

OUTLINE PLANNING APPLICATION

LAND AT ROVER WAY, CARDIFF, CF24 2RX

**THE REMOVAL OF FILL MATERIAL AND THE CONSTRUCTION OF
INDUSTRIAL ACCOMMODATION (B8 USE CLASS), NEW ACCESS
ROADS AND ASSOCIATED LANDSCAPING WORKS**

ENVIRONMENTAL STATEMENT: NON-TECHNICAL SUMMARY

September 2021



Geraint John Planning

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PREFACE

A planning application has been submitted to Cardiff Council for the redevelopment of Land at Rover Way, Cardiff, CF24 2RX. The applicant is Parc Calon Gwrydd Ltd.

An Environmental Impact Assessment (EIA) of the proposed development has been undertaken, and Parc Calon Gwrydd Ltd have commissioned a range of technical experts to prepare a comprehensive Environmental Statement (ES) to accompany the planning application.

The purpose of the ES is to identify the possible environmental effects of the development, and the measures that are available to reduce these effects (where such action is appropriate).

The ES is presented in two volumes:

- **Volume 1:** which records the main findings of the assessment; and
- **Volume 2:** which includes technical information to support the findings of the environmental assessment exercise.

This document – the 'Non-Technical Summary' – is designed to provide an overview of the main ES. It draws out the key issues contained within the individual chapters of the ES.

Copies of the ES can be inspected at the following premises:

Cardiff Council,
Planning Services,
County Hall,
Atlantic Wharf
Cardiff
CF10 4UW.

Printed copies or electronic CD copies of the ES and Technical Appendices can be purchased from the Application agent:

Geraint John Planning Ltd,
Office 16,
House 1
2nd Floor
The Maltings
East Tyndall Street
Cardiff
CF24 5EA

The cost of a printed copy will be provided upon request. Electronic copies on CD of the full Environmental Statement and the Non-Technical Summary can be provided at a cost of £20 per copy including postage. Printed copies of the Non-Technical Summary will be provided free of charge upon request.

The following documents have been submitted as part of the planning application which this Environmental Statement Supports:

- Planning Application Form and Certificates;
- Application drawings and plans, prepared by Southgate & Sarabia Architects;
- Design and Access Statement (Southgate & Sarabia Architects);
- Environmental Statement (Various);
- Environmental Statement Technical appendices:
 - Transport Statement (Vectos);
 - Flood Consequences Assessment (Vectos);
 - Site Investigation (Integral Geotechnique and MDA Consult);
 - Ecology Survey (Sturgess Ecology);
 - Aculeate Survey (Sturgess Ecology);
 - Reptile Survey (Wildwood Ecology);
 - Energy Statement (Aecom); and
 - Job Creation Statement (La Salle Investment Management).
- PAC Report (Geraint John Planning).

BACKGROUND

The application for which this ES has been prepared relates to the development of Land at Rover Way, Cardiff, CF24 2RX. The site is located on the south-eastern extent of the city and on the eastern side of Rover Way adjoining existing industrial uses, a sewage treatment works (STW) and the adjoining Anaerobic Digestion (AD) renewable energy plant. This area is considered to be the main industrial core of the City where heavy industry has long been located. The range and type of uses and activities present is a product of its proximity to the coast and the docks.

Planning Application

The application will be submitted in outline, with all matters reserved except access. An 'outline' application seeks to establish the principle of development. Should 'outline' planning permission be granted, more in-depth 'reserved matters' applications will need to be submitted to the Local Planning Authority in order to agree the detail of the scheme.

The application seeks planning permission for the following:

'The Removal of Fill Material and the Construction of Industrial Accommodation (Use Class B8), New Access Roads and Associated Landscaping Works'

Due to the site's sensitive nature and prominent location, a significant amount of survey and assessment work has been undertaken to inform and support the outline application.

Environmental Impact Assessment Process

The applicants have undertaken an EIA of the development proposals. This process, introduced by the European Union in 1985, is designed to improve the environmental design of a development scheme

as it is drawn up, whilst also providing those making the final decision about the planning application with sufficient information about the possible environment effects of the proposal before that decision is made.

The applicants have therefore prepared an ES to examine the potential environmental effects of the proposals. The ES accompanies the planning application and has been prepared by a team of environmental specialists.

THE SITE

Site Characteristics

The site, which was previously used as a non-domestic land fill site, known as the former 'frag tip' site, is currently used as an off-road motorcycle facility managed by Cardiff Council's Parks Service. The motorcycle facility utilises less than half of the site area. The site extends to an area of approximately 16.65 hectares (41.0 acres).

The site directly abuts:

- The Bristol Channel to the east;
- Its north-east boundary abuts the Rover Way Traveller site;
- The north-western boundary adjoins both Rover Way and the Sims Metals Ltd site; and
- To the south the Dwr Cymru Welsh Water STW and the AD plant.

The site was previously used for non-domestic landfill and specifically as a frag tip, now commonly known as ASR (automotive shredded residue). It is understood that this area was reclaimed, partially remediated and landscaped during the construction of the adjacent STW site to provide a local amenity. These works included the provision of a capping and membrane system, leachate collection, and gas venting provisions.

Subsequent to the completion of these works a large amount of uncertified fill was deposited on the site from various construction projects in the locality, notably St Davids 2 retail scheme, rendering a substantive amount of the previous remediation ineffective.

The site is located within close proximity to the Cardiff suburbs of Tremorfa and East Moors, in a south-easterly and easterly direction, respectively. The character of the site and its surrounds is a product of both its history, as a non-domestic landfill site and industrial workings including waste recycling, and its present function as a motocross track with further adjacent industrial facilities including a sewage treatment works and an anaerobic digester.

The site is located adjacent to a Site of Important Nature Conservation (SINC), Pengam Moors, to the north of the site and a Special Area of Conservation (SAC); Special Protection Area (SPA); Ramsar; and Site of Special Scientific Interest (SSSI), the Severn Estuary mudflats.

The site is located within the settlement boundary, as designated on the Proposals Map of the Cardiff County Council Local Development Plan.

THE PROPOSED DEVELOPMENT

The proposed development is for industrial accommodation, which will be mostly energized by the sources on site. The industrial units vary in size, from 7,100m² units at the north of the site, with a 22,000m² unit in the middle and 15,400m² unit at the south, with full articulated lorry access. This would provide circa 50,000m² of Low to Zero Carbon (LZC) industrial accommodation. To note, the roof form of the industrial units could be flat, be pitched or could have a saw tooth shape so to provide south facing angled roofs for long term photo-voltaic use and north facing roof lights. The solar energy from the roof together with the possible use of wind turbines, will ensure that the units will be low to zero carbon generation during use.

Development Principles

The site has been conceived to appear from behind a landscaped mound which surrounds the whole of the proposed development. The re-profiling of the material on site and partial removal, will allow sensitively landscaped bunds to be created, with a recessed platform provided for the power station and warehousing. Vehicle movements within the site will not be visible from the adjacent locations.

Whilst the application is to be submitted in outline, the indicative design of the low to zero industrial units have been heavily influenced by the environmentally sustainable nature of the development. The warehousing would be laid out in a series of units in the centre of the site, allowing flexibility depending on the ultimate demand for space. The roof design would comprise of a flat roof with south facing solar panels, or a multi pitched roof providing south orientated roof which creates south facing pitched plains ideal for the installation of photo-voltaic panels or a south orientated roof, with a north light. The north side of these roofs could be vertical, which would allow glazing to provide high levels of natural illumination. The saw tooth nature of the profile, reminiscent of some of the historic warehouse buildings in Cardiff docks.

The general site levels will be reduced from a current maximum of 30m above sea level to form building platform at 12m AOD for the industrial units. A bund will surround the development at around 20m – 22m AOD.

PLANNING POLICY

Future Wales (February 2021)

Future Wales – The National Plan 2040 is Wales’ national development framework which sets out the direction for development in Wales up to 2040. It is a development plan that sets out a strategy for addressing key national priorities including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and wellbeing of our communities. The spatial strategy is a guiding framework which sets out the key national policies that will guide and encourage development which supports sustainable growth in both urban and rural areas across Wales.

In particular, Policy 33 (National Growth Area – Cardiff, Newport and The Valleys) notes that “growth in the South East region should primarily be focused in Cardiff, Newport and the Valleys’. In particular, the policy notes how ‘Cardiff will remain the primary settlement in the region, its future

strategic growth shaped by its strong housing and employment markets and it will retain its capital city role, accommodating higher level functions and attractions'. In addition to this, the policy considers how the 'Welsh Government will work with regional bodies and local authorities in the region and in neighbouring regions of England to promote and enhance Cardiff, Newport and the Valleys' strategic role and ensure key investment decisions support places in the National Growth Area and the wider region'.

Planning Policy Wales (February 2021)

The 11th edition of PPW was published in February 2021 and sets out the land use policies of the Welsh Government (WG). The document states that land use planning should set the framework for the development and use of land, taking full account of economic, social and environmental issues.

It is set within the context of the Future Generations Act 2015 which places a duty on public bodies to carry out sustainable development. A Place Making Charter includes six principles that promote the placemaking agenda, namely :-

- People and communities
- Movement
- Mix of uses
- Location
- Public realm
- Identity

In addition, the document sets out the Key Planning Principles of

- Growing our economy in a sustainable manner (including generating renewable energy)
- Making best use of resources
- Facilitating accessible and healthy environments
- Creating and sustaining communities
- Maximising environmental protection and limiting environmental impacts (including integrated green infrastructure

One of the key aims of PPW is to promote sustainable development through the planning process. Of particular relevance in the case of the current proposal is:-

- (i) the use of Previously Developed Land (paragraph 3.55),
- (ii) transport and network management (paragraph 4.11),
- Integrated green infrastructure and development (paragraph 6.2.4) and
- (iv) unlocking the potential [of a site] by taking a derisking approach (paragraph 6.9.1)

The proposed development accords, therefore, with the key components of PPW 11

The Cardiff Local Development Plan was adopted in January 2016 and forms the statutory development plan for the area. Within the LDP, the key planning designations at the local level of relevance to the site and proposals are that the site is located partly within the Existing Employment Land identified as EC1.3 (Rover Way (Celsa Steel Works, Tremorfa Industrial Estate, Seawall Road)).

The LDP also includes a constraints map which identifies constraints to development within Cardiff. The constraints of relevance to the site are as follows:

- The Eastern Bay Transport Link;
- A Strategic Recreation Route – The Wales Coastal Footpath;
- A Site of Important Nature Conservation (SINC), Pengam Moors, to the north of the site; and
- The Severn Estuary mudflats to the south and east, which is designated as the following – Special Area of Conservation (SAC); Special Protection Area (SPA); Ramsar; and Site of Special Scientific Interest (SSSI).

ENVIRONMENTAL EFFECTS AND MITIGATION

Key Issues

In the context of the previous planning permissions 17/02130/MJR and 20/01279/MJR, consultation has taken place at various levels with Planning Officers and the relevant departments of the LPA to inform the form and content of the proposals.

It is anticipated that the environmental effects and mitigation for the current proposal will, in some respects, be the same as the previously assessed (not least in respect to the 'common' elements: the access works and the removal of fill material). The development proposals have, notwithstanding this, been considered and assessed afresh. Given that the previous proposals for the site have been deemed to be EIA development, the applicant has assumed the need for EIA for this proposal.

Following ongoing informal dialogue with Cardiff City Council, the responses received to the Pre-Application Consultation (PAC) process and drawing on the extensive acquired knowledge from the extant permission on site (including the former EIA, consultation responses to that application, and its consideration and evaluation), the applicant has taken an informed view with regards to the matters to be 'scoped in' to the ES for consideration. These include:

- Geotechnical Conditions and Contaminated Land;
- Ecology;
- Highways and Transportation;
- Visual Impacts; and
- Hydrology and Flooding;

The applicant welcomes confirmation of this via the screening and scoping exercise undertaken by the Local Planning Authority during the determination of the application, in accordance with Part 4 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.

The issues 'scoped-in' for consideration are assessed in detail in chapters 7-11 of the Environmental Statement submitted as part of this application.

Ecology

The site occupies an area of approximately 16.5 hectares. It lies immediately adjacent to the Cardiff foreshore, which is part of the Severn Estuary. This is a statutory protected site, designated as a Special

Protection Area (SPA), Special Area of Conservation (SAC), Ramsar site and Site of Special Scientific Interest (SSSI), mainly because of its value to estuarine waders and wildfowl.

Information on the statutory protected sites was obtained from the Natural Resources Wales (NRW) web-site. This search was limited to sites within 5km of the study area. A South East Wales Biodiversity Records Centre (SEWBReC) search was commissioned to provide data on protected and priority species and protected sites within a 500m radius of the 2014 wind turbine site. This covered the whole of the current study area but yielded very few records from the site itself.

A number of ecology surveys have been carried out since 2014. An extended Phase 1 habitat survey was undertaken on 7 July 2014, and this was followed by a series of bird studies between October 2014 and March 2015, to investigate whether the proposed turbine would affect overwintering birds using the estuary. Most recently the extended Phase 1 habitat survey was extended and revised to cover the current development site, by a survey on 1 August 2017, and a specialist survey of bees has also been carried out. A further Reptile survey of the site has also been undertaken. Relevant data from each of these reports has been included in this assessment. The results of earlier surveys that were carried out prior to the recapping of the Frag Tip have not been considered in the assessment because the site was almost totally reprofiled during the engineering works so that virtually none of the former habitat remains.

The Severn Estuary which lies immediately outside the site boundary is an important protected area, designated as SAC, SPA, Ramsar site and SSSI. There are five SSSIs within 5km of the site. The closest of these is the Severn Estuary. There is a high degree of overlap between the SSSI features and those already outlined above as part of the European site designations, so this SSSI is not discussed further here. The Gwent Levels Rumney and Peterstone SSSI lies approximately 2.5km north-west of the site, east of the Rhymney estuary. This is one of six Gwent Levels SSSIs between Cardiff and Chepstow. The levels are made up of low-lying fields which are drained by an extensive network of drainage ditches. The nature conservation interest in the Gwent Levels is primarily associated with the ditches, which support a rich diversity of plants and invertebrates, many of which are nationally rare or notable. The hedgerows and flower-rich reed banks also provide valuable habitat for invertebrates. The Gwent Levels SSSI is evaluated as being of nature conservation importance in a National context.

The Rhymney Quarry, Rhymney River Section and Penylan Quarry SSSIs lie approximately 2.6km, 2.8km and 3.2km north of the site respectively. These are all designated for their geological importance. They are not discussed further in this document because there would clearly be no potential impact on them from the proposed development.

The closest Site of Importance for Nature Conservation (SINC) is Pengam Moors, which lies to the north-west. Its closest point is approximately 20m from the Parc Calon Gwyrdd site, on the north side of Rover Way. Pengam Moors SINC occupies the former site of Cardiff airport, and later the Rover Car Works. Following demolition, the site has reverted to saline, marshy conditions. It includes a network of drainage channels with good emergent aquatic vegetation. It also includes areas of bare ground and scrub. The SINC supports a number of locally rare plants including Sea Clover, Brackish Water Crowfoot and Water Whorl-grass. It is also considered important for water fowl and wintering birds of prey.

There are no other SINC sites within 500m of the proposed development, but several lie just beyond this. The Rhymney River SINC is approximately 570m north at its closest point. This is connected to

the Lamby Saltmarsh SINC where it meets the estuary, and the Rhymney River Complex SINC further upstream. Between them they form a corridor of relatively unmodified estuarine and river habitats, with associated scrub and diverse grassland, which extends from the coast to approximately 2.5km inland. The Tidal Sidings SINC lies approximately 590m south west of the proposed development at its closest point. And beyond this lies the Cardiff Heliport Fields SINC. Both sites occupy post-industrial land that now supports a mix of flower-rich neutral and calcareous grassland and scrub. SINC sites are evaluated as being important for nature conservation in a County context.

A summary of the ecological features described above and their value at geographic scale are summarised below:

Ecological feature	Value (at geographical scale)
Severn Estuary	International (outside application boundary)
Rumney and Peterstone SSSI	National (outside application boundary)
Pengam Moors SINC	County (outside application boundary)
Rhymney River and associated SINCs	County (outside application boundary)
Tidal Sidings and Cardiff Heliport SINCs	County (outside application boundary)
Open Mosaic Habitat on Previously Developed Land /flower-rich grassland	County
Scrub and landscape planting	Within site boundary
Upper shoreline	Within site boundary
Plants	County
Invertebrates	County (precautionary assumption)
Amphibians	Within site boundary (precautionary assumption)
Birds (within site)	Local
Mammals	Within site boundary

The most important ecological feature in this assessment is the Severn Estuary, with several designations giving it international significance. This lies immediately adjacent to the site so the development proposals incorporate a number of measures to reduce potential disturbance of overwintering estuary birds and limit any temporary increase in the contamination from the tip would mean that there is no significant impact on the protected site during the construction works. The creation of a coastal bund would screen much of the potentially disturbing construction and operational activities, and the removal and remediation of tipped material would ensure that there is no impact on the protected site in the long term. In addition, there would be no impact on the Gwent Levels SSSI or any of the nearby SINC.

The features of greatest nature conservation value within the site are the mix of open mosaic habitat and flower-rich grassland, which support a diverse assemblage of wild plants and insects. These are all assessed as being important in a county context, yet they have all developed since 2001, and in the central area since 2009, following previous engineering works on the site. Virtually all of the existing habitats and their associated flora and fauna would be lost during the construction phase, because this would require the whole landform to be reprofiled. This would be a very severe impact, but one of a temporary nature. The proposed development would include at least 3.1 hectares of new landscaping on the bunds around the industrial area. The new landform would support less scrub habitat and bare ground, but a higher proportion of flower-rich grassland, with small patches of scrub and south-facing ridges that would be specifically designed and managed to favour wildlife. This would ensure that it

retains SINC quality habitat for plants and insects in the long term. In particular, suitable conditions for the nationally notable Brown-banded Carder Bee that is currently found on the site.

Birds and mammals were considered valuable for nature conservation in a more local context. Amphibians were also assumed to fall within this category for the assessment but may not actually be present. All of these groups would be taken into account in the new landscaping design, so that the overall effect on them would be neutral. In the case of amphibians, the creation of new ponds would probably be beneficial in the long term. The new landform would inevitably support a different mix of species than those that currently occupy the site, but many of the less common species should be retained and the management priorities would aim to favour species of greater nature conservation significance.

Contaminated Land

The circa 16.5 hectare development site sits in the industrial part of Cardiff Bay and has played a role in the long steel making history of the region. The site was reclaimed from the River Severn estuary in the 1970's by the placing of a layer of circa 8m of blast furnace slag generated by the adjacent steel making processes. The site was then used to support the scrap metal feedstock required by the adjacent Celsa steel making plant (formerly Allied Steel & Wire) which included the processing of scrap motor vehicles. The site was abandoned during the 90's with large quantities of non-ferrous automotive shredded residue (ASR) and other fill evident on the site. The shredded residue was contained to the south west of the site in a formal cell but the residue deposits to the north east of the site were not contained and believed to be interspersed in a random fashion with general non-domestic fill of the era.

ASR was produced in developed countries throughout the world from the 1970s through and beyond the 1990s. The shredding process of vehicles allowed with the use of electro- magnets the recovery of substantial quantities of ferrous residue. The remaining substantive residue constituents were:

- PVCs;
- PCBs;
- Heavy metals;
- Duff which comprised of fines including dirt.

Whilst the materials would generally be inert if undisturbed there were previous recordings of elevated levels of gas being generated from the ASR.

The site was then subject to a major landscaping and remediation scheme at the turn of the century which converted the site to a rich tract of grassed amenity land. The scheme essentially provided a containment solution of the ASR with importation of fill from the adjacent Dwr Cymru Sewage Treatment Works (STW) site and re-profiled the land with gentle gradients which were capped with imported sub and top soils before the implementation of a substantive landscaping and planting scheme. Potential risks for the site prior to remediation were essentially seen as:

- Combustion of the ASR by the self-ignition of gas pockets
- Leachate containing contaminants being generated by the passage of ground water through the ASR and mobilizing contaminants

The remediation proposals mitigated these effects by:

- The introduction of a passive gas venting system
- A site wide MDPE membrane overlaid with a drainage blanket to interrupt potential pathways and intercept and shed any ground water to the foreshore before it could percolate through to the lower horizons of the ASR and mobilize contaminants.

During 2006 Cardiff County Council developed a scheme to place substantive quantities of subsoils and blast furnace slags and re-profile the site for use as motor cross track. As developer, CCC applied for planning permission and implemented the scheme during 2007. There are no records of an Engineering Risk Assessment being carried out and these works could have compromised the mitigation measures previously carried out during the then recent landscaping and remediation as the works:

- Capped the passive gas vents
- Surcharged the existing overburden materials causing further settlements of the compressible ASR with potentially consequential tensile tears in the MDPE membrane. This could allow pathways to be created for groundwater allowing ground water to pass through the ASR and generate contaminated leachate.

It has been established that site has a substantive amount of overburden comprising subsoils and blast furnace slag. These overlay the ASR which historically was arranged in

- A capped cell with a clay type of capping material and believed to be 100% ASR located towards the south west end of the site – Zone 1;
- An uncapped cell and believed to be 60% ASR located towards the north east end of the site. The remaining 40% is believed to be general building waste and rubble – Zone 2.

Part of the reclamation scheme was to provide for the full containment of the ASR over the site and to ensure that no pathways were created for groundwater to pass through the ASR and mobilize contaminants. This would prevent the production of contaminated leachate.

The capping details included an MDPE membrane overlain with a drainage blanket which prevented groundwater percolation and the creation of 'pathways' between 'sources' of contamination (the ASR) and 'receptors' (the adjacent protected estuary).

In tandem with the MDPE membrane a passive gas venting system was also installed at this time.

As previously noted it is possible that following the surcharging of the site during the creation of the motor cross track in 2007, the MDPE membrane has been ruptured as the ASR is compressible and if compressed would have created substantial tensile forces within the MDPE.

The proposed development therefore proposes:

- To remove circa 1,000,000 tonnes of the overburden material to local development schemes that require general up-filling;
- The removal of the ASR in the Zone 1 cell by a specialist re-processor;
- Re-profiling of the site to give an interesting setting for development;

- The installation of a new gas venting system;
- The installation of a sealed membrane laid to positive falls overlaid with a drainage blanket to all unpaved areas to Zone 2;
- Monitoring of potential leachate pathways;
- 'Pathway' interception at +8.00 AOD of leachate with extraction wells;
- Soil washing of any leachate that has elevated levels of contaminants.

The site is a disused industrial site that had substantial quantities of ASR left in 2 distinct zones, one of which was in a formal capped cell and the other in an uncapped cell and intermingled with other waste thought to be mostly building related. The site was subjected to a comprehensive reclamation scheme at the turn of the century but was subsequently turned into a motor cross site with addition of substantial overburden materials in 2007.

The geology of the area typically comprises of the made ground associated with the site history, sitting over estuarial alluvium. Channel Gravels are situated beneath the alluvium which overlays the rock head comprising a stratum of the Triassic Mercia Mudstone Group (formerly known as Keuper Marl).

The proposal assumes a reduction by circa 1,000,000 tonnes of the overburden material and the reprocessing off site of the ASR from Zone 1 of the development site. The surpluses of overburden from Zone 2 will then be used by consolidating them over the whole of the site to form the development plateau.

The main impacts of the development with respect to ground conditions and contamination during the delivery and the operation of the development are:

- i) Health of construction workers
- ii) Creation of pathways between source and receptor for leachate to become contaminated and initially to reach the foreshore and possibly reach the tidal flow of the River Severn
- iii) Health of future site users from contaminants and landfill gas in the Zone 2
- iv) Migration of radon from the natural geology of the area

Mitigation measures to be implemented in response are:

- i) include the use of safe working procedures and good environmental practices, the Construction (Design and Management) Regulations 2015 and Pollution Prevention Guidelines
- ii) Monitor the underlying slag 'plate' at +8.00am to look for evidence of perched contaminated leachate during the construction process and ensure interception and remediation measures are put in place should the situation arise;
- iii) Provide similar measures to those that were installed circa 2000 for the retained contaminants in Zone 2;
- iv) Provide radon protection to vulnerable areas of the development that could be vulnerable to a build of radon gases.

Following the implementation of mitigation measures it is considered that a minor to moderate adverse impact remains for the health and safety of construction workers but other impacts are considered negligible following mitigation.

Transportation

12.1.1 The Transportation Chapter of the ES considers the potential impacts on various means of transport associated with the proposed development and the predicated associated effects on sensitive receptors in the area. It is based on the Transportation Statement submitted with the application. The movements associated with the Biomass Plant no longer need to be taken into account - this is a benefit. Also, the additional daily vehicle movements associated with the increase in B8 development are much lower than the reduction associated with recent and predicted long term effects on travel behaviour and the road traffic levels as consequence of the COVID-19 pandemic. Most recent DfT data suggests daily traffic flows could be between 10-25% lower than pre-COVID flows.

12.1.2 Therefore, the cumulative highways impacts are considered to be lower than those already approved and accepted in the context of the capacity of the surrounding highway network.

Visual Impacts

In considering the visual impacts of the proposed development, the neighbouring heavy industrial uses to the north and west form an important context. As a result of the development, the removal of fill material will facilitate the creation of a development plateau at approximately 12-14 metres AOD. The indicative site plans show the formation of bunds along the southeast and northwest boundaries to screen the development and provide enhanced landscaping features. The bunds would be a maximum of 22 metres AOD, thus creating approximately 8 to 10 metres screening to the development. The final development would likely be visible above the landscaped bunds. However, this in itself is not considered to be an issue as the final building designs and the landscaped bunds will be subject to detailed reserved matters approval. It is considered that these bunds have the potential to provide significant screening to the proposed development subject to their detailed design.

It is considered that the proposed development, whilst being visible from various viewpoints in the locality, is likely to have a negligible visual impact and the site will largely be viewed in the context of the existing heavy industrial operations immediately north and west of the site. Finally, in terms of visual impacts, views will also be possible from the Wales Coast Path, which will be upgraded as a result of this development. It is considered that through the sensitive landscaping of the site, any views from this Public Right of Way would not be significantly harmful.

Hydrology and Flooding

The hydrology and flooding chapter of the ES assesses the hydrological impacts associated with the development and incorporates a summary of the surface water drainage, foul drainage and flood risk.

The closest body of water, River Rhymney, is located 900m east of the site, where it outfalls into the Severn Estuary. The mouth of the River Taff is located approximately 3km to the south west of the site. Generally, the majority of the principal site area is open space. There are no significant existing impermeable areas located within the site. Hence, the overall site area can be described as having 'natural' drainage.

DCWW network map shows that there is a public sewer crossing the site where the proposed north entrance to the site is proposed. This sewer is of a combined nature and is shown to be 2.4m diameter. The sewer runs from a north-east to south west direction and ultimately ends in the treatment works. The sewer will have a designated easement which will need to be respected as part of the final layout of the proposed development. There are also a series of further DCWW sewers on the most northern corner of the site with combined sewers and surface water sewers located in the vicinity. These are located in an area that is not likely to impact the development proposals.

There is an opportunity through this development to introduce sustainable drainage solutions and address existing site issues which will protect the Severn Estuary marine sites from contaminated material known to be in the ground. The hydrology and flooding chapter recommends conditions to be attached to any subsequent planning permission for the proposals in order to secure a hydraulic modeling assessment and full details of the proposals for foul and surface water drainage. Similarly, the chapter notes how details of the management of the leachate, and segregating it from the surface water run-off will be important.

The hydrology and flooding chapter also notes that the part of the site that falls within Zone C2 on flood defence maps includes part of the access road that could be affected by a tidal event. However, the site has a secondary / emergency access at Tide Fields Road in the southwest which could be utilised in an extreme tidal event. Natural Resources Wales have no objection in this regard.

Finally, it is considered that satisfactory drainage solutions can be designed to ensure compliance with LDP Policies EN11 (Protection of Water Resources) and EN14 (Flood Risk).

CONCLUSION

The proposed mitigation measures include those that have been incorporated within the scheme as it has been designed, and those that have been specifically identified in order to overcome a potentially adverse effect.

Those mitigation measures that have either been 'designed in' to the scheme or can be incorporated as part of the detailed design stage, are known as 'inherent mitigation'. These measures have been identified where relevant within the ES, as they are intended to reduce or minimise the likelihood of an adverse environmental effect occurring.

With proper consideration and careful design of the mitigation measures, the development schemes at the application site need not conflict with environmental concerns. In terms of the scheme's environmental consequences, it can be concluded from the assessment carried out and recorded in the ES that the proposed development can proceed without causing an unacceptable impact on the local or wider environment, including the adjoining SSSI, Ramsar, SAC and SPA.

In terms of land contamination, following the implementation of mitigation measures it is considered that a minor to moderate adverse impact remains for the health and safety of construction workers but other impacts are considered negligible following mitigation. Given the issue of the damaged membrane and the likely environmental impacts of a 'do-nothing' scenario due to this, it is considered that the resultant negligible residual impact after mitigation is a significant environmental benefit of the proposed development.

Regarding the highways and Transport impact, the accumulative highways effects are considered to be lower than already approved in the previous application in the context of the capacity of the surrounding highway network. Therefore, there will be no negative effect.

The site is screened by planting and buildings from the majority of Tremorfa, and is significantly screened from Splott and the rest of the city by the Celsa steel works. Due to the relative flatness of the city and the orientation of streets there are few distant views of the site from further afield in the city. The main visual impact of the development would fall from the Severn Estuary as the proposed development would be highly visible from this location. The development would likely be a significant improvement to the current view, as it would screen the unsightly steelworks, repair the foreshore boundary and present a higher quality of architecture than the current developments in the area. As the proposed development is likely to be barely visible from the vast majority of the city, except a few local viewpoint where the impacts are considered to be minor / negligible, the overall impact of the development is considered to be negligible to moderate (positive) in terms of landscape / visual impacts.

The completed development will not be required to provide on-site retention of surface water to restrict flows due to discharging into the sea. Therefore, the impact on this medium sensitivity receptor will be negligible, resulting in a neutral effect which is not considered to be significant.

With the incorporation of the Enhancement and Mitigation Proposals the residual impact of magnitude would be negligible. The potential significance of impacts during the construction phase on surface water runoff, on and off site, would be considered to be reduced from moderate-minor adverse to negligible.

The overall effect of the scheme will be positive in some regards – i.e. it has been shown that positive effects will occur with regard to Land Contamination compared to the existing scenario, in some aspects. In other areas the effect has been shown to be neutral / negligible after mitigation. For this reason, it is recommended that, subject to the consideration of planning policy issues, the measured environmental consequences of the scheme support a recommendation to grant planning permission for the project.