

# GIGA 1 BATTERY PLANT, SUNDERLAND

## TRANSPORT ASSESSMENT OF SECTION 73 AMENDMENTS & NEW APPLICATIONS

### IDENTIFICATION TABLE

<b>Client/Project owner</b>	Envision
<b>Project</b>	Giga 1 Battery Plant, Sunderland
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## 1. INTRODUCTION

### 1.1 Background

- 1.1.1 In October 2021, Sunderland City Council (SCC) granted full planning permission for the following development (planning permission reference 21/01764/HE4): *“Erection of industrial unit to be used for the manufacture of batteries for vehicles with ancillary office / welfare floorspace and associated infrastructure provision, accesses, parking, drainage and landscaping.”*
- 1.1.2 The approved development consists of a single, three-storey industrial unit which is to house a battery manufacturing facility, comprising of two battery manufacturing areas separated by a central spine of offices. The facility will have an annual maximum production capacity of 9 GWh.
- 1.1.3 Due to operational requirements, the Applicant is now proposing several amendments to the approved facility with respect to health and safety improvements. Accordingly, the Section 73 application seeks to vary Condition 2 attached to planning permission reference 21/01764/HE4 through the substitution of revised plans enclosed with the application.
- 1.1.4 Three full planning applications are also being submitted with respect to the development of a gas governor house, HV substation compound and bulk store canopy which will provide the supporting infrastructure and will help facilitate the battery plant development. The location of each of these developments lie within the red line boundary of the battery plant as approved under planning reference 21/01764/HE4.
- 1.1.5 SYSTRA has been commissioned to review residual traffic impact of these works to inform and support the corresponding planning submissions to SCC, the local planning authority (LPA).

### 1.2 The Section 73 Application

- 1.2.1 The Section 73 application proposes to bring forward minor material amendments to planning permission reference 21/01764/HE4. The scope of the amendments sought through this application have been made with respect to health and safety improvements. Full details of the amendments are detailed within the Design and Access Statement, but include:
- Optimised gatehouse to suit health and safety and client operational requirements;
  - Revised cycle and motorcycle shelter to improve access and security;
  - Reduced car park area to suit British Parking Association Standards;
  - Space allocation for HV substation compound increased due to design development and plant requirements;
  - Gas Governor house and bulk store canopy 2 included due to new requirements;
  - Bulk Store canopy 1 footprint reduced to minimise health and safety risks in association with known on-site storage of material;
  - Reduced office footprint to suit client operational requirements;
  - Switch rooms relating to providing power to Life Safety equipment to the main facility generally relocated outside of main facility footprint;



- Ancillary plant rooms detached from main building to suit construction phasing and design development;
- Revised water tanks and pump house to accommodate increase in volume demand;
- Overall reduced main factory building footprint due to processes rationalisation and operational requirements;
- Number and location of flue stacks revised due to design development;
- Number and location of stair towers revised due to fire safety requirements;
- Road width and footpaths minimised to reduce hard landscaping;
- Fence lines revised to reflect the 2021 battery plant application, with boundary treatment details having been approved under discharge of conditions application 22/00692/DIS; and
- Plant Room annex height increased to include screening to equipment.

1.2.2 The proposed changes to the Giga 1 battery plant will occur within the red line boundary of the previous planning permission (Ref: 21/01764/HE4), which itself is located entirely within the consented IAMP ONE Phase 2, with access to the site taken via International Drive.



1.2.3 Whilst the proposed changes will not generate traffic in excess of those previously forecast for the battery plant, for non-traffic related reasons, a Section 73 application is required. As such, the application is supported by this Transport Note.

### 1.3 The Three Full Planning Applications

1.3.1 An overview description of the works proposed by the three new full planning applications for the Gas Governor House, HV Substation Compound and Bulk Storage Canopy 2 are described below.

#### Gas Governor House

1.3.2 The proposed gas governor house is located in the northeast corner of the wider application site boundary, situated between the gatehouse and the development site main access point from International Drive, approximately 30m from the mains gas location. The site area is approximately 0.13 ha.

1.3.3 The Gas Governor House is accessed from within the curtilage of the red line boundary of the wider application site. Provisions have been made for maintenance vehicle access to an area of hardstanding surface.



## **HV Substation Compound**

- 1.3.4 The substation compound will be located in the northwest corner of the wider application site, situated between the ancillary plant rooms, the car park and the north-western boundary. The total site area is approximately 1.09 ha.
- 1.3.5 The compound footprint has been established by the demand of product output and requirements for the process equipment to be provided. The compound has been positioned and orientated to coordinate with the ancillary plant rooms, providing safe and efficient site access connection from International Drive and suitability of car park for heavy goods vehicles, as well as providing space for suitable boundary treatments to the west and northern boundaries.
- 1.3.6 The secure HV substation compound is 72m x 48m and includes an 11kV substation and 2 no. transformer units with future provision for an additional transformer. The transformers are each 12 x 10m with an 8m separation from the compound boundary.
- 1.3.7 The substation compound is serviced by a concrete access road for maintenance vehicle. The remainder of the landscaping within the compound will be a permeable gravel layer.

## **Bulk Store Canopy 2**

- 1.3.8 The proposed bulk store canopy 2 building will be located in the western section of the wider application site adjacent to Area A of the main Factory Building. The total site area is approximately 0.85 ha.
- 1.3.9 The bulk store canopy 2 consists of 2 no. delivery bays and a bunded tank farm. This has been established by the demand of raw material product arriving on site and requirements for the manufacturing process.
- 1.3.10 The store has been positioned and orientated to coordinate with the proposed factory. The layout within the bulk store is defined by the provision of the HGV drive-through within the bulk store area providing safe and efficient site access connection from International Drive. This includes storage tanks located in an open standalone drive-through canopy to reduce Health and Safety risk in association with on-site storage of materials.
- 1.3.11 Access into the store is connected via the perimeter service road to International Drive where all HGV traffic will be directed through security-controlled barriers to the perimeter service roads.

## **1.4 Purpose of this Note**

- 1.4.1 This note has been produced to accompany the Section 73 application for the Giga 1 battery plant. The intention of this report is to provide confirmation that previously forecast traffic levels will not increase and summarise changes to the baseline conditions since the previous application. It is considered superfluous to reproduce the previous findings of the previous Transport Assessment.



## **2. UPDATED BASELINE**

### **2.1 Introduction**

- 2.1.1 The most notable changes to the traffic and transport baseline conditions are those associated with the A19 Downhill Lane junction. Improvements to the A19 Testo's junction were completed and considered within the previous assessment.
- 2.1.2 This section provides a concise overview of the improvement measures completed at the A19 Downhill Lane junction and also summarises the existing traffic flow characteristics of the road network in the vicinity.

### **2.2 A19 Downhill Lane Junction**

- 2.2.1 National Highways have undertaken works to improve this junction that expanded the previous junction by providing a second bridge to the south to establish a full circulatory system. The north-facing slip road was disconnected from the A19 and instead now ties into the link roads as part of the A19/A184 Testo's Junction Improvement.
- 2.2.2 Washington Road to the east of the A19 and the A1290 to the west of the A19 have been realigned slightly to tie-in to the new Downhill Lane junction circulatory system.
- 2.2.3 Downhill Lane to the east of the A19 has been realigned to the south to tie into Washington Road at a location further away from the circulatory system.
- 2.2.4 The new layout provides improved connectivity with the local road network and facilities for pedestrians, cyclists and horse riders are enhanced by providing a separate non-motorised user bridge over the A19 and Washington Road.
- 2.2.5 The completed upgraded junction was officially opened in March 2022.

### **2.3 Traffic Flows**

- 2.3.1 The traffic data that supported the previous planning application was informed by traffic surveys undertaken in 2018, prior to the completion of the A19 Testo's junction and A19 Downhill Lane junctions being improved and prior to COVID-19.
- 2.3.2 SYSTRA has undertaken a review of traffic flow changes, by comparing the 2018 data with new traffic surveys conducted in 2022. Traffic flows at four junctions were considered and journey times on two routes were compared.
- 2.3.3 The results showed no overarching trend across the four junctions considered, with consistent changes between the morning and evening peak periods. Junctions reported average flow increases of 20% and average decreases of 22% across all arms in the AM Peak and average increases of 19% and average decreases of 15% in the PM Peak.
- 2.3.4 Journey times across the network decreased in both the AM and PM periods by 14-43% except for the A19 northbound movement (south of Wessington Way to north of Testo's), which showed an increase of 2%.



### 3. SECTION 73 TRAFFIC IMPACT

3.1.1 This section considers each element of the proposed Section 73 application changes and provides a concise comment on the traffic and transport implications. Only items that could be perceived to have traffic and transport implications are considered and presented.

DESCRIPTION	COMMENT
Revised cycle and motorcycle shelter to improve access and security	Positive change to improve access and security.
Reduced car park area to suit British Parking Association Standards	The previous spaces were larger than required. Overall quantity of provision unchanged.
Reduced office footprint to suit client operational requirements	No impact on previously forecast staff numbers.
Overall reduced main factory building footprint due to processes rationalisation and operational requirements	No impact on previously forecast staff numbers.
Road width and footpaths minimised to reduce hard landscaping	These changes do not compromise operational needs or internal safety.

### 4. NEW PLANNING APPLICATIONS

4.1.1 This section provides a concise comment on the traffic and transport implications associated with the three new planning applications.

DESCRIPTION	COMMENT
Gas Governor House	Access will be taken from within the site and a hardstanding are provided for maintenance. Traffic movements associated with maintenance will be very limited and insignificant to operations of the road network.
HV Substation Compound	An efficient access is provided from directly off the site access from International Drive. Vehicle trips associated with the element will be minimal and infrequent and will be insignificant to the operations of the road network



DESCRIPTION	COMMENT
Bulk Store Canopy 2	Two delivery bays are proposed and the provision of a HGV drive-through within the bulk store area. Access to the store via the perimeter service road to International Drive where all HGV traffic will be directed through security-controlled barriers to the perimeter service roads. Vehicle trips associated with the element will be insignificant to the operations of the road network

## 5. CONCLUSION

- 5.1.1 The amendments being sought by the Section 73 application are predominately associated with health and safety improvements and do not amend the conclusions of the previous Transport Assessment.
- 5.1.2 With regard to the proposed three new planning applications, the access arrangements to these elements are efficient and safe. The traffic generated by the new proposals are forecast to be low and further assessment of impact unwarranted, either individually or cumulatively.



