River Alyn valley works eastwards. As the River Alyn corridor meets the A483 in the south and south east,

land levels rise to meet the settlements of Marford and Gresford. Marford being a former extractive site, now restored to a combination of residential development and nature conservation.

- 5.27 Land to the south and south west of the Site is well wooded, as is the elevated Gegin Lane boundary (northern Site boundary), from which the Site is accessed. An elevated site office and weighbridge area leads down from this point via an internal quarry ramp to the main quarry voids. An established concrete plant is located adjacent to the quarry access along with a garage and vehicle storage area / lorry park, both of which fall under separate ownership and operation to the quarry. Quarry operational plant is set low down within the south east of the Site, adjacent to its southern boundary and wooded ridge landform.
- 5.28 The low lying eastern and elevated western Site boundaries are under mixed agricultural land uses (arable and pastoral). The eastern agricultural land being undulating and meeting Llay in the east. The western agricultural land gently sloping south westwards to meet the river Alyn, beyond which it meets the A483 road corridor. Proposed additional extraction areas A and B being located within / adjacent to these boundary land uses.
- 5.29 Desktop and site survey works have considered the potential for intervisibility between the Site / development proposals and other local context character area settings. These are illustrated on Drawing No. KD.BLW.004. These areas being:

Potential Landscape and Visual Effects

- 5.30 It is considered that the proposed development will have the following changes / effects on the site / local context.
- Ongoing mineral extraction within the permitted extraction area
 - Movement of vehicle / loading operations will be similar to the existing situation
 - Ongoing stocking of materials and processed mineral
 - Ongoing restoration operations utilising on-site materials
 - Removal of 2No. narrow strips of existing agricultural land with the subsequent stripping of soils and extraction of mineral within these areas
 - Activities associated with the construction of the proposed new wash plant

Landscape and Visual Mitigation and Enhancement Measures

- 5.31 Mitigation measures associated with the development include the progressive restoration of land to minimise the extent of operational disturbance at any one time. Please see Drawing No. KD.BLWQ.1.020 which outlines the proposed sequential restoration of land, with the elevated northern area of the quarry forming restoration area 1. In addition, operational plant and stocking areas are to continue to be located to the lower levels of the Site, where an element of natural screening is afforded by a combination of landform and the existing mature vegetation structure.

Landscape Assessment

- 5.32 The methodology at Appendix B sets out how value, susceptibility and overall sensitivity is determined for each landscape receptor. The value of the individual landscape elements takes into account the other baseline studies associated with this application that provides an indication of condition and quality and also includes an assessment of the rarity and representativeness of the individual features in the local landscape and its nature conservation value. Other considerations include an understanding of:

- Scenic quality
- Recreational value
- Perceptual aspects including tranquillity
- Cultural and historic associations

Assessment of Landscape Sensitivity

- 5.33 Landscape receptors need to be assessed in terms of their sensitivity, combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape. For consistency we have assessed the landscapes sensitivity to change in respect of the sites location within the Blythe Lowlands and its potential to visually influence adjacent character areas along with the actual site itself. The assessed sensitivity is stated in Table 1 below.

Table 1: Assessment of Landscape Sensitivity

LANDSCAPE CHARACTER AREA/LANDSCAPE DESCRIPTION UNIT	SENSITIVITY TO CHANGE
Local Level	
<i>LANDMAP</i>	
WRXHMVS058	Low
WRXHMVS054	Medium
WRXHMVS057	Medium
WRXHMVS069	Medium
<i>Wrexham County Borough</i>	
Gwersyllt, Llay, Gresford, Borrass	High
River Alyn Valley	Medium
Dee Terraces	High
The Site and Its Immediate Setting	Very Low

5.34 The main considerations and reasoning behind the assessment of the sensitivity of identified landscape character areas to change, associated with a mineral development being:

- LANDMAP Visual and Sensory area WRXHMVS058 - being primarily associated with the existing operational Ballswood Quarry and its boundaries. The character of which is of a large area of disturbed land and associated operational ancillary infrastructure, with limited and / or lost landscape character elements and features.
- LANDMAP Visual and Sensory Areas WREXHMV054, 057 and 069 being more intact and open in nature, whilst incorporating mineral extraction (peripheral), man-made skyline features, mixed settlement and infrastructure / road corridors. Recreational and cultural associations being present but limited to that of local level importance. Whilst incorporating features typical of their defining landscape character, they are not of a significant value or quality to be considered as of High Sensitivity to Change.
- Wrexham County Borough Landscape Character Area 8 (Gwersyllt, Llay,

Gresford, Borrass) being heavily influenced by and incorporating both historic and operational mineral workings with large areas of disturbed land and associated operation ancillary infrastructure, along with the presence of major road corridors and the influence of neighbouring settlements. Recreational and cultural associations being limited to local level. Our High Sensitivity of the character area being that indicated within the Wrexham Landscape Character Area Guidance.

- Wrexham County Borough Landscape Character Area 9a (River Alyn Valley) Whilst incorporating features typical of their defining landscape character, they are not of a significant value or quality to be considered as of High Sensitivity to Change. Our Medium Sensitivity of the character area being consistent with that indicated within the Wrexham Landscape Character Area Guidance and information available via LANDMAP.
- Wrexham County Borough Landscape Character Area 13 (Dee Terraces) being heavily influenced by and incorporating both historic and operational mineral workings with large areas of disturbed land and associated operation ancillary infrastructure, along with the presence of major road corridors and the influence of neighbouring settlements. Recreational and cultural associations being limited to local level. Our High Sensitivity of the character area being that indicated within the Wrexham Landscape Character Area Guidance.
- The Site: As with LANDMAP V&S Area WRXHMOV058, landscape character at a Site and immediate setting level is that of a large area of disturbed operational land / active quarry and associated ancillary infrastructure, with limited and / or lost landscape character elements and features.

Assessment of Magnitude of Impact of the Development

- 5.35 This is a term which combines *“judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration”*. (GLVIA3). The magnitude of existing and potential landscape character effects resulting from the proposed retained development have been evaluated in terms of its size/scale, geographical extent, duration and reversibility.

Table 2: Assessed Magnitude of Effect from the development on Landscape Character

Development	The proposal is for the minor extension of on-going mineral workings, within three areas (A, B a C) and the establishment of an additional ancillary wash plant, set within the existing Ballswood Quarry.	
Size/scale	The size and scale of the proposed additional elements are small to medium within the context of the existing Site, being located either within or directly adjoining the large scale existing Ballswood Quarry.	
Geographical extent	The existing Site occupies ~54.89 ha of which ~ 30.5 is currently disturbed and operational in nature. The proposed mineral extraction areas equate to an additional operational area of~ 4.5 ha. The proposed additional plant and water management proposals being set within the existing disturbed quarry void. Its geographical influence on landscape character is partially generally contained by both landform and vegetation.	
Duration	The nature of the mineral proposals is long term, but temporary, with final restoration being permanent and including the removal of all quarry plant and ancillary site features and elements.	
Assessed Magnitude of effect	Long Term – Temporary	Low

Assessment of Significance of Impact of the Development

- 5.36 The assessed significance of impact on the Site and local character has been determined by combining the assessed sensitivity of the Site and the seven character areas (LANDMAP & Wrexham assessment areas) the application is located within / which it may have a geographical extent of influence over, with the predicted magnitude of effect associated with the development. This has provided an overall Significance of Effect which describes the potential overall impact the proposed retained development will have on the local landscape character.
- 5.37 Tables 3, 4 and 5 summarise our assessment of the current site development and the proposed new developments effects on the identified Landscape Character

Areas at both the operational and post-operation / restoration stages.

Table 3: Current Development effect on Local Landscape Character

LANDSCAPE CHARACTER AREA			
Landscape Character Area/ Landscape Description Unit	Sensitivity	Current Site Land Use Magnitude (of Effect)	Assessed level of Significance
WRXHMVS058	Low	Very Low	Minimal Adverse
WRXHMVS054	Medium	Low	Slight Adverse
WRXHMVS057	Medium	Low	Slight Adverse
WRXHMVS069	Medium	Low	Slight Adverse
Gwersyllt, Llay, Gresford, Borrass	High	Low	Moderate Adverse
River Alyn Valley	Medium	Low	Slight Adverse
Dee Terraces	High	Low	Moderate Adverse
The Site and Its Immediate Setting	Very Low	Very Low	Negligible Adverse

Table 4: Proposed Development effect on Local Landscape Character

LANDSCAPE CHARACTER AREA			
Landscape Character Area/ Landscape Description Unit	Sensitivity	Proposed Development Land Use Magnitude (of Effect)	Assessed level of Significance
WRXHMVS058	Low	Low	Very Slight Adverse
WRXHMVS054	Medium	Low	Slight Adverse
WRXHMVS057	Medium	Low	Slight Adverse
WRXHMVS069	Medium	Low	Slight Adverse
Gwersyllt, Llay, Gresford, Borrass	High	Low	Moderate Adverse
River Alyn Valley	Medium	Low	Slight Adverse

Dee Terraces	High	Low	Moderate Adverse
The Site and Its Immediate Setting	Very Low	Low	Minimal Adverse

Table 5: Concept Restoration effect on Local Landscape Character

LANDSCAPE CHARACTER AREA			
Landscape Character Area/ Landscape Description Unit	Sensitivity	Concept Restoration Land Use Magnitude (of Effect)	Assessed level of Significance
WRXHMVS058	Low	High	Moderate Beneficial
WRXHMVS054	Medium	Low	Slight Beneficial
WRXHMVS057	Medium	Low	Slight Beneficial
WRXHMVS069	Medium	Low	Slight Beneficial
Gwersyllt, Llay, Gresford, Borrass	High	Low	Moderate Beneficial
River Alyn Valley	Medium	Low	Slight Beneficial
Dee Terraces	High	Low	Moderate Beneficial
The Site and Its Immediate Setting	Very Low	High	Slight Beneficial

Summary Landscape Conclusion

- 5.38 Overall, it is assessed that the proposed operational development will **not** result in any Significant Adverse Effects on any of the regional / local landscape character areas / types identified. The development itself is located within both the LANDMAP Visual and Sensory Area WRXHMV058, and the Wrexham Landscape Character Area Guidance Area 8, Gwersyllt, Llay, Gresford, Borrass, which have historical and current associations with mineral development, including the long term Ballswood Quarry

site, Area 8 also incorporating recreational opportunities at a local level. The LANDMAP classification area relating to Ballswood Quarry itself and noting its economic importance.

- 5.39 The scale and nature of the proposed development, set within the context of the existing operational Ballswood Quarry, is considered to be capable of physical integration and absorption into the local landscape setting. Upon final restoration of the quarry, the potential Significance of Effect is assessed as between and Slight and Moderate Beneficial.
- 5.40 At a landscape policy level, with respect to the designated Special Landscape Area, which covers a narrow strip of land to the east of the Site (within the planning permission boundary) spreading out to cover land to the east and north east, due to the scale and nature of the existing landscape and the proposed additional mineral extraction, it is not considered that the associated impacts at a landscape scale would be Significant. Progressive restoration, including the planting of large areas of additional native tree / woodland, the establishment of new native hedgerows and areas of species rich grassland, along with the reinstatement of productive agricultural land mitigating the effects of additional working and providing long term landscape enhancements.
- 5.41 Emerging policy within the Wrexham Local Development Plan, yet to be adopted, includes the operational Ballswood Quarry site as a Designated Site of Nature Conservation and Geological Importance. Based upon the ecological survey work carried out as part of this application, combined with the current landscape and visual elements and features which comprise the quarry, its proposed designation status appears very premature and not founded on the current baseline situation. The progressive and final restoration for the Site will create both landform and vegetative structure and habitat, which will allow the promotion of species diversity and geodiversity.

6.0 VISUAL MATTERS

- 6.1 Desktop and Site survey works have identified the areas of potential visibility and visual receptor locations from which the existing Site and the development may be visible along with the different groups of people who may experience views of the development and its specific elements and features, along with the viewpoints where they will be affected and the nature of the views at these points.
- 6.2 These baseline and assessment works have been carried out by initially mapping the geographical extent of the study area where receptors have the potential to view

the current Site and structures. This was carried out digitally through the production of Zones of Visual Influence (ZTVI).

- 6.3 This was initially carried out based upon a ground levels varying from ~25m aOD to 73m aOD, upon which the layout plan and height of the existing minerals processing plant structure up to 12m has been modelled in as well as site office and weighbridge. No other physical structures or vegetation has been assessed as part of the current situation. The Dependable Concrete Plant was not modelled in as it is not part of this application.
- 6.4 The findings of this ZTVI are illustrated on Drawing No. KD.BLWQ.1.D.023 (Appendix A). As can be seen the associated ZTVI has the greatest potential for a higher magnitude of impact is generally within the actual permitted planning boundary, with the highest level of impact also covering the previously quarried area of land outside of the permitted boundary, to the south of the Site, together with fields immediately east of the Site and woodland to the south east.
- 6.5 Secondary areas of potential higher magnitude of visual influence being principally located to the north / north east of the Site and including Yew Tree Farm, Croeshowell Road, and residential development in Burton and Rossett, as well as the A483 road corridor (east) and higher elevated land around the western perimeter of Pant. Properties and land located between the B5102 and Gegin Lane also fall within this potential higher are of magnitude of effect. Mid and lower ranges of potential impact contained within and surrounding the higher potential area and also predominantly heading north and north east (over 3km from the Site), covering Greenfield, Rossett, Darland and Pulford, as well as the A483 road corridor and surrounding land.
- 6.6 The proposed development ZTVI, which includes the minor extension areas within the boundary of the permitted Site, along with a new wash plant at ~12m in height, and assuming all land is disturbed within the quarry, is very similar to that of the current situation. No significant differences of note.
- 6.7 The Site survey considered the viewpoints from which the current situation and the proposed development could actually be seen by differing groups of people. These groups included:
- Residential visual receptors in private properties
 - Public viewpoints e.g. public rights of way, inland waterways and public open space (POS)

- Places where people work
- Transport routes where there may be views from private vehicles and from different forms of public transport.

6.8 Based upon the above desktop research and assessment works, a detailed visual Site survey took place being guided by both the current and proposed ZTVI. Both ZTVI mapping and Site surveys assume that the observers eye height is some 1.6 above ground level, based upon the midpoint of average heights for men and women.

6.9 To describe and illustrate the nature and types of views and potential changes, a Zoned approach has been taken. Six individual area of land containing visual receptors have been identified, each with a type of existing and / or potential development view. These representative Zones are illustrates on Drawing No. KD.BLWQ.1.D.023 and described below with the type of view receptors may receive of the Site.

Table 6: Identified Landscape Zones

<i>Zone</i>	<i>Visual Receptors</i>	<i>Distance from Site</i>	<i>Receptor Type of View</i>
1	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users</i>	<i>Receptors are located between ~1km and 3km of the Site</i>	<i>Receptors look west from lower or similar elevations to the Site. Views are panoramic, of which the quarry comprises an element. The eastern and southern minor extension area are screened from view. Extraction and restoration works to Area B will be observed.</i>
2	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users - including users of the main A483 road corridor</i>	<i>Receptors are located between ~20m to 3km of the Site</i>	<i>Receptors tend to look up towards the Site from a lower elevation, looking west. Views are contained / vistas, generally of the upper ridge elements of the quarry.</i>
3	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users – including PROW ref. MAR11, BVR35 and 36</i>	<i>Receptors are located adjacent to the Site to ~1km of the Site</i>	<i>Receptors tend to look west from similar / lower elevations to the Site. Views are both open and contained / vistas, principally of the upper north / north western quarry faces.</i>
4	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users – including road users specifically relating the Gegin Lane</i>	<i>Receptors are located adjacent to the Site to 200m from the Site's western boundary</i>	<i>Receptors look east / south east across and over the Site from similar or higher elements. Views are principally of the Site's western boundary vegetation; on-going restoration works and of the current eastern faces and plant site.</i>

5	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users</i>	<i>Receptors are located generally between 400m to 600m of the Site's southern boundary</i>	<i>Receptors look north / north east towards the Site. Potential views are very restricted by existing landform and vegetation structure. Possible views from 1st floor windows of the site office, weighbridge area and higher south facing quarry face.</i>
6	<i>Representative Visual Receptors include residential, users of public open space / parks, PROW and road users</i>	<i>Receptors are located at a distance of ~1km to 3km +</i>	<i>Receptors look south and west towards the Site. The higher elements may be observed as skyline features, specifically during the winter months, as part of a wider panoramic view or vista.</i>

6.10 Table 6 summarises the representative visual receptors identified and the effects that have been considered with an assessment of their significance based upon the methodology described within Appendix B of this report.

6.11 This is first determined by assessing Sensitivity of Visual Receptors to change from this type of development (Table 5) and then the magnitude of the visual effect, its size/scale, geographical extent, duration and reversibility (Table 6). A judgement on the sensitivity of visual receptors and magnitude of the effect are then combined to assess the overall significance of visual impact/effects (Table 7).

6.12 The susceptibility of visual receptors to changes in view and visual amenity is mainly a function of “the occupation or activity of people experiencing the view at particular locations and the extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations” (GVLA page 113).

Table 7: Susceptibility of Visual Receptors to Change

Recept or No	Visual Receptors	Assessed Susceptibility to change of Visual Receptors	Assessed Value of View	Overall Assessment of Sensitivity of Visual Receptor
Zone 1				
1	Residents of Quarry Bow and Pant Lane.	High	High	High
2	Users of Public Right Of Way references MAR8 + MAR9 southern section.	Medium	Medium	Medium
3	Users of Public Open Space (Maes y Pant)	Medium	Medium	Medium
4	Vehicle users of Quarry Bow and Pant Lane	Low	Low	Low
Zone 2				
5	Residents of Gresford within the southern zone	High	High	High
6	Resident of Rossett / Gresford within the north eastern area of the zone	High	High	High
7	Users of Public Right of Way references MAR8 and MAR9 northern section as well as GRE6 + GRE7	Medium	Medium	Medium
8	Users of the A483 roadway	Low	Low	Low

Zone 3				
9	Residents of Yew Tree Farm	High	High	High
10	Residents of Rossett House	High	High	High
11	Residents of Strathalyn	High	High	High
12	Residents of Woodridge	High	High	High
13	Residents of semi detached property located in Rossett off B5102	High	High	High
14	Residents of Croeshowell Hall and adjacent properties	High	High	High
15	Users of Public Right of Way reference MAR11, BUR 35 + BUR36	Medium	Medium	Medium
16	Users of B5102 Llay Road	Low	Low	Low
Zone 4				
17	Residents of Llay situated between Gegin Lane and Straight Mile	High	High	High
18	Users of Gegin Lane	Low	Low	Low
19	Users of Public Right of Way reference LLA2	Medium	Medium	Medium
20	Residents of property on junction of Croeshowell Hill and Croeshowell Lane	High	High	High
Zone 5				
21	Residents of Llay located off Gresford Road	High	High	High
22	Users of Gresford Road (B5373)	Low	Low	Low
23	Residents of Singret Farm	High	High	High
24	Residents of the Homestead	High	High	High
25	Residents of the Grange	High	High	High
26	Residents of Knowle Cottage	High	High	High
27	Users of Gegin Lane	Low	Low	Low
Zone 6				
28	Residents of Rossett	High	High	High
29	Residents of Pulford	High	High	High
30	Residents of Darland	High	High	High
31	Users of the local road network within this zone	Low	Low	Low
32	Users of the PROW network within this zone	Medium	Medium	Medium

- 6.13 Local visual receptors have a variety of assessed sensitivity to change resulting from the proposed retained development within this locality. Residential receptors having the greatest sensitivity to change i.e. High with users of the local road network being assessed as having the lowest sensitivity to change and Low as a result of their transient nature and limited time duration of view of the Site / proposed retained development.

Visual Mitigation and Enhancement Measures

- 6.14 The following mitigation and enhancement measures are proposed and integrated into the working and restoration of the Site:

- On-going and progressive restoration of the upper currently exposed

quarries northern and western faces

- Tree and shrub planting to strengthen existing vegetation structure along the Site's western skyline boundary with Gegin Lane
- Progressive restoration to try and minimise the amount of disturbed ground within the Site at any one point in time
- Development of significant areas of nature species woodland to both the western quarry ridge and to supplement the lower wooded ridge along the Site's southern boundary
- Creation of new habitat suitable for the establishment of species rich grassland and wetland / marginal aquatic environments, to help promote Biodiversity
- Proposals for a long-term Site Aftercare and Management Plan

- 6.15 This combines with the natural screening mitigation of the Site's location set within sections of mature woodland. The woodland having to potential ability to screen lower plant activities including stocking and vehicle movements.

Assessed overall Significance of Visual Effects

- 6.16 This is achieved by combining the separate judgements about sensitivity of the visual receptor and the magnitude of the proposed development (including any mitigation measures) on visual impacts/effects. See Table 7 below.
- 6.17 Significance of visual effects is not absolute and can only be defined in relation to each development and its specific location. In making a judgement about the significance of visual effects it is noted that:
- Effects on people (receptors) who are particularly sensitive to change in views and visual amenity are more likely to be significant
 - Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant
 - Large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view
- 6.18 The assessment is based on the proposed development, its structures, associated users and activities. The following assessments have been carried out in respect of the Current Visual Situation and secondly the Proposed Developments effects on Visual Matters. As per the identification of the proposed receptors, this has been carried out in a Zoned and individual representative visual receptor basis.

Table 8: Assessed Overall Significance of Visual Effects (Current Situation)

Receptor No	Visual Receptors	Assessed Sensitivity of Visual Receptors	Assessed Magnitude of Effect (Current Situation)	Overall Assessment of Significance of Effect (Current Situation)
Zone 1				
1	Residents of Quarry Bow and Pant Lane.	High	Low	Moderate Adverse
2	Users of Public Right Of Way references MAR8 + MAR9 southern section.	Medium	Low	Slight Adverse
3	Users of Public Open Space (Maes y Pant)	Medium	Low	Slight Adverse
4	Vehicle users of Quarry Bow and Pant Lane	Low	Low	None to Very Slight Adverse
Zone 2				
5	Residents of Gresford within the southern zone	High	None	Neutral
6	Resident of Rossett / Gresford within the north eastern area of the zone	High	None	Neutral
7	Users of Public Right of Way references MAR8 and MAR9 northern section as well as GRE6 + GRE7	Medium	None	Neutral
8	Users of the A483 roadway	Low	None to Low	Neutral to Low Adverse
Zone 3				
9	Residents of Yew Tree Farm	High	Low	Moderate Adverse
10	Residents of Rossett House	High	Low	Moderate Adverse
11	Residents of Strathalyn	High	None to Low	None to Moderate Adverse
12	Residents of Woodridge	High	Low	Moderate Adverse
13	Residents of semi detached property located in Rossett off B5102	High	Low	Moderate Adverse
14	Residents of Croeshowell Hall and adjacent properties	High	Low	Moderate Adverse
15	Users of Public Right of Way reference MAR11, BUR 35 + BUR36	Medium	Low	Moderate Adverse
16	Users of B5102 Llay Road	Low	Low	Very Slight Adverse
Zone 4				
17	Residents of Llay situated between Gegin Lane and Straight Mile	High	Low	Moderate Adverse
18	Users of Gegin Lane	Low	Low	Very Slight Adverse
19	Users of Public Right of Way reference LLA2	Medium	Medium	Moderate Adverse
20	Residents of property on junction of Croeshowell Hill and Croeshowell Lane	High	Low	Moderate Adverse
Zone 5				
21	Residents of Llay located off Gresford Road	High	Very Low	Very Slight Adverse
22	Users of Gresford Road (B5373)	Low	None	Neutral
23	Residents of Singret Farm	High	Very Low	Very Slight Adverse
24	Residents of the Homestead	High	Very Low	Very Slight Adverse

25	Residents of the Grange	High	Very Low	Very Slight Adverse
26	Residents of Knowle Cottage	High	Very Low	Very Slight Adverse
27	Users of Gegin Lane	Low	None	Neutral
Zone 6				
28	Residents of Rossett	High	None to Very Low	Neutral to Slight Adverse
29	Residents of Pulford	High	None to Very Low	Neutral to Slight Adverse
30	Residents of Darland	High	None to Very Low	Neutral to Slight Adverse
31	Users of the local road network within this zone	Low	None to Very Low	Neutral to Minimal Adverse
32	Users of the PROW network within this zone	Medium	None to Very Low	Neutral to Very Slight Adverse

Table 9: Assessed Overall Significance of Visual Effects (Proposed Development)

Receptor No	Visual Receptors	Assessed Sensitivity of Visual Receptors	Assessed Magnitude of Effect (Proposed Development)	Overall Assessment of Significance of Effect (Proposed Development)
Zone 1				
1	Residents of Quarry Bow and Pant Lane.	High	Low	Moderate Adverse
2	Users of Public Right Of Way references MAR8 + MAR9 southern section.	Medium	Low	Slight Adverse
3	Users of Public Open Space (Maes y Pant)	Medium	Low	Slight Adverse
4	Vehicle users of Quarry Bow and Pant Lane	Low	Low	None to Very Slight Adverse
Zone 2				
5	Residents of Gresford within the southern zone	High	None	Neutral
6	Resident of Rossett / Gresford within the north eastern area of the zone	High	None	Neutral
7	Users of Public Right of Way references MAR8 and MAR9 northern section as well as GRE6 + GRE7	Medium	None	Neutral
8	Users of the A483 roadway	Low	None to Low	Neutral to Low Adverse
Zone 3				
9	Residents of Yew Tree Farm	High	Low	Moderate Adverse
10	Residents of Rossett House	High	None to Low	None to Moderate Adverse
11	Residents of Strathalyn	High	Low	Moderate Adverse
12	Residents of Woodridge	High	Low	Moderate Adverse
13	Residents of semi detached property located in Rossett off B5102	High	Low	Moderate Adverse
14	Residents of Croeshowell Hall and adjacent properties	High	Low	Moderate Adverse
15	Users of Public Right of Way reference MAR11, BUR 35 + BUR36	Medium	Low	Very Slight Adverse

16	Users of B5102 Llay Road	Low	Low	Moderate Adverse
Zone 4				
17	Residents of Llay situated between Gegin Lane and Straight Mile	High	Very Low	Slight Adverse
18	Users of Gegin Lane	Low	Very Low	Minimal Adverse
19	Users of Public Right of Way reference LLA2	Medium	Medium	Moderate Adverse
20	Residents of property on junction of Croeshowell Hill and Croeshowell Lane	High	Low to Medium	Moderate to Notable Adverse
Zone 5				
21	Residents of Llay located off Gresford Road	High	Very Low	Very Slight Adverse
22	Users of Gresford Road (B5373)	Low	None	Neutral
23	Residents of Singret Farm	High	Very Low	Very Slight Adverse
24	Residents of the Homestead	High	Very Low	Very Slight Adverse
25	Residents of the Grange	High	Very Low	Very Slight Adverse
26	Residents of Knowle Cottage	High	Very Low	Very Slight Adverse
27	Users of Gegin Lane	Low	None	Neutral
Zone 6				
28	Residents of Rossett	High	None to Very Low	Neutral to Slight Adverse
29	Residents of Pulford	High	None to Very Low	Neutral to Slight Adverse
30	Residents of Darland	High	None to Very Low	Neutral to Slight Adverse
31	Users of the local road network within this zone	Low	None to Very Low	Neutral to Minimal Adverse
32	Users of the PROW network within this zone	Medium	None to Very Low	Neutral to Very Slight Adverse

Summary Visual Analysis and Conclusion

- 6.19 In respect of both the Current Situation and the Proposed Development, six Zones have been identified, within which receptors may receive a specific ‘type’ of view. Within each zone, individual receptor types have been identified and grouped to form representative receptor viewpoints. The visual effects of the magnitude of the current and proposed development being assessed in tables 8 and 9 above.
- 6.20 In respect of the current visual nature of the quarry, it is assessed that the main visual elements and features which result in Adverse effects are the upper western quarried faces and areas of unrestored ground. The disturbed faces being partially visible to receptors in all identified Zones (note: Less so in Zone 4 adjacent to the western Site boundary).
- 6.21 Of the 32No. representative visual receptor locations, it is assessed that No. receptor is currently receiving a Significant Adverse Visual Effect from existing

quarry activities. Ten receptors are assessed as receiving a Moderate Adverse Effect, nine a Slight Adverse effect, one minimal Adverse and six no effect. Of the Moderate Adverse effects all but one is residential. Residential receptors having a High sensitivity to this type of development. The actual assessed magnitude of effect is however Low which results in an overall Moderate Effect. These receptors include those of Quarry Bow and Pant Lane at distances of ~1km who's view is panoramic of which the quarry is one component of the overall view. Residents of Yew Tree Farm, who are located at a closer distance to the site at ~300M from its eastern boundary, but as a result of existing landform and vegetative structure have limited views of quarry activities.

- 6.22 The remaining assessed receptor receiving a Moderate Adverse effect being users of PROW reference MAR11 which runs through Yew Tree Farm and passes ~200 to 400m away from the site's eastern boundary. Users having part views of the upper western quarry faces from a relatively close distance. Receptors are however transitory as they pass by the quarry.
- 6.23 In assessing the potential visual changes resulting from the proposed development which include the progressive restoration of the western / north western quarry faces, the minor mineral extensions of mineral extraction, the new wash plant and overall continuation of phased working and restoration, we conclude that there will be no change in the overall level of visual influence of the quarry compared to the existing situation. Individual representative receptors will observe a change in view over the operational period as currently exposed faces and disturbed land is restored, but this will be off set by other areas of continued / new extraction and operational activity. Receptors in Zone 4 will receive a reducing impact as existing vegetation continues to establish.

At restoration all quarry plant and machinery will be removed from site. The resulting restored quarry landform is considered capable of assimilation and integration into the local area and all quarry land established as either woodland, agricultural land sandy substrate or species rich grassland. These land uses and landforms reflecting the local landscape character and visual setting.

7.0 CUMULATIVE ASSESSMENT

- 7.1 Cumulative landscape and visual effects must be considered in LVIA when it is carried out as an EIA. The 2002 edition of these guidelines defined cumulative landscape and visual effects as those that: result from the additional change to the landscape and visual amenity caused by the proposed development in conjunction

with other developments (associated or separate to it), or actions that occur in the past, present or are likely to occur in the foreseeable future. (Landscape Institute and IEMA, 2002:85 This definition being supplemented to consider the additional charges caused by a propose development in conjunction with other similar developments or as the combined effect of a set of developments, taken together’ (SNH, 2012:4);

- 7.2 The emphasis in EIA is on likely significant effects rather than on the comprehensive cataloguing of every conceivable effect that might occur.
- 7.3 The only known / identified other developments which could result in cumulative impact being the previous are of mineral extraction (now restored land) within Singret Farm, located to the south of the Site and the land at adjoining the Sites southern boundary, which has been extracted previously by others outside of the Ballswood Quarry planning boundary.
- 7.4 Cumulative landscape effects as effects that “can impact on either the physical fabric or character of the landscape, or any special values to it” (SNH, 2012:10).
- 7.5 The previously worked land is to be restored and integrated into the Ballswood Quarry restoration scheme during the current restoration period. A mix of agricultural and wildlife enhanced land. The restored Singret Farm Quarry comprises lower level land with varying slopes which grade into surrounding land. The restored land use being to agricultural use.
- 7.6 When considering the potential cumulative impact in respect of the aesthetic aspects of the landscape with the combined sense of enclosure, scale, diversity, openness and general tranquillity it is not considered to be significantly changed or degraded by the cumulative inclusion of the Ballswood Quarry proposals. There is not a significant modification of combined key characteristics or the possible creation of a new landscape character. It is not considered that the proposal will result in a significant overall Cumulative Effect on the fabric of the landscape or its setting
- 7.7 Cumulative visual effects are effects that can be caused by combined visibility, ‘which occurs where the observer is able to see two or more developments from one view – point and / or sequential effects which ‘occur when the observer has to move to another viewpoint to see different developments’ (SNH,2012:11).
- 7.8 Cumulative visual effects are the effects on views and visual amenity enjoyed by people, which may result either from adding the effects of the application

development to the effects of the other projects on the baseline conditions. The Site and the other potential cumulative developments are generally located within a similar visual envelope and study area. The visual receptors identified as potentially receiving views of the proposed development reflecting those receptors who may have views of the two other identified areas. The visual impact from these areas being of a very low magnitude with limited receptor views principally from the south and south west. It is not considered that the additional visual aspects of the proposed development combined with the other identified areas will result in a significant cumulative visual impact. There will therefore not a significant cumulative degradation of individual receptor views or visual amenity.

8.0 CONCLUSION

- 8.1 This report has been carried out in general accordance with the Landscape Institute and Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment (GLVIA3), and Photography Technical Guidance Note TGN06/19 – Visual Representation of Development Proposals (published 17th September 2019), as well as baseline data from Natural Resources Wales / LANDMAP.
- 8.2 The proposed development includes the continued working of mineral from within the quarries permitted phased areas, plus the additional extraction of mineral to avoid sterilisation, contained within the Site's currently permitted planning boundary. Landscape orientated mitigation and enhancement measures integrated into the proposals including the progressive restoration, significant areas of new nature woodland planting, including ~21,750 trees and shrubs, establishment of species rich grassland and the provision of a long-term Woodland Management Plan.
- 8.3 Desktop and Site survey visual assessment works have taken place within a 5km study area around the Site. The existing quarry elements and features which have been identified as potentially resulting in adverse visual effects including the higher elevated, unrestored western and northern quarry faces, areas of disturbed ground, and to a lower degree, quarry plant and equipment. The majority of quarry plant and equipment being located within the quarry void.
- 8.4 Six differing visual Zones have been identified where receptors including residents for properties, users of public open space and PROW, along with road users, can potentially view the existing quarry and proposed development. These Zones representing a type of view of the Site which may be available to individual receptors within them. These being:

Table 10: Identified Zones

Zone	Distance from Site	Receptor Type of View
1	<i>Receptors are located between ~1km and 3km of the Site</i>	<i>Receptors look west from lower or similar elevations to the Site. Views are panoramic, of which the quarry comprises an element. The eastern and southern minor extension area are screened from view. Extraction and restoration works to Area B will be observed.</i>
2	<i>Receptors are located between ~20m to 3km of the Site</i>	<i>Receptors tend to look up towards the Site from a lower elevation, looking west. Views are contained / vistas, generally of the upper ridge elements of the quarry.</i>
3	<i>Receptors are located adjacent to the Site to ~1km of the Site</i>	<i>Receptors tend to look west from similar / lower elevations to the Site. Views are both open and contained / vistas, principally of the upper north / north western quarry faces.</i>
4	<i>Receptors are located adjacent to the Site to 200m from the Site's western boundary</i>	<i>Receptors look east / south east across and over the Site from similar or higher elements. Views are principally of the Site's western boundary vegetation; on-going restoration works and of the current eastern faces and plant site.</i>
5	<i>Receptors are located generally between 400m to 600m of the Site's southern boundary</i>	<i>Receptors look north / north east towards the Site. Potential views are very restricted by existing landform and vegetation structure. Possible views from 1st floor windows of the site office, weighbridge area and higher south facing quarry face.</i>
6	<i>Receptors are located at a distance of ~1km to 3km +</i>	<i>Receptors look south and west towards the Site. The higher elements may be observed as skyline features, specifically during the winter months, as part of a wider panoramic view or vista.</i>

8.5 Of 32N° individual representative visual receptor locations within these Zones, it is assessed that no receptor is currently receiving a Significant Adverse Visual Effect from existing quarry activities.

8.6 In assessing the potential visual changes resulting from the proposed development which include the progressive restoration of the western / north western quarry faces, the minor mineral extensions of mineral extraction, the new wash plant and overall continuation of phased working and restoration, we conclude that there will

be no change in the overall level of visual influence of the quarry compared to the existing situation. Individual representative receptors will observe a change in view over the operational period as currently exposed faces and disturbed land is restored, but this will be offset by other areas of continued / new extraction and operational activity. Receptors in Zone 4 will receive a reducing impact as existing vegetation continues to establish.

- 8.7 At restoration all quarry plant and machinery will be removed from site. The resulting restored quarry landform is considered capable of assimilation and integration into the local area and all quarry land established as either woodland, agricultural land sandy substrate or species rich grassland. These land uses and landforms reflecting the local landscape character and visual setting.
- 8.8 The Site is not located within a National Designated Landscape. In respect of Landscape Character, the Site and its regional area are located within the Deeside and Wrexham National Landscape Character Area. In respect of the LANDMAP descriptive characterisation, Ballswood Quarry has its own classification (Visual and Sensory Area WRXHMV058). The area being characterised by bare disturbed sand, which is constantly changing due to the nature of its landuse. The quarry is located adjacent to three further Aspect Areas, WRXHMV054, 057 and 069, and within and adjacent to Wrexham Landscape Supplementary Planning Guidance landscape character areas 8 – Gwessyllt, Llay, Gresford, Borrass (within which the Site is located), 9b River Alyn Valley, and 13c Dee Terraces.
- 8.9 Overall, it is assessed that the proposed operational development will **not** result in any Significant Adverse Effects on any of the regional / local landscape character areas / types identified. The development itself is located within both the LANDMAP Visual and Sensory Area WRXHMV058, and the Wrexham Landscape Character Area Guidance Area 8, Gwessyllt, Llay, Gresford, Borrass, which have historical and current associations with mineral development, including the long term Ballswood Quarry site, Area 8 also incorporating recreational opportunities at a local level. The LANDMAP classification area relating to Ballswood Quarry itself and noting its economic importance.
- 8.10 The scale and nature of the proposed development, set within the context of the existing operational Ballswood Quarry, is considered to be capable of physical integration and absorption into the local landscape setting. Upon final restoration of the quarry, the potential Significance of Effect is assessed as between and Slight and Moderate Beneficial, through the reinstatement of a landform and morphology characteristic of the Alyn valley landscape, and the establishment and long term management of large areas of native woodland planting, additional hedgerow

planting, areas of species rich grassland and reinstated agricultural land, along with the removal of quarry operational infrastructure (plant and vehicular movements).

- 8.11 The potential for cumulative landscape and visual effects has been assessed and it is considered that there will be No Significant cumulative degradation or adverse effects on landscape and visual receptors as a result of the proposed development.
- 8.12 In respect of landscape planning policies, the proposals offer opportunities to meet and enhance Wrexham Unitary Development Plan policies, including biodiversity enhancement (Policy PS11 and EC6), to promote agriculture (Policy EC2), and the significant establishment of trees and woodlands (Policy EC4 and NE3).
- 8.13 At a landscape policy level, with respect to the designated Special Landscape Area, which covers a narrow strip of land to the east of the Site (within the planning permission boundary) spreading out to cover land to the east and north east, due to the scale and nature of the existing landscape and the proposed additional mineral extraction, it is not considered that the associated impacts at a landscape scale would be Significant. Progressive restoration, including the planting of large areas of additional native tree / woodland, the establishment of new native hedgerows and areas of species rich grassland, along with the reinstatement of productive agricultural land mitigating the effects of additional working and providing long term landscape enhancements.
- 8.14 Emerging policy within the Wrexham Local Development Plan, yet to be adopted, includes the operational Ballswood Quarry site as a Designated Site of Nature Conservation and Geological Importance. Based upon the ecological survey work carried out as part of this application, combined with the current landscape and visual elements and features which comprise the quarry, its proposed designation status appears very premature and not founded on the current baseline situation. The progressive and final restoration for the Site will create both landform and vegetative structure and habitat, which will allow the promotion of species diversity and geodiversity.
- 8.15 We therefore consider that the proposed development scheme for the release of currently sterilised mineral within the existing Site permitted planning boundary is acceptable and appropriate in Landscape and Visual Effects, and in accordance with landscape orientated designations and policies.