Heatons

Planning Environment Design

ENVIRONMENTAL STATEMENT

PLANNING APPLICATION CONSISTING OF:

INSTALLATION OF ADDITIONAL PRODUCTION LINE (LINE 4), INVOLVING A LATERAL EXTENSION TO AN EXISTING BUILDING AND THE INSTALLATION OF ASSOCIATED PLANT AND MACHINERY

at

UNIFRAX PILKINGTON SULLIVAN SITE, WIDNES, WA8 0US

Prepared By

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JUNE 2022

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Statement of Competence for the Preparation and Management of Planning Applications Subject to Environmental Impact Assessment

As per The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Part 5, 18 (5), in order to ensure the completeness and quality of the environmental statement:

(a) the developer must ensure that the environmental statement is prepared by competent experts; and

(b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.

Heatons is a consultancy with specialist planning knowledge of the minerals, waste, energy, commercial and housing development sectors. The Company was established in 1999 and employs planners and a landscape architect. All members of the professional team are RTPI Accredited Members.

Heatons has undertaken and managed Environmental Impact Assessments, and prepared and submitted Environmental Statements and Non-Technical Summaries since 1999.

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1. Introduction

1.1. Background

1.1.1. This Environmental Statement (ES) has been prepared on behalf of Unifrax (hereafter referred to as 'the Applicant') relating to the installation of an additional production line at the Applicant's Pilkington Sullivan site ('the site').

1.1.2. The site is part of the former Imperial Chemical Industries (ICI) Pilkington Sullivan Complex and currently comprises a manufacturing site for high-temperature fibres designed for a variety of industrial and commercial applications, including silica fibres.

1.1.3. There are currently three production lines present at the site, albeit Line 1 has not operated since 2018 and will not be restarting operations. Although Line 1 is currently being formally removed from service, for clarity the proposed additional production line hereby applied for is referred to in this ES as 'Line 4'.

1.1.4. Line 4 would be accommodated within the existing building which currently houses Line 3. The building was rebuilt in October 2017 under planning permission HBC ref. 17/00376/FULEIA following the demolition of the former building in April 2017 due to a fire.

1.1.5. The building was rebuilt with an identical footprint and space to accommodate a future additional production line. Line 3 was reinstalled, although in a different location from the former line. Line 4 would be located on the former Line 3 location from the previous building.

1.1.6. Line 4 would be used to facilitate the manufacture of a new silica fibre product for export which requires a lateral extension to the existing building and the installation of associated plant and machinery.

1.1.7. The silica fibre product is a key raw material for the production of SiFAB which is a revolutionary new silicon fibre product, developed by Unifrax, for use in the manufacture of Lithium-ion batteries as an anode material. SiFAB offers considerable improvements in charge density and battery life and it is planned to build the first SiFAB production line in USA.

1.1.8. This ES should be read in conjunction with the suite of accompanying planning application plans listed below:

- Site Location Plan (Drawing No. RAS-001-C-001);
- Proposed Building Extension Layout Plan (Drawing No. RAS-001-C-002);
- Proposed Building and Process Equipment Annotated Plan (Drawing No. RAS-001-C-003);
- Proposed Northern and Eastern Elevations Plan (Drawing No. RAS-001-C-004);
- Proposed Southern and Western Elevations Plan (Drawing No. RAS-001-C-005); and

- Proposed Building Annotations Plan (Drawing No. RAS-001-C-006).

1.2. The Applicant

1.2.1. Unifrax is an established leader in developing and mass-producing high-performance specialty materials and fibres, with over 75 years' experience. The Applicant employs over 2,700 employees worldwide, with 37 manufacturing facilities across 12 countries.

1.2.2. 'Saffil Limited' is the legal entity which includes Unifrax. As a result of a recent merger, Unifrax will be known in the future as 'Alkegen'. However, for the purposes of this Statement, its supporting Technical Appendices, and the wider planning application, 'Unifrax' is used to refer to the Applicant.

1.2.3. The Applicant operates across multiple industries and sectors, including electric vehicles, energy storage and batteries, automotive and aerospace, industrial insulation, filtration and fire protection. Across all fields the Company operate to rigorous quality standards, certifications, and compliance to global health, safety, and environmental regulations.

1.2.4. The Applicant is currently building a silicon fibre anode battery technology (SiFAB) production line which is nearing completion in Indiana, USA. SiFAB has been developed by Unifrax for use in lithium-ion batteries. The Widnes Site has been chosen by the Applicant as their desired location to manufacture and supply silica fibre product to the Company's Indiana SiFAB plant for conversion to SiFAB silicon anode fibre.

1.3. Availability of this ES

1.3.1. Copies of this ES can be purchased from the Applicant, via Heatons. Digital copies of the entire suite of application documents can be supplied to interested parties via electronic transfer without cost. Hard copies of this ES can be printed and issued to interested parties within the UK at a cost of £150 (including postage and packing). Digital and hard copies of application documents can be requested using the 'Agent' details provided on the accompanying Planning Application Forms.

1.3.2. The suite of application documents will also be made available on the Halton Borough Council website once the application has been validated.

2. The Environmental Impact Assessment Regulations and Scoping Opinion

2.1. Environmental Impact Assessment Regulations

2.1.1. The need for an Environmental Assessment is considered under the terms of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('The Regulations'). On behalf of the Applicant, Heatons has prepared this ES and accompanying supplementary information in order to adhere to the above Regulations in recognition that the proposed development is EIA-development.

2.1.2. The Regulations set out the list and descriptions of development which is categorised as 'Schedule 1 development', requiring Environmental Impact Assessment and the preparation of an Environmental Statement. Schedule 1 includes the carrying out of development to provide:

> "6. Integrated chemical installations, that is to say, installations for the manufacture on an industrial scale of substances using chemical conversion processes, in which several units are juxtaposed and are functionally linked to one another and which are—
>
> *(a) for the production of basic organic chemicals;*
>
> *(b) for the production of basic inorganic chemicals;*
>
> *(c) for the production of phosphorous–, nitrogen– or potassium-based fertilisers (simple or compound fertilisers);*
>
> *(d) for the production of basic plant health products and of biocides;*
>
> *(e) for the production of basic pharmaceutical products using a chemical or biological process; or*
>
> *(f) for the production of explosives."*

2.1.3. It is considered that the development proposed in this application falls within Schedule 1. On that basis, the Applicant sought Halton Borough Council's Scoping Opinion in their role as local planning authority in November 2021, with regard to the scope of the EIA required.

2.2. Scoping Opinion

2.2.1. The Council's Scoping Opinion was adopted on 20th December 2021 (HBC ref. 21/07134/PREAPP).

2.2.2. In preparing the ES, the Applicant and its consultants have identified, described and assessed in an appropriate manner, the direct and indirect significant effects of the proposed development on the following:

- Population and Human Health;

- Biodiversity;
- Land, Soil, Water, Air and Climate;
- Material assets, cultural heritage, and the Landscape; and
- Interaction between the first four bullet points.

2.2.3. An Environmental Impact Assessment has been carried out to determine the likely impacts of the proposed development with regard to The Regulations. In accordance with the Scoping Opinion adopted by the HBC in December 2021, the following matters have been covered through the Environmental Impact Assessment for this project, and summarised in this ES:

- Landscape and Visual Impact
- Nature Conservation and Ecology;
- Traffic and Transportation;
- Noise and Vibration;
- Air Quality;
- Ground Conditions;
- Water Resources;
- Climate Change; and
- Heritage Impacts;
- Alternatives; and
- Cumulative Impacts.

2.2.4. This ES has been prepared by Heatons alongside numerous technical appendices prepared by the Applicant's team of technical consultants, all of whom are suitably qualified and benefit from an understanding of the site and significant experience of similar proposals to that contained within the scope of this planning application.

2.2.5. The appointed team of technical specialists are as follows:

Landscape and Visual Impact:
Heatons

Nature Conservation and Ecology:
Heatons

Traffic and Transportation:
AECOM

Noise:

Hepworth Acoustics

Air Quality:

RAS

Ground Conditions:

CC Geotechnical

Water Resources:

BSP

2.2.6. A Non-Technical Summary has been provided.

3. Site, Location, & Setting

3.1. Site Background

3.1.1. The site is part of the former Imperial Chemical Industries (ICI) Pilkington Sullivan Complex and has been occupied by Saffil since 1977. The Pilkington Sullivan site has an extensive history of industrial uses, with soda ash manufacture taking place on-site from 1865-1926. The site is well-known for its uses as part of the ICI's portfolio of chemical manufacturing plants.

3.1.2. Fibre production at the site began in 1978, utilising Line 1. Line 2 was added in June 2004 and Line 3 was completed in December 2012. Currently Line 1 is not operational and will not be restarted.

3.1.3. At present, the site comprises a manufacturing site for high-temperature fibres designed for a variety of industrial and commercial applications, including silica fibres.

3.1.4. The building which is proposed to accommodate the new Line 4 is located on the footprint of the former Line 3 which was demolished following a fire in April 2017. The building has since been rebuilt with an identical footprint which includes space to accommodate a future additional production line. The current building was rebuilt in accordance with planning permission HBC ref. 17/00376/FULEIA (dated 9th October 2017). The original permission for the building also permitted the erection of an electrical switch room and process plant was granted in 2006 (HBC ref. 06/00936/FUL).

3.2. Site Location

3.2.1. The Site Location Plan (Drawing No. RAS-001-C-001) accompanying this planning application illustrates the location of the site in the context of its surroundings.

3.2.2. The site is situated circa 1.3km from Widnes town centre, 800m to the north of the River Mersey with the disused St. Helens Canal, a railway, and intervening disused former industrial land situated in between.

3.2.3. The site is accessed off Moss Bank Road leading into Sullivan Road and smaller internal industrial roads. The site has convenient access to the wider strategic highway network with Moss Bank Road connecting further onto the A557 and A562.

3.2.4. The site is located within 1km west of the decommissioned Fiddlers Ferry Power Station and the wider site is within 200m of new residential development at Tanhouse Lane to the west. The residential development at Tanhouse Lane is currently being built out following a grant of planning permission in March 2020 (HBC ref. 19/00235/FUL).

3.2.5. The site comprises 3.7-hectares of land within the ownership of the Applicant, located within the long-established industrial Moss Bank area of Widnes.

3.2.6. The entire site falls within use class B2 'General Industrial' and lies adjacent to the ICONiChem Works separated by Moss Bank Road and in close proximity to other well-established industrial uses and more modern light industrial units. A landfill operated by Broadthorn Developments Ltd is located east of the site utilising the same site access point off Sullivan Road.

3.2.7. The majority of the land surrounding the site, with the exception of new residential properties currently being developed at Tanhouse Lane, is dominated by longstanding industrial uses (either active or disused) and waste management.

3.3. Site Setting

3.3.1. The site is relatively flat with a slight slope to the south, towards the Mersey. The site surface is at an elevation of approximately ten metres above sea level. The entirety of the site is within Environment Agency Flood Zone 1 (representing land at lowest risk of flooding from fluvial sources).

3.3.2. The site is not located within a National Park, Green Belt, or Area of Outstanding Natural Beauty. However, it is located close to an area of Special Landscape Value.

3.3.3. The site is situated within the Mersey Forest which covers a significant area across Merseyside and north Cheshire, totalling over 1,100km^2.

3.3.4. There are no Sites of Special Scientific Interest located within 2km of the site. The Mersey Estuary SSSI and the Mersey Estuary Special Protection Area (SPA) are both located 2.5km south-west of the site at their closest point. The Mersey Estuary is also a designated Ramsar site. However, the closest part of the designation to the site is also 2.5km south-west of the site, west of the Silver Jubilee Bridge (A533) Mersey Crossing.

3.3.5. There are limited number of sensitive visual receptors close to the site, with no sensitive receptors within the immediate setting. The closest listed buildings are Grade II 'Brick Sewer Vent' located circa 1.2km north east of the site and Grade II 'Roman Catholic Church of St Marie' located over 1km west of the site in the centre of Widnes.

3.3.6. There is one Local Nature Reserve located within 2km of the site.

3.3.7. There is a non-designated visitor attraction 'Future Flower', a non-designated visitor attraction located just south of the St Helens Canal and railway line c. 700m from the site.

3.3.8. Two public rights of way located near the site. The Widnes – Penketh section of the long distance 'Trans Pennine Trail' walking and cycling route is located on the far side (southern side) of the canal and the railway line itself (classified as W/67). National Cycling Route 62 (Diversion) connects from the St Helens Canal, traversing north near the western boundary of the site then turning west connecting to the A557 Queensway.

4. Details of Proposed Development

4.1. Introduction

4.1.1. The proposed development comprises a lateral extension to the existing building which contains Line 3, and the installation of associated external plant and machinery forming a new production line.

4.1.2. The proposed additional line ('Line 4') would effectively act to replace production at Line 1, which ceased operation in December 2018. However, the new Line 4 would be capable of manufacturing a new product which would be exported from the site to the USA for conversion to SiFAB silicon fibre anode material, used in Lithium-ion battery manufacture.

4.1.3. For operational reasons, it is not possible to utilise Line 1 for the manufacture of the product proposed to be manufactured along Line 4. Line 1 is currently being formally removed from service.

4.1.4. The benefits of using SiFAB in lithium-ion batteries are multiple but include increased energy density for batteries used in electric vehicles which increases the length of journey that an electric vehicle can travel before requiring a recharge.

4.1.5. Batteries containing SiFAB anode material batteries also offer vastly improved performance in many fields, including:

- consumer electronics such as mobile phones;
- power storage from renewable energy sources such as solar panels;
- the aerospace industry; and
- cordless power tools.

4.1.6. Batteries containing SiFAB anode material generally provide smaller, lighter, and longer lasting alternatives than currently available battery technology.

4.2. Main Elements

4.2.1. The main elements of the proposal are shown in the Proposed Building Extension Layout Plan (Drawing No. RAS-001-C-002) and are as follows:

- Installation of an alumina fibre production line ('Line 4') and associated plant equipment; and
- Lateral extension of an existing building, on its eastern elevation.

4.2.2. A more detailed annotated version of the Proposed Building Layout Plan is also provided accompanying the planning application (Proposed Building and Process Equipment Annotated Plan, Drawing No. RAS-001-C-003).

4.2.3. The lateral extension measures 48m deep, with a height (12m) and width (25.5m) matching the existing building. The proposed extension would extend the building by a total of 1,224m^2. This represents a relatively modest increase in the footprint of the building, which are present measures c.3,290m^2.

4.2.4. A trailer loading cover is proposed to be attached on the northern and southern elevation of the extension.

4.2.5. The proposed plant equipment (comprising abatement, dust extraction, and ventilation) will be constructed outside the main building on the southern elevation. The structure and design of the plant equipment will be identical to the existing exterior plant equipment associated with Line 3, with a maximum stack height of 40m, as illustrated on the Proposed Elevation Plans which accompany the planning application (Drawing No.s RAS-001-C-004 and RAS-001-C-005).

4.2.6. A dedicated Line 4 solutions storage and preparation area is proposed to be installed in an area of the site formerly associated with the now-redundant production Line 1. The location of the proposed storage solutions area is shown on the accompanying Proposed Building Alterations Plan, Drawing No. RAS-001-C-006).

4.2.7. The proposed solutions storage area would be built in place of currently redundant external pipework and equipment associated with the former production Line 1. The redundant pipework and equipment would be removed to facilitate the use of the area for the solutions storage associated with the proposed production Line 4.

4.2.8. The production facilities for Line 4 are supported by existing utilities and services already on the site which include:

- Raw material and finished product storage;
- Process and cooling water;
- Water treatment;
- Steam production and distribution;
- Atmospheric emissions treatment;
- Neutralisation plant;
- Warehousing;
- Laboratories; and
- Engineering workshops.

4.2.9. Lines 2 and 3 manufacture alumina fibre for export from the site prior to use primarily in automotive applications including catalytic converters and diesel particulate filters. Lines 2 and 3 will not be impacted by the proposed development of Line 4.

4.2.10. It is proposed that Line 4 will manufacture finished products in a similar way to Lines 2 and 3. However, as Line 4 is creating a different finished product with a different manufacturing process it may require additional spinning chambers for similar overall output.

4.2.11. An extension to the Line 3 building is therefore required due to the probable increased length of the spinning section and additional fibre handling and packing equipment at the end of the line. Line 4 cannot therefore be accommodated within the existing dimensions of the Line 3 building.

4.2.12. Finally, newly planted vegetation is proposed in the form of native climbers along the site's southern boundary.

4.3. Transport

4.3.1. HGV traffic movements associated with Line 4 will enter the site via Moss Bank Road, as vehicles associated with all other production lines do. Once on-site, HGVs will operate via a one-way system within the site, as shown on the Plans accompanying this Statement.

4.3.2. The HGVs routing will be used for the deliveries of caustic and raw materials to enable the production of the silica fibre product. The route will also be utilised for maintenance and inspections. This route will still enter and exit the site via Moss Bank Road.

4.3.3. From Moss Bank Road, HGVs will exit onto Tan House Lane or Gorse Lane which both connect onto the A562 and thereafter the wider highway network.

4.3.4. Traffic movements will equate to an additional six trips per day (three in and three out), additional to the 12 trips generated by the two existing operational production lines at the site.

4.3.5. Traffic and transport is discussed in greater detail in Chapter 8 of this ES.

4.4. Operating Hours

4.4.1. Manufacturing operations at the site currently operate 24 hours / day, 7 days per week and will continue to do so under these proposals.

4.4.2. Traffic movements (in and out) which includes HGVs and employee/ contractor/ visitor vehicles are limited to between the hours of 0800-2000 hours, usually Monday – Friday, although there is occasional weekend traffic.

4.5. Employment

4.5.1. The Pilkington Sullivan site currently has 83 direct full-time employees as well as supporting indirect jobs in the supply chain. The proposed development will generate an additional 38 full-time jobs as well as increasing the number of indirect jobs. 35 of these jobs will be spread across five shift patterns, with seven employees typically working on Line 4 at any one time

(1no. supervisor/leading operator, 4no. operators, 1no. maintenance, and 1no. QC). A further three jobs will be directly created in the form of day-based maintenance, day-based warehouse/general operator, and day-based process engineer.

5. Alternatives

5.1. Introduction & Methodology

5.1.1. Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 sets out information that should be included in an Environmental Statement and indicates that this should include: "a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

5.1.2. This assessment of alternatives to the development proposed within this application has regard to relevant development plan policy, Government planning guidance, and the EIA Regulations 2017.

5.1.3. In terms of approach, it is considered neither practical nor necessary to look at every single alternative option. Instead, consideration of the main alternatives considered is undertaken below.

5.2. 'Do Nothing' Approach

5.2.1. The first consideration in terms of an alternative assessment is the 'do nothing option'. In practical terms, this would result in the site continuing to operate the existing production lines (2 and 3) and not facilitate the production of a new silica fibre product for export. This would result in vacant space not being utilised for an additional line within the existing building which houses Line 3, but was designed with capacity for Line 4.

5.2.2. A 'do nothing' approach would not enable the Applicant to manufacture the silica fibre products required to be utilised at the SiFAB manufacturing site. A 'do nothing' approach would also not deliver the many other benefits of the proposed development, including the associated direct job creation that the proposed Line 4 will deliver.

5.3. Alternative Locations

5.3.1. The Applicant has considered alternative locations for Line 4 with regard to the use of alternative sites to the Widnes Pilkington Sullivan Site, and alternative locations for Line 4 within the Pilkington Sullivan Site.

5.3.2. A key benefit of the application site housing Line 4 is the successful operation of alumina fibre production at the Pilkington Sullivan Site for over 30 years. On a broad scale, the site is an ideal location for continued fibre manufacture, given its longstanding use as a site for chemical processing and significant employment uses in the industrial sector.

5.3.3. The site harbours extensive knowledge of the process and proposed operations. Furthermore, overall site infrastructure and health and safety standards required for this type of development are already in place.

5.3.4. Within the site itself, alternative locations for Line 4 have been discounted as the existing building housing Line 3 at the application site was designed to accommodate an additional production line when it was constructed. It is therefore logical to accommodate Line 4 within the building designed to accommodate it.

5.3.5. It is not considered to be preferable to the Applicant in economic and sustainability terms to construct an entirely new building to house the proposed Line 4 when the existing building has long been earmarked to accommodate it.

5.4. Alternative Design

5.4.1. As aforementioned, it is neither practical nor sustainable to build a new building to house the proposed new Line 4 as provisional space has already been provided within the existing building which accommodates Line 3. Due to the process to manufacture the new silica fibre product proposed to be produced, the space required to operate the new Line 4 needs to be longer than production Line 3.

5.4.2. The site of the proposed development has sufficient space to accommodate the lateral extension, without compromising existing operations at the site.

5.5. Alternative to Export via Road

5.5.1. The Applicant has considered the potential for exporting finished product from the site by means other than road haulage. It is concluded that there are no viable alternatives to the export of the product by road. Exporting the new silica fibre product by road is the only option available to the Applicant and would be the same mode of transportation being taken by the products produced in both Lines 2 and 3.

5.5.2. As considered later within this ES, HGV movements to/from the site associated with Line 4 are not concluded to be of such significance that they pose an unacceptable adverse impact on highway safety and/or the capacity of the road network.

6. Landscape and Visual Considerations

6.1. Policy Context

6.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

6.1.2. The NPPF and Halton Borough Council DALP (2022) collectively contain many relevant policies and text concerning the protection and enhancement of landscape. In particular:

- NPPF (as amended 2021) paragraphs 130, 174 and 185;
- DALP (2022) Policies, CS(R)18, CS(R)19, CS(R)20, HE3 and HC7.

6.1.3. In accordance with the Scoping Opinion, Heatons have undertaken a Landscape and Visual Appraisal of the site which considers any relevant statutory and non-statutory landscape designations as well as the current baseline landscape character. The proposed development has been considered in the context of the site's current landscape character and the potential for visual impact on identified receptors.

6.1.4. Representative photo viewpoints accompany this ES at Technical Appendix A. The viewpoints supplement the conclusions of the Landscape and Visual Appraisal, which is detailed in remainder of this ES Chapter.

6.2. Baseline Landscape Context

Landscape Designations

6.2.1. There are no national landscape designations within the application site or immediately surrounding area.

6.2.2. The site is allocated as "Primarily Employment" land within the Halton Delivery and Allocations Local Plan (adopted 2nd March 2022), in an area known as Moss Bank and which extends northwards into Widnes and southwards to a narrow strip of "Waste Allocation" and onto the St Helens "Canal". There are several environmental policies relating to land along and to the south of the canal and up to the River Mersey, including a Local Wildlife Site and Greenspace (St Helens Canal and Widnes Warth Nature Reserve), with a Greenway along the canal towpath and a Visitor Attraction associated with the Future Flower Sculpture located on the opposite (southern) side of the canal.

6.2.3. The canal towpath is also part of the Trans Pennine Trail, a promoted long-distance recreational route, which connects Southport and Hornsea, whilst the diverted section of National Cycle Network (NCN) 62 follows along Tan House Lane, to the west of the site and connects with the canal towpath to the south-east.

Landscape Character

6.2.4. The site is located within the National Character Area: 60 "Mersey Valley", a wide low-lying river valley landscape, which is associated with the River Mersey, its estuary, associated tributaries, and waterways and encompasses a complex mix of extensive industrial development and urban areas, with farmland in between.

6.2.5. At a local level the site is identified as being located within an area of "Settlement" in the Halton Landscape Character Assessment 2009 with the "Upper Mersey Estuary" landscape character area to the south.

6.2.6. The Executive Summary of the Halton Landscape Character Assessment describes how "*The physical landscape is strongly influenced by the River Mersey which flows through the central part of the borough and is characterised by mudflats and salt marsh, industry, agriculture and recreation along its fringes."*

6.2.7. The description of the "Upper Mersey Estuary" includes reference to how "*Development visible within the urban areas of Runcorn and Widnes includes industrial and commercial development of simple functional style often with large metal clad facades and few windows. Where present, industry is taller than other adjacent built form and is distinctive on the skyline."*

6.2.8. Within the vicinity of the site, there is a clear contrast in the landscape character of the built up, "Settlement" areas to the north of the railway line and the more open and naturalistic "Upper Mersey Estuary" to the south (including the canal).

6.2.9. The Moss Bank area is long-established as industrial uses, with the site being accessed via Sullivan Road and Moss Bank Road and onwards to the wider strategic highway network to the north (at the A557 and A562). The topography at this location slopes slightly to the south at approximately 10m AOD.

6.2.10. The existing development at the Pilkington Sullivan Site includes a grey coloured, metal-clad industrial building (approximately 204m long, east to west by 26m wide, north to south and 11m high to ridge and 9m to eaves) and includes external plant (air, effluent / abatement area and dust extraction), tanker loading bays, forklift, and plant storage, as well as taller stacks (2No. at 40m high, 1No. at 30m high and 1No. 28m high). There is hardstanding surrounding the existing building, with grey palisade fence around site boundaries, including adjacent to the railway line to the south and Tan House Lane to the west.

6.2.11. Residential development, including proposals for access, open space and associated infrastructure was consented on land to the west of NCN 62 Diversion / Tan House Lane in 2020.

6.2.12. Vegetation is limited within the built-up, industrial areas to the north of the site, although there is a line of tall conifers along the boundary of Tan House Lane, adjacent to the site. This contrasts with the grassland, scattered scrub and trees along the St Helens Canal to the south and across the estuary marshes.

6.2.13. The combination of existing large-scale, vertical built forms and scattered vegetation provides enclosure within and around the site to varying degrees and establishes complexity with busy vehicle and plant movements. This contrasts with the wide, horizontal estuary landform, mudflats and river, with typically low-growing vegetation, which is open, simple and still, albeit with movement along the railway line or towpath. The A533 Mersey Gateway Toll extends (north-south) across the estuary breaking up the wide, open space.

6.2.14. The proposed development of Production Line 4 at the Pilkington Sullivan site would occupy a relatively small footprint, with an extension to the eastern end of the existing industrial building (48m long, of the same width and height), two storey extension to part of the south of the existing building for HV/LV switchroom and transformer pens, as well as external plant to mimic those to the north (air, effluent / abatement area and dust extraction), tanker loading bays, forklift and plant storage, as well as taller stacks (1No. at 40m high, 1No. at 30m high and 2No. at 20m high).

6.2.15. There would be no valued landscape elements or features lost as a result of the proposed development. Such elements that exist within the vicinity of the site, including vegetation and recreational access along the canal, would all be retained.

6.2.16. The cladding of the building extensions would mimic the existing structures and thereby reduce any potential visual contrasts. The development would result in a small increase in HGV movements from the site, along the existing routes. The additional stacks would be no taller than existing. The potential changes to aesthetic and perceptual aspects resulting from the proposed development would be limited. The proposed development would not appear out of scale or context.

6.2.17. The proposals would not change the overall existing industrial character and it would remain as part of “Settlement” in the Halton Landscape Character Assessment. The more open and naturalistic “Upper Mersey Estuary”, which is already characterised by urban development along its fringes, would be unchanged.

6.2.18. Consideration has been given to the potential for biodiversity enhancement through recommendations such as the introduction of vegetation on site and tree planting around the periphery and this would also offer landscape benefits.

Views and Visual Amenity

6.2.19. The site is visually contained to the north by the existing industrial development around Moss Bank and to the east, south and west by vegetation along the site boundaries, railway line and canal side. Although there is some potential visibility along the railway line and canal towpath, beyond this lies the wide expanse of the River Mersey corridor, with the nearest visual receptors on the southern banks at Wigg Island being over 1.3km away. The consented residential development to the west is approximately 0.3km away and would have potential views interrupted by the line of existing conifers, as well as the configuration of the existing built forms.

6.2.20. In visual terms, the proposals therefore have limited potential to affect views and visual amenity, due to the restricted visibility from other existing built elements and vegetation and the character of the site's existing industrial setting.

6.2.21. Six representative viewpoints have been identified to illustrate views from publicly accessible locations, at a range of viewing directions and distance from the site, as shown on Drawing LVA/001 at Technical Appendix A.

6.2.22. Viewpoint 1 is located on the NCN 62 Diversion / Tan House Lane and shows the established industrial uses within the Moss Bank area of Widnes, as well as the existing industrial building and stacks at the Pilkington Sullivan Site. Refer to Drawing LVA/002 of Technical Appendix A for baseline photography looking east and southwards from this location. Visual receptors at this location include recreational users of the cycleway and road as well as future occupants of the consented residential development which would be located on land to the west (behind the viewer).

6.2.23. Viewpoint 2 is located on Carter House Bridge over St Helens Canal and shows the railway line crossing point for the NCN 62 Diversion / Tan House Lane, as well as the existing industrial building and stacks at the Pilkington Sullivan Site and Fiddlers Ferry Power Station. Refer to Drawing LVA/003 of Technical Appendix A for baseline photography looking north and eastwards from this location. The consented residential development which would be located on land to the west. Visual receptors at this location include recreational users of the cycleway and Trans Pennine Trail along the canal towpath.

6.2.24. Viewpoint 3 is located by the bird hide off St Helens Canal and shows the canal and palisade fencing along the railway line, as well as the existing industrial building and stacks at the Pilkington Sullivan Site. Refer to Drawing LVA/004 of Technical Appendix A for baseline photography looking north-west and north-eastwards from this location. Visual receptors at this location include recreational users of the cycleway and Trans Pennine Trail along the canal towpath.

6.2.25. Viewpoint 4 is located by the elevated viewing point near to the Future Flower Sculpture off St Helens Canal and shows the wide expanse of the River Mersey estuary, as well as the

existing industrial building and stacks at the Pilkington Sullivan Site. Refer to Drawing LVA/005 of Technical Appendix A for baseline photography looking west and northwards from this location. Visual receptors at this location include recreational visitors to the viewing area.

6.2.26. Viewpoint 5 is located on the Moss Bank Road and shows the established industrial uses within the Moss Bank area of Widnes, as well as the existing industrial building and stacks at the Pilkington Sullivan Site. Refer to Drawing LVA/006 of Technical Appendix A for baseline photography looking southwards from this location. Visual receptors at this location include workers and visitors to the industrial estate.

6.2.27. Viewpoint 6 is located by the access to Wigg Island under the A533 Mersey Gateway Bridge and shows the wide expanse of the River Mersey estuary, as well as the existing industrial building and stacks at the Pilkington Sullivan Site. Refer to Drawing LVA/007 of Technical Appendix A for baseline photography looking north and north-eastwards from this location. Visual receptors at this location include recreational visitors to the viewing area and travellers along the A533.

6.2.28. For future residents within the consented residential development west of Tan House Lane (represented by Viewpoint 1), the views of the existing built-up industrial development within and around the Pilkington Sullivan site are already interrupted by the existing line of conifers. The extension of the existing building to the east and south would not be perceptible for these receptors. Similarly, the additional stacks and external plant / structures would be mostly obscured, and the built forms would not be positioned closer to this future residential area. Vehicle movements would connect onto Moss Bank Road to the north and form part of the traffic using the existing industrial estate more generally. Overall, there would be little to no change to views or visual amenity for these future receptors.

6.2.29. For recreational cyclists using NCN 62 Diversion and along the canal towpath (represented by Viewpoints 1, 2 and 3), the views are already characterised by the existing built-up industrial development within and around the Pilkington Sullivan site. In places these are interrupted by the existing line of conifers to the west of the site and by deciduous trees and scrub to the south of the site (these views would enclose during the summer months as the intervening deciduous plants come into leaf). The extension of the existing building to the east and south would be barely perceptible for these transient receptors. Similarly, the lower parts of the additional stacks and external plant / structures would be mostly obscured, with any upper parts forming part of the existing industrial skyline. Additional vehicle movements which would connect onto Moss Bank Road to the north, would form part of the traffic using the existing industrial estate more generally. Overall, there would be little to no change to views or visual amenity for these receptors.

6.2.30. For recreational visitors to Trans Pennine Trail (represented by Viewpoints 1, 2 and 3) and to the Viewing Area by the Future Flowers Sculpture (Viewpoint 4), the views are already

characterised by the existing built-up industrial development within and around the Pilkington Sullivan site. In places these are interrupted by the deciduous trees and scrub to the south of the site (these views would enclose during the summer months as the intervening deciduous plants come into leaf). The extension of the existing building to the east and south would be inconspicuous for these passing visitors, who are likely to be focused on the wider expansive views along the canal and across the estuary. Similarly, the lower parts of the additional stacks and external plant / structures would be mostly obscured, with any upper parts forming part of the existing industrial skyline. Overall, there would be little to no change to views or visual amenity for these receptors.

6.2.31. For recreational visitors to Wigg Island on the south side of the River Mersey (represented by Viewpoints 6), the long-distant panoramic views are already characterised by the existing built-up industrial development within and around the Pilkington Sullivan site. The extension of the existing building to the east and south would not be obvious for these passing visitors, who are likely to be focused on the wider expansive views across the estuary. Similarly, the lower parts of the additional stacks and external plant / structures would be mostly obscured, with any upper parts forming part of the existing industrial skyline. Overall, there would be little to no change to views or visual amenity for these receptors.

6.2.32. For road users generally (such as along Moss Bank Road, represented by Viewpoint 5 and A533 represented by Viewpoint 6), the views are already characterised by the existing built-up industrial development within and around the Pilkington Sullivan site. The extension of the existing building to the east and south would be barely perceptible for these passing visitors, who are likely to be focused on the road corridor. Similarly, the lower parts of the additional stacks and external plant / structures would be mostly obscured, with any upper parts forming part of the existing industrial skyline. Overall, there would be little to no change to views or visual amenity for these receptors.

6.3. Landscape and Visual Conclusions

6.3.1. Overall, the potential effect on the views and visual amenity of current and future residents, recreational receptors, and road users more generally is anticipated to be limited and very localised. Where the proposed building extension, external plant, additional stacks and vehicle movements would be visible, they would be seen as part of an established industrial context. The proposed development would be set within the existing panoramic skyline of industrial development on the north bank of the River Mersey.

6.3.2. It is not anticipated that the proposed development would give rise to any unacceptable effects on the landscape character of the locality or on the visual amenity of nearby receptors. No significant landscape or visual impacts would result from the proposed development.

7. Nature Conservation & Ecology

7.1. Policy Context

7.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

7.1.2. The NPPF and Halton Borough Council DALP (2022) collectively contain many relevant policies and text concerning the protection and enhancement of the ecological landscape. In particular:

- NPPF (as amended 2021) paragraphs 174 and 185;
- DALP (2022) Policies CS(R)20, CS(R)23 and HE3.

7.1.3. The thrust of these policies is to ensure that designated sites and sites of local wildlife interest are safeguarded, and any proposals do not cause unacceptable effects on the natural environment.

7.1.4. In addition to the above national and local planning policy, the following key legislation is considered to be of particular relevance:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Countryside and Rights of Way Act (CRoW) Act 2000;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

7.2. Baseline Conditions and Methodology

7.2.1. Heatons have been commissioned to undertake a Preliminary Ecological Appraisal (PEA) to determine the ecological status of land at the proposed development site. The PEA can be read in full at Technical Appendix B.

7.2.2. It is noteworthy that the application site is used for the same purpose and has not significantly changed in terms of land use and habitats present since the publication of a PEA which accompanied the Line 3 building re-build following the fire at the site in 2017.

7.2.3. The PEA undertaken by Heatons to accompany this application included a desk study, a Phase 1 Habitat Survey which was undertaken on the 10th March 2022 and a preliminary protected species assessment, prepared in accordance with CIEEM (2017).

7.2.4. The survey and desk-based assessment undertaken as part of this review are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013)

7.2.5. The online mapping service 'Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to search for statutory and non-statutory ecological sites within and around the 2km radius of the central point of the proposed building extension within the application site. A search of sensitive ecological receptors was conducted using ecological data provided by The Biodiversity Information System (RECORD).

7.2.6. A Phase 1 Habitat Survey of the site was carried out in order to assess the current ecological importance of the land within the boundaries of the site. The site was surveyed using the standard Phase 1 Habitat Survey Methodology as described in the Guidelines for Preliminary Ecological Assessment (IEEM, 2012).

7.2.7. A protected species scoping survey was also carried out alongside the Phase 1 Habitat Survey to assess suitability for the site to support protected species by looking for evidence of use on site.

7.2.8. It is noted that the survey was conducted outside the optimal survey period (April – October), however it is considered that the data acquired during the survey gives an accurate representation of the habitats present at the site.

7.3. Consideration of the Potential for Impacts

Desk Study

Designated Sites

7.3.1. There is one statutory designated site for nature conservation, Local Nature Reserve titled 'Wigg Island' located 1.3km south from the site boundary. Although outside the search radius, the Mersey Estuary Ramsar Site and Special Protection Area (SPA) have been included due to their international importance.

7.3.2. It is considered that due to the distance between the designated sites and the application site, and the significant barrier (railway line) between the site boundary and the designated sites, there will be no negligible impacts arising from the proposed development. Therefore, no further recommendations will be required.

Non-Statutory Designated Sites

7.3.3. There were nine non-statutory designated sites located within the 2km search radius of the site. These are: St Helens Canal Local Wildlife Site (LWS), Widnes Warth Saltmarsh LWS, Upper Mersey Estuary Intertidal Areas and Mudflats LWS, Astmoor Saltmarsh and Swamp LWS, Wigg Island LWS, Manchester Ship Canal Bank LWS, Haystack Lodge LWS, Upper Mersey Estuary LWS and St Helens Canal – Disused (LWS), all of which are detailed within Table 1 of the PEA at Technical Appendix B.

7.3.4. The closest of these non-statutory designated sites is St Helens Canal (LWS), located 550m from the site. Due to the distance from the site, and the significant barrier (railway line) between the site boundary and the LWS it is considered that there will be no negligible impacts arising from the proposed development, and therefore no further recommendations will be required.

7.3.5. MAGIC identified that the site falls within the SSSI Impact Risk Zone of Mersey Estuary SSSI (2.4km southwest), however the proposals do not fall under an appropriate category where further consultation with Natural England is recommended. Therefore, Technical Appendix B does not contain further detail regarding the application's potential for impact on the SSSI.

Priority Habitats

7.3.6. There were three priority habitats found within 2km search radius. These are: open mosaic habitat (OMH) located within the site boundary, coastal saltmarsh located 130m south, and mudflats located 200m south.

7.3.7. The OHM boundary spans into the south of the site, however there is a building present alongside areas of hard standing and bare ground with some loose material present. Based on the criterion set out for field recognition for the OHM (UKBAP, 2010), it is considered that the habitats on site do not meet the criterion due to the lack of vegetation, pools and spatial variation across the site and therefore no adverse impacts to the area of OHM is anticipated.

7.3.8. Due to the significant barrier (railway) between the site boundary and the coastal saltmarsh and mudflats to the south of the site, an adverse impact is not anticipated.

Species Records

7.3.9. Records of protected species, obtained from RECORD show a number of species of conservation importance or otherwise notable were recorded within the 2km search radius of the site. A summary of these records is provided in Table 3 within the PEA and is shown below.

Table 1: Summary of the Protected and Notable Species Returned within the 2km Search Area

Species	Nearest distance from site (km)	Year of most recent record	Number of records	Conservation status
Mammals				
Brown Hare *Lepus europaeus*	700m east	2015	4	Wildlife and Countryside Act, 1981.
Eurasian Badger *Meles meles*	1km south-south-east	2018	3	Protection of Badgers Act 1992 Wildlife and Countryside Act, 1981
Common pipistrelle *Pipistrellus pipistrellus*	1.km south-east	2016	9	European Protected Species (EPS). Wildlife and Countryside Act, 1981.
Soprano Pipistrelle *Pipistrellus pygmaeus*	1.8km south-east	2013	1	European Protected Species (EPS). Wildlife and Countryside Act, 1981.
Common porpoise *Phocoena phocoena*	1.6km south-west	2013	1	Wildlife and Countryside Act, 1981.
Daubenton's Bat *Myotis daubentonii*	1.8km south-east	2013	1	European Protected Species (EPS). Wildlife and Countryside Act, 1981.
Amphibians				
Common frog *Rana temporaria*	1km south-east	2015	3	Wildlife and Countryside Act, 1981.
Insects				

White-letter hairstreak *Satyrium w-album*	1km south-east	2016	5	Wildlife and Countryside Act, 1981.
Cinnabar *Tyria jacobaeae*	1.2km east-south-east	2019	12	UK BAP: Priority Species.
Shaded Broad-bar *Scotopteryx chenopodiata*	1.8km south	2014	2	UK BAP: Research only.
Invasive species				
Japanese Knotweed *Fallopia japonica*	600m north-west	2019	12	Invasive non-native species.

Phase 1 Habitat Survey

Habitats

7.3.10. The following habitats were identified within the site boundary:

- Buildings;
- Bare Ground;
- Hard Standing; and
- Plant & Machinery.

7.3.11. All habitats identified have negligible ecological importance and therefore no further recommendations or mitigation is considered to be required.

Species

7.3.12. In terms of amphibian species, there are no ponds located within 500m of the site and although the St. Helens Canal was present to the south of the site boundary, due to the distance and barriers (active railway line), the canal was not assessed for its suitability to support Great Crested Newts.

7.3.13. There is also a lack of limited suitable terrestrial habitat due to the industrial nature of the site as well as a lack of records for GCN returned within 2km of the site boundary. It is therefore considered highly likely that GCN are absent from the survey area and therefore do not need to be assessed further.

Reptiles

7.3.14. The survey noted that the building materials on the bare ground may provide some suitable refuge habitat for reptiles. However, there is limited foraging and commuting habitat within

the site boundary. There were also no records returned for any reptile species within the desk study data.

Bats

7.3.15. The existing building where the lateral extension is proposed was subject to an initial bat roost assessment which found that it was considered to provide negligible suitability for roosting bats due its lack of suitable access / roosting features. Additionally, the habitats within the site boundary are considered to provide sub-optimal / negligible foraging and commuting habitat due to there being limited vegetation and standing water across the site. As the site provides sub-optimal habitat suitability for bats, a significant adverse impact to the species is not anticipated.

Badgers

7.3.16. During the survey, no badgers or sign of badger was noted. The habitat within the site boundary, provide limited suitability for badger due to the lack of vegetation, and material suitable for sett building. Therefore, it was considered highly likely that badgers will be absent from the site boundary and was not considered further within the report.

Birds

7.3.17. The habitats on site provide limited opportunities for nesting and foraging birds due to hard standing, bare ground and industrial buildings dominating the site.

Otters and Water Vole

7.3.18. No suitable habitat for either species was noted within the site boundary, or within close proximity to the site boundary. Therefore, both water vole and otter were not considered further within this report.

Invertebrates

7.3.19. No invertebrates were noted during the survey and the habitats on site were considered to be sub-optimal to support invertebrate assemblages due to the lack of vegetation. Due to the likely absence of significant invertebrate assemblages within the site boundary, they were not considered further within the report.

Invasive Species

7.3.20. The survey found no invasive species and therefore was not considered further within the report.

7.4. Consideration of the Potential for Mitigation

7.4.1. In terms of additional surveys, no further surveys are recommended for reptiles due to the limited habitat diversity on site, the lack of reptile suitability on site is considered highly unlikely that the site will support a reptile population. However, clearance of stockpiled

materials should be undertaken during the reptile active season (March – October) in temperatures above 5C to ensure in the unlikely case that reptiles are present, they are able to move to safety.

7.4.2. There is negligible bat roost habitat on site and therefore no further surveys are recommended.

7.4.3. There is only sub-optimal bird habitat on site and therefore no further surveys are recommended.

7.4.4. In line with the NPPF (2021), recommendations to enhance the site's biodiversity value have been designed into the proposed development. Native vegetative planting around the periphery of the site has been incorporated into the design. Given the limited space between operational areas of the site and the site's boundaries, it is proposed to plant native climbing species of plants along the site's southern boundary. Species proposed to be introduced include common ivy and common honeysuckle, which will provide foraging material for birds and invertebrates as well as visually 'greening' the site when viewed from the south.

7.5. Conclusions

7.5.1. The contents of Technical Appendix B of this ES set out the results of surveys and data reviews that confirm the status of the application site as land which is currently of limited biodiversity value.

7.5.2. It is considered that the proposals would not have any significant adverse impact on any significant biodiversity habitat located on, or within close proximity to, the site. The PEA did not identify any significant habitats of ecological important and no suitable habitats for notable protected species were found at the time of the assessment.

7.5.3. Therefore, it is concluded that the proposals accord with both national and local policy, and represent an opportunity to deliver a degree of ecological benefits as part of a wider development proposal.

8. Traffic & Transport

8.1. Policy Context

8.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

8.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many policies concerning the impact of the transport highway network. In particular:

- NPPF (as amended 2021) paragraph 85 and 111;
- DALP (2022) Policies CS(R)15, CS(R)23 and HE7.

8.1.3. Policy at a national and local level generally aims to minimise the environmental impacts of development related transport on existing communities. With regards to transport and HGV traffic, this requires achieving good access and promoting the use of agreed routes. The key policy test is contained in NPPF which states that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are "severe". This is confirmed in PPG (Travel Plans, Transport Assessments and Statements, March 2014) which states that: "Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be 'severe', which may be a reason for refusal, in accordance with the NPPF" (at paragraph NPPF paragraph 111).

8.2. Methodology

8.2.1. A Transport Statement (TS) accompanies this ES (see Technical Appendix C). The TS was prepared by AECOM and considers the impact the proposed development will have on highway capacity and road safety. It considers the proposed development in the context of existing site operations and non-site traffic and concludes that the impacts would not be 'severe' which is the main policy test under the NPPF (2021).

8.2.2. The TS has been prepared following current best practice as set out in paragraph 013 (Reference ID: 42-013-20140306) of Planning Practice Guidance.

8.2.3. Although now withdrawn, most local highway authorities continue to use the Guidance on Transport Assessment (GTA, Department for Transport (DfT, 2007) to establish the development thresholds that trigger a Transport Assessment (TA) and / or TS. This provides a threshold of an increase of 30 two-way trips in any one hour as triggering a full TA.

8.2.4. Through the pre-application Scoping exercise undertaken, the local highway authority requested a TS to be produced which is in line with the small number of additional HGVs expected at the site.

8.3. Baseline Conditions

Site Access

8.3.1. The route comprising Tan House Lane / Moss Bank Road / Gorsey Lane provide access between the A562 to the site. The site access is designed to deter HGV access from Gorsey Lane.

8.3.2. All traffic currently in and out of the site (including HGV, employee, contractor and visitor vehicles) are limited to between the hours of 0800-2000hrs, Monday to Friday with some weekend traffic occurring occasionally.

8.3.3. Six HGV movements per day are associated with each production line. As there are currently two operational production lines at the site, 12 HGV movements occur per day to and from the site.

8.3.4. The site access also handles 20 Broadthorn HGVs per day which are not associated with the Applicant. In total there are 32 HGV movements per day using the site access.

8.3.5. A manual traffic count conducted in 2019 by the DfT found that there was an Annual Average Daily Traffic (AADT) flow of 13,532 on the A562 between the Tan House and Gorsey Lane access points to the site. The Design Manual for Roads and Bridges (DMRB) states that a two-lane single carriageway road should be built to accommodate flow ranges of up to 13,000 AADT and as such, the A562 is considered a busy distributor route.

Road Safety

8.3.6. The GTA states that a TS should 'establish the current personal accident records for the most recent three-year period, or five years if this is considered to be more appropriate'.

8.3.7. Road safety collision statistics have been obtained from the DfT for the period from 2015 to 2020. The data shows a total of 12 collisions within the study area with most collisions occurring on the A562 and A562 / Gorsey Lane roundabout totalling 9 collisions. The overall total collision numbers are small and 75% collisions occurring the study area were classified as 'Slight' meaning an injury not requiring medical treatment. No 'fatal' collisions were recorded over the last five years.

8.3.8. The TS states that there have been no recorded collisions at the site access junctions.

8.4. Consideration of Potential Impact and Mitigation

8.4.1. An additional production line would generate six additional HGV trips a day, in addition to the existing 32 HGV trips per day utilising the site access.

8.4.2. It is anticipated that an additional six employees per shift would also travel to and from the site, and in a 'worst case scenario', 12 additional employee trips per day would be generated.

8.4.3. In total, there would be 18 additional trips generated to and from the site from the proposed development, which equates to an average of two trips per hour to and from the site across a working day of 12 hours.

8.4.4. The TS has stated there should be no material highway capacity issues as a result of the development. The trigger point for starting an assessment would be if any junction experiences an increase in trips of more than 32 two-way movements in a single hour.

8.4.5. The TS also stated that given the low number of trips to be added to the highway network, there should be no material change in road safety risk as a result of the proposed development.

8.5. Conclusions

8.5.1. The increase in both HGV and vehicular trips to and from the site would be small and it is not considered that the proposed development would result in a material impact on highway capacity or road safety. Furthermore, the site operated with three production lines for 5 years between 2013 and 2018 following the start-up of Line 3 in 2013 prior to the cessation of Line 1 production in December 2018. No adverse effects on the public highway were notably experienced during that time.

8.5.2. The proposed development is therefore considered to be compliant with the NPPF and Local Plan Policies CS15 and C1, since the resulting highway and road safety impact is unlikely to be 'severe'.

9. Noise Impacts

9.1. Policy Context

9.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

9.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many policies concerning noise impacts. In particular:

- NPPF (as amended 2021) paragraphs 174 and 185;
- DALP (2022) Policies HE7, CS(R)19 and CS(R)23.

9.1.3. The thrust of these policies is to ensure that development does not cause an unacceptable adverse impact in terms of noise. The policies seek to ensure the protection of sensitive receptors and users.

9.1.4. In considering the issues set out in the development plan and other policy, there is a need to ensure that impacts on local communities and amenity are maintained or reduced to acceptable levels. The NPPF acknowledges that there is an acceptance within planning policy that there will be some adverse effects and that the test is whether the adverse effects have been reduced or controlled to sufficiently low levels subject to recognised noise limits set out by the government.

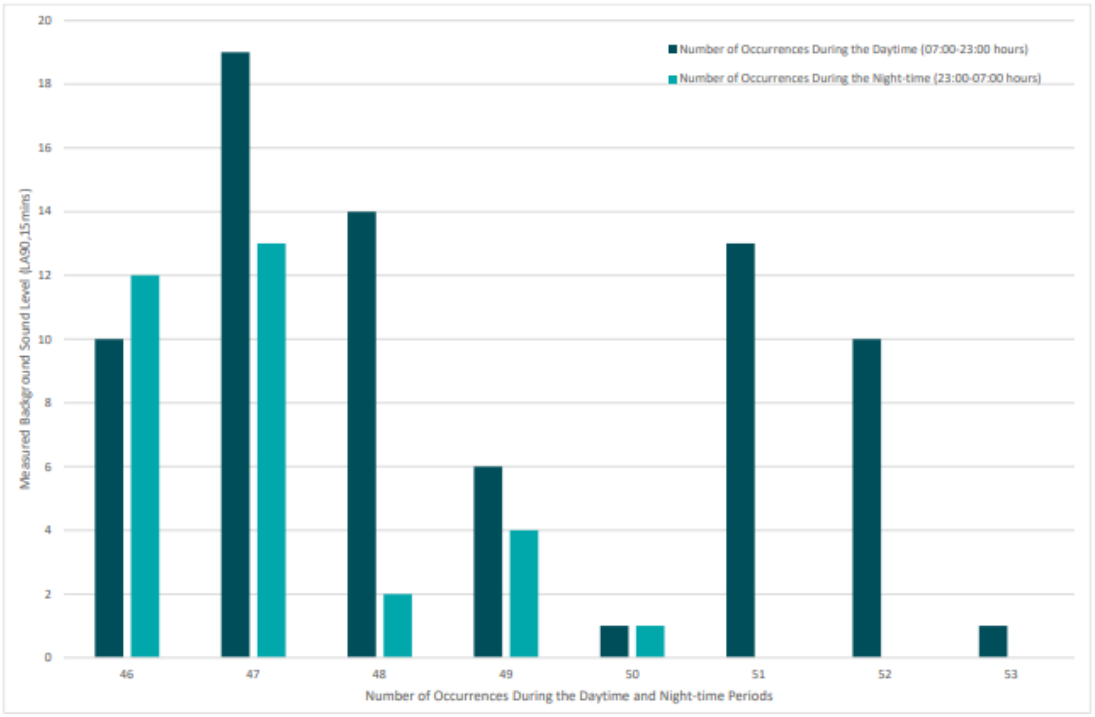
9.1.5. Hepworth Acoustics Ltd have carried out a noise impact assessment in connection with the proposed development. The assessment can be read in full at Technical Appendix D.

9.2. Baseline Conditions and Methodology

9.2.1. This assessment has followed the appropriate guidance set out in British Standard 4142:2014+A1:2019 ‘Methods for rating and assessing industrial and commercial sound’ for assessing the potential noise impact at residential locations from commercial and industrial sources.

9.2.2. Noise levels were measured at a location on the western boundary of the site, representative of the nearest residential properties to the site. The results of the baseline noise levels are summarised below, taken from Graph 1 within Technical Appendix D:

9.2.3. Based on guidance within BS 4142, the background sound level is represented as 47 dB outside the nearest dwelling for both day and night-time periods.



9.2.4. The measured $L_{Aeq,T}$ values associated with external fixed plant and machinery are shown below (extract from within Technical Appendix D):

Table 2: Summary of Source Noise Levels Measured (dB)

Description	$L_{Aeq,T}$
10m from External Equipment & Machinery	66
At open roller shutter door to production line	65

9.2.5. These source noise levels have been used in the noise assessment discussed below to determine the likely noise levels outside the nearest dwellings

9.3. Consideration of Potential for Impact

9.3.1. A noise assessment has been undertaken to calculate the likely level of noise outside the nearest dwellings to the proposed development. The nearest dwellings to the application site are those approved in planning permission under HBC ref. 19/00235/FUL at Tan House Lane, approximately 240m from the proposed lateral extension and associated Line 4 machinery.

Table 3: BS 4142 Initial Assessment at the nearest dwellings (dB)

Description	Nearest Dwelling
Specific sound level ($L_s = L_{Aeq,Tr}$)	39
Character correction	0
Rating level ($L_{Ar,Tr}$)	39
Background sound level ($L_{A90,T}$)	47
Excess of rating level over background level	-8
Likely Noise Impact	'No adverse impact'

9.3.2. Table 3 of Technical Appendix D above shows the calculated rating sound level is 8dB below the representative background sound levels measured at the nearest dwellings in the daytime and at night. Therefore, it can be assumed based on BS 4142 guidance, the proposed development will not result in any adverse impact on the residents of the approved residential development.

9.3.3. Furthermore, it should be noted that noise emanating from the application site that could impact upon the Tan House Lane residential development will also likely be improved once Line 4 is built when compared with the noise generated by the site when Line 1 was operational. This is likely to be the case as the Line 3/proposed Line 4 building is located further away from the sites western boundary, beyond which the Tan House Lane residential properties are located.

9.4. Consideration of Potential for Mitigation

9.4.1. Given the above, Technical Appendix D concludes that there are no requirements for specific noise control measures associated with attenuating noise from the proposed Line 4.

9.5. Conclusion

9.5.1. The operations at the proposed development would not result in any unacceptable harm to the amenity of existing and permitted residential properties by reason of noise disturbance.

9.5.2. Furthermore, it is not considered that the threshold of unacceptability 'significant adverse impacts' as outlined in national and local policy would be triggered by the proposed development. Overall, it is considered that the proposed development in line with the NPPF and associated guidance of the Noise Policy Statement for England (NPSE) 2010.

10. Air Quality & Dust

10.1. Policy Context

10.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

10.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many policies regarding the impact of the proposed development on air quality. In particular:

10.1.3. In particular:

- NPPF (as amended 2021) paragraphs 154 and 174;
- DALP Policies CS(R)19, CS(R)23 and HE7.

10.1.4. The thrust of these policies focuses on development proposals minimise air pollution by ensuring the level of air borne pollutants caused by the proposed development does not cause adverse impacts, through mitigation where necessary.

10.1.5. RAS Ltd have carried out an Air Quality Assessment outlining any likely significant effects of the proposed development on human health and ecological receptors in respect of air quality and the acceptability of such impacts in the context of the EIA Regulations 2017. The Air Quality Assessment involved quantitative prediction of the effects during the operational phase of the plant with production lines 2 to 4 in operation, assessment of elements of the development that could give rise to adverse effects, and proposed mitigation measures. This can be read in full at Technical Appendix E.

10.1.6. RAS Ltd have also prepared an application to vary the application site's Environmental Permit. This included the production of a H1 Screening Assessment used to assess the impact of certain hazardous pollutants released to the air from discharges and to determine which required further detailed analysis for EA Permitting reasons and for further assessment to inform this ES chapter.

10.2. Baseline Conditions and Methodology

10.2.1. Principal emissions from the site are, and are proposed to be, those derived from the emission points (stacks) on the site. Analysis within the H1 Screening Assessment enables some pollutants to be screened out of further detailed analysis. However, the H1 Screening Assessment considers that oxides of nitrogen (NOx), particulates (PM10), and dioxins require such further analysis.

10.2.2. There are a number of point sources of emissions to air (stacks) at the application site, currently located across Line 1 (currently being removed), Line 2, and Line 3. Further stacks are proposed as part of Line 4. The effects of the changing emissions through these stacks has been assessed using a dispersion model, detailed within Technical Appendix E.

10.2.3. Other sources of emissions include those from vehicle movements associated with the proposed Line 4 operations. However, as these are limited to circa six HGV movements per day, it is not considered that emissions from vehicle exhausts associated with Line 4 could impact upon air quality to any significant degree.

10.2.4. Baseline data for current concentrations for particulates and NO2 were obtained using the UK Air Quality Archive website. Background concentration data from 2019 was used in the Air Quality Assessment in order to use the most up-to-date pre-pandemic background information.

10.2.5. Detailed air dispersion modelling has been carried out using ADMS 5.2 to assess the impacts of the site on both nearby environmental receptors and human receptors. The ADMS 5.2 model was used alongside meteorological data from 2017 to 2019 to assess the short term and long-term concentrations of particulates (PM10).

10.2.6. Within the Air Quality Assessment, the significance of impact at an identified individual receptor is identified as 'negligible', 'slight', 'moderate' or 'substantial'. The impact significance at individual receptors is predominantly dependent upon long-term average pollutant concentration at the receptor in the assessment year and the percentage change relative to AQAL (Air Quality Assessment Level). The impact significance can either be 'adverse' (due to concentration increase) or 'beneficial' (due to concentration decrease).

10.3. Consideration of the Potential Impact

Receptors

10.3.1. The ecological receptors considered within this assessment are outlined in the table below:

Table 6 Ecological Receptors

Receptors	Distance from site (m)	Designation	Easting, x (m)	Northing, y (m)	Height above ground, z (m)
St Helens canal/Widnes Warth	~ 90	Local wildlife site	352980	385170	0
Randle Reed Bed	~ 1,100	Biodiversity Action Plan Priority Habitat	353880	384450	0
Wigg Island	~ 1,300	LNR	353330	383550	0
Mersey Estuary	~ 2,600	Ramsar, SPA, SSSI	350990	383730	0

10.3.2. The human receptors considered within Technical Appendix E are the nearest commercial and residential areas to the site, outlined in the Table below:

Table 7 Human Receptors

Receptors	Easting, x (m)	Northing, y (m)	Height above ground, z (m)
Houses off French Street	352610,	385970	1.8
New Housing estate to the west of the site	352625	385211	1.8
Caravans at the Warrington Road Site	352320	385680	1.8
Nearest commercial premises	352870	385420	1.8

10.3.3. Detailed dispersion modelling has been carried out to assess the impacts of the site on both nearby environmental receptors and human receptors. The scope of assessment following the H1 Screening Assessment was limited to particulates (PM10), nitrogen oxides, and dioxins.

10.3.4. The results from the H1 assessment and subsequent detailed dispersion modelling assessment are contained within Technical Appendix E. The results show that overall the site will not have any significant impacts on the nearby environmental and human receptors. The assessed concentrations are acceptable in the context of the relevant air quality and environmental standards, both with predicted emission concentrations and also if the site were operating at the top end of the permitted range (at the emission limit values).

10.3.5. It should be noted that the application site's contribution to background concentrations of particulates, nitrogen oxides, and dioxins between each receptor. Background levels will include a contribution from the existing processes at the application site.

Particulates

10.3.6. 'No adverse effect' is the most commonly identified impact on each of the assessed ecological and human receptors to particulates, with some receptors assessed as likely to experience 'negligible' impacts.

Nitrogen Oxides

10.3.7. 'No adverse effect' is similarly the most commonly identified impact on each of the assessed ecological and human receptors to nitrogen oxides, with some receptors assessed as likely to experience 'negligible' impacts and the nearest working population to the proposed Line 4 anticipated to experience 'slight' short-term and long-term impacts.

Dioxins

10.3.8. Technical Appendix E includes detailed consideration of the potential for impact upon human health. The operational production lines 2 and 3 are considered alongside the proposed production Line 4 as a potential source of dioxins. However, it should be noted that 85% of gases potentially containing dioxins are collected and treated in a regenerative thermal oxidiser.

10.3.9. The methods for estimating inhalation dose and dose from soil are relatively well established. The combined inhalation and soil ingestion dose has been shown to be very much less than the tolerable daily intake (TDI).

10.3.10. The UK Soil Guideline value for residential areas of 8,000 ng/kg dry weight is compared with the additional dioxin input from the site (lines 2, 3 and 4) over 25 years of 0.037 ng/kg. This is the highest predicted concentration based on the ADMS modelling for the new housing estate to the west of the site (using 2018 meteorological data).

10.3.11. The methodology for estimating human intake from home grown vegetables and home raise poultry and eggs due to atmospheric deposition is much less well established for an urban area such as Widnes.

10.3.12. The UK guideline value for garden soil takes into account soil contamination of home grown produce that is taken to include vegetables and eggs.

10.3.13. Comparing the increment due to the site in total, operation of the site would add less than 1% of the TDI to the dose affecting the nearest residents taking into account all potential pathways of exposure and as such the contribution from the site is not of concern and the impacts as a result of dioxin emissions are not deemed significant.

Requirement for Mitigation

10.3.14. It is believed that based on the results of the dispersion modelling that sufficient mitigation measures are in place to prevent adverse impacts on nearby receptors and no further mitigation is necessary for Line 4 additional to the implementation of best available techniques already employed on production lines 2 and 3.

10.3.15. Existing measures to limit emissions from the site include filtration of stack emissions and scrubbers which filter emissions and reduce the hydrogen chloride concentration in the emitted gas.

10.3.16. For all existing lines and the proposed Line 4, dust extraction systems are/will be implemented that comprise a large bag filter system exhausting at height via a stack.

10.4. Conclusion

10.4.1. An Air Quality Assessment has been prepared by RAS Ltd which includes detailed dispersion modelling for particulates, nitrogen oxides, and dioxins as per the findings of a H1 Screening Assessment.

10.4.2. Overall, it is concluded that proposed development will not have any significant impacts on the nearby environmental and human receptors. Air dispersion modelling also included consideration of impacts on the two Air Quality Management Areas declared within the boundaries of Halton Borough – neither of which were assessed as being impacted by the proposed development.

10.4.3. Concentrations of the modelled particulates, nitrogen oxides, and dioxins are acceptable in the context of all the relevant air quality and environmental standards, both with predicted emission concentrations and also if the site were operating at the top end of the permitted range (at the emission limit values).

10.4.4. The dispersion modelling results show that sufficient mitigation measures are already in place to prevent adverse impacts on nearby receptors and no further mitigation is necessary. It is considered that in EIA terms the potential impacts of the proposed Line 4 are acceptable.

10.4.5. In addition, the site will continue to be subject to its separate EA Environmental Permitting regime, which aims to maintain acceptable environmental standards for the site.

11. Ground Conditions

11.1. Policy Context

11.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

11.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many policies concerning the impact of the proposed development on ground conditions.

11.1.3. In particular:

- NPPF (as amended 2021) paragraphs 183 and 185;
- DALP (2022) Policies CS(R)23, HE7 and HE8.

11.1.4. The thrust of these policies seeks to ensure that any site, where contamination may potentially exist undertake sufficient investigation as to provide measures where necessary to take treat, contain or control any contamination. This is to ensure that the development will not cause unacceptable effects on the amenity of the area, amenity or health/safety of others or future occupiers of the site and the natural environment.

11.2. Baseline Conditions and Methodology

11.2.1. A Phase I Desk Study has been carried out by CC Geotechnical Limited and can be read in full at Technical Appendix F of this ES.

11.2.2. The Phase I Study was undertaken as a preliminary to assess the requirements for any intrusive phase of investigation to be undertaken at a later stage.

11.2.3. The site was surveyed by CCG in March 2022.

Site History

11.2.4. The history of the site and its immediate surroundings have been investigated through a range of archive resources. Industrial land uses have been long-established at the site, which was formerly part of ICI Pilkington Sullivan Works.

11.2.5. Two historic site investigations have also been undertaken in relation to the periphery of the site. A Geoenvironmental Report for land at Line 3 was produced in 2017 with the intrusive groundworks dated from 2011. A ground investigation report was also accompanied for the work at Line 3, dated August 2018.

11.2.6. The reports confirmed the site geology to generally comprise superficial made ground deposits of various thickness.

11.2.7. The intrusive report from 2011 confirmed elevated levels of arsenic, hexachlorobenene, and asbestos within site soils, at concentrations potentially harmful to human health. Perched waters were also reported to contain elevated concentrations of Arsenic, Lead, Selenium, Chloroform and Hexachlorobenzene at levels in excess of recommended environmental water quality standards. The 2018 report also reported similar findings.

Historic Coal Mining

11.2.8. The site is located within a coal mining report area as defined by the Coal Authority. By reference to the Coal Authority Interactive Map Viewer the site is not within a Development High Risk Area is not covered by the Abandoned Mines Catalogue. No mine entries or potential zones of influence are recorded within the site or surrounding area. No records of surface or shallow coal mining are reported. The site does not lie within an area of probably shallow coal mine workings and does not lie within a NE mining and Groundwater Constraints area.

11.2.9. On this basis, this risk to site by historic mining activities is considered very low and therefore is not considered in greater depth within Technical Appendix F.

11.3. Consideration of Potential Impacts

11.3.1. Based on the historic development of the site, demolition works, and previous land use, it was considered there is a high potential for the presence of contamination and therefore a preliminary Risk Assessment was undertaken.

11.3.2. A Tier 1 Risk Assessment and Preliminary Conceptual Model (PCM) have been formulated based on the assumption that the site compromised the proposed development in full and drinking water would be accessed from the mains supply. These are set out in Technical Appendix F and are summarised using extracts below. In using this approach, the assessment recommends undertaking intrusive investigation of any Risk Classification of 'Moderate' or over.

Table 7 within Technical Appendix F - Matrix of Consequences against probability to gain a risk classification (CIRIA, C552, 2001)

		CONSEQUENCE			
		SEVERE	MEDIUM	MILD	MINOR
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Table 8 within Technical Appendix F - Classification Definitions (C552 CIRIA, 2001)

CLASSIFICATION	DEFINITION
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard. Or, there is evidence that server harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be server, or if any harm were to occur it is more likely that harm would be relatively mild. Investigation (if not undertaken already) is normally required to clarify the risk and to determine to potential liability. Some remedial works may be required in the longer term.
Moderate / Low	
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be server.

Table 9 within Technical Appendix F – Preliminary Conceptual Model (PCM)

11.3.3. By application of the risk assessment methodology outlined above, the following PCM was constructed shown overleaf.

POLLUTANT LINKAGE	SOURCE	PATHWAY	RECEPTOR	PROBABILITY	CONSEQUENCE	RISK RATING
1	Elevated PAH/Hydrocarbon contaminants in soils impacted by the historical site fire	Soil and / or soil dust ingestion Inhalation of vapours Direct contact	Construction workers Future worker occupants	Likely	Medium	Moderate
2	Elevated PAH/Hydrocarbon contaminants in soils impacted by the historical use of the site, former railway and storage of fuels – on site bunded tank identified during walkover	Soil and / or soil dust ingestion Inhalation of vapours Direct contact	Construction workers Future worker occupants	Low likelihood	Medium	Moderate / Low
3	Elevated heavy metals, chlorides, sulphur/sulphides, hydrocarbons and/or VOC/SVOC contaminants in soils impacted by the historical ICI / British Alkali and Unifrax/Saffil use of the site	Soil and / or soil dust ingestion Inhalation of vapours Direct contact	Construction workers Future occupants	Likely	Medium	Moderate
4	Asbestos contamination of made ground soils associated with historic demolition and redevelopment activities, historic railway use	Fibre Inhalation	Construction workers	Likely	Severe	High
5	Ground gases associated with potential on site made ground deposits, nearby infilled ponds and disused canal	Accumulation in buildings	Future occupants Fabric of buildings	Low likelihood	Severe	Moderate
6	Organic contamination associated with potential made ground deposits, historic site activities and current fuel storage	Direct contact with water mains	Potable water supply	Likely	Medium	Moderate
7	Soil / groundwater aggressivity to concrete arising as a consequence of potential made ground deposits, and history of site as a historic Alkali works	Direct contact with building fabric	Concrete substructure	Likely	Medium	Moderate
8	Vertical migration of leachable contamination held within site soils / vertical migration of perched contaminated groundwater	Vertical migration via permeable fissures within the clay drift aquitard	Principal Aquifer Sandstone	Unlikely	Medium	Low
9	Lateral migration of groundwater / leachable contamination held within site soils	Lateral migration via permeable made ground deposits perched on the clay drift aquitard	Surface waters - St Helens Canal	Likely	Medium	Moderate

11.3.4. The results have identified a significant number of potential risks, and if present, these could adversely impact on human or environmental receptors. Therefore, a scheme of intrusive investigation to determine whether pollutant linkages are present on site is recommended, as detailed within Technical Appendix F and the following section of this ES.

11.4. Consideration of Potential Mitigation Measures

11.4.1. The phase II intrusive investigation recommended includes the sinking of exploratory holes through made ground into underlying natural strata. It is proposed that ten boreholes be sunk across the site by light dynamic sampling methods, each to a nominal depth of 5m below ground level (mbgl) to assess shallow ground conditions.

11.4.2. The boreholes shall be sited to provide good coverage of the site and include for targeting of the soils to the bunded fuel tank, historic on-site tank locations and the location of the former chimney.

11.4.3. A further three deep boreholes shall be sunk by cable percussion methods and shall advance to terminate at depths of up to 25mbgl bedrock (if encountered).

11.4.4. The proposed exploratory locations are provided on CCG drawing 12912-03 contained at Appendix A of Technical Appendix F.

11.4.5. Analysis and reporting post-intrusive investigation will appropriately consider the risks of the proposed development to human health. Data collected will be assessed against LQM/CIEH S4UL's Human Health Risk Assessment (2015) for 'commercial/industrial' land uses. Where LQM/CIEH S4UL values have not been established, contaminant concentrations will be considered against the C4SL published by DEFRA, or the EIC/AGS/CL:AIRE Generic Assessment Criteria (GAC) published by CL:AIRE.

11.4.6. In addition, ground gas and groundwater monitoring standpipes shall be installed within at least 3 of the boreholes, thus enabling a programme of ground gas and groundwater monitoring to be undertaken. Groundwater samples recovered from each of the monitoring wells shall be recovered and subjected to chemical analysis and reporting. Consideration in reporting shall be given to any potential risk to the surface waters of the St Helens Canal.

11.5. Conclusions

11.5.1. Planning policy seeks to ensure proposed developments do not adversely impact upon human health or below ground water resources by exposing contaminants or by posing a threat by creating unacceptable pathways/linkages from above to below ground.

11.5.2. CC Geotechnical Limited have prepared a detailed Phase I Desk Study which outlines recommended intrusive investigation of the application site. Detailed investigation is proposed to be undertaken in locations across the application site which will enable data collection, analysis, and reporting to ensure that the impacts of the proposed development are acceptable to, inter alia, human health and nearby surface waters.

11.5.3. With the imposition of suitably worded planning condition, such as a pre-implementation planning condition, it is considered that the proposed development can be shown to accord with local and national development policy/guidance and be proven acceptable in EIA terms.

12. Water Resources

12.1. Policy Context

12.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

12.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many policies concerning the impact of the water environment. In particular:

- NPPF (as amended 2021) paragraphs 167 and 174;
- DALP (2022) Policies CS(R)23, HE7 and HE9.

12.1.3. The thrust of these policies seeks to ensure that the proposals do not give rise to adverse impact on the water environment through impact of risk of flooding on-site and elsewhere. BSP have undertaken a Flood Risk Assessment & Drainage Strategy, incorporating Flood Risk Assessment (FRA) as part of this proposal, and can be read in Full at Technical Appendix G.

12.2. Baseline Conditions and Methodology

12.2.1. The Flood Risk Assessment & Drainage Strategy has been prepared in accordance with the Department for Communities and Local Government (DCLG) publication 'Technical Guidance to the National Planning Policy Framework'.

Flood Risk

12.2.2. A number of sources of potential flood risk to the site have been assessed in order to provide context to the proposed drainage strategy for the development. Details of the levels of risk to the site from each source are provided below.

Fluvial Flood Risk

12.2.3. The EA Risk of Flooding from Rivers and Sea mapping indicates that the development site is located in Flood Zone 1, with a less than 1 in 1,000-year annual probability (<0.1%) risk of flooding. The primary source of flood risk the local area is the River Mersey which, downstream of its confluence with the Manchester Ship Canal, is an Ordinary Watercourse flowing from east to west approximately 180m to the south of the site. Between the site and the River Mersey are the Skelton Junction to Ditton Junction Railway Line and the St Helens Canal which serve as informal flood defences preventing flood water waters from extending further north to the site.

Tidal Flood Risk

12.2.4. The River Mersey is a tidal watercourse downstream of Howley Weir in Warrington and, as such, there is a risk of tidal flooding to the local area, however as the site itself is located within Flood Zone 1 it is deemed not at risk of tidal flooding.

Surface Water Flood Risk

12.2.5. The EA Risk of Flooding from Surface Water mapping indicates that the site and surrounding areas are at very low risk of flooding from surface water. A small thin strip of low risk (0.1%) surface water flooding is indicated on the service road adjacent to the northern site boundary. The site is therefore not at significant risk of flooding from surface water runoff from adjacent land

Ground Water Flood Risk

12.2.6. The British Geological Survey's Geology of Britain mapping indicates that the site is situated upon bedrock geology consisting of Chester Formation and the Environment Agency Aquifer Designation Map identifies the site as being situated on bedrock classed as Principal Aquifer: geology that exhibits high permeability and/or provide a high level of water storage. Based on the information from the above sources the site is considered to be at low risk of flooding from groundwater sources.

12.2.7. Due to the site's proximity to the River Mersey, there is a potential for the presence of a high-water table, with levels linked to water levels within the watercourse and as such, any risk of groundwater flooding is likely to occur in conjunction with fluvial and/or tidal flooding from the river. While a high-water table could be present, the site is shown to be within Flood Zone 1 and at very low risk of fluvial and tidal flooding. In addition, the existing site comprises of impermeable surfaces and made ground, preventing groundwater from rising to the surface on-site.

Flood Risk from Sewers and Infrastructure

12.2.8. The local sewer system is operated and maintained by United Utilities (UU). The nearest public sewer to the site is located to the north of the site, south of Moss Bank Road and within Moss Bank Road, records indicate two foul rising mains. No concerns have been raised relating to flooding incidents on these sewers or sewer flooding in general within proximity to the site.

12.3. Consideration of Potential Impacts

Sustainable Drainage Strategy

12.3.1. Part H of the Building Regulations 2010 recommends that surface water run-off shall discharge to one of the following, listed in order of priority:

- An adequate soakaway or infiltration system, or where that is not reasonably practicable;

- A watercourse, or, where that is not reasonably practicable;
- A sewer.

12.3.2. The report has assessed the most appropriate method of controlling and discharging surface water which are set out below:

Infiltration Based Systems

12.3.3. The site was assessed on the feasibility of infiltration methods as a means of disposing of surface water runoff. The British Geological Survey's Geology of Britain mapping indicates that the site is situated upon bedrock geology consisting of Chester Formation whilst The Cranefield Soil and Agrifood Institute indicates the site to be situated on soils categorised as Soilscape 18: Slowly permeable wet slightly acid but base-rich loamy and clayey soils.

12.3.4. Due to the site and surrounding land compromising impermeable surfaces and made ground throughout, infiltration methods as a means of disposing of surface water runoff from the site are not feasible. In addition, due to the proximity of the site to the River Mersey, any permeable strata are likely to be accompanied by a high-water table, particularly in times of flood.

Open Watercourses

12.3.5. The existing site surface water runoff is drained via a private sewer network to a culverted surface water drain which run adjacent to the Skelton Junction to Ditton Junction Railway Line. The culvert changes to an open drain to the southeast of the site, continuing in an easterly direction before passing beneath the railway and over the St Helens Canal and ultimately discharging into the River Mersey. Due to the scale of the development proposals, the development will utilise the existing drainage on-site.

Sewers

12.3.6. The proposed extension of the existing development will discharge surface water runoff to the private sewer network on-site unchanged. However, surface water runoff from the site at present ultimately discharges to an open watercourse and this will not be altered.

SuDS Category	SuDS Technique	Viability	Explanation
Infiltration/Filtration	Infiltration Trenches	✗	Soakaway testing would be required to confirm whether drainage via infiltration is possible. However, due to the presence of impermeable surface and made ground across the site and surrounding area infiltration systems have not been suggested as part of this drainage strategy.
	Infiltration Basins	✗	
	Soakaways	✗	
	Bioretention/Filter Strips	✗	Due to the existing commercial/industrial site use and the presence of made ground and existing impermeable surfaces, bioretention/filter strip methods that encourage percolation will not be feasible.
Source Control	Green Roofs	✗	The existing building comprises a pitched roof, with the extension proposed to also comprise a pitched roof. As such, green roofs will not be feasible.
	Rainwater Harvesting	✗	Due to the existing site use landscaped features that utilise rainwater harvesting will not be feasible.
	Pervious Pavements	✗	Due to the existing site use pervious paving is not suitable, as pervious pavements
			cannot be used on areas subject to high loads.
Conveyance	Swales	✗	Due to the nature of the site use and the fact that the extension will continue to utilise the existing drainage system on-site the use of conveyance features will not be feasible.
	Filter Drains	✗	
	Channels/Rills	✗	
Retention/Detention	Detention Basin	✗	As the positively drained impermeable area will remain unchanged there is no requirement for attenuated surface water flows.
	Retention Pond	✗	
	Wetlands	✗	
	Sub-Surface Attenuation	✗	

Sustainable Urban Drainage Systems

12.3.7. Sustainable Urban Drainage Systems (SuDS) are designed to reduce the risk of surface water runoff in urbanised areas in an effective manner. A summary of the different types of Sustainable Urban Drainage Systems (SuDS) options available and their viability in the context of the proposed development were assessed and are outlined below (taken from Table 4 of Technical Appendix G).

Runoff Assessment

12.3.8. Runoff rates were calculated, using the Lloyd-Davies method and are summarised below:

Rainfall Event	Average Rainfall Intensity (mm/hr)	Runoff Rate (l/s)
1 in 30-year	49.499	34.4l/s
1 in 100-year	64.789	45.03l/s
1 in 100-year + 20% Climate Change	-	54.04l/s

12.3.9. In accordance with DEFRA guidance, the peak surface water runoff rate for brownfield developments should be restricted to the pre-development discharge rate were reasonably practicable. Given that the positively drained impermeable surface will remain unchanged under the development proposals, the surface water runoff rates calculated above will remain unchanged as well.

Drainage Strategy – Main Proposals

12.3.10. Based on the FRA and the viability of SuDs and run-off assessment for the proposals at the site, a specific drainage strategy for the site is outlined below:

Surface Water Attenuation

12.3.11. Surface water runoff from the proposed lateral extension of the existing building will drain to the existing private surface water sewer which runs beneath the existing building. As the positively drained impermeable surfaces on-site will remain unchanged, the surface water drainage regime will also remain unchanged. Therefore, surface water attenuation will not be required.

Foul Water Drainage

12.3.12. It is not anticipated that a new foul wastewater discharge will be required. Where there is a need for foul wastewater discharge from the proposed extension this should connect into the existing private foul sewer network already in-place on-site which discharges foul flows to the 900mm diameter foul sewer located to the north of the site.

Site Development Levels

12.3.13. The proposed development site levels will be set to ensure that finished floor levels are no lower than the existing levels to reduce the risk of any potential internal surface water flooding.

Off-Site Impacts

12.3.14. The proposed development surface water will discharge at existing rates unchanged. Therefore, the development will not adversely impact the surface water regime in the area, and hence will not increase flooding adjacent to or downstream of the site for the lifetime of the development.

12.4. Consideration of Potential for Mitigation

12.4.1. No mitigation is required due to the drainage strategy in place outlined above. However, recommendations have been set out in Technical Appendix G to help promote a sustainable and practicable drainage strategy, as follows:

- Proposed development site levels should be set to ensure that finished floor levels are no lower than the existing levels to reduce the risk of any potential internal surface water flooding.
- It is proposed that surface water runoff should drain to the existing on-site surface water sewer network, as existing.
- Additional drainage connections will be also installed as part of the Line 4 project and therefore storm water drainage will be improved overall relative to the existing Line 3 operations.

12.5. Conclusions

12.5.1. Regarding flood risk, the site is located within Flood Zone 1 (less than 1:1000-year return period). The FRA concludes that flood risk will not be exacerbated by the proposed development, and the proposals are therefore considered acceptable in this regard. There are no areas highlighted as being sensitive to flood risk and as such the site will meet the requirements of the NPPF and local planning policy.

12.5.2. In view of the findings of the assessment and the planned approach to the proposed development, which includes a drainage strategy proposal for the protection of the water environment, there are considered to be no over-riding flood risk reasons why the planned development should not be approved.

13. Cultural Heritage

13.1. Policy Context

13.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

13.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many relevant policies and text concerning the protection and enhancement of cultural heritage assets. In particular:

- NPPF (as amended 2021) paragraph 194;
- DALP (2022) Policies CS(R)20 and HC7.

13.1.3. The thrust of these policies is to ensure the conservation, and where possible, the enhancement of heritage assets and their setting.

13.2. Consideration of Potential Impacts

13.2.1. The site has no designated heritage assets within the boundary with the closest located 1.23km to the west as a Grade II listed building 'Roman Catholic Church of St Marie'.

13.2.2. An initial assessment has also been undertaken by Natural England determined that the proposal is located outside a 'buffer' area (an area within which development is likely to affect designated sites) and therefore is unlikely to impact upon an Internationally or Nationally Designated site.

13.2.3. The site is also of no known archaeological interest and no adverse impact on archaeology is considered likely given the history of the site and the scope of the proposed development footprint.

13.2.4. Although not a designated heritage asset, the Council have identified the 'Future Flower' visitor attraction as a local point of interest which is located 83m to the south of the site separated by the River Mersey and railway line. Policy HC7 states that visitor attractions identified on the policies map, which includes Future Flower, shall be protected from any adverse effects caused by new development.

13.2.5. The proposed development will have no detrimental impact on the existing visitor attraction during the construction and operational phase of the development. The views from the visitor attraction will be similar to existing with the proposed lateral extension in keeping with the height of the existing building and the proposed external structures replicate the existing.

13.3. Consideration of Potential Mitigation and Conclusion

13.3.1. The site is situated within an area of industrial land with no nearby sensitive receptors within close proximity. Therefore, no mitigation measures are considered necessary; the proposal will not impact upon cultural heritage assets through degradation of their integrity and setting.

13.3.2. In line with Policy CS(R)20 of the DALP (2022) and the wider guidance provided in Paragraph 194 of the NPPF, it is not considered that there are any heritage reasons why the proposed development cannot proceed.

14. Climate Change

14.1. Policy Context

14.1.1. The Environmental Impact Assessment Directive 2014/52/EU states that the direct and indirect effects of development on the environment should be assessed. Based on the factors identified in Schedule 4 of the EIA regulations (2017), the direct and indirect effects of the proposal on population, human health, land, material assets, cultural heritage and landscape should be identified, along with measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

14.1.2. The NPPF and the Halton Borough Council DALP (2022) collectively contain many relevant policies and text concerning the minimising and mitigation the impact on climate change. In particular:

- NPPF (as amended 2021) Section 14, specifically Paragraph 154; and
- DALP Policy CS(R)19.

14.1.3. The NPPF provides the arching guidance on addressing potential impacts of climate change within development proposals. Paragraph 154 states that ' new development should be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change…and help to reduce greenhouse gas emissions, such as through its location, orientation and design.

14.1.4. In addition to the consideration of the proposed development's potential for impact on / adaptation to climate change as set out elsewhere in this ES (such as the consideration of emissions, flood risk, and transport) the below summarises the other aspects of the proposal relating to climate change.

14.2. Climate Change Considerations

14.2.1. The development proposed in this application aims to facilitate the production of a silica fibre product at the Pilkington Sullivan site which forms a key raw material for the production of SiFAB. SiFAB is a revolutionary new silicon fibre product for use in the manufacture of Lithium-ion batteries as an anode material.

14.2.2. The key environmental benefit of the proposed development is not demonstrated 'on the ground' at the application site, but is represented by the role that the site would play in the production of the revolutionary SiFab product facilitates the manufacture of batteries with significantly improved charge density and lifespan.

14.2.3. Using the Lithium-ion batteries incorporating SiFAB technology not only improves battery efficiency, but the longer battery life reduces the frequency of required charges. The products will assist in adapting to lifestyles that mitigate climate change, such as through their use in

electric vehicles. SiFAB batteries weigh comparatively less than an electric vehicle batteries currently used today, which increases efficiency and contributes to their appeal.

14.2.4. Aside from the wider environmental benefits, at the application site the proposed development represents the effective use of previously developed land, which is highly sustainable compared with the potential alternative of accommodating the proposed production line for the silica fibre elsewhere, on a greenfield site. The creation of jobs within an existing industrial area is also considered to be environmentally preferable to expansion of industrial uses onto land not previously utilised for a similar purpose.

14.2.5. Furthermore, although not considered to be of great significance, a benefit of the proposed development that could contribute to the site's adaptation to climate change is the first introduction of vegetation to the application site. Native climbers are proposed to be introduced to the site's southern boundary which would assist with CO2 absorption and also support pollinators through planting of pollinator-friendly species such as honeysuckle.

15. Socio-Economic Effects

15.1. Introduction

15.1.1. This chapter describes current economic and social conditions in the area around the Pilkington Sullivan Site as a precursor to considering likely impacts on the local economy and its population if the proposed development is approved.

15.2. Geographical scope of assessment

15.2.1. The geographical scope of the assessment concentrates on the area most directly affected by the proposed development, Widnes. However, the assessment is defined by reference to geographical units for which economic and socio-economic data are available, such as electoral wards.

15.2.2. The application site is located in the electoral ward 'Halton View' within the Borough of Halton. A large proportion of the ward comprises much of the Moss Bank Industrial Estate.

15.3. Baseline local economic and socio-economic indicators

15.3.1. The economic and socio-economic data which describes conditions around the site are drawn from a range of sources. Unfortunately, different sources use different geographical reporting units, and report data from different years. Nevertheless, taken in conjunction they provide a representative picture of the local economy.

15.4. Population and Employment

15.4.1. Reflective of the Halton View Electoral Ward's composition being largely made up of the Moss Bank Industrial Estate, the Ward has a working age population (16-64) of 4,031, as per Office for National Statistics (ONS) figures (2013).

15.4.2. The Ward includes the residential suburb of Crow Wood, located east of Watkinson Way and north of Fiddlers Ferry Road.

15.4.3. 2011 unemployment levels in the Halton View Ward were 8.3%, representing a level higher than the national average of 7.6% (ONS), but lower than the comparable unemployment rate in Halton (9.4%).

15.4.4. The latest ONS figures for workless household's state that 17.1% of households in Halton with at least one person aged 16 to 64 do not have any resident in employment. This figure is higher than the averages for the wider North West (15.5%) and Great Britain (13.6%).

15.5. Current Economic Importance

15.5.1. The Unifrax facility supports the direct employment of 83 people, with many more employed throughout the supply chain. Further indirect employment is generated by the Applicant's presence in the area through contractor employment.

15.5.2. The site is a significant contributor to the local economy through employment, business rates, and taxation. The site also benefits from an important longstanding presence within the Moss Bank Industrial Estate. The relationship between the site and the local area is mutually beneficial; the longstanding presence of chemical works at the site have developed a local workforce knowledgeable and well suited to the jobs at the site.

15.5.3. The Moss Bank Industrial Estate as a whole is one of the primary employment locations within Widnes. It is a significant strategic employment location for the Borough of Halton and has been for many decades, demonstrated by the remaining considerable industrial uses across the Industrial Estate and the legacy of the former ICI operations.

15.5.4. The Industrial Estate today is under pressure from competing residential land uses which are likely to demand the release of employment land for residential uses in the context of the housing crisis and Halton's limited available supply of land for housing given the Borough's Green Belt constraints. It is considered that in this context, existing providers of significant employment for the Borough's population should be safeguarded from land uses that could threaten the operation of existing employment uses, such as at Unifrax's Pilkington Sullivan Site.

15.6. Development proposal and future economic and social conditions

15.6.1. The proposed development will create 38 full time employment opportunities as well as jobs involved in the construction of the proposed additional production line. The benefits of the proposal therefore include both direct and indirect economic benefits, through direct and indirect employment. The employment benefits are also considered to be both temporary (at the construction phase) and permanent (the significant number of new jobs created once Line 4 is operational).

15.6.2. Increased investment into the area is considered to support the overall strategy for economic investment of the Widnes Waterfront, set out in the development plan.

15.6.3. The project represents a significant capital investment, which increases confidence in the site and therefore supports the retention of the 83 jobs which are already supported on-site.

15.6.4. Additional employment not only reduces unemployment and results in direct economic benefits to the workforce and the exchequer, but new employment also results in a series of spin-off benefits which are referred to as 'indirect effects'.

15.6.5. 'Indirect effects' can occur down the supply chain, for example the employment of individual hauliers that deliver materials to and from the site.

15.6.6. 'Induced effects' arise from the income earned by local employees being spent on household and personal goods and services within the local economy. The extent of this effect is a matter of some debate and difficult to predict in an accurate way.

15.6.7. In an assessment of purely local effects, it is also important to recognise that some of the benefits (direct, indirect and induced) will not accrue to the local economy by, for example, the Applicant purchasing a major item of capital equipment from another region, or by some of the workers and their families spending their wages on holidays in other regions, or abroad. Such effects are referred to as leakage, displacement, and substitution of benefits.

15.6.8. However, it should not be underestimated that the proposed additional production line at the Pilkington Sullivan Site would undoubtedly benefit the local economy as well as playing a vital role in the production of a product that has much more wide-reaching benefits.

15.6.9. Aside from quantifying the economic benefits of the proposed development, it should be noted that the overarching objective of the planning application is to facilitate the production of a new fibre at the site which is to be used in the production of SiFAB lithium-ion batteries. The proposed contribution of Unifrax's Pilkington Sullivan Site in the production of the revolutionary SiFAB batteries is to be celebrated, given the environmental credentials of the technology.

15.6.10. We consider that the association of the Pilkington Sullivan Site with the production of SiFAB batteries is highly positive and may attract further inward investment to the site or to the wider Widnes Waterfront.

15.7. Socio-Economic Conclusions

15.7.1. The Applicant's Pilkington Sullivan Site supports 83 jobs at present, which is proposed to be increased to 121. As an area with an unemployment rate greater than the national average, it is considered of even greater importance that the economic benefits of the proposed development are recognised and brought to fruition.

15.7.2. An approval for the proposed development would not only support the creation of new employment, but would also increase job security for the site's existing employees, many of whom are residents of Halton Borough.

15.7.3. Furthermore, it is possible that the association of the site with SiFAB technology could provide further benefits to the region and the Moss Bank Industrial Area in particular, when it becomes known within the chemical industry that the Pilkington Sullivan Site has been selected as the location of the proposed silica fibre for use in SiFAB fibre technology production line.

16. Cumulative Impact Assessment

16.1. Introduction and Methodology

16.1.1. There is no dedicated section within the NPPF for Cumulative Impact Assessments. Furthermore, the Scoping Opinion adopted by from Halton Borough Council did not request that a Cumulative Impact Assessment be undertaken to assess the possible cumulative effects of the proposed development.

16.1.2. However, this chapter of the ES aims to provide a review of the cumulative impacts of the proposed development, taking into account the current and proposed future operations across the site in combination with each other, and other nearby activity. It considers the potential for cumulative impact arising from the proposed development and assesses whether any changes will arise from the proposal that, when combined with other development and activities in the area, would result in the proposed scheme being unacceptable. Past, present and reasonably foreseeable future developments and operations have been considered to ensure that the potential cumulative impacts of the proposal are fully considered.

16.1.3. Throughout this ES and its associated technical appendices, the potential environmental impacts of proposed introduction of Line 4 to the site have been assessed. This chapter consolidates the findings of all the individual technical assessments that have been undertaken.

16.1.4. Throughout, it should be noted that Line 1 is to be removed from the site and therefore the proposed Line 4 on site does not represent a fourth operational production line.

16.2. Successive Impacts

16.2.1. Successive effects comprise the impacts caused by the proposed development in conjunction with other developments that have occurred or are likely to occur in the foreseeable future.

16.2.2. The site has been occupied by Saffil (the legal entity of Unifrax) since 1977. It has an extensive history of industrial uses, with soda ash manufacture taking place on-site from 1865-1926 prior to the site's most well-known historic use from which it takes its name: as part of the Imperial Chemical Industries (ICI) portfolio of chemical manufacturing plants.

16.2.3. Fibre production at the site began in 1978, utilising Line 1. Line 2 was added in June 2004 and Line 3 was completed in December 2012.

16.2.4. The historic (and current) uses of the site is such that the baseline conditions for much of the Environmental Impact Assessment undertaken are already dominated by the physical impacts of industrial uses and fibre manufacture. The entirety of the application site is made up of previously development land.

16.2.5. Given the site's location within a long-established industrial area, it is not anticipated that future site operations would result in any adverse impact upon future sensitive receptors which may be introduced. It is not considered likely that sensitive land uses could be introduced closer to the site than the residential properties recently erected at Tan House Lane, west of the site.

16.2.6. To the immediate north the site is bounded by similar general industrial uses which from a visual inspection appear to have high occupancy. To the east of the site is waste management (landfilling) operations managed by Broadthorn. The south of the site abuts disused land formerly associated with the ICI works and beyond that lies the railway line and St Helens Canal.

16.2.7. Even though the site is located within the boundaries of the Widnes Waterfront SPD (2005),the site is bounded by proposed employment redevelopment opportunities rather than by residential or any similarly sensitive use.

16.2.8. Overall, the risk of unacceptable potential successive impacts of the proposal are considered to be negligible as the development site represents an ideal location to accommodate the proposed development. This has been concluded based upon the historic significant industrial land uses of the area, including over 40 years of fibre manufacture at the site itself. The likelihood of the introduction of significant sensitive receptors to the site's setting immediate setting (i.e. closer than the Tan House Lane properties) is considered to be low.

16.2.9. Finally, the impacts of introducing a third operational production line (Line 4) are considered to be environmentally acceptable, as demonstrated within this ES.

16.3. Simultaneous Effects

16.3.1. The proposed development has the potential to impact upon the local and wider community through impacts that may be acceptable as a standalone impact but may be unacceptable in combination with existing neighbouring uses/operations. Simultaneous effects comprise the impacts arising from multiple developments, occurring at different locations in the locality. This ES has considered the potential for impacts where individual projects may not create an unacceptable degree of adverse impact but collectively the results may potentially be significant.

16.3.2. As part of the assessment of simultaneous effects, a targeted search of Halton Borough Council's planning application register was undertaken to identify any applications of relevant scale that have been granted permission or are pending decision in the locality. No interactive mapping feature to assess planning applications is available via the HBC website.

16.3.3. However, planning application searches using nearby addresses were undertaken and at the time of writing, no live planning applications pertinent to this application have been identified.

16.3.4. The site is located within the boundaries of the Widnes Waterfront SPD (2005). However, the proposed development is considered to accord with the content of the SPD, which promotes redevelopment of the wider area through, inter alia, new employment and leisure opportunities.

16.3.5. The potential environmental impacts of the proposed introduction of Line 4 to the site have been assessed by technical consultants based on the current baseline at the site, which is already an operational chemical fibre manufacturing plant. The presence and accessibility to the operational production Line 3 enable clear appreciation of what Line 4 will comprise, and its likely environmental impacts.

16.3.6. It is considered that the implementation of appropriate mitigation measures ensure that even the simultaneous effects of future operations at the site do not result in adverse environmental impacts which are unacceptable in EIA terms.

16.4. Combining the Potential Environmental Impacts

16.4.1. In order to assess the combined effects of the environmental impacts, it is necessary to consider whether some or all of the individually acceptable effects are so close to being unacceptable, that when combined, the totality is unacceptable. The potential benefits of the proposal must also be considered into the cumulative planning balance.

Landscape and Visuals

16.4.2. It is concluded within this ES and supporting Landscape and Visual Appraisal that no significant impacts are anticipated with respect to the potential for adverse impacts on individual visual receptors or the local and wider landscape and its character.

16.4.3. It is concluded that the potential cumulative effects as a result of additional changes to the landscape or visual amenity caused by the proposed development would not be significant. Given the nature of the proposed development and established industrial context in which the site is located, it is not considered that cumulative effects would be significant.

16.4.4. No simultaneous cumulative landscape and visual impacts are foreseen as a result of the proposal.

Nature Conservation and Ecology

16.4.5. In terms of ecology, this ES and accompanying Technical Appendix B consider the potential for effects on nature conservation and ecology. Searches for planning applications that have been submitted within the vicinity of the application site have not identified any planning proposals that may have an impact on the application site's ecology when they are considered cumulatively with the development proposed in this application.

Transport

16.4.6. The Transport Assessment (TA) accompanying this ES considers as its key policy test the NPPF in which it is stated that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are “severe”.

16.4.7. The TA does not explicitly consider the potential cumulative impacts of traffic movements associated with the proposed Line 4 operations on the road network. This is due to very limited number of traffic movements associated with Line 4 largely representing a continuation of the existing situation, not least as the site will continue to operate no more than three production lines at any one time.

16.4.8. An online search for nearby developments (either current or future) that could generate significant vehicle movements has not identified any other proposal that would add such quantities of vehicles onto the roads used by site traffic that could result in an unacceptable impact in highways terms when considered in combination with those proposed by the proposed development on-site.

16.4.9. Therefore, it is not considered that the proposal would result in any significant cumulative impacts in traffic and transport terms.

Cultural Heritage

16.4.10. With regard to cultural heritage, this ES concludes that the proposals would not result in any adverse impact upon appreciation of any heritage asset. The site is not located within any cultural heritage designation, nor is it located within 1km of any Listed building.

16.4.11. Therefore, it is not expected that the proposed development would have any cumulative impact on the integrity of heritage assets or their setting.

Amenity Impacts (noise, dust etc)

16.4.12. The potential impacts of the development proposal upon amenity (i.e. in relation to noise, dust etc.) are not considered to be significant. Noise Assessment has shown that the operation of the proposed Line 4 production line and associated external fixed plant and machinery will not result in any significant noise that would impact on the amenity of the nearest residential properties. With regard to air quality, the proposed development has been assessed as having no significant impacts on the nearby environmental and human receptors.

16.4.13. Operations of the same nature as Line 4 have been undertaken at the Pilkington Sullivan site for many years, without causing adverse impact upon the amenity of residential receptors. It is beneficial to the Applicant to have good relations with the local community, and therefore the Applicant will continue to adhere to high environmental standards.

16.4.14. Overall, whether considered individually or in their totality, the potential effects on amenity do not come close to the thresholds of unacceptability.

Water Resources

16.4.15. The Flood Risk Assessment & Drainage Strategy (Technical Appendix G) considers the strategy for water management for the proposed development. The Assessment concludes that the proposed development is acceptable in terms of on-site flood risk and will not impact upon flooding or the surface water regime in the wider area. As the proposed development will not increase flooding off-site it is not considered that there are any potential cumulative impacts of the proposal.

16.5. Summary of Cumulative Impacts

16.5.1. In summary, having considered the potential for cumulative impact, it is considered that there are no cumulative impacts that will arise from the scheme in combination either within itself or with other past/ existing/ proposed developments that would render the proposed development unacceptable. It is therefore considered that with regard to cumulative impacts, the proposals are acceptable.

17. Conclusions

17.1.1. In accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, the proposed development is classified as 'Schedule 1 development', requiring Environmental Impact Assessment and the preparation of an Environmental Statement. Schedule 1 includes the carrying out development to provide 'Integrated chemical installations'.

17.1.2. This ES has been prepared on behalf of the Applicant in accordance with the 2017 Regulations. It has set out the baseline and background environmental information as well as the details of the development having regard to the location, scale and nature of the proposals.

17.1.3. This ES identifies the likely significant impacts and the relevant national and development plan policies that will be used in the determination of the application. In this regard, the proposal is considered to be compliant with the main planning policy tests set out in the development plan and advice set out in national planning policy. Further details with regard to the application's wider accordance with the development plan are set out within the accompanying Planning, Design & Access Statement.

17.1.4. This ES concludes that, upon completion of numerous technical reports to consider the potential environmental impacts of the proposal, it is not considered likely that unacceptably adverse impacts will arise. The proposed Line 4 is considered to be capable of facilitating production of silica fibre product for use in SiFAB without unacceptable adverse environmental impact.

17.1.5. The benefits of the proposed development have been outlined in this ES and are expanded upon in the accompanying Planning, Design & Access Statement. The benefits include the maintenance of jobs at the site, the creation of new job opportunities, and wider benefits through the contribution that the Pilkington Sullivan Site can make to the production of SiFAB anode material for use in Lithium-ion batteries.

17.1.6. The determination of this application should also attribute weight to the fact that the proposed Line 4 would represent the ability of the site to operate three production lines simultaneously, which the site has previously accommodated without significant adverse environmental impact.

17.1.7. In overall conclusion, the proposed development is considered to accord with development plan policies which aim to protect amenity and environmental standards as set out in the development plan. It is considered that the proposal represents environmentally acceptable development that provides economic, social, and environmental benefits.

17.1.8. Accordingly, where proposals conform with the definition of sustainable development in NPPF and comply with Section 38(6) of the Planning and Compulsory Purchase Act 2004 (i.e. that

have regard to the development plan) NPPF, paragraph 11 advises that it is national level policy that in decision-taking, such development proposals should be approved without delay. Accordingly, the findings of this ES suggest that overall, the development will be environmentally acceptable and will accord with the development plan.

Appendix 1: Halton Borough Council Scoping Opinion adopted 20th December 2021

HALTON BOROUGH COUNCIL

Joel Jessop
Heatons
The Arc
6 Mallard Way
Pride Park
Derby

BY EMAIL ONLY – joel@heatonplanning.co.uk

Our Ref	21/07134/PREAPP
If you telephone please ask for	Rob Cooper (0151) 511 7975
Your ref	
Date	20/12/2021
E-mail address	robert.cooper@halton.gov.uk

Dear Mr Jessop

The Town & Country Planning (Environmental Impact Assessment) Regulations 2017
Scoping Opinion

Proposed installation of an additional production line (Line 4) at Unifrax, Sullivan Road, Widnes.

I refer to your formal EIA Scoping request received on 04 November 2021 for the proposed installation of an additional production line (Line 4) at Unifrax, Sullivan Road, Widnes.

I note that in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, it is your view that the proposed development should be classified as EIA development as the proposed development falls within Category 6 of 'Schedule 1' of the Regulations, and that you intend on submitting an Environmental Statement with the application.

The submitted scoping report provided (Heatons, November 2021) introduces the planning context of the site, outlines the proposed development, and includes the proposed topics and the level of detail proposed regarding the various technical assessments that will accompany the Environmental Statement. In summary these shall include:

- Landscape and Visual
- Ecology & Nature Conservation effects
- Traffic
- Noise and Vibration
- Air Quality
- Ground Conditions
- Water Resources
- Climate Change

The general scope of the proposed ES is considered to be acceptable, and the Council agrees with the above topics and accompanying reports and assessments proposed.

I also note that the following matters were scoped out include socio-economic effects and the effects on cultural heritage. Whilst it may not be necessary to include these in the ES, I would suggest that they should be appropriately addressed in the planning statement.

A non-technical summary (NTS) is also required to accompany an EIA and should summarise the EIA, setting out the positive and negative impacts and the mitigation measures, monitoring and management of the development. It is advised that the non-technical summary should include plans of working and restoration and preferably be available for free. The NTS should be a separate document to the ES.

As required by Regulation 18 (5) (a) and (b) of the 2017 EIA Regulations the Environmental Assessment should be prepared by a competent expert and the ES should be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.

I have appended the various consultee responses we have received from the Local Highway Authority, Lead Local Flood Authority, Merseyside Environmental Advisory Service (MEAS), Natural England and United Utilities. These matters should be addressed within the ES and planning application. Your attention is also drawn to the comments provided by MEAS with regards to HRA.

I note we have not received any comments from Environmental Health (on air quality and noise) or from the contaminated land officer, should you wish to contact them directly to discuss the relevant sections of the ES their contact details are below.

Isobel Mason, Lead Environmental Health Officer - 0151 511 7595

Will Watson, Contaminated Land Officer - 0151 511 7526

I hope the above is satisfactory, if can be of further assistance in the meantime, do not hesitate to contact me.

Yours sincerely,

R Cooper

For Operational Director – Policy, Planning and Transportation

Appendix 2: Non-Technical Summary

Heatons

Planning Environment Design

NON-TECHNICAL SUMMARY

PLANNING APPLICATION CONSISTING OF:

INSTALLATION OF ADDITIONAL PRODUCTION LINE (LINE 4), INVOLVING A LATERAL EXTENSION TO AN EXISTING BUILDING AND THE INSTALLATION OF ASSOCIATED PLANT AND MACHINERY

at

UNIFRAX PILKINGTON SULLIVAN SITE, WIDNES, WA8 0US

Prepared By

Heatons

JUNE 2022

Heatons

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CONTENTS

1 INTRODUCTION & BACKGROUND

This Non-Technical Summary (NTS) has been prepared by Heatons on behalf of Unifrax (hereafter referred to as 'the Applicant') to supplement an Environmental Statement (ES) prepared in support of a planning application for a proposed additional production line at the Applicant's Pilkington Sullivan Site, referred to in this document as 'the site'.

The proposed production line would be the fourth at the site, therefore it is referred to as 'Line 4' despite the fact that the site's Line 1 has not operated since 2018 and is currently being formally removed from service with no possibility of it restarting. The proposed additional production line 'Line 4' will enable the site to operate three production lines simultaneously, as has been the case in the past.

Line 4 proposes to manufacture a new product from the site: a silica fibre product for export for use in Lithium-ion batteries which are manufactured in the USA. The fibre product to be manufactured at Line 4 is a vital component in the Lithium-ion batteries, which offer considerable usability and environmental benefits when compared with traditional batteries.

This NTS is supplementary to an Environmental Statement (ES) which has been prepared with the benefit of numerous technical appendices to ensure that suitable environmental impact assessment has been undertaken to inform the ES. The scope of environmental impact assessment was agreed with Halton Borough Council via their adoption of a Scoping Opinion to set the scope of assessment required. The adopted Scoping Opinion is available at Appendix 1 of the accompanying ES.

The NTS gives a summary of the following:

- The development proposed at the site;
- The main elements of the proposal that have the potential to impact positively and/or negatively on the environment, people and the economy; and
- Potential mitigation measures to prevent, and reduce where possible, significant adverse effects.

The Figures contained within this NTS are reproductions of planning application drawings that have been submitted accompanying the planning application. Full 'to-scale' versions are therefore available.

2 SITE AND SURROUNDINGS

The site subject of this planning application comprises 3.7-hectares of previously developed ('brownfield') land which was part of the former Imperial Chemical Industries (ICI) Pilkington Sullivan Complex. The site therefore has a long history of chemical manufacture, with soda ash manufacture taking place on-site from 1865 – 1926.

The site is located within the industrial Moss Bank area of Widnes, located circa 800m north of the Mersey. The site is accessed via Moss Bank Road leading into Sullivan Road and smaller industrial roads.

Figure 1 below shows the site in its immediate context.

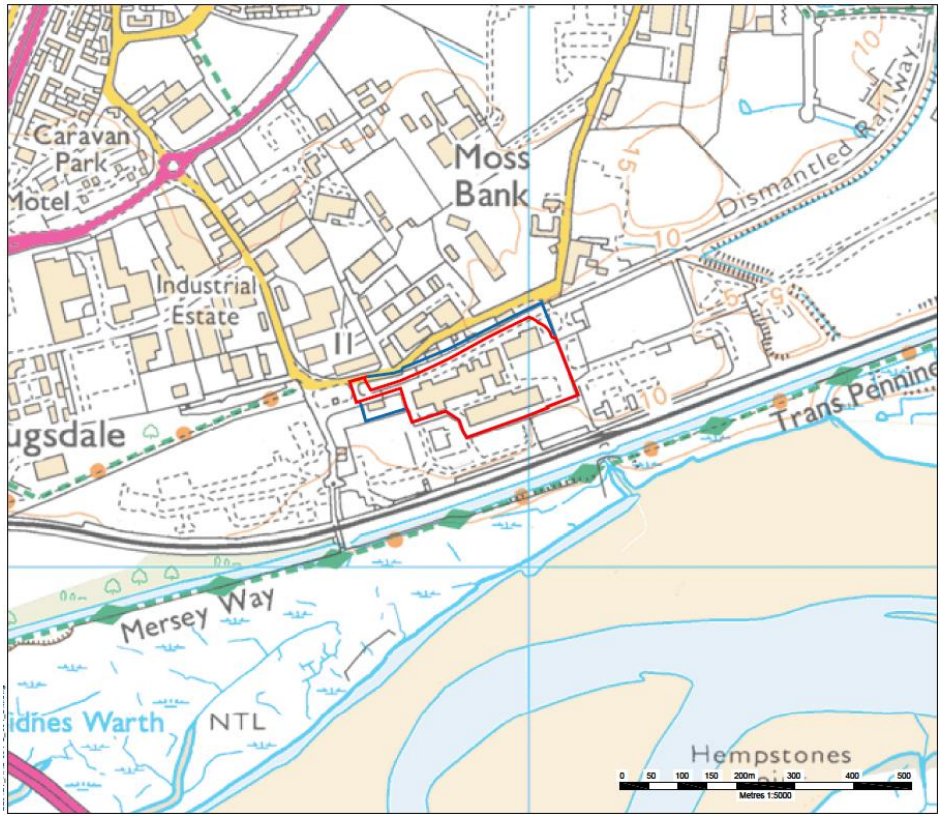

Figure 1: The site (outlined in red) and other land in the control of the Applicant (outlined in blue)

Fibre production began in 1978, utilising Line 1. Line 2 was added in 2004 and Line 3 was completed in December 2012.

The site is relatively flat with a slight slope to the south, towards the Mersey. The site surface is at an elevation of approximately ten metres above sea level. The entirety of the site is within Environment Agency Flood Zone 1 (representing land at lowest risk of flooding from fluvial

sources). The wider setting of the site is dominated by local industrial land uses, including waste management and Fiddler's Ferry Power Station.

The disused St. Helens Canal and a railway line are located between the site and the River Mersey, along with intervening disused former industrial land situated.

The site is not located within a National Park, Green Belt, or Area of Outstanding Natural Beauty. However, it is located close to an area of Special Landscape Value.

There are no Sites of Special Scientific Interest located within 2km of the site.

There are limited number of sensitive visual receptors close to the site, with no sensitive receptors within the immediate setting. The closest listed buildings are Grade II 'Brick Sewer Vent' located circa 1.2km north east of the site and Grade II 'Roman Catholic Church of St Marie' located over 1km west of the site in the centre of Widnes.

There is one Local Nature Reserve located within 2km of the site.

There is a non-designated visitor attraction 'Future Flower', a non-designated visitor located just south of the St Helens Canal and railway line c. 700m from the site.

Two public rights of way located near the site. The Widnes – Penketh section of the long distance 'Trans Pennine Trail' walking and cycling route is located on the far side (southern side) of the canal and the railway line itself (classified as W/67). National Cycling Route 62 (Diversion) connects from the St Helens Canal, traversing north near the western boundary of the site then turning west connecting to the A557 Queensway.

3 DESCRIPTION OF PROPOSED DEVELOPMENT

Overview

The proposed development comprises of the following elements:

- a lateral extension to the existing building which contains Line 3; and
- the installation of associated external plant and machinery forming a new production line.

The above development is considered necessary to meet a requirement to produce a new product that would be exported from the site to the USA for conversion to SiFAB silicon fibre anode material, used in Lithium-ion battery manufacture. As outlined in this NTS and described further in the ES, the disused production Line 1 cannot be utilised to accommodate the manufacture of the silica fibre product as the line is too physically short. The development proposals submitted are considered to best enable the efficient production of the product ready for its export to the USA.

Plans showing the proposed layout of Line 4 in the context of the wider site are provided accompanying this NTS. A technical annotated version of the Layout Plan is also provided, which explains the numerous components of the proposed production line.

Building Extension

The lateral extension to the existing building on-site that currently houses Line 3 measures 48m deep, 12m high, and 25.5m wide (matching the height and width of the existing building). The building is currently at half capacity, as it was designed to house two production lines: Line 3 (which is built and operational) and Line 4 (hereby proposed).

Line 4 requires a physically longer length production line than Line 3 in order to manufacture its finished product. As Line 4 requires a longer spinning section and fibre handling section, as well as packing equipment at the end of the line, it cannot be accommodated within the existing dimensions of the building.

The proposed extension to accommodate the longer production line would extend the building by a total of 1,224m^2.

The appearance of the building extension will match the existing building in terms of its materials and colour palette.

Proposed External Equipment

Various plant and machinery are proposed to be installed beyond the confines of the proposed extended building, as part of the equipment necessary for the operational of production Line 4. However, the production line will also use many existing utilities and services already on-site, including:

- Raw material and finished product storage;
- Process and cooling water;
- Water treatment;
- Steam production and distribution;
- Atmospheric emissions treatment;
- Neutralisation plant;
- Warehousing;
- Laboratories; and
- Engineering workshops.

Comprehensive details of the equipment and processes to be installed as part of Line 4 are shown on the accompanying planning application plans. Their visual appearance are shown on the accompanying Elevations Plans which illustrate how the proposed structures will appear in the context of the existing site.

Proposed Vegetative Planting

Newly planted vegetation is proposed in the form of native climbers along the site's southern boundary.

Transport

HGV traffic movements associated with Line 4 will enter the site via Moss Bank Road, as vehicles associated with all other production lines do. Once on-site, HGVs will operate via a one-way systems within the site, as shown on the Plans accompanying this Statement.

From Moss Bank Road, HGVs will exit onto Tan House Lane or Gorse Lane which both connect onto the A562 and thereafter the wider highway network.

Traffic movements will equate to an additional six HGV trips per day (three in and three out).

Operating Hours

Manufacturing operations at the site currently operate 24 hours / day, 7 days per week and will continue to do so under these proposals.

Traffic movements (in and out) which includes HGVs and employee/ contractor/ visitor vehicles are limited to between the hours of 0800-2000 hours, usually Monday – Friday, although there is occasional weekend traffic.

Employment

The site currently has 83 direct full-time employees as we all indirect jobs in the supply chain. The proposed development will support indirect employment in the supply chain as well as generate an additional 38 full-time jobs at the site itself. The proposed production Line 4 requires the employment of seven staff, spread over five shifts. An additional three job positions will also be created in maintenance and engineering at the site.

4 NEED AND BENEFITS

Need for Line 4

The proposed development comprises the construction of an additional production line (Line 4) at the Pilkington Sullivan Site. Line 4 would enable the manufacture of a new product at the site, which cannot be accommodated by any existing production line at the site. Incidentally, Line 1 is currently being removed. Construction of the additional production line at the site would enable the manufacture of the silica fibre product needed in the manufacture of SiFAB silicon fibre anode material, which is used in Lithium-ion batteries.

The proposed development would result a diversification in the products that can be made on-site as well as creating new skilled jobs and many other benefits, as outlined in the ES

Due to the nature of the specific silica fibre manufacturing process, additional abatement is required for Line 4, which elongates the physical linear process of the fibre's manufacture. It is this additional abatement that necessitates the extension to the building to accommodate Line 4.

The Applicant has already constructed a space for an additional production line within the existing building. At present, this space is vacant. Furthermore, there is external vacant space on-site to accommodate the proposed lateral extension to the building and external equipment needed for Line 4 without expansion beyond the confines of land already closely associated with the manufacture of silica fibres. The Applicant currently has land on-site (both internal floorspace and external areas) that are not productive and can be put to positive use.

Locational Benefits

Paragraph 119 of the National Planning Policy Framework (NPPF) supports the use of previously developed land. The proposed development would be located at an existing site which benefits from a locally important longstanding presence within the Moss Bank Industrial Estate. The site is located with a Primarily Employment Area as per the adopted Halton Delivery and Allocations Local Plan (DALP). Given the site's location in one of the primary employment locations in Halton, it is considered to be an appropriate location for further job creation.

The proposed Line 4 will sit largely within an existing building that already accommodates Line 3. The building was erected in 2017 to accommodate a future additional production line (Line 4). Without the approval of the Line 4 production line, the space will remain redundant and of no practical use to the Applicant.

Furthermore, the proposed development can be accommodated without any modification to the site's access.

Job Creation

National planning policy places 'significant weight on the need to support economic growth and productivity', as stated in paragraph 81 of the NPPF. The proposed development supports economic growth with an additional 38 direct jobs being created at the site as well as creating indirect haulage jobs with the transportation of the finished product.

Sustainability Benefits

As stated, the silica fibre production proposed to be manufactured at production Line 4 is an essential component of SiFAB Lithium-ion batteries.

SiFAB batteries themselves are revolutionary in that they offer a more efficient, lighter, and higher energy density alternative to traditional batteries. The uses of SiFAB batteries includes, but isn't limited to use in electric vehicles. As the SiFAB batteries offer superior charge times and lengthened battery life to what is currently available, SiFAB batteries can assist in the transition to mainstream adoption of electric vehicles.

It is therefore considered that the need for the proposed development and its benefits are not localised to Halton, but are far more widespread.

5 ALTERNATIVES

Prior to the submission of this planning application, the Applicant has considered various alternative options to the development proposals, including a 'do nothing' approach. The 'do nothing' approach would result in the site continuing to operate the existing production lines (2 and 3) and not facilitate the production of a new silica fibre product for export. This would result in vacant space not being utilised for an additional line within the existing building which houses Line 3, but was designed with capacity for Line 4.

A 'do nothing' approach would not enable the Applicant to manufacture the silica fibre products required to be utilised at the SiFAB manufacturing site. A 'do nothing' approach would also not deliver the many other benefits of the proposed development, including the associated direct job creation that the proposed Line 4 will deliver.

With regard to alternative locations for the proposed production line, on a broad scale the site is ideal due to its longstanding use as a site for chemical processing and significant employment uses in the industrial sector. The site harbours extensive knowledge of the process and proposed operations. Furthermore, overall site infrastructure and health and safety standards required for this type of development are already in place.

Within the site itself, alternative locations for Line 4 have been discounted as the existing building housing Line 3 at the application site was designed to accommodate an additional production line when it was constructed. It is therefore logical to accommodate Line 4 within the building designed to accommodate it.

It is not considered to be preferable to the Applicant in economic and sustainability terms to construct an entirely new building to house the proposed Line 4 when the existing building has long been earmarked to accommodate it. The proposed development can be comfortably accommodated within the existing site, which was sufficient space to accommodate the lateral extension without compromising existing operations at the site.

Finally, the Applicant has considered the potential for exporting finished product from the site by means other than road haulage. HGV movements to/from the site associated with Line 4 are not concluded to be of such significance that they pose an unacceptable adverse impact

on highway safety and/or the capacity of the road network. Therefore, as there are no viable alternatives to road haulage that do not involve third party land and significant cost, it is concluded that road haulage is the sole viable option to serve the proposed Line 4.

6 ENVIRONMENTAL IMPACTS

The accompanying Environmental Statement (ES) assesses the aspects of the environment that are likely to be significantly affected by the contents of this planning application. Regard has been given to the potential for impact (adverse and beneficial) of the proposals on the topics listed in this Chapter.

The assessment of the topic areas has been undertaken by employing specialist consultants who are qualified experts in their respective fields. Full technical reports relating to the evaluation of the potential impacts have been prepared and form part of the ES.

Landscape and Visual Impact

A Landscape and Visual Appraisal has been prepared by Heatons and accompanies the ES at Technical Appendix A.

The site is not located within a nationally designated landscape, National Park, or Area of Outstanding Natural Beauty. Given the context of the site, there are also relatively few nearby sensitive visual receptors, such as residential properties. However, given the topography and nature of the land to the south of the site (primarily the Mersey Estuary), long-distance views of the site are possible from the south.

The Landscape and Visual Appraisal considers the potential impact of the proposed development against the current baseline landscape character, which is dominated locally by operational industrial uses and vacant former industrial land. The Appraisal considers the impact of the proposal on the character of the landscape, and impact on sensitive receptors, including the occupants of the newly constructed properties at Tan House Lane, recreational walkers , and road users.

Overall, the potential effect on the views and visual amenity of current and future residents, recreational receptors, and road users more generally is anticipated to be limited and very localised. Where the proposed building extension, external plant, additional stacks, and vehicle movements would be visible, they would be seen against the site's existing industrial backdrop.

It is not anticipated that the proposed development would give rise to any unacceptable effects on the landscape character of the locality or on the visual amenity of nearby receptors.

Ecology

Extensive desk-based assessment and field surveys have informed a Preliminary Ecological Appraisal (PEA) that has been prepared to determine the ecological status of land at the site. The PEA (ES Technical Appendix B) which accompanies the planning application was informed by a desk study, a Phase 1 Habitat Survey which was undertaken on the 10th March 2022, and a preliminary protected species assessment, prepared in accordance with the latest relevant ecological guidance.

The desk study confirmed the absence of ecological designations such as Local Wildlife Sites and National Nature Reserves that could be impacted upon by the proposed development. The Phase 1 Habitat Survey considered the physical makeup of the site and surrounding land with regard to the potential for presence of protected species.

It is considered that the proposals would not have any significant adverse impact on any significant biodiversity habitat located on, or within close proximity to, the site. The PEA did not identify any significant habitats of ecological important and no suitable habitats for notable protected species were found at the time of the assessment.

However, in line with the NPPF, recommendations to enhance the site's biodiversity value have been designed into the proposed development. Native vegetative planting around the periphery of the site has been incorporated into the design. Given the limited space between operational areas of the site and the site's boundaries, it is proposed to plant native climbing species of plants along the site's southern boundary. Species proposed to be introduced include common ivy and common honeysuckle, which will provide foraging material for birds and invertebrates as well as visually 'greening' the site when viewed from the south.

Traffic and Transport

A Transport Statement (TS) accompanies the planning application at Technical Appendix C of the ES. The TS was prepared by AECOM and considers the impact the proposed development will have on highway capacity and road safety.

The proposed Line 4 would generate six additional HGV trips a day, in addition to the existing 32 HGV trips per day utilising the site access.

Therefore, in the context of existing site operations and non-site traffic, it is concluded that the impacts of the proposed development would not be 'severe' for the highway network's capacity or safety, which is the main policy test under the NPPF.

The TS concludes that the increase in both HGV and vehicular trips to and from the site would be small and it is not considered that the proposed development would result in a material impact on highway capacity or road safety.

Noise

Noise Impacts have the potential to arise from operations being in close proximity to sensitive receptors or not having been undertaken in accordance with recognised good practice and being a cause for nuisance. To assess the potential noise implications of the proposed development, Hepworth Acoustics Ltd have carried out a noise impact assessment which accompanies the ES at Technical Appendix D.

To measure the impact, baseline noise monitoring was carried out at a location on the western boundary of the site representative of the nearest residential properties to the site, prior to consideration of the likely level of noise to be generated by Line 4. The process enabled determination of the overall acceptability of noise impact.

It was established that the proposed development would generate a noise level lower than representative background sound levels. Therefore, it is not considered that the proposed development will result in 'significant adverse impacts' which are outlined in national and local policy as the level at which noise impacts become unacceptable.

Air Quality and Dust

Specialist consultants RAS Ltd have carried out an Air Quality Assessment outlining any likely significant effects of the proposed development on human health and ecological receptors in respect of air quality and the acceptability of such impacts in the context of the EIA Regulations 2017.

The Air Quality Assessment is available at Technical Appendix E of the ES and involved quantitative prediction of the air quality impacts of the site with production lines 2 to 4 in operation and the potential requirement for measures to mitigate air quality and dust impacts.

As well as considering the current baseline air quality, emissions dispersion modelling was employed to consider the impacts of the additional production line and the potential for new emissions to impact upon sensitive receptors as well as human health. The modelling also included consideration of impacts on the two Air Quality Management Areas declared within the boundaries of Halton Borough – neither of which were assessed as being impacted by the proposed development.

Overall, the dispersion modelling concludes that the proposed development will not result in unacceptable air quality impacts in the context of the relevant air quality and environmental standards, both with predicted emission concentrations and also if the site were operating at the top end of its permitted range.

The site currently benefits from measures to limit emissions from the site including filtration of stack emissions to filter out the hydrogen chloride concentration within emissions. Dust extraction systems are also currently implemented, and will be utilised on new stacks erected as part of the proposed development.

It is considered that in EIA terms the potential impacts of the proposed Line 4 are acceptable.

Ground Conditions

A Phase I Desk Study has been carried out by CC Geotechnical Limited in order to assess the requirements for any intrusive ground investigation to be undertaken at a later stage. The

Study was informed by historic ground investigation information and a site survey undertaken in March 2022. The Study can be found at Technical Appendix F of the ES.

Despite previous intrusive investigation of the site being undertaken as recently as 2011, a Phase II (intrusive investigation) has been recommended, including the sinking of exploratory boreholes to assess ground conditions and consider the presence of contamination. It is proposed that ten boreholes be sunk across the site to assess shallow ground conditions. A further three deep boreholes shall be sunk to terminate at depths of up to 25m below ground level.

Detailed investigation will enable data collection, analysis, and reporting to ensure that the impacts of the proposed development are acceptable to, inter alia, human health and nearby surface waters. The recommendations within the Phase I Study are submitted as part of the planning application for the approval of Halton Borough Council.

Impact on Water Resources and Flood Risk

Water resource experts BSP have undertaken a Drainage Strategy incorporating Flood Risk Assessment (FRA) which can be read in full at ES Technical Appendix G.

The site is located within Environment Agency Flood Zone 1 and is therefore classified as land with a low probability of flooding from rivers and the sea, with Flood Zone 1 representing land least likely to flood. The FRA concludes that flood risk will not be exacerbated by the proposed development, and the proposals are therefore considered acceptable in this regard. There are no areas highlighted as being sensitive to flood risk and as such the site will meet the requirements of the NPPF and local planning policy.

The scale of development and the fact that the existing site comprises entirely impermeable ‘brownfield’ land do not result in a requirement to create any surface water drainage features such as a drainage pond. The proposed development will not discharge surface water at a rate beyond what currently exists.

Overall, the proposals have been found within the Flood Risk Assessment & Drainage Strategy to be acceptable.

Cultural Heritage

An assessment of the potential impacts of the proposed development on cultural heritage assets such as Listed Buildings and Scheduled Ancient Monuments has been undertaken by Heatons.

The site has no designated heritage assets within the boundary with the closest located 1.23km to the west as a Grade II listed building 'Roman Catholic Church of St Marie'. The site is also beyond any buffer zone for impact upon any internationally or nationally designated site. Furthermore, the site is of no known archaeological interest and no adverse impact on archaeology is considered likely given the history of the site and the scope of the proposed development footprint.

The site is situated within an area of industrial land with no sensitive receptors or buffer zones within close proximity. Therefore, no mitigation measures are considered necessary; the proposal will not impact upon cultural heritage assets through degradation of their integrity and setting.

In accordance with national and local planning policy, it is not considered that there are any heritage reasons why the proposed development cannot proceed.

Climate Change

The development proposed in this application aims to facilitate the production of a silica fibre product at the site which forms a key raw material for the production of SiFAB. SiFAB is a revolutionary new silicon fibre product for use in the manufacture of Lithium-ion batteries as an anode material. The batteries have superior environmental credentials compared with traditional batteries, as outlined earlier in this NTS and detailed further in the accompanying ES.

It is considered therefore that the key environmental benefit of the proposed development is not demonstrated 'on the ground' at the application site, but is represented by the role that the site would play in the production of the revolutionary SiFAB product facilitates the manufacture of batteries with significantly improved charge density and lifespan.

Using the Lithium-ion batteries incorporating SiFAB technology not only improves battery efficiency, but the longer battery life reduces the frequency of required charges. The products will assist in adapting to lifestyles that mitigate climate change, such as through their use in electric vehicles. SiFAB batteries weigh comparatively less than an electric vehicle batteries currently used today, which increases efficiency and contributes to their appeal.

Aside from the wider environmental benefits, at the application site the proposed development represents the effective use of previously developed land, which is highly sustainable compared with the potential alternative of accommodating the proposed production line for the silica fibre elsewhere, on a greenfield site. The creation of jobs within an existing industrial area is also considered to be environmentally preferable to expansion of industrial uses onto land not previously utilised for a similar purpose.

Furthermore, although not considered to be of great significance, a benefit of the proposed development that could contribute to the site's adaptation to climate change is the first introduction of vegetation to the application site. Native climbers are proposed to be introduced to the site's southern boundary which would assist with CO2 absorption and also support pollinators through planting of pollinator-friendly species such as honeysuckle.

Socio-Economic Assessment

This proposal is expected to have a positive socio and economic impact in terms of both job creation and contributing to the local, regional and national economy. The proposed development would secure new direct jobs at the site and also result in greater job security for the entire site, given the significant investment in the site.

38 additional jobs are proposed to be created, on top of the 83 already employed directly at the site by the Applicant. Further indirect employment is generated by the Applicant's presence in the area through contractor employment. The employment benefits are also considered to be both temporary (at the construction phase) and permanent (the significant number of new jobs created once Line 4 is operational).

As according to the Office for National Statistics the site is located within an area with an unemployment rate greater than the national average, it is considered of even greater

importance that the economic benefits of the proposed development are recognised and brought to fruition.

The site is a significant contributor to the local economy through employment, business rates, and taxation. The site also benefits from an important longstanding presence within the Moss Bank Industrial Estate. The relationship between the site and the local area is mutually beneficial; the longstanding presence of chemical works at the site have developed a local workforce knowledgeable and well suited to the jobs at the site.

It is possible that the association of the site with SiFAB technology could provide further benefits to the region and the Moss Bank Industrial Area in particular, when it becomes known within the chemical industry that the Pilkington Sullivan Site has been selected as the location of the proposed silica fibre for use in SiFAB fibre technology production line.

Overall, the proposed development would undoubtedly benefit the local economy as well as playing a vital role in the production of a product that has much more wide-reaching benefits.

Cumulative Impact Assessment

An assessment of cumulative impacts has been carried out to consider the following categories of potential cumulative effects:

- Successive effects (i.e. those caused by the proposed development in conjunction with other developments that have occurred or are likely to occur in the foreseeable future); and
- Simultaneous effects (those with the potential to impact in combination with existing neighbouring uses/operations).

The risk of unacceptable potential successive impacts of the proposal are considered to be negligible as the development site represents an ideal location to accommodate the proposed development. This has been concluded based upon the historic significant industrial land uses of the area, including over 40 years of fibre manufacture at the site itself. The likelihood of the introduction of significant sensitive receptors to the site's setting immediate setting (i.e. closer than the Tan House Lane properties) is considered to be low.

With regard to simultaneous effects, it is not considered that there are other developments in the vicinity of the site that would render the proposed development unacceptable.

In summary, having considered the potential for cumulative impact, it is considered that there are no cumulative impacts that will arise from the scheme in combination either within itself or with other past/ existing/ proposed developments that would render the proposed development unacceptable.

The ES also considers the potential for unacceptable cumulative environmental impacts from each of the technical disciplines considered within the ES, for example the air quality impacts generated by HGV movements that arise due to the proposed Line 4. No unacceptable cumulative environmental impacts have been identified.

7 CONCLUSION

This Non-Technical Summary sets out the findings of the full ES, and it considers the potential for impacts associated with a wide range of identified topic areas. Consideration of the issues within a planning context, the severity of the degree of any likely unacceptable impact and the mitigation measures provided to address such impacts where they arise.

The ES concludes that the proposed Line 4 is considered to be capable of facilitating production of silica fibre product for use in SiFAB without unacceptable adverse environmental impact.

The benefits of the proposed development include the maintenance of jobs at the site, the creation of new job opportunities, and wider benefits through the contribution that the site can make to the production of SiFAB anode material for use in Lithium-ion batteries.

The determination of this application should also attribute weight to the fact that the proposed Line 4 would represent the ability of the site to operate three production lines simultaneously, which the site has previously accommodated without significant adverse environmental impact.

In overall conclusion, the proposed development is considered to accord with Halton Borough Council's development plan policies which aim to protect amenity and environmental standards as set out in the development plan. The same development plan aims to deliver economic growth and support job creation.

It is considered that the proposal represents environmentally acceptable development that provides economic, social, and environmental benefits. Accordingly, it is considered that development proposals should be approved without delay where they accord with the development plan. The findings of the ES suggest that overall, the development will be environmentally acceptable and will accord with the development plan. The Applicant therefore requests that the application be approved.