DEVELOPMENT OF A MATERIALS RECYCLING FACILITY, TWO PLASTICS RECYCLING FACILITIES, A POLYMER LAMINATE RECYCLING FACILITY AND A HYDROGEN REFUELLING STATION ON LAND AT, PROTOS, INCE

ENVIRONMENTAL STATEMENT

VOLUME 4: NON TECHNICAL SUMMARY

September 2021

This Environmental Statement has been prepared in support of an application for planning permission for the above development. The Environmental Statement, planning application and associated documentation has been produced and co-ordinated by AXIS PED Limited with technical inputs from:

- AXIS – EIA Coordination and Landscape & Visual Effects;
- Ramboll – Ecology and Nature Conservation; and
- Fichtner – Air Quality.

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

1.1.1 This Environmental Statement (ES) has been prepared in support of a planning application made by Peel NRE Ltd for the development of a Materials Recycling Facility (MRF), two Plastics Recycling Facilities (PRFs), a Polymer Laminate Recycling Facility (PLRF) and a Hydrogen Refuelling Station ('the Proposed Development') on land at Protos, a strategic energy and resource management development, at Ince Marshes on land off Pool Lane/Grinsome Road, Ince.

1.1.2 This document is the Non-Technical Summary (NTS) of Environmental Statement (ES) and provides a review of the development proposals, and the possible environmental implications, in concise lay terms.

1.1.3 The Proposed Development would provide a total of up to 367,500 tonnes of recycling and recovery capacity per year. Each of the facilities would be capable of being constructed and operated independently. Whilst not all of the facilities would necessarily be constructed at once it is the Applicants intention to develop all of the facilities over time, with a flow of material between the different recycling and recovery plants. On this basis the total volume of material received at the Proposed Development would be less than the overall processing capacity.

1.1.4 The recycling facilities proposed would help increase the amount of UK based recycled material available for manufacturing of new plastic products. It would reduce the landfill and incineration of waste plastic and reliance on the export of waste plastic overseas for processing and recycling. This would deliver a number of environmental benefits including reducing greenhouse gas emissions. When compared to the alternatives of landfill or incineration the Proposed Development would give rise to CO_2 equivalent savings of between 192,146 and 685,737 tonnes per year respectively.

1.1.5 The Proposed Development would also provide the ability for hydrogen generated from the consented Plastics to Hydrogen facility on Plot 10B to be used as a sustainable fuel by hydrogen powered HGVs which serve Protos and the surrounding businesses.

1.1.6 The likely significant environmental effects of the Proposed Development are described fully within the Main Report (Volume 1). Illustrative Figures (Volume 2)

and Technical Appendices (Volume 3) provide supporting data for the assessments.

1.2 The Applicant

1.2.1 Peel NRE, part of Peel Land and Property (Peel L&P), works in partnership with investors, technology providers and business, together with the public sector, to provide bespoke real estate, infrastructure and operational solutions for the low carbon and circular economy sector.

1.2.2 Peel NRE owns and develops projects relating to energy generation, waste management and district heating. Peel NRE has achieved planning consent for a range of schemes in these areas, including the Protos energy and resource hub in Ince, Cheshire.

1.2.3 Peel NRE is a forerunner in the sustainable management of plastic waste. Their Plastic Park at Protos will help to manage some of the millions of tonnes of plastic waste generated in the UK each year and is part of Peel L&P's wider commitment to the UN Sustainable Development Goals, specifically goal 12 which focusses on sustainable consumption and production.

1.3 Background

1.3.1 Protos is a significant industrial development site with the benefit of planning permissions for industrial, commercial, waste, transport and energy uses. The principal planning permission was granted in 2009 (planning permission reference APP/Z0645/A/07/2059609), this development was referred to as Ince Resource Recovery Park. Protos has always been intended to deliver a series of integrated waste management facilities which contributed to the sustainable management of waste in Cheshire West and Cheshire and other local authorities in the northwest of England.

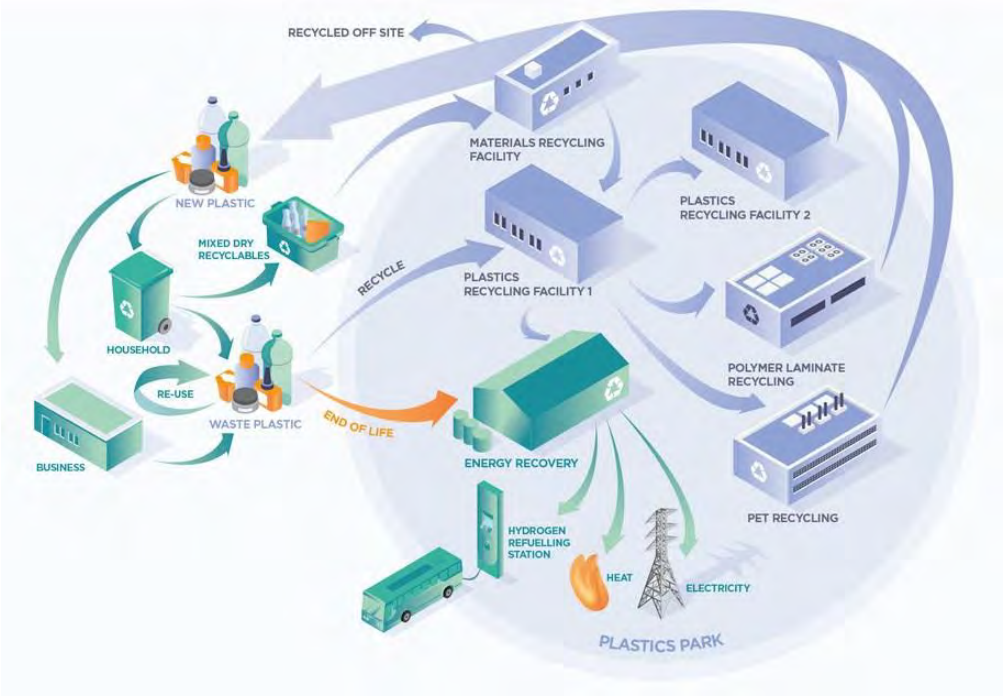
1.3.2 Subsequent to the grant of the outline planning permission reserved matters have been approved for detailed schemes across Protos. There have also been a series of standalone planning permission granted for different energy and waste developments across Protos, all of which were similar in nature to types of uses originally granted planning permission. These permissions include the plots where the Proposed Development would be located and so there is an expectation that these plots would be developed overtime.

1.3.3 The issue of how society manages waste plastic has been increasingly scrutinised in recent years. The government has estimated 2.3 million tonnes of plastic packaging waste was produced in 2017, with over half of this sent for disposal. However, estimates undertaken by other organisations have put the overall figure for plastics waste much higher, with a report in 2018 commissioned by the World Wildlife Fund identifying that 4.9 million tonnes of plastic waste was generated in the UK in 2014, with an estimate of 5.2 million tonnes of plastic waste being generated in 2018.

1.3.4 The Protos planning permission included provision for plastics recycling. However, as a result of technological advances and increased demand for plastic recycling capacity there was a need to revisit the approach originally envisaged. This planning application provides a contemporary solution to help meet the urgent need for more plastic recycling capacity. The Proposed Development, along with the with the PET Recycling Facility on Plot 13 and the Plastics to Hydrogen Facility on Plot 10B which have already been granted planning permission, form the ‘Protos Plastic Park’.

1.3.5 The Plastics Park is being proposed by Peel NRE as part of a more sustainable solution to dealing with the UKs plastic waste. It is a unique concept which would

deliver a cluster of recycling and recovery technologies that would enable mixed recyclables and pre-sorted plastics to be sorted, processed and recycled into products which can be re-used in plastics manufacturing all on a single site. Plastics which could not recycled would be used as feedstock for the plastics to hydrogen facility, providing a circular economy solution to waste plastic in this area of the north-west. The graphic below illustrates the broad concept of the Plastic Park.



1.4 The Site

1.4.1 The Proposed Development would be located across Plots 9B, 10A, 11 and 12 of Protos ('the Site'), covering an area of approximately 10 ha. In total Protos covers approximately 134 hectares of land, of which 54 hectares is consented for waste and energy related development. The remaining land being used for landscape and habitat creation works. The developer of Protos is Peel NRE.

1.4.2 The Site is located approximately 1.2km to the east of the village of Ince and 800m to the north of the settlement of Elton. The location of the Site is shown on Figure 1, which also illustrates the approximate location of the other development plots on Protos, as well as other planning permissions which have been granted across the wider Protos development area. Figure 2 illustrates the site location on an aerial photograph. The centre of the Site is located approximately on Grinsome Road roundabout at National Grid reference SJ 463 764. The Mersey Estuary is located circa 900m to the north of the Site and is designated as a Site of Special Scientific Interest ('SSSI'), Special Protection Area ('SPA') and Ramsar site.

1.4.3 There are a number of existing major industrial facilities in close proximity to the Site including the Encirc Glass Ltd, CF Fertilizers UK plant, the Ince Biomass Renewable Energy Plant and a 19 turbine wind farm. An Energy from Waste (EfW) Facility is also being constructed on Protos at present.

1.4.4 As well as the industrial sites described above, there are significant areas of agricultural land close to the Site, used for arable crop production and grazing.

3.0 ALTERNATIVES

3.1.1 A number of alternatives have been considered during the deign process for the Proposed Development including:

- Locations
- Layout and Scale
- Appearance; and
- Technology Choice

3.1.2 The precise location of the Proposed Development within the Protos site was reviewed in light of the size and shape of the remaining plots within the overarching masterplan and the intention to deliver an integrated and coherent hub for recycling plastic waste. On this basis the plots surrounding the Grinsome Road roundabout were selected.

3.1.3 The precise layout of the facilities was dictated by existing site constraints, including environmental considerations such as retention of woodland and wetland habitats, and the requirements of the specific facilities in terms of process flows and vehicle circulation.

3.1.4 Having established the key environmental constraints and other engineering and process requirements a range of layouts were developed. The final solution seeks to deliver a well designed entrace to Protos, focussing on users and visitors as they approach Grinsome Road roundabout and travel along the restricted byway that passes through Protos.

3.1.5 In relation to the appearance of the development the project architect reviewed a number of design options, selecting a design which provides a contemporary architectural solution for the entrance to the Protos development area. Alternative colours and material types were considered before determining that the selected design would deliver a modern feel to the innovative Plastics Park, that would also reduce its prominence when viewed in the wider landscape.

3.1.6 In relation to technology, the Applicant selected well established separation and recycling techniques for the main facilities that would be process the majority of the plastic received at Protos. However, consideration was given to a range of technologies which would help to manage the ‘hard to recycle’ waste plastics, resulting in the proposal to include the PLRF within the Plastics Park.

4.0 SCHEME DESCRIPTION AND CONSTRUCTION METHODS

4.1 Introduction

4.1.1 The Proposed Development comprises the following elements:

- A **Material Recycling Facility ('MRF')** to be located on Plot 10A which would sort, process and separate 75,000 tonnes of dry mixed recyclates.
- A **Plastics Recycling Facility ('PRF1')** to be located on Plot 11 which would separate 200,000 tonnes of mixed waste plastics into different plastics types for onward processing / recycling / recovery.
- A **Plastics Recycling Facility ('PRF2')** to be located on Plot 12 which would recycle 90,000 tonnes of pre-sorted waste plastics into recycled flaked plastic for re-use in plastics manufacturing.
- A **Polymer Laminate Recycling Facility ('PLRF')** to be located on Plot 9B which would recycle 2,500 tonnes of plastic aluminium laminates by splitting them into aluminium and high-value oil for re-use in plastics manufacturing.
- A **Hydrogen Refuelling Station** to be located on Plot 9B.

4.1.2 As set out in the introduction it is the intention of the Applicant that each of the above components could be delivered on a phased basis. Each facility could be run by an independent operator but the synergies between the various facilities lend themselves to an integrated approach, as is the case with other facilities on Protos.

4.1.3 The general arrangement of Proposed Development is illustrated on Figure 3. Figure 4 provides a series of 3D representative images of the Proposed Development.

4.1.4 The MRF, PRF1, PRF2 and the PLRF would operate 24 hours, throughout the year with occasional shutdowns for scheduled maintenance. All handling and process of materials would occur within buildings. The main processing hours for the MRF, PRF1 and PRF 2 would be 07.00 to 19.00 Monday to Saturday, with maintenance and cleaning activities occurring overnight. The delivery of waste and consumables to the facilities and the export of recycled products and residual wastes would also be undertaken during these hours.

4.1.5 The hydrogen refuelling facility would be capable of being used 24 hours, 356 days a year as an automated facility. However, on the basis that it is anticipated to

predominantly service vehicles already accessing Protos, its usage is likely to be limited to 07.00 to 19.00.

4.2 Material Recovery Facility

4.2.1 The proposed MRF would accept, separate and bulk up dry recyclables arising from household kerbside collections, commercial premises and waste management companies. The overall building height would be 15.1m to parapet. The building would contain:

- a general reception area for recyclables;
- a loading bay which would feed the sorting line;
- a sorting line, within which the dry recyclables would be mechanically separated (with some manual sorting/checking);
- balers and recyclables containers;
- storage for baled and loose recyclables;
- a reject handling area; and
- ancillary offices suite, workshop and staff welfare facilities.

4.2.2 Once fully operational the plant would process up to 75,000 tonnes of recyclables per year.

4.2.3 Recyclables would arrive at the facility in either conventional refuse collection vehicles direct from collection rounds, or in bulk haulage vehicles from other waste management facilities. All vehicles would weigh in and proceed to the reception hall inside the main MRF building.

4.2.4 The sorting system is designed to accept and separate:

- newspapers, magazines and pamphlets;
- mixed paper
- old corrugated cardboard
- light card (mainly food packaging containers);
- mixed plastics (Polyethylene Terephthalate (PET), High-Density Polyethylene (HDPE), Polyethylene (PE), Polypropylene (PP), Polyvinyl Chloride (PVC));
- ferrous and non-ferrous metals; and
- glass bottles and jars.

4.2.5 The MRF would be equipped with sophisticated automatic recognition and sorting processes to split out the different types of recyclable materials.

4.2.6 The separated plastics, card and metals would be stored within silos, baled and loaded into bulk transport vehicles for delivery to reprocessing plants, with the plastics taken to the PRF1 facility on Plot 11.

4.3 Plastics Recycling Facility 1 (PRF1)

4.3.1 The proposed PRF1 would process mixed waste plastics received from the MRF, separately collected mixed plastics (e.g. from Deposit Return Scheme sources), and other mixed plastic sources from offsite waste management facilities. The tallest element of the building would be the sorting hall which would be 16.1m in height to parapet, the material storage area would be 8m in height to parapet. The building would contain:

- a reception area for receiving baled and loose material for processing;
- PRF 1 sorting plant for separation into individual plastic types from a mixed plastic feedstock;
- a storage area for outputs from PRF 1, namely separated plastics, ferrous metal, non-ferrous metal, fuel outputs and rejects;
- air handling and filtration plant; and
- offices, workshops, control rooms and welfare facilities.

4.3.2 Once fully operational plant would process up to 200,000 tonnes of plastic per year. Plastics would arrive at the site via either transfer vehicles from the MRF or via bulk haulage vehicles from offsite waste management facilities.

4.3.3 The plastic would be stored within a dedicated feedstock storage building where it would be fed into the processing hall for sorting. The plastics would be processed using a number of separation and sorting technologies to extract the different types of plastics for recycling or recovery at the other facilities on Protos.

4.4 Plastics Recycling Facility 2 (PRF2)

4.4.1 The proposed PRF2 would process the separated recyclable plastics from PRF1 or other external supply chains by refining, washing and flaking the plastic so that it can be used directly in plastics manufacture as a direct replacement feedstock for virgin plastic.

4.4.2 The tallest element of the building would be the processing and washing hall which would be 16.1m in height to parapet, the material storage area would be 9.6m in height to parapet. The building would contain:

- a reception area for receiving material from PRF 1 and/or external supply;
- a purification plant for purification of separated plastics to a quality suitable for further processing;
- flaking facility where separated plastics are reduced into smaller flakes prior to washing;
- washing process for further cleaning of plastics;
- a storage area for outputs from PRF 2;
- air handling and filtration plant; and
- offices, workshop, control room and welfare facilities.

4.4.3 Once fully operational plant would process up to 90,000 tonnes of plastic per year. Plastics would arrive at the facility either via transfer vehicles from PRF1 or via bulk haulage vehicles from offsite direct source segregated providers.

4.4.4 There would be separate processing lines for each of the plastics being recycled at the facility. Plastics being processed would be subject to additional screening and sorting to ensure the production of high quality recyclable material.

4.4.5 The plastics would be mechanically broken into small uniform flakes. The flakes would then be processed within a series of washing lines to remove impurities, glues and labels. Cleaned, dried flakes would be bagged prior to export for use as a plastic manufacturing feedstock.

4.4.6 The facility would include air and water treatment processes to ensure the facility does not have impact local air quality or result in pollution to local watercourses. The water treatment facility would also enable the reuse of water in the process, reducing the fresh water demand from the facility.

4.5 Polymer Laminate Recycling Facility (PLRF)

4.5.1 The proposed PLRF would process laminated plastics such as crisp packets and baby food pouches which comprise aluminium with a plastic covering. The process would use microwaves to heat the waste plastic to generate a hydrocarbon oil from the plastic component. This would be reused in plastics manufacturing. Aluminium would be recovered from the process for recycling.

4.5.2 The building would be 9m in height to the parapet. There would be a gas engine emissions stack 12m in height and a flare stack 9m in height. The building would contain:

- a reception area for receiving plastic laminates;
- plastic laminate storage bays;
- a material preparation area;
- process area containing the pyrolysis unit and syngas distillation module;
- flue gas treatment facility; and
- offices, workshop, control room and welfare facilities.

4.5.3 Once fully operational the plant would process up to 2,500 tonnes of plastic laminate waste per year. Plastics will arrive at the site via bulk haulage vehicles from offsite sources (such as food manufacturing plants) or waste management facilities.

4.5.4 The plastic feedstock would be heated to temperatures of approximately 1,000^{o}C using microwaves. This would separate the plastic from the aluminium. The plastic component would be broken down into a hydrocarbon oil for reuse in plastics manufacturing and a hydrocarbon gas which would be piped to the on-site gas engine where it would be combusted to generate electricity. The electricity generated would power the facility.

4.5.5 The emissions associated with the gas engines would be typical of a conventional gas engine and would comply with the relevant emissions regulations for this type of plant. The emissions would pass through a flue gas treatment system before being released to atmosphere via a 12m high stack.

4.5.6 Based on a processing capacity of 2,500 tonnes of feedstock per year it is expected that the facility would produce circa 1,500 tonnes of hydrocarbon oil and 250 tonnes of aluminium for recycling.

4.6 Hydrogen Refuelling Facility

4.6.1 The hydrogen refuelling station would be located on the northern half of Plot 9B, to the north of the PLRF. Hydrogen would be supplied to the refuelling station via a pipeline running from the Plastics to Hydrogen facility on Plot 10B. It would also be possible to supply hydrogen to the refuelling station via tanker. The refuelling station would only be used by HGVs.

4.6.2 The refuelling station would have a capability to dispense sufficient hydrogen to refuel up to 40 HGVs. It is the intention for the refuelling station to predominantly serve HGVs which are already accessing Protos i.e. HGVs accessing other development plots and other nearby businesses e.g. Encirc or CF Fertilizers.

4.6.3 Refuelling would be undertaken using an automated dispensing and payment system so there would be no full time operatives on site. However, the facility would employ servicing and maintenance staff.

4.7 Employment

4.7.1 Table 1 sets out the employment generated by each of the development components. There would be a range of different employment opportunities with a mix of skilled operatives, technical engineers, administrative staff, and manual works.

Table 1 – Permanent Employment

Site Element	Full Time Equivalent
MRF	20
PRF1	60
PRF2	60
PLRF	6
Hydrogen Refuelling	1
Total Jobs	**147**

4.7.2 Additional jobs would also be created during construction. Employment opportunities would also be provided indirectly from the construction and operation of the various facilities, associated with the supply of materials and expendable products and for servicing and maintenance of the facilities.

4.8 Vehicle Movements

4.8.1 The daily 2-way HGV movements associated with the various development components is set out below in Table 2.

Table 2 – Daily Vehicle Movements

Site Element	Material In	Material Out	Ancillary	Refuelling	Total HGV
MRF	22	14	1	-	37
PRF1	38	38	2	-	78
PRF2	18	18	0	-	36

PLRF	1	1	0		2
Hydrogen Refuelling	-	-	-	20	20

* - Two way movements i.e. 2 movements = 2 in and 2 out

4.8.2 The overarching Protos planning permission limits the number of HGV movements permitted to access Protos to 718 daily 2-way HGV movements (i.e. 718 in and 718 out).

4.8.3 The Applicant is proposing to retain the overall HGV movements at Protos at 718 per day by re-allocating HGV movements from other development plots to the facilities as set out in Table 2.

4.8.4 As such when considered cumulatively with the other existing and potential developments at Protos, the Proposed Development would not exceed the total HGV movement currently permitted under the current overarching Protos planning permission. On this basis there would be no net change in HGV impacts as a result of the Proposed Development.

4.9 Construction Methods

4.9.1 The general construction activities associated with the construction of each of the components of the Proposed Development is summarised as follows:

- establishment of site compound and laydown area;
- bulk earthworks;
- construction of foundations;
- installation of buried services;
- erection of structural building frame;
- installation of wall and roof cladding;
- installation of main plant and equipment;
- external civil infrastructure (roads, car parking, fencing and lighting);
- testing and commissioning; and
- decommissioning of temporary construction compound and laydown area.

4.9.2 The timing of the construction works would be dependent on the grant of planning permission and subsequent contract negotiations / detailed design for each of the development components. However, it is currently planned that construction to commence in mid 2022 for the first of the facilities. The construction period would

vary depending on the facility being constructed, with the PRF1 and PRF2 likely to have the longest construction periods of approximately 24 months.

4.9.3 Construction operations would generally be limited to 07.30hrs to 18.00hrs Monday to Friday, 08.00hrs to 13.00hrs on Saturdays with no construction work on Sundays or Bank Holidays.

4.9.4 The construction access would be via Grinsome Road and the internal access roads on Protos. There would be construction compounds required for each of the developments. Depending on the phasing of these works the compound locations are likely to vary. However, they would all be accommodated within the wider Protos development area, as has been the case for the other developments undertaken to date on Protos.

4.9.5 A CEMP would be provided for each phase of construction, the purpose of which would be to manage and report environmental effects of the project during the construction period.

4.9.6 A CEMP for a project of this nature would typically cover the following key elements:

- drainage, water quality and hydrology;
- dust, emissions and odours;
- health and safety/site management;
- waste management;
- traffic management;
- wildlife and natural features;
- cultural heritage; and
- contaminated material.

5.0 SUMMARY OF EFFECTS

5.1 Landscape and Visual Effects

5.1.1 Chapter 5.0, together with the supporting Figures and Appendices, sets out an assessment of the likely significant landscape and visual effects of the Proposed Development.

5.1.2 The Proposed Development would comprise the development of four currently vacant plots within the wider Protos site. The whole of the Protos site benefits from outline planning permission for a variety of waste management facilities, and three of the four plots benefit from full planning permission for development of a similar nature albeit slightly lower in height than that which is now proposed.

5.1.3 The buildings proposed in each plot would be well designed and would be contemporary in style and clad in recessive colours. The accompanying landscape proposals would include new woodland planting, new hedgerows, new specimen trees, and new areas of wildflower grassland. Internally, each plot would include amenity areas intended to benefit both staff and biodiversity.

5.1.4 The location of the Proposed Development is such that a combination of existing large scale industrial development and mature tree cover would provide very effective screening of the new buildings from many locations. The Encirc facility to the south-west, CF Fertilisers to the south-east, and the Ince Biomass Plant to the east are all much larger in scale than any of the new buildings. Construction is underway on a new Energy from Waste facility to the north of the Ince Biomass Plant, which would also be considerably larger than the new buildings. Tall tree belts are present along Grinsome Road to the west of the Site, to the south of the Site, along the southern perimeter of CF Fertilisers to the south-east, and along the nearby railway and M56 motorway corridors. These all combine to greatly limit the influence that the Proposed Development would have over its surroundings.

5.1.5 From a very short section of National Cycle Route 5 (also a public right of way) that runs through the Protos site adjacent to the four development plots the new buildings would be clearly visible at close range. This would appreciably increase the influence of development upon the view. However, people passing through are likely to expect the presence of development, given the context of the surrounding existing contemporary buildings and structures and ongoing construction activity. As such, effects would not be significant.

5.1.6 From elsewhere, the influence of large scale industrial development upon this part of the Mersey Estuary is well established and the introduction of the Proposed Development would not change this. The Proposed Development would reflect the ongoing development of the wider Protos site, reflecting the transition to a more sustainable, 'circular' approach to waste management. Effects upon the character of the wider landscape and upon views across the landscape would not be significant.

5.2 Ecology and Nature Conservation

5.2.1 Chapter 6.0, together with the supporting Figures and Appendices, sets out an assessment of the likely significant effects of the Proposed Development upon ecology and nature conservation assets at the Site and within the surrounding area.

5.2.2 The ecological baseline at the Site has been characterised by completing an extended Phase 1 habitat survey, a desktop study and a suite of protected species surveys for reptiles, bats, water vole, otter and badger. Dispersion and deposition modelling undertaken as part of the Air Quality assessment allowed consideration of effects on sensitive ecological receptors in a wider context, including European designated sites.

5.2.3 The Site's importance in relation to ecology and nature conservation has been assessed using the best practice guidelines produced by the Chartered Institute for Ecology and Environmental Management (CIEEM)[1] and by the application of professional judgement.

5.2.4 Sensitive ecological features identified on the Site or within the area that could be affected by the project include the Internationally / Nationally important Mersey Estuary SSSI, SPA and Ramsar site; the Regionally important Frodsham, Helsby and Ince Marshes LWS; habitats of Local Level importance including wet ditches; and species of Local Level importance including European eel, bats and water vole. Himalayan balsam is also present on the site.

5.2.5 In the absence of mitigation, there is potential for significant impacts resulting from the spread of Himalayan balsam, an invasive plant, during the construction and

[1] *CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute for Ecology and Environmental Management, Winchester.*

operational phases of the Proposed Development. Following the application of mitigation, including an appropriate control / eradication strategy and adherence biosecurity protocol during construction, no significant residual effects are predicted.

5.2.6 Whilst not deemed to be significant, there is the potential for adverse impacts on the ecological receptors during the construction and operational phases of the Proposed Development.

5.2.7 As such a series of mitigation measures have been proposed which include:

- measures to avoid harm to European eel, amphibians and badger;
- appropriate vegetation clearance timings for breeding birds;
- precautionary tree-felling methodology and an appropriate lighting strategy for bats;
- capture and translocation of water voles, and the creation of non-development buffers around wet ditches for water vole;
- delivery of a net gain in water vole habitat, via creation of new habitats or enhancement of existing habitats; and
- standard working methods and good practice measures (such as pollution prevention and dust suppression measures) – all of which will be controlled through a CEMP – no significant residual effects are predicted.

5.2.8 In addition to the above mitigation, it should be recognised that the First Phase of the Protos development included the creation of two new ecological areas. These have been developed specifically to mitigate the ecological effects of development within Phase 1 of the wider Protos development, which includes the area now being proposed for the Plastics Park.

5.2.9 Following the implementation of the recommended mitigation measures and enhancements described above no significant residual effects are anticipated to result from the construction or operational phases of the Proposed Development.

5.3 Air Quality

5.3.1 Chapter 7.0, together with the supporting Figures and Appendices, sets out an assessment of the likely significant effects of the Proposed Development upon air quality, odour and human health.

5.3.2 During construction there is the potential for dust to be generated from earthworks and movement of plant and machinery. Mitigation measures have been recommended in accordance with best practice guidance, including implementation of a CEMP incorporating a dust management plan. Following implementation of these measures the residual effects are not likely to be significant.

5.3.3 Detailed modelling of the emissions from the PLRF have been undertaken. This modelling includes a series of assumptions that ensures a highly conservative assessment.

5.3.4 The assessment concluded that the effect of process emissions on human health and ecological receptors would not be significant, including effects on the Mersey Estuary SPA, SSSI and Ramsar site.

5.3.5 An assessment of the potential for impacts from dust and odour during operation has been undertaken and has shown that these impacts would not be significant.

5.3.6 Cumulative effects with other emissions sources at Protos has also been assessed. This assessment concluded that there is no risk of significant cumulative effects occurring.

5.4 Conclusion

5.4.1 The Proposed Development would involve the construction and operation of a Materials Recycling Facility (MRF), two Plastics Recycling Facilities (PRFs), a Polymer Laminate Recycling Facility (PLRF) and a Hydrogen Refuelling Station at Protos, Ince Marshes on land off Pool Lane/Grinsome Road, Ince. These facilities along with the PET Recycling Facility on Plot 13 and the Plastics to Hydrogen Facility on Plot 10b which have already been granted planning permission, form the 'Protos Plastic Park'.

5.4.2 The ES has provided a detailed assessment of Landscape and Visual, Ecology and Nature Conservation and Air Quality effects. In doing so it has assessed and evaluated all potential significant, direct, indirect, cumulative and in-combination environmental effects of the Proposed Development. Where adverse effects have been identified, measures envisaged to prevent, reduce, and if appropriate offset these have been described.

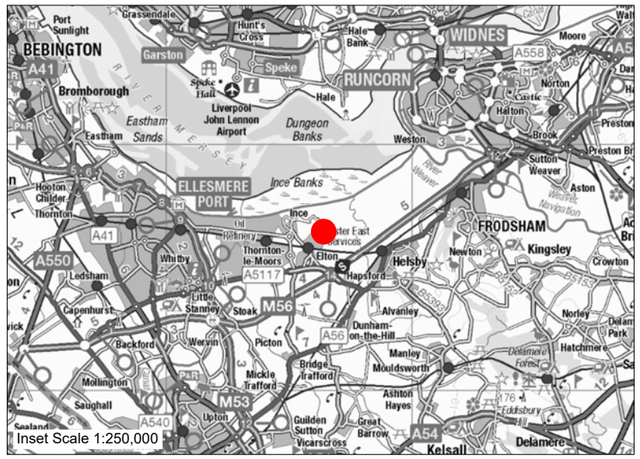
5.4.3 Following the implementation of the proposed mitigation there would be no significant adverse residual effects on the environment.

Figures

\\ax-cc-adc-01\Projects\2851-2900\2879-01 Protos Plastics Park\Dwgs\CAD\ES Figures\Figure 1.2 Site Location Plan.dwg

Note - Reference to Planning Permissions should be made for precise application boundaries

MERSEY ESTUARY



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Key:

- Site Location
- Proposed Application Boundary
- Resource Recovery Park (Protos) 14/02277/73
- Originally Consented Developments

Plot 1a&b	Dry Cargo Facility
Plot 2	Soils Treatment Facility
Plot 3	WEEE Facility (expired)
Plot 4	Wood & Timber Recycling Facility (expired)
Plot 5	Waste Management Facility
Plot 6	Plastics Village
Plot 7	Water Treatment Plant
Plot 8	RDF Facility (section 36 consent)
Plot 9	Ethanol Production Facility
Plot 10a&b	B1/R&D/Recource Recovery Business Centre
Plot 11	Commercial & Industrial Waste Transfer Station
Plot 12&13	Resource Recovery Village
Plot 14	Block Making Facility

- Biomass Renewable Energy Plant (BREP) (14/02278/S73) Now Operational
- Timber Recycling Plant (14/02271/S73) Now Operational
- Bio-Substitute Natural Gas Fuels Facility (18/04671/WAS)
- Substation (10/01489/FUL)
- Energy from Waste (EfW) Facility (16/03074/FUL)
- Plastics to Hydrogen Facility (19/03489/FUL)
- PET Plastics Recycling Facility (Undetermined) (20/04396/FUL)

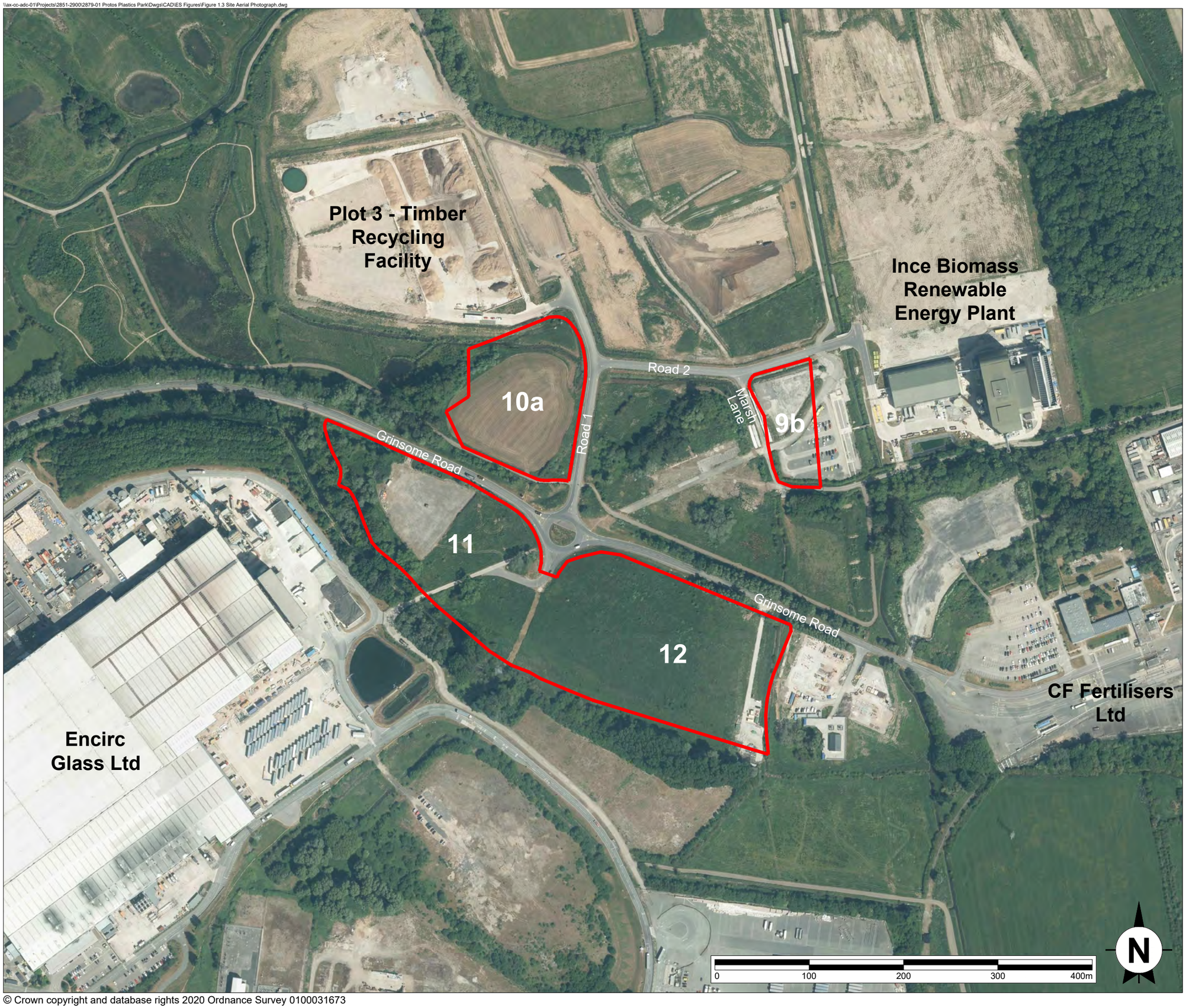
PROTOS PLASTICS PARK
Environmental Statement

NTS Figure 1

Site Location Plan

Scale	Date
1:10,000@A3	September 2021

\\ax-cc-adc-01\Projects\2851-2900\2879-01 Protos Plastics Park\Dwgs\CAD\ES Figures\Figure 1.3 Site Aerial Photograph.dwg



axis

Key:

Proposed Application Boundary

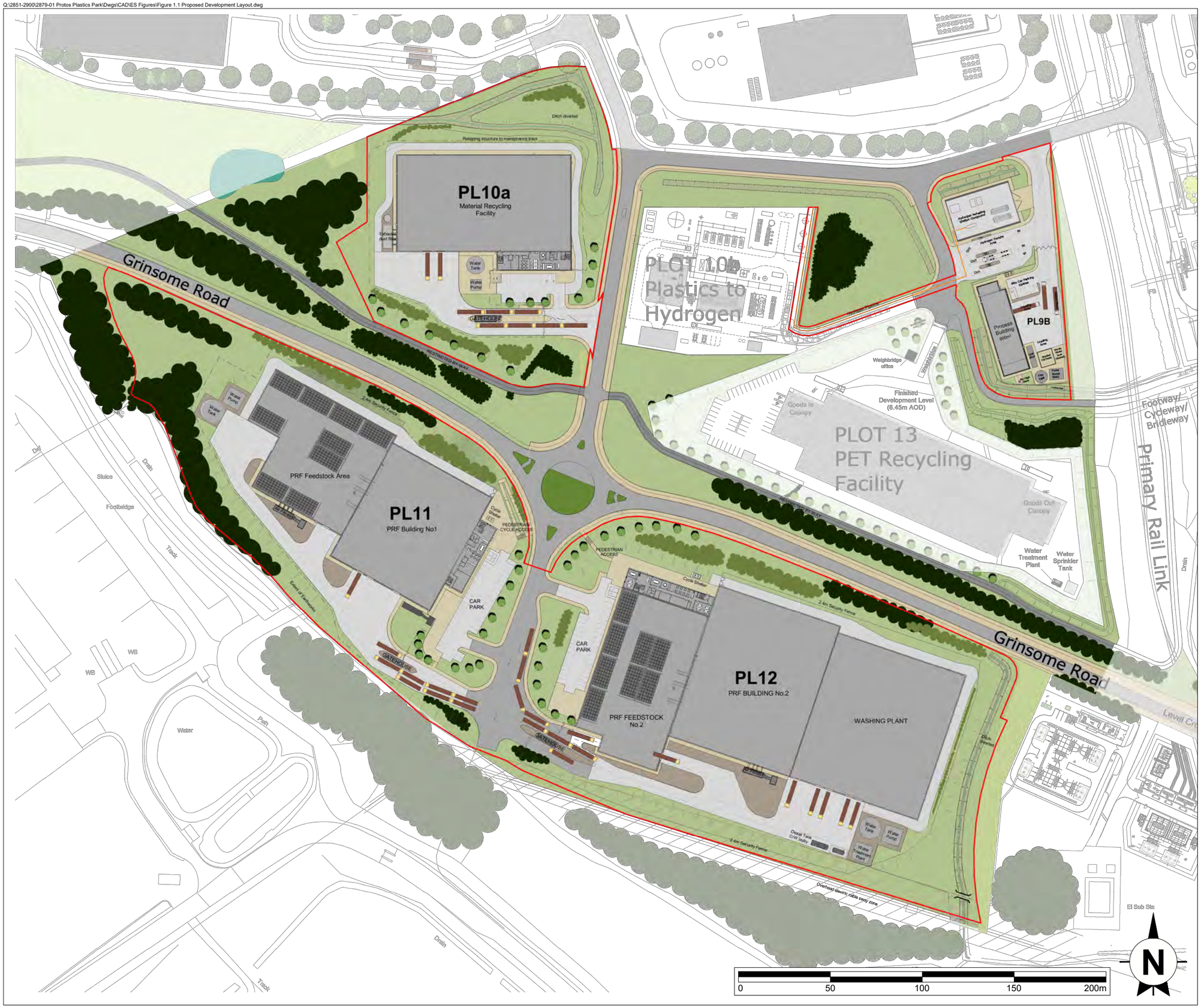
PROTOS PLASTICS PARK
Environmental Statement

NTS Figure 2

Site Aerial Photograph

Scale	Date
Not to Scale	September 2021

Q:\2851-2900\2879-01 Protos Plastics Park\Dwgs\CAD\ES Figures\Figure 1.1 Proposed Development Layout.dwg



axis

LEGEND

- Application Boundary
- Existing Woodland
- Existing Hedgegrow
- Proposed Hedgegrow
- Fence line
- Hydrogen Pipeline
- Overhead Electric cable sway zone

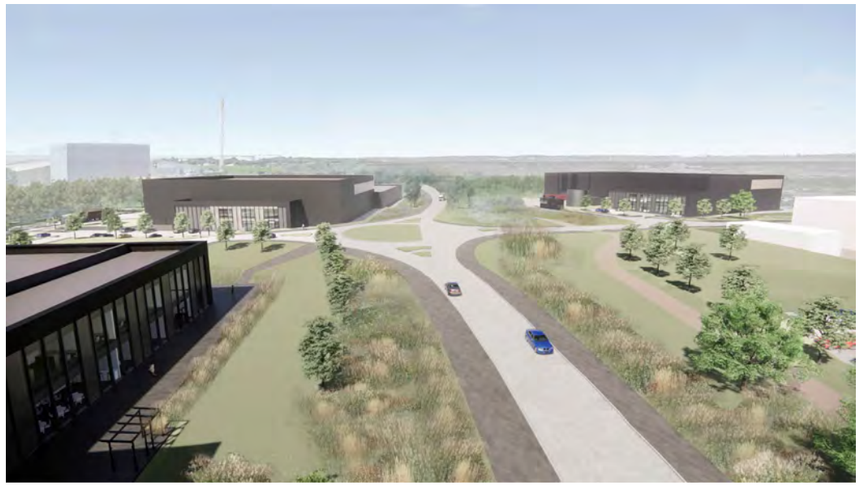
PROTOS PLASTICS PARK
Environmental Statement

NTS Figure 3

Proposed Layout

Scale	Date
1:2000@A3	September 2021

Q:\2851-2900\2879-01 Protos Plastics Park\Dwgs\CAD\ES Figures\Figure 4.1 3D Representations.dwg



View from the East

Plot 11 Frontage

Aerial View

View from Bridleway towards PL12

axis

PROTOS PLASTICS PARK
Environmental Statement

NTS Figure 4

3D Representations

Scale	Date
NA	September 2021