ENVIRONMENTAL STATEMENT CHAPTER 4: CONSIDERATION OF ALTERNATIVES

Land South of Rover Way, Cardiff CF24 5PH

Harsco Metals Group Limited

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4.1.0 Introduction

4.1.1 Paragraph 2 of Schedule 4 to The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 ('the Regulations') requires that an Environmental Statement should include:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant or appellant which are relevant to the proposed development and its specific characteristics and an indication od the main reasons for selecting the chosen option, including a comparison of the environmental effects."

4.1.2 This Chapter therefore details the main alternatives studied by the applicant and project team during the iterative design process up to the submission of the application itself. If actual or hypothetical alternatives have not been studied by either the applicant or the development team, then there is no necessity to address such issues within an ES.

4.1.3 As outlined within Paragraph 5.5 of the Scoping Request Report, as submitted to Cardiff Council on 4th April 2019 (Appendix 5-3), there are three main scenarios for considering alternatives with the site and the proposed development. These three scenarios are:

- A 'do nothing' or 'no change' scenario, which considers no development taking place at the application site;
- An 'alternative sites' scenario, which considers alternative sites for the proposed development (as relevant); and
- An 'alternative designs' scenario, which considers the alternative designs of the proposed development with respect to issues of location, materials, extent, etc. taking into account the environmental effects which influences the design evolution.

4.1.4 Beyond the pre-application consultation undertaken to date and the architect's design process, the planning and EIA processes have required the assessment of various environmental issues which have subsequently influenced design and mitigation. In many respect, this assessment and design process shapes the alternative options associated with such a development. Where appropriate, these factors have been included within the consideration of alternatives outlined below.

4.1.5 The above approach to the consideration of alternatives was confirmed as appropriate within the Scoping Opinion duly issued by Cardiff Council on 17th May 2019 (Appendix 5-4). Further information regarding the Scoping Report, Scoping Opinion and consultation is provided within Chapter 5: Scoping and Consultation.

4.2.0 'Do Nothing' Scenario

4.2.1 It is recognised that, as an alternative, there is a 'do nothing' or 'no change' scenario which would mean that the development is not promoted or brought forward at this stage. However, as outlined below, this is not considered to be a suitable alternative for this site.

4.2.2 The 'do nothing' scenario would fail to achieve the objectives of the applicant (Harsco Metals Group Ltd) or the aspirations of the Celsa Steel to promote the viable alternate use of waste materials arising from the existing steelworks operations.

4.2.3 The 'do nothing' scenario would fail to deliver the proposed Asphalt Batching Plant, infrastructure improvements and sustainability benefits (i.e. reduction in haulage movements) proposed as part of the application submission. Were the proposals not to be brought forward, significant quantities of waste materials from the Celsa site would continue to be transported to Harsco's site in Rotherham.

4.2.4 Furthermore, the 'do nothing' scenario is not in accordance with the key thrust of the extant local planning policy and associated allocations which identify the site as being suitable for Class B2 (General Industrial) employment uses (allocation ref. EC1.3).

4.2.5 On this basis, the proposals are entirely consistent with the identified development plan policies seeking to promote sustainability, the use of the site for Class B2 (General Industrial) uses and the associated employment opportunities contained therein.

4.2.6 Whilst the 'do nothing' scenario would result in no corresponding adverse or beneficial effects, it is considered to be entirely inappropriate given the benefits the site could deliver through redevelopment. As such, the 'do something' scenario and its associated benefits are considered to clearly outweigh the 'do nothing' scenario.

4.3.0 'Alternative Sites' Scenario

4.3.1 No alternative sites to the application site have been considered as part of the development process.

4.3.2 The applicant (Harsco Metals Group Ltd) has an existing working relationship with the owner of the land, Celsa Steel UK, and both parties would benefit from a symbiotic relationship of operating the Asphalt Batching Plant in this location.

4.3.3 The site is readily accessible and benefits from a significant amount of both processed and unprocessed slag materials arising from the Celsa Steel Works site which can be utilised in the Asphalt Batching Plant processes.

4.3.4 This location clearly accords with the extant planning policy position for the site and the surrounding area. As such, it is considered entirely unrealistic for the applicant to have considered alternative sites when the application site is suitable, available and viable.

4.3.5 Given that no other sites have been considered, it is not possible to consider whether this site would have any additional adverse or beneficial effects in comparison to a hypothetical alternative site. As such, this has not been considered further within the EIA and the associated technical reports contained herein.

4.3.6 Given the working relationship between Harsco and Celsa Steel, no alternate locations not within the ownership of Celsa were considered for the location of the Asphalt Batching Plant.

4.3.7 Discussions with Celsa Steel dictated the potential location that the Asphalt Batching Plant could be accommodated within the wider Celsa Steel site. On this basis, Celsa Steel advised Harsco that the plant would need to be located on the area of site to the south of Rover Way. Further discussions regarding the various design options and iterations is provided within the 'Alternate Designs' Scenario (Section 4.4) below.

4.4.0 'Alternative Designs' Scenario

4.4.1 The true consideration of alternatives has generally focussed on the options considered for alternative designs, including the layout, massing, density, uses and general arrangement of the site in the context of the site opportunities and constraints.

4.4.2 The description of 'alternative designs' outlined below has concentrated on providing an overview of key design aspects such as layout, massing and appearance, where relevant to the consideration of the EIA. More detailed design process information, such as sketch layouts for the plant and storage bays, is provided within the Design and Access Statement prepared by Carter Jonas.

Consultation

4.4.3 Further information regarding the various elements of consultation undertaken is contained within the Public Consultation document prepared by Carter Jonas and is submitted separately to the ES as part of the wider planning application submission. Please see this document for further information regarding various elements of consultation undertaken.

Design Iterations

4.4.4 This Section seeks to outline, in brief, each of the design iterations considered by Harsco in the development of a suitable site layout for the proposed Asphalt Batching Plant and why these were discounted.

Initial Development Conception (Design Iterations 1, 2 and 3)

4.4.5 The first three design iterations were considered concurrently when the project was first conceived. The general location for the development within all three iterations was to be located within the north eastern most confines of the Celsa Steel site to the south of Rover Way, whilst the layout of the Asphalt Batching Plant and associated operational area varied between the iterations.

4.4.6 Access to the site layouts contained within the three design iterations, as shown within Figures 4-1 to 4-3 below, would have been taken from Rover Way, whilst a new isolated haul road would have been formed along the north western boundary of the site.

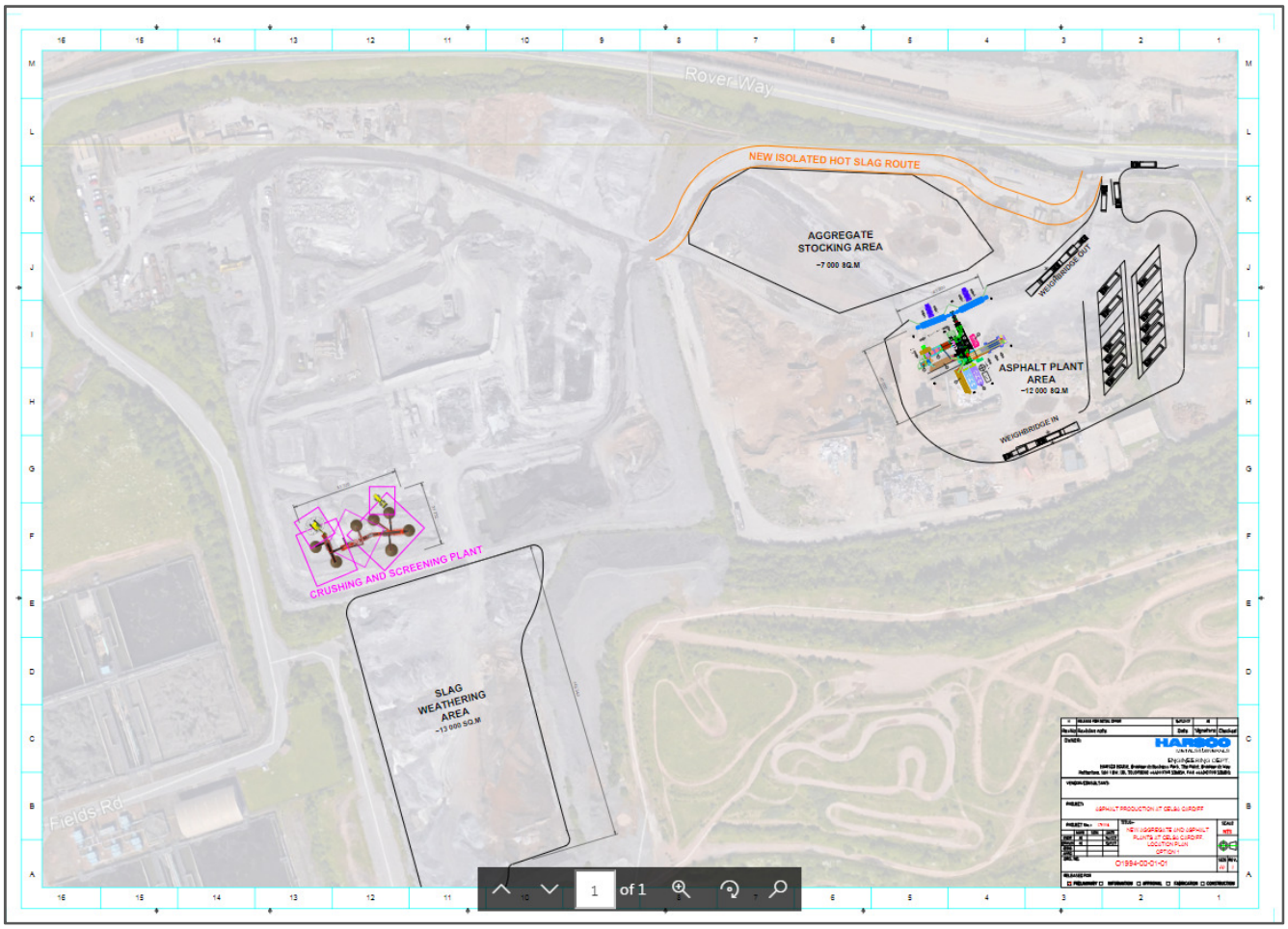
Design Iteration 1

4.4.7 Design Iteration 1, as shown in Figure 4-1, proposed a larger specification of Asphalt Batching Plant compared to those contained within other design iterations or that contained within the planning application.

4.4.8 Given the size of the plant proposed within Design Iteration 1, the operational area would also have accommodated a delivery and asphalt vehicle waiting / parking area to the north of the plant. Furthermore, a separate larger aggregates storage area would have been allocated to the west of the plant. This aggregates storage area would have been significantly larger than that currently proposed as part of the application.

4.4.9 Internally, the design would have provided an internal loop, where vehicles would travel the site in a clockwise direction passing over both an entry and exit weighbridge.

Figure 4-1: Design Iteration 1



Design Iteration 2

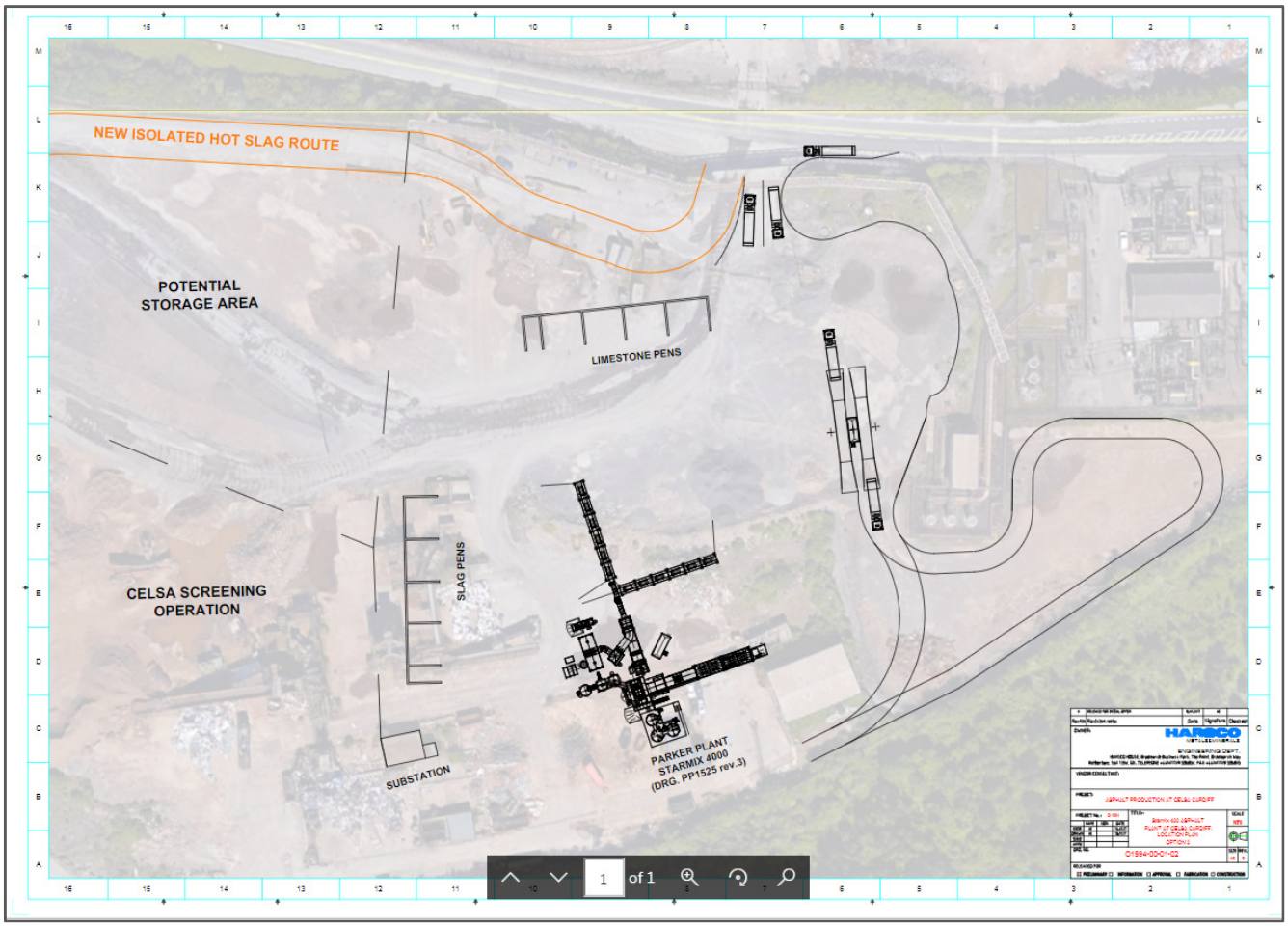
4.4.10 Design Iteration 2, as shown within Figure 4-2 below, proposed a smaller specification Asphalt Batching Plant; the same which is proposed as part of the current application (a Parker Plant, Starmix 4000).

4.4.11 Given the size of the plant, the operational footprint is reduced and allowed for the plant to be located within the eastern confines of the operational area. The aggregates storage area is also replaced by a total of 10 concrete storage bays located along the southern and western confines of the operational area.

4.4.12 Again, access into the site layout would have been taken from Rover Way, whilst the weighbridges would have been located to the north of the plant. The positioning of the weighbridges would have necessitated the imposition of an internal haul loop into a new area of the Celsa site to the north east.

4.4.13 No delivery and asphalt vehicle waiting / parking area is proposed within Design Iteration 2.

Figure 4-2: Design Iteration 2



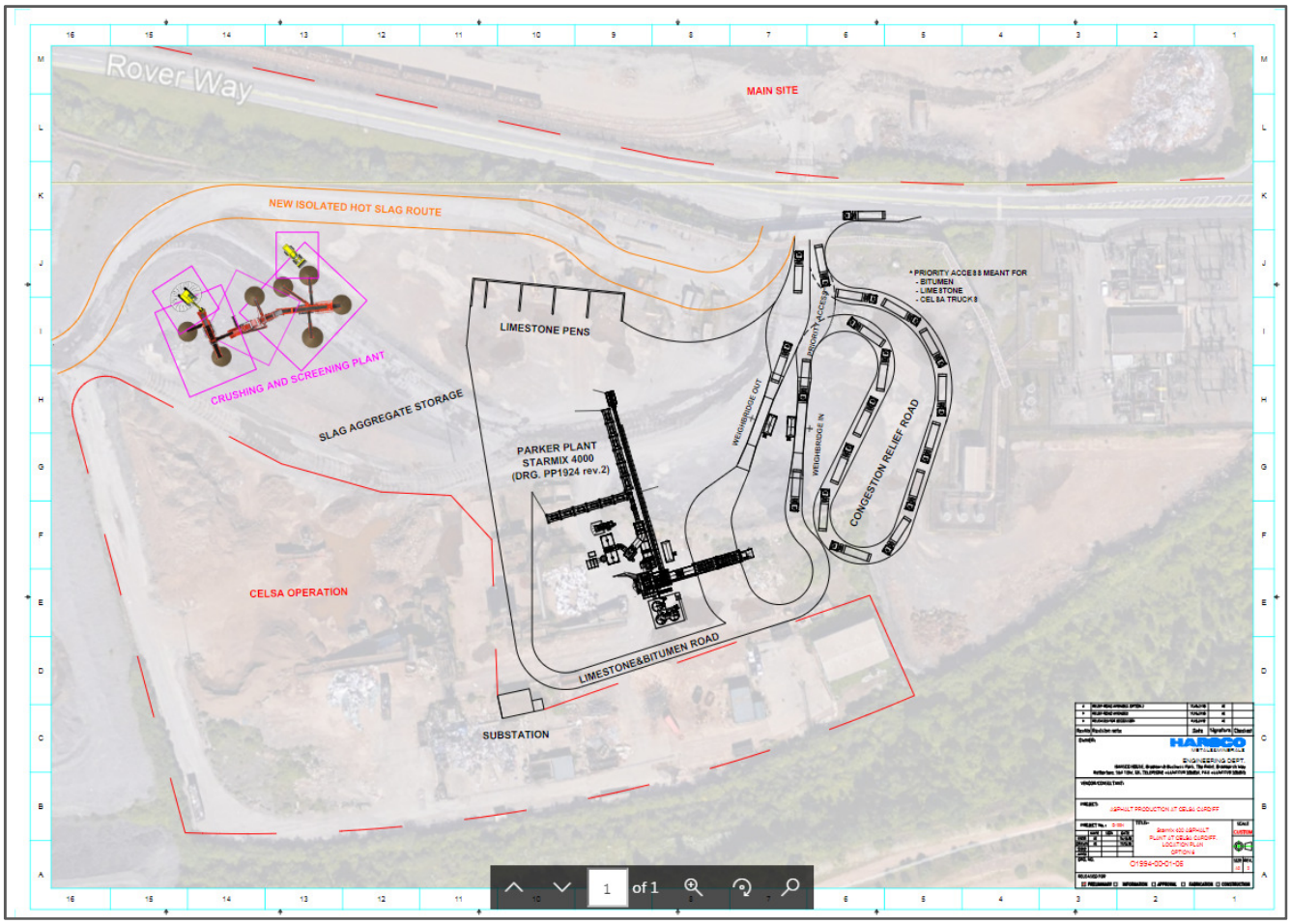
Design Iteration 3

4.4.14 Design Iteration 3, as shown within Figure 4-3 below, again proposed a smaller specification Asphalt Batching Plant; the same which is proposed as part of the current application (a Parker Plant, Starmix 4000).

4.4.15 Following discussions with Celsa, an area of site to the south east needed to be excluded from the operational area, along with the north eastern haul loop being considered unfeasible. This resulted in the footprint of the plant moving west, whilst individual components of the plant were re-arranged to allow for easier vehicular movements to and from the fill point.

4.4.16 The reduction in site area resulting in a tighter internal haul loop and minor repositioning of the entry and exit weighbridges. Furthermore, the number of storage bays had to be reduced to 5 in total, albeit these remained in the same location as those previously proposed along the western bounds of the operational area.

Figure 4-3: Design Iteration 3



Consideration of Design Iterations 1-3

4.4.17 The Design Iterations outlined above were discounted from consideration due to their land take and requirement for access to be taken from Rover Way for all non-Celsa operational vehicles.

4.4.18 This access arrangement would have resulted in conflicts with large operational machinery that traverse between the northern and southern parcels of the wider Celsa Steel Works site, whilst the stocking area of weathered slag would have been located a significant distance to the south.

4.4.19 Furthermore, with the reduction in available site area, the internal arrangements of the Asphalt Batching Plant and internal haul route logistics were considered not fit for purpose.

4.4.20 This design would have also significantly impacted upon the operations of SIMS Metal, who are currently located within the north eastern confines of the Celsa Steel Works site south of Rover Way.

Design Iteration 4

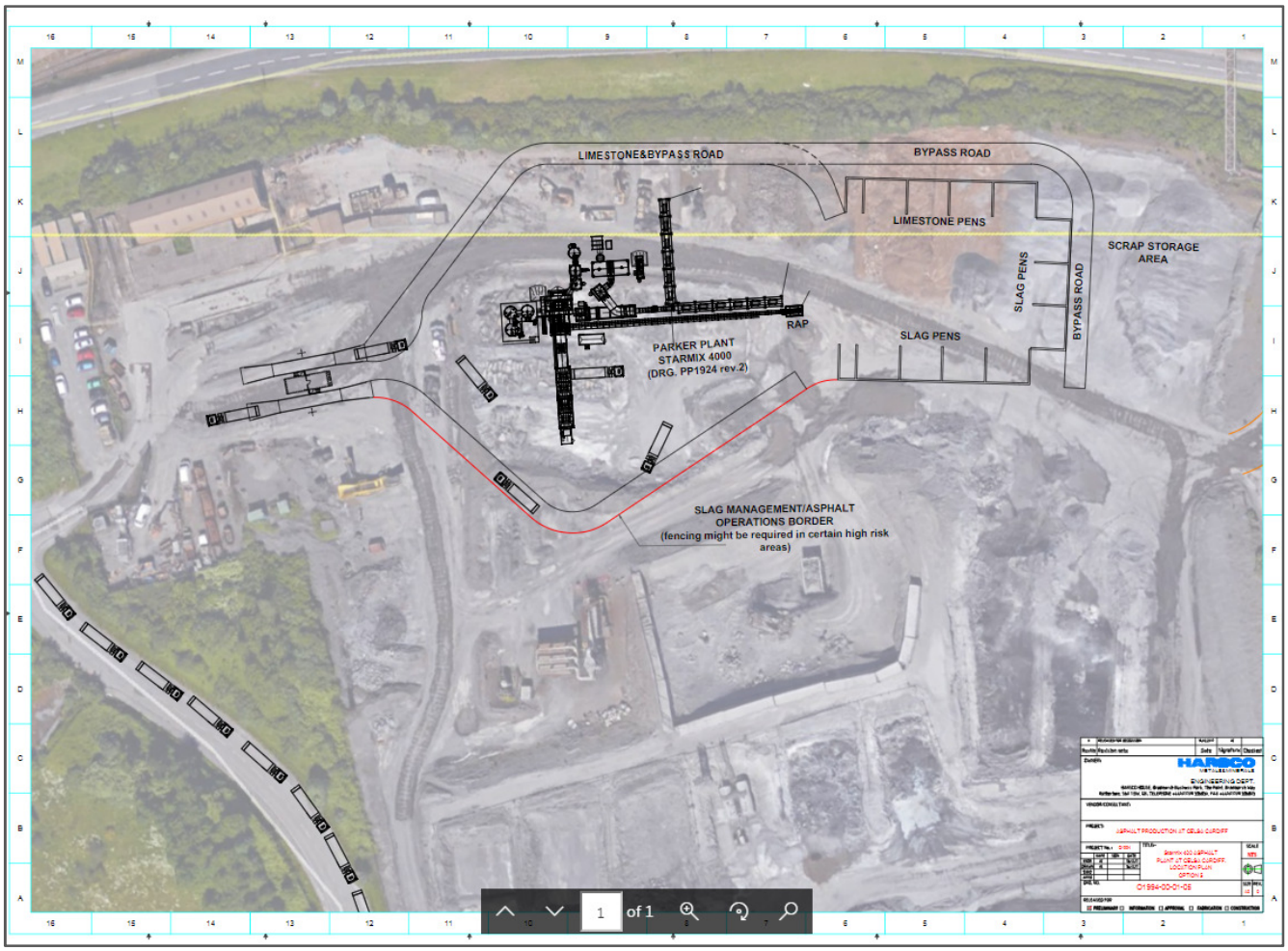
4.4.21 Design Iteration 4, as shown within Figure 4-4 below, proposed an entirely new operational area and layout to those previously contained within Design Iterations 1-3.

4.4.22 The operational area was moved further south west to that previously proposed, abutting the

western boundary of the site. This arrangement also proposed an alternate access from the Tide Fields Road access, whilst the number of storage bays was increased to 13 in total; located to the north east of the plant.

4.4.23 Again, new internal haul roads were proposed to incorporate a limestone delivery and vehicular bypass route to the west of the plant. The weighbridges were to be located to the south west of the plant, between the plant and the access from Tide Fields Road.

Figure 4-4: Design Iteration 4



4.4.24 Design Iteration 4 was discounted on the basis that it would significantly reduce the parking provision, metal storage and materials storage areas associated with the Celsa Steel Works site. On this basis this design arrangement was considered to be overly intrusive on the existing operational requirements of Celsa Steel.

Design Iteration 5 & 6

4.4.25 Design Iterations 5 and 6, as shown within Figures 4-5 and 4-6 below, again proposed to locate the Asphalt Batching Plant operational area within a new area of the wider Celsa Steel Works site. This newly proposed location is located approximately central within the wider southern Celsa site and is the same location as that currently contained within the application submission.

4.4.26 Access to both Design Iterations 5 and 6 was proposed from Tide Fields Road, utilising the existing

haul roads within the Celsa Steel Works site.

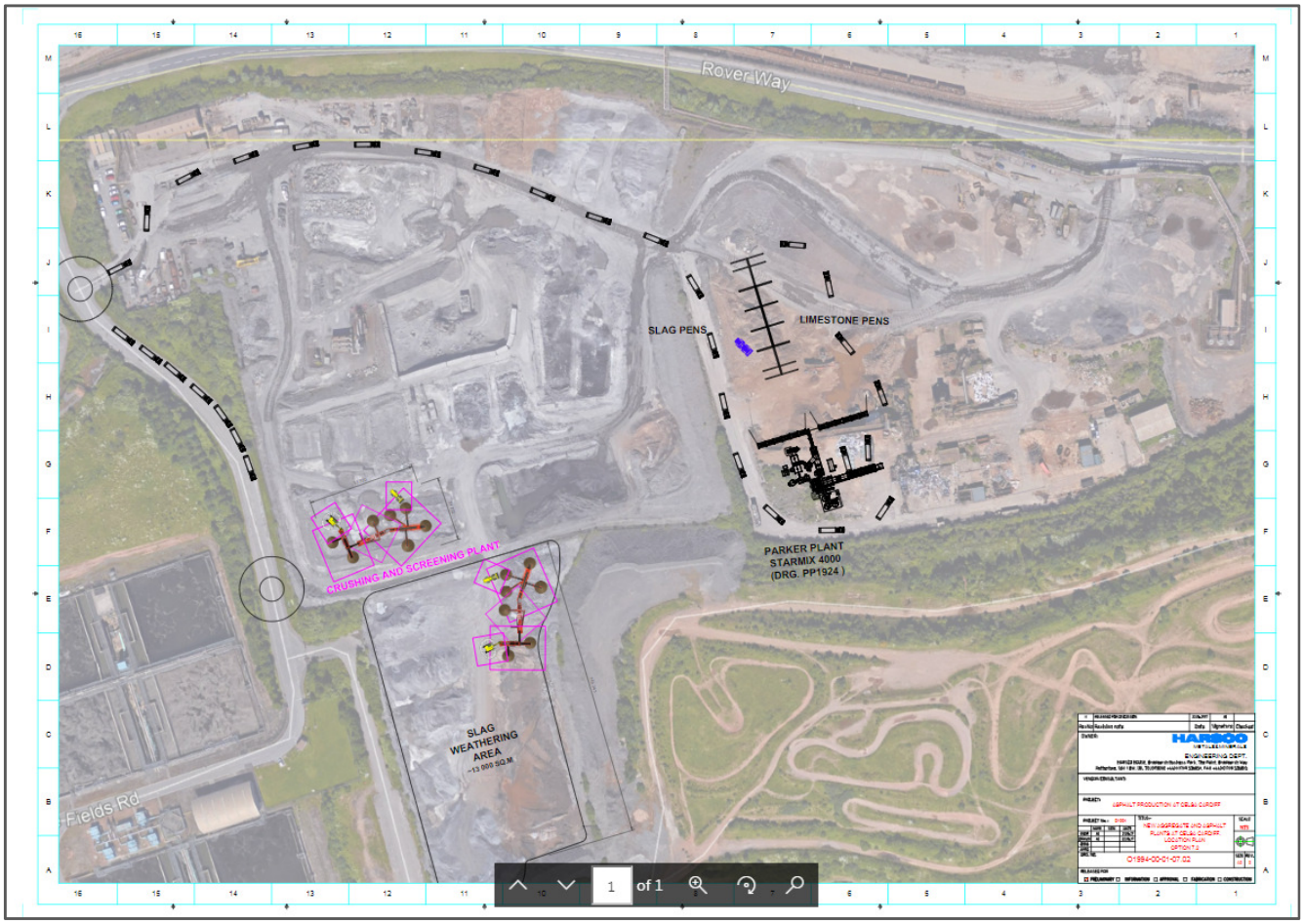
Design Iteration 5

4.4.27 Design Iteration 5, as shown within Figure 4-5, located the Asphalt Batching Plant within the eastern confines of the operational area, whilst the western confines would be used for the location of the associated storage bays.

4.4.28 The design of the storage bays within Design Iteration 5 was linear in nature, with the bays facing back to back and position centrally within the site. This required the bays to be accessed by traveling around the bays to collect materials.

4.4.29 Delivery and asphalt vehicles would travel around the operational area in an anti-clockwise direction, entering the plant area in the east and departing in the west.

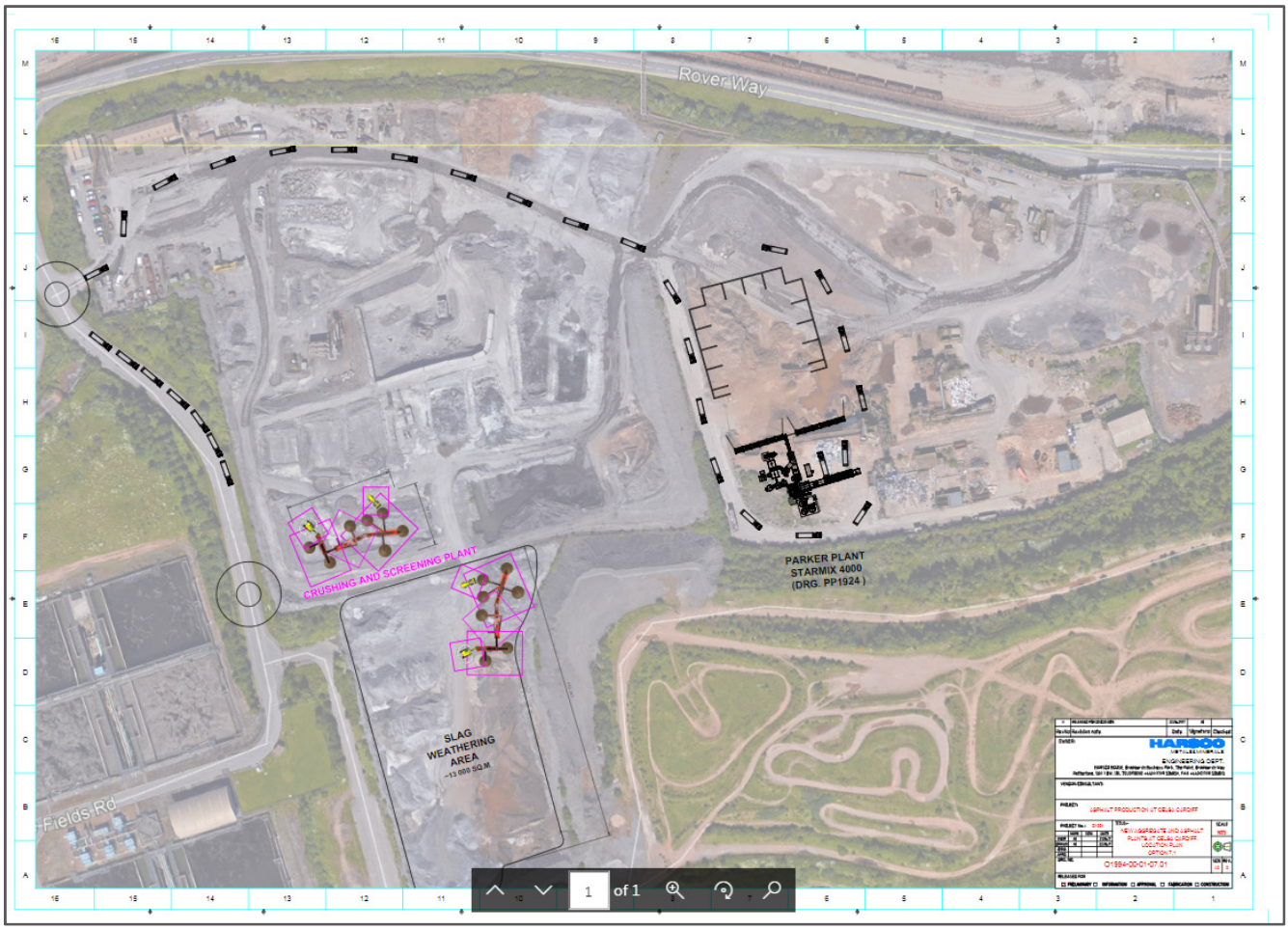
Figure 4-5: Design Iteration 5



Design Iteration 6

4.4.30 Design Iteration 6, as shown within Figure 4-6, had the same site arrangements for both the Asphalt Batching Plant and vehicular access as that contained within Design Iteration 5. However, within this design iteration, the storage bays were organised around the edge of the site, thereby creating a central manoeuvring area for the operational vehicles.

Figure 4-6: Design Iteration 6



Consideration of Design Iterations 5 & 6

4.4.31 Both Design Iterations 5 and 6 were discounted on the basis that there would be poor segregation of heavy plant machinery and road vehicles. In addition, the internal haul route identified for delivery and asphalt vehicles was considered extensive and would result in unnecessary interaction between their route and other operational areas of the Celsa Steel Works site, namely at the western operational area exit point.

4.4.32 In addition to the above, it also became apparent that there was a water pipe which crosses the eastern extent of the site (in an approximate north-south alignment) which is subject to an easement. As such, further consideration was needed to be given to ensuring that no development took place over this easement which could potentially restrict access to the pipe for maintenance purposes.

Design Iteration 7

4.4.33 Design Iteration 7, as illustrated within Figure 4-7 below, essentially flipped the layout of the operational area. This resulted in the Asphalt Batching Plant being located within the north western extent of the operational area.

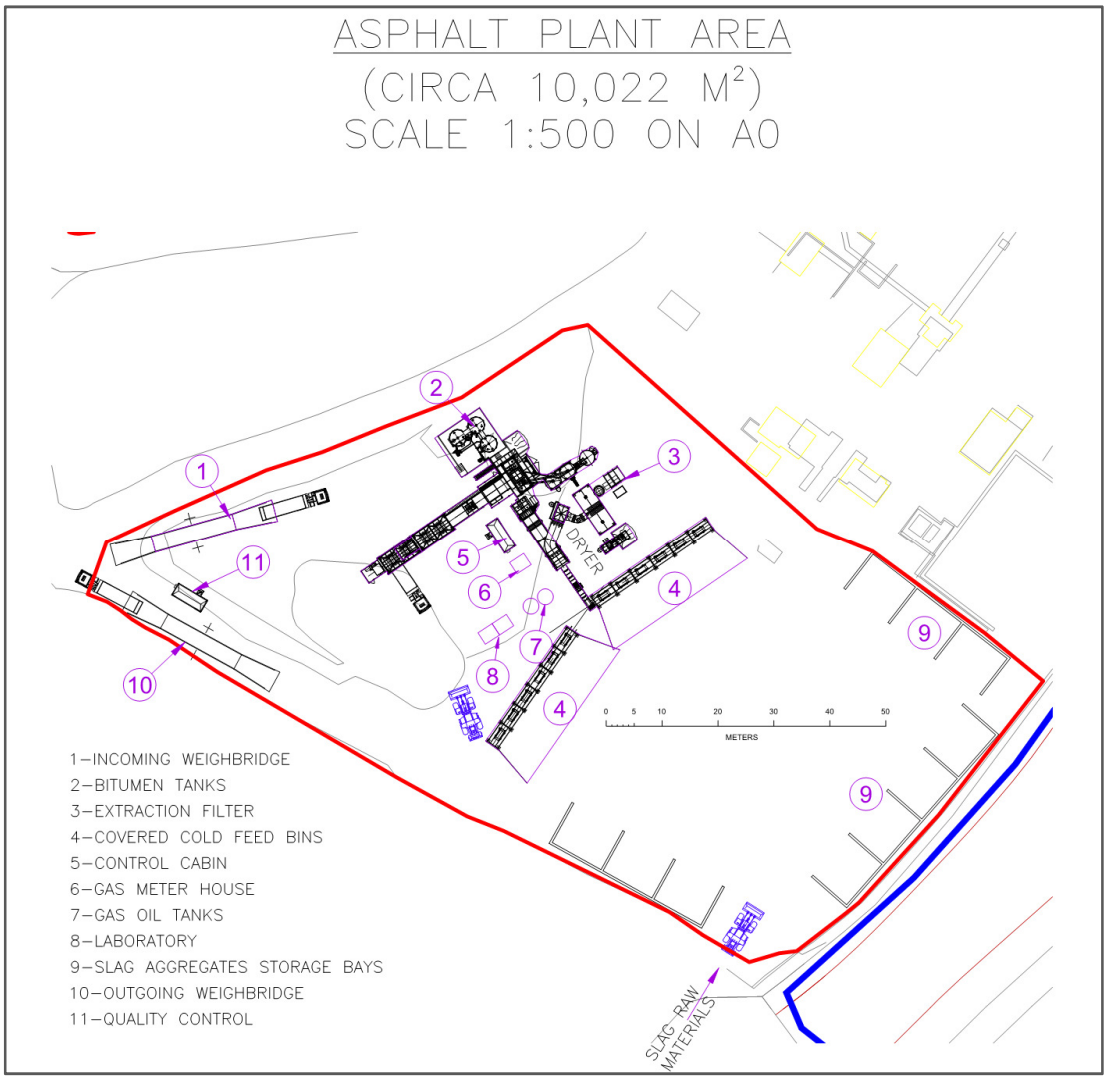
4.4.34 The south west extent of the operational area would be utilised for vehicular access, fill and

departure via entry and exit weighbridges, whilst the eastern confines of the operational area would be utilised for a number of storage bays. The storage bays would be arranged around the edge of the site to allow for a central manoeuvring area for operational vehicles.

4.4.35 It is on the basis of Design Iteration 7 that the various technical assessments which are contained within the ES or form part of the planning application submission were instructed. As such, whilst Design Iteration 7 represents the initial appropriate design solution, further minor design alterations have been incorporated to satisfy the findings of the various technical assessments.

4.4.36 For example, following completion of the Flood Consequences Assessment a surface water drainage design was incorporated which necessitated the incorporation of a settlement lagoon and associated soakaway. This is now reflected within the proposed site layout as submitted.

Figure 4-7: Design Iteration 7



4.4.37 Whilst separate from the Asphalt Batching Plant proposals, previous design iterations also included conceptual layouts for the co-location of an aggregates crushing and screening plant. However, as can be noted from Design Iteration 7 (and the current proposed Site Layout Plan), this supporting infrastructure is no longer considered necessary and has therefore been removed the development proposals.

4.5.0 Alternatives Conclusion

4.5.1 As outlined above, the consideration of alternatives has principally related to the design of the scheme and how this interacts with the site, its surrounds, adjoining committed developments and as a result of the technical assessments undertaken in support of the planning application and EIA.

4.5.2 Whilst these considerations have been outlined above, further information regarding the iterative design process is contained within the supporting Planning, Design and Access Statement prepared by Carter Jonas.

4.5.3 Furthermore, where appropriate, consideration of the design process has been accounted for within the various technical chapters contained within this ES.

4.5.4 On this basis, it is duly contended that the consideration of alternatives associated with the proposed development have been outlined in sufficient detail to ensure accordance with The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.

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