



McDonald's Pontardawe

Construction Environmental Management Plan (CEMP)

For McDonald's Restaurants Ltd

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1. INTRODUCTION

1.1 Terms of Reference

Hydrock has been appointed by McDonald's Restaurants Ltd (the Client) to produce a Construction Environmental Management Plan (CEMP) for a proposed new restaurant located in the car park at the Tesco Superstore, adjacent to A4067, Alltwen, Pontardawe, SA8 3AZ.

A planning application has not yet been submitted to Neath Port Talbot Council for the proposed Development. This CEMP has been prepared to clear the anticipated planning condition for the development.

This CEMP broadly follows the procedures set out in Pollution Prevention Guidance 6 (PPG6) entitled 'Construction and demolitions sites: prevent pollution'. However, PPG6 was formally withdrawn on 14 December 2015 and not replaced. It still does however provide useful information on the contents of a CEMP.

1.2 Site Location

The site is located at the Tesco Superstore, adjacent to A4067, Alltwen, Pontardawe, SA8 3AZ. The site is positioned between the A4067 and the Afon Tawe (River Tawe), within the car park of the Tesco Superstore. A site location plan (15297-HYD-XX-XX-DR-GE-1001) is included in Appendix A. The site currently comprises part of the Tesco car park.

1.3 Site Description

The site is roughly rectangular in shape, measuring approximately 60m northeast to southwest by 50m northwest to southeast, with an area of approximately 0.3 ha. The site is currently part of a car park for the Tesco superstore located to the southwest. Hydrock undertook a walkover in May 2020 which noted that the asphalt car park was visually in good condition with few repairs and no obvious cracking or settlement. A set of high-voltage overhead powerlines cross the site from the east corner to the west corner. In the north-easternmost car parking spaces there were a set of large manhole covers.

1.4 Surrounding Land Uses

The northeast boundary is formed of the access road from the A4067 roundabout with the Tesco petrol station approximately 50m northeast of the site. The southeast boundary is formed by a stepped slope up to the A4067.. This stepped slope progresses into a soil nailed slope to the southwest, towards the Tesco Superstore. Located to the south of the A4067 is residential housing on Lon Tanyralt. The southwest boundary is open to the Tesco car park with the Tesco Superstore 100m southwest. The northwest boundary comprises a reinforced soil slope, standing at approximately 70 degrees. This reinforced soil slope supports the Tesco car park and provides access for deliveries to the Tesco Superstore between the car park and Afon Tawe. Located to the north of the Afon Tawe is a Cwmtawe Community School and residential housing on Llys Glanrafon.

1.5 Proposed Development

A proposed development plan (reference: Scurr Architects drawing 8882-SA-8823-P004 C, dated 29 June 2022) is presented in Appendix A. The proposed development includes:

- Removal of existing car park hardstanding;
- Grounding of overhead electricity cables;

- Construction of a single-storey McDonalds Restaurant (Type NG100);
- Vehicle 'drive-thru';
- Electricity sub-station;
- Car parking;
- Landscaping;
- Patio with play space; and
- Customer order displays.

1.6 Purpose

The main purpose of a CEMP is to outline a set of overarching principles to minimise the potential for environmental impacts during the construction phase of the development. This CEMP demonstrates McDonald's Restaurants Ltd commitment to implement the development in such a way as to avoid or minimise the potential health, safety and environmental impacts resulting from the construction activities planned on the site.

This document is a CEMP for all construction and related enabling works on the site which either disturbs the existing ground conditions or has the potential to impact the wider environment including site neighbours and the environment.

At the time of writing, a Principal Contractor has not yet been appointed. McDonald's Restaurants Ltd and their sub-contractors will adopt this document as part of their working procedures.

It is proposed that this CEMP is a 'living' document that shall be developed and updated where required as the construction works progress.

1.7 Objectives

McDonald's Restaurants Ltd recognise the potential impacts associated with the development of the site. The following sections set out the aims of the CEMP in order to manage environmental risk and mitigate any unavoidable impacts from construction activities and to achieve an appropriate balance between the prudent use of natural resources and protection of the environment and neighbours.

The key objectives of this CEMP are:

- To meet the requirements of relevant environmental legislation, authorisations and commitments;
- To check that all environmental undertakings and obligations of the developer are completed;
- To achieve good environmental practice on site;
- Ensure that the contractor and sub-contractors /suppliers are aware of the environmental constraints and sensitivities associated with their work, and the wider site and environment;
- Identify responsible staff and contractors; and
- Mitigate the effects of the construction works on residents, neighbours, highway users and the general public, where applicable.

2. SCOPE & RECEPTORS

2.1 Scope

This CEMP is applicable to all works on the Site including activities such as, but not limited to:

- Site set-up and compound;
- COVID-19;
- Working hours and delivery times;
- Demolition;
- Ecological protection;
- Invasive species;
- Waste management;
- General earthworks;
- Foundations and underground structures;
- Soft landscaping works;
- Environmental Health & Safety;
- Surface water drainage;
- Fuel Storage, refuelling generators and plant;
- Construction traffic routes;
- Construction programme and vehicle movements;
- Construction traffic management;
- Construction workforce;
- Traffic noise and environmental impact;
- Archaeology;
- Air quality;
- Vegetation and tree protection; and
- Noise and vibration.

2.2 Receptors

2.2.1 *Existing*

Table 1, below, lists the existing receptors that have been identified as being potentially sensitive to the construction works due to their proximity to the site.

Table 1: Existing Receptors

Receptor	Description & location
Neighbours	Located to the south east of the site are residential properties on Lon Tanyralt that back on to the A4067 approximately 60m from the site boundary. There is a footbridge over the A4067 to provide access to the Tesco Superstore. The Tesco Petrol Filling Station is located approximately 50m to the north east of the site. The Tesco Superstore is located approximately 100m to the south west of the site. Located north of the Afon Tawe is a Cwmtawe Community School approximately 130m from the site and residential housing on Llys Glanrafon located approximately 65m from the site.
Site users	The site is currently used by customers as car parking for the Tesco Superstore.
Transportation	The A4067 is located to the south east of the site. There are internal roadways within the existing Tesco Superstore to the north and south of the site.
Controlled waters	<u>Groundwater</u> The site is underlain by superficial Glaciofluvial clays and silts over the solid Brithdir Member comprising sandstones and conglomerate. The superficial and solid geology is classified as a Secondary A aquifer. The site is not located within a groundwater source protection zone and there are no licensed groundwater abstractions within 500m of the site. <u>Surface Water</u> The Afon Tawe is located 35m to the north west of the site. There are no surface water abstractions within 500m of the site. The closest discharge into the Afon Tawe is located 237m north east of the site (upstream of the site) where a sewage storm tank over flow is located.
Archaeology	At the time of preparing this CEMP it is unknown if any special precautions are required with regards to archaeology. The historical mapping reported within the Hydrock desk study (15297-HYD-XX-XX-RP-GE-1001) indicates that there was an Old Coal Level shown on site (1887 Ordnance Survey map) and later the site became part of the Pontara Chemical Works (1898-1962 Ordnance Survey maps).
Ecology	At the time of preparing this CEMP Hydrock are not aware of any ecological survey works having been carried out.

2.2.1 Construction

During the construction works there will be a significant number of site personnel deployed to the site. All site workers will need to be fully inducted, to be made aware of the health & safety and environmental risks on site, to demonstrate that site workers understand the part that they have to play in maintaining good practice throughout the works under the guidance of the Principal Contractor and their sub-contractors at site.

3. ROLES AND RESPONSIBILITIES

3.1 Introduction

The anticipated roles and responsibilities of the parties involved in the construction works are set out below. All members of site staff will be responsible for implementing the requirements of the CEMP.

3.2 Principal Contractor

McDonald's Restaurants Ltd has not yet appointed a Principal Contractor. However, the Principal Contractor's Site Manager will be responsible for the day-to-day management of Health & Safety, Environmental and Quality performance during the construction works. They will apply the principles set out in this CEMP, monitor the performance of sub-contractors and maintain records to demonstrate compliance with and implementation of the CEMP.

In relation to the implementation of the CEMP, the Contractor's Site Manager's duties will include the following:

- Overall management of the environmental aspects of that phase of the development;
- Manage day-to-day activities to ensure that significant adverse environmental effects are avoided, and that any impacts are minimised and mitigated;
- Review and update the CEMP as required;
- To act as the main point of contact with the regulatory authorities on environmental issues;
- Development and delivery of any required environmental training (induction and toolbox talks) for site personnel and sub-contractors;
- Ensure best practice is promoted at all times;
- Assisting with the development of procedures which highlight the emergency response to environmental incidents;
- Management of the monitoring programmes, including noise, dust and water quality; and
- Environmental incident monitoring and reporting.

Any complaints/queries will be directed initially to the Principal Contractor's Site Manager who will then identify the appropriate person to take action and/or determine what action is required to address the complaint or query raised.

3.3 Project Manager

The McDonald's Project Manager will be responsible for monitoring the site team(s) on the delivery of the CEMP. This will include checking that all contractors have allocated sufficient resources to allow delivery of the CEMP. The Employer's Agent will obtain regular monthly updates from the Principal Contractor to monitor the delivery of the CEMP.

3.4 Ecologist

At the time of preparing this CEMP it is not known if there are any ecological constraints.

3.5 Arborist

The site is currently a car park with some low level shrub planting around the periphery, therefore a arboricultural assessment is unlikely to be required.

4. ENVIRONMENTAL OBLIGATIONS

4.1 Identification of Requirements

To ensure the objectives of this CEMP are met, it is important that the construction adheres to a number of specified requirements, including:

- Appropriate legal and regulatory requirements;
- Any consents, permits, licences; and
- Any technical reports provided in support of the planning application and the decisions from the planning application approval document.

Additionally, all works are required to operate in accordance with the Principal Contractor's Environmental Policy. The Policy will be made available to all interested parties on site notice boards.

4.2 Legal and Regulatory Requirements

All Contractors shall comply with all the legal requirements and best practice regarding environmental protection and undertake the works in accordance with the consented scheme and employers' requirements. The key relevant environmental legislation and regulations for the scheme are presented below, although other legislation and regulations may also apply.

- The Environment (Wales) Act 2016;
- The Environmental Protection Act 1990;
- The Environment Act 1995;
- The Control of Pollution Act 1974;
- Pollution Prevention and Control Act 1999;
- The Clean Air Act 1993;
- The Environmental Protection (Prescribed Processes and Substances) Regulations 1991;
- The Conservation (Natural Habitats and Species) Regulations 2017;
- The Control of Pollution (Oil Storage) (England) Regulations 2001;
- The Control of Noise (Codes of Practice for Construction and Open Sites) (England) Order 2002;
- The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001;
- Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996;
- The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972;
- The Control of Substances Hazardous to Health Regulations 2002 (COSHH);
- The Control of Asbestos Regulations 2012;
- Hazardous Waste (England and Wales) Regulations 2011;
- Waste (England and Wales) Regulations 2011 (as amended);
- The Controlled Waste Regulations 2012;
- The Controlled Waste (Registrations of Carriers and Seizure of Vehicles) Regulations 1991 (as amended);
- The Environmental Permitting (England and Wales) Regulations 2016 (as amended);

- Environmental Protection (Duty of Care) Regulations 1991 (as amended);
- The List of Wastes (England) Regulation 2005 (as amended);
- Air Quality (England) Regulations 2010;
- Air Quality Limit Values Regulations 2003;
- Contaminated Land (England) (amendment) Regulations 2012;
- Anti-Pollution Works Regulations 1999; and
- The Environmental Permitting (England and Wales) Regulations 2016.

4.3 Consents, Permits and Licences

In addition to the legislation listed above, the Principal Contractor will need to work within certain licenses and consents. These are listed in Table 2 below. Other consents may also be required and will need to be added to this list.

Table 2: Licenses and consents

Consent/Permit	Statutory Authority	Requirements
Planning Act 2008	Local Council	Discharge of all appropriate planning documents.
Environmental Permitting for Construction Works	Environment Agency/DEFRA	To be agreed by the statutory authority.
Discharge to sewer (usually foul)	Local Water Company	For the Principal Contractor to apply for.
Section 61 Control of Pollution Act 1974	Local Council	Construction- / demolition-related noise and vibration impact on the environment

5. ENABLING WORKS

5.1 Unexploded Ordnance (UXO)

Reference to the non-specialist UXO screening exercise, carried out as part of the Hydrock Phase 1 desk study (reference: 15297-HYD-XX-XX-RP-GE-1001 P1), has indicated no further assessment or mitigation is required with regard to UXO prior to construction works.

5.2 Contamination Identified

Hydrock has undertaken a ground investigation for the site (see Hydrock report 15297-HYD-XX-XX-RP-GE-1002 P1). This investigation identified the following contamination:

5.2.1 *Human health*

Lead was recorded in excess of the Generic Assessment Criteria (GAC) in a single exploratory hole (CP02). However, due to hardcover of the proposed development this is not considered a risk to end users.

5.2.2 *Controlled Waters*

Whilst exceedances of Chemicals of Potential Concern (CoPC) were recorded within the leachate samples it is deemed that they do not pose a risk to controlled waters based on current development proposals and no further assessment of groundwater is required. The soils below the site do not pose a significant risk to controlled waters.

5.2.3 *Radon*

The site is in a Radon Affected Area (1 to 3% of existing homes affected).

5.2.4 *Ground Gases*

A moderate risk from ground gases was identified. Characteristic Situation 2 (CS2) ground gas protection measures are required.

5.2.5 *Water supply pipes*

As the site is brownfield the presumption in the guidance is that barrier pipe will be used. However, the investigation and assessment has indicated no significant Contaminants of Concern and as such standard pipework may be suitable for the site following discussion with the supply company.

5.3 Remediation

Hydrock recommended the following remediation:

- Installation of basic radon protection.
- Installation of ground gas mitigation measures to comply with CS2 conditions.
- Verification of ground gas mitigation measures should be undertaken by a competent third-party specialist following installation of ground gas protection measures.

5.4 Imported Material

There may be a requirement for the importation of topsoil for landscaping purposes.

Imported topsoil must be chemically tested for a general suite of heavy metals, polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons at a frequency of 1 sample per 250m³ with a minimum of 3 samples per import source to provide an indication of cleanliness.

The results of such testing should be passed to a suitably qualified Geo-environmental Consultant for confirmation of the topsoil's suitability for use.

In addition, it is recommended that the physical composition of the topsoil be confirmed prior to import. Ideally, this should conform with the requirements of BS 3882: British Standard for Topsoil or the landscape specification.

Where the topsoil is to be imported from a 'donor' site the transfer of material shall need to be documented in a 'Materials Management Plan', in general accordance with CL:AIRE Definition of Waste Code of Practice.

5.5 Materials Management

Where site-won materials are proposed to be re-used, the material's use should be documented in a 'Materials Management Plan', in general accordance with CL:AIRE Definition of Waste Code of Practice, or covered under a suitable exemption, e.g. U1 waste exemption: use of waste in construction.

5.6 Site Set Up

The site should be securely fenced with *Heras*-type fencing or similar during enabling works. Welfare and parking should be established on site that is suitable for the number of site personnel present. All utilities will require isolation and disconnecting. Hydrock drawing 15297-HYD-XX-XX-DR-TP-0002 in Appendix A shows the proposed construction compound layout.

5.7 Construction Personnel

All contractors and sub-contractors have a responsibility to:

- Work to agreed plans, methods and procedures to minimise environmental impacts;
- Understand the importance of avoiding pollution on-site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact;
- Report all incidents immediately to their line manager who then reports the issue to the Site Manager as soon as practically possible;
- Monitor the work place for any new potential environmental risks, and alert their line manager if any are observed, who then shall report the issue to the Site Manager as soon as practically possible; and
- Co-operate as required during site inspections and audits.

6. RECORD KEEPING

The Principal Contractor's Site Manager shall maintain records of activities on site, which will include the following information:

- Project environmental procedures;
- Completed environmental forms;
- All permits, licences and consents obtained;
- Training records;
- Weekly inspection reports;
- Complaints;
- Air monitoring reports (if applicable);
- Records of material movements;
- Waste transfer or consignment notes;
- Any specialist environmental reports (ecology / landscape etc.); and
- Records of any incidents and actions taken to mitigate impacts.

7. TRAINING

7.1 Introduction

McDonald's Restaurants Ltd recognises that raising health, safety and environmental awareness is a crucial element in the appreciation and implementation of the CEMP. The CEMP will be distributed to members of the project team, including suppliers and sub-contractors as necessary to ensure that environmental requirements are adequately communicated through site induction and toolbox talks.

The Principal Contractor's Site Manager will be responsible for ensuring that all people on-site are provided with relevant information concerning environmental protection and will operate a system whereby all staff and operatives receive a site-specific safety and environmental induction prior to starting work on-site.

7.2 CSCS

In line with best practice, all site staff will be encouraged to be registered under the Construction Skills Certification Scheme (CSCS).

7.3 SMSTS

The Principal Contractor's Site Manager will hold the Site Management Safety Training Scheme (SMSTS) qualification, which develops responsibilities in respect of health, safety and environmental issues on site.

7.4 Inductions

All site staff will undergo environmental awareness training. Mandatory induction training will address the following areas:

- Access to site/compounds via permitted routes;
- Noise and vibration controls at nominated sensitive boundaries;
- The sensitivity and value of areas of ecological interest, both on-site and off-site (if present);
- Asbestos awareness;
- Pollution prevention to watercourses and groundwater;
- The avoidance of litter and promotion of good housekeeping;
- Dust mitigation; and
- Environmental incidents and procedures for dealing with and reporting of environmental incidents.

7.5 Toolbox Talks

The Principal Contractor will provide toolbox talks on various topics concerning the environmental management of the works, including but not limited to the following:

- Dust mitigation;
- Asbestos awareness;
- Pollution prevention;
- Emergency procedures in the event of a pollution incident; and
- Covid-19.

8. MONITORING, CONTINUAL IMPROVEMENT AND REVIEW

8.1 Monitoring

The Contractor(s) will implement a monitoring procedure to ensure the environmental protection measures outlined in the CEMP are executed during the construction works.

Monitoring shall ensure that the measures detailed in the CEMP are being adhered to and that such measures are effective in avoiding or minimising effects on the identified environmental aspects, both within the site and in the surrounding area. In the event that routine monitoring identifies concerns or a potential problem there may be a requirement for working methods to be adjusted or additional controls implemented. In these circumstances additional monitoring will be undertaken at an appropriate frequency to demonstrate that the remedial action taken has been successful and to allow consideration to be given to whether it is appropriate to remove additional control measures or revert to the planned or standard working methods.

The review and monitoring of implementation of the CEMP will be undertaken at several levels including:

- Weekly site inspections by the Contractor(s) targeted at specific activities;
- A regular internal audit of overall compliance with the requirements of the CEMP; and
- Should it become a project requirement, site visits by the project ecologist / arboriculturist (at appropriate times) to check compliance with any required ecological protection measures.

Prior to the commencement of the development, the appointed contractor will submit the CEMP for approval to local authority. This will set out the relevant standards to be applied and procedures to be followed including any special measures and/or conditions to be discharged and complied with for that phase.

Any revisions to the CEMP will need to be submitted to the local authority for approval. In addition, any revisions will need to be communicated to the appropriate site contractors and other personnel.

8.2 Environmental Complaints and Incidents

Any complaints will be recorded by the Principal Contractor and responded to by the Site Manager who will keep a record of any complaints received, actions taken and responses provided.

Any environmental incidents, such as spillages will be appropriately dealt with and recorded as a matter of urgency.

8.3 Weekly Site Inspections

The Principal Contractor will have responsibility for the weekly environmental inspection. Photographs will be attached to the weekly inspection report to aid investigation of any incidents and demonstrate achievement of best practice. The Principal Contractor shall maintain records of the weekly inspections as required.

9. CODE OF PRACTICE

This section of the CEMP provides the Codes of Practice for the following topics:

- Site Set-up and compound;
- Covid-19;
- Working Hours and delivery times;
- Demolition;
- Ecological protection;
- Invasive species;
- Waste management;
- General earthworks;
- Foundations and underground structures;
- Soft landscaping;
- Environmental Health & Safety;
- Surface water drainage;
- Fuel storage, refuelling generators and plant;
- Construction traffic routes;
- Construction programme and vehicle movements;
- Construction traffic management;
- Construction workforce;
- Traffic noise and environmental impact;
- Archaeology;
- Air quality;

- Noise and vibration; and
- Vegetation and tree protection.

Each Code of Practice defines the technical parameters and/or standards that must be considered or adhered to.

9.1 Site Set-up and Compound

9.1.1 General

A good housekeeping policy is to be applied at all times as far as reasonably practicable, specifically:

- All areas are to be kept in a clean and tidy condition;
- All waste to be collected in a timely manner and stored appropriately;
- Plant, machinery, and equipment to be stored such that as to limit adverse impacts on the environment; and
- Adequate security to prevent unauthorised entry and exit from the site and protect the public.

- Welfare arrangements will be of high standard with due consideration given to wellbeing, energy and water efficiency.

An indicative construction site layout showing the compound and materials storage areas are shown on Hydrock's Indicative Construction Compound Layout (reference: 15297-HYD-XX-XX-DR-TP-0002) presented in Appendix A.

9.2 COVID-19

At the time of commencement of the site works, the current COVID-19 regulations should be reviewed and relevant rules adhered to with regard to social distancing, etc.

9.3 Working Hours and Delivery Times

The working hours and delivery times will be set out in the planning consent.

9.4 Demolition

No demolition is required other than the removal of the existing asphalt car park hardstanding and grubbing out of any buried obstructions.

9.5 Ecological Protection

Based on the site current condition it is unlikely that any ecological protection works will be required. However, this will be confirmed in the planning consent.

9.6 Invasive Species

The Hydrock desk study did not identify any potential invasive species on the site, however this does not constitute a formal survey.

9.7 Waste Management

9.7.1 Key Issues

Waste management must comply with all appropriate legislation and statutory guidance. These include but are not limited to the Statutory Duty of Care, the need for registered carriers, the need for appropriately licensed disposal sites, the need for hazardous consignment notes and the need for waste transfer notes for all wastes including hazardous waste.

All works will seek to minimise the generation of waste. Where treatment of waste is proposed, appropriate Environmental Permitting, such as a Mobile Treatment Licence, must be obtained.

Contractors will be made aware of the statutory requirement to pre-treat both hazardous and non-hazardous wastes prior to disposal at landfill sites. In all cases, the contractor must provide evidence of approval of the chosen method of pre-treatment from the receiving landfill.

There is no anticipated planning condition requiring a Materials Management Plan (MMP) in line with CL:AIRE Definition of Waste a Code of Practice (DoWCoP) 2016. However, where material is excavated and re-used on site or imported to site an MMP is recommended to demonstrate certainty of use and to avoid potential non-compliances with the Environment Agency and HMRC.

If appropriate the re-use of crushed secondary aggregate should be in accordance with the WRAP protocol entitled 'Aggregates from Inert Waste'.

9.7.2 Design

Any uncontaminated site-won soils and hardcore can be re-used in accordance with the Definition of Waste: Development Industry Code of Practice Version 2 (CL: AIRE CoP, 2016). This material could be won from any part of the site. Any material that is intended to be re-used will be placed in a managed and labelled stockpile and may be subject to chemical and geotechnical testing to determine if it is fit for use.

All works will include a detailed analysis of potential waste arisings, adhere to the waste management hierarchy and seek to maximise on-site re-use of site-won materials (CL:AIRE CoP and exemptions) and the minimisation of off-site disposal.

Any construction wastes will be segregated on site into the following waste streams for recycling and reuse:

- Soils;
- Bricks;
- Concrete;
- Wood;
- Plasterboard (not expected);
- Insulation (not expected);
- Compactable waste such as cardboard and plastic; and
- Any other waste stream generated (asbestos, steel and other materials).

The materials will be segregated into clearly labelled skips. Waste will be transported off-site by a registered waste management company for recycling. Records will be kept on-site detailing the volumes of material recycled.

9.7.3 Methods

Methods to be considered include selective excavation to minimise the volumes generated and the use of screening of arisings to remove 'clean' oversize materials.

9.8 General Earthworks

It is not known if any cut and fill is proposed across the site. There is likely to be a requirement for the import of topsoil for landscaping purposes.

9.9 Foundations and Underground Structures

9.9.1 Key Issues

Obstructions associated with historical buildings, including foundations, floor slabs and services, should be anticipated and grubbed out. The Hydrock ground investigation recommends piled or raft foundations. Floor slabs are to be suspended due to the depth of Made Ground and requirements for radon/ground gas protection measures. Foundations are to be designed by a structural engineer.

9.9.2 Design

All below ground structures will be designed with consideration of surrounding ground mass and in accordance with the foundation recommendations set out in Hydrock's Ground Investigation Report (reference: 15297-HYD-XX-XX-RP-GE-1002 P2).

Potential damage to foundations from aggressive ground will be adequately mitigated against, through consideration of guidance such as 'Concrete in aggressive ground', BRE Special Digest 1, 2001.

9.9.3 Methods

Installation of foundations and underground structures will include consideration of the waste management of arisings. Any Made Ground and natural material will be segregated into separate clearly labelled stockpiles. These stockpiles will be chemically tested to determine the most suitable use/disposal route for this material.

Appropriate PPE will be required for the work force.

There is potential for unforeseen contamination to be present, therefore, vigilance will need to be maintained during site development works. The public will not be permitted onto the site, so will not be in contact with any soils during the construction works. If unforeseen potential contaminated material is encountered, then works should stop in that area and advice sought from suitably qualified geo-environmental consultant.

9.10 Soft Landscaping

The proposed landscaping is shown on Scurr drawing 6682-SA-8823-P007 A dated 15 May 2022, presented in Appendix A of this report. Imported soils for landscaping purposes will require chemical testing to confirm they are suitable for use.

9.11 Environmental Health & Safety

9.11.1 Key Issues

All works will comply with all relevant legislation and guidance relating to environmental, health and safety, and include:

- Best practice working methods used to minimise risk and/or exposure are preferable to the increased use of protective equipment by those involved in the works; and
- Health & Safety Legislation relating to wider aspects of the works, such as: Construction Design and Management Regulations (2015), Health and Safety at Work Act 1974 and the Health and Safety at Work Regulations (1999), are not specifically referenced in this environmental code but are mandatory requirements in their own right.

9.12 Surface Water Drainage

9.12.1 Key Issues

During construction, measures should be put in place to prevent all surface water run-off leaving the site. Particular attention should be made to preventing run off reaching the Afon Tawe.

9.12.2 Design

Temporary drainage may be required to mitigate against silt run-off.

9.12.3 Methods

The provision of silt traps should be considered to prevent run-off.

9.13 Fuel Storage, Refuelling Generators and Plant

9.13.1 Key Issues

Fuel storage and refuelling of plant should be carried out within the designated area within the construction compound only.

9.13.2 Controls

Specific measures that the appointed Principal Contractor shall include:

- The Contractor will select double-bunded fuel tanks;
- Refuelling will only take place on hard standing (if not use spill kit mats);
- Existing surface water drainage gullies etc. will be blocked during dispensing of fuels;
- Spill kits will be kept adjacent to all fuel tanks;
- Fuel dispenser will be securely locked when not in use;
- Vehicles will be parked in shallow bunded areas while refuelling to contain any localised spillages; and
- Small hand-operated plant, such as generators, Stihl saws and chain saws, will only be refuelled in the designated refuelling area.

9.14 Construction Traffic Routes

9.14.1 Introduction

It is necessary to identify suitable and safe routes that can accommodate the movements associated with construction materials, construction and plant vehicles. This section of the CEMP identifies appropriate routes for construction traffic to access the site during the construction phase.

The primary considerations for the routing strategy are as follows:

- To use the shortest route from the access point of the site to the Strategic Road Network (SRN);
- As far as possible use 'A' roads as a first priority followed by 'B' roads, 'C' roads and then 'unclassified roads';
- Where possible avoid single carriageway roads unless these provide direct access to the construction site; and
- To avoid settlements and sensitive receptors to minimise impact on villages and towns and sensitive road users.

9.14.2 Proposed Construction Routes

The site is located within the existing car park of a Tesco Superstore which lies directly to the north of the A4067. The A4067 runs in a south-west/north-east alignment and provides the principal vehicular route between Pontardawe and Swansea to the south-west whilst also offering direct access to the Strategic Road Network (SRN) via the M4 J45 some 6.5km south-west of the site.

Access to the A4067 from the site is provided via a four-arm roundabout, from hereon in referred to as the 'site access roundabout'. The site access roundabout provides direct access to the Tesco Superstore with the remaining three arms comprised of the A4067 carriageway.

To the north east of the site access roundabout the A4067 provides a direct vehicular route to the town of Ystradgynlais.

Approximately 150m north of the site access roundabout the A4067 meets the A474 at a further roundabout. The A474 is primarily suburban in nature providing access to local residential settlements to the south of the A4067 whilst providing a key route to small rural settlements to the north.

To the south-west of the site access roundabout the A4067 continues for some 6.5km from the site to provide access to the SRN at J45 of the M4. The M4 provides a strategic east to west route between London and South Wales providing a route to Port Talbot, Cardiff and Newport to the south east of the development site before continuing across the Severn Estuary to Bristol. The M4 terminates some 19km to the west of the site before continuing as the A48 northwest to Carmarthen.

It is proposed that all construction vehicles will enter/exit the site via the site access roundabout from the A4067. It is envisaged that the majority of construction vehicle movements would be from destinations to the south (Swansea), south-east (Port Talbot, Cardiff, Newport) and north-west (Carmarthen) of the site. There may be a limited number of construction vehicle movements from Ystradgynlais to the north-east of the site.

All vehicles travelling north-east from the site will travel via the north-eastern arm of the A4067 from the site access roundabout.

All construction vehicles travelling south, south-east and north west of the site will be routed south-west bound on the A4067 towards the M4 J45 gyratory. Those construction vehicles travelling south to Swansea will continue on the A4067 whilst those travelling south-east and north-west will travel via the M4.

The routes outlined above ensure that construction vehicles do not route through central Pontardawe, minimising the impact of construction vehicles on the highway network within the town centre.

The routes described above are outlined in Figure 1.

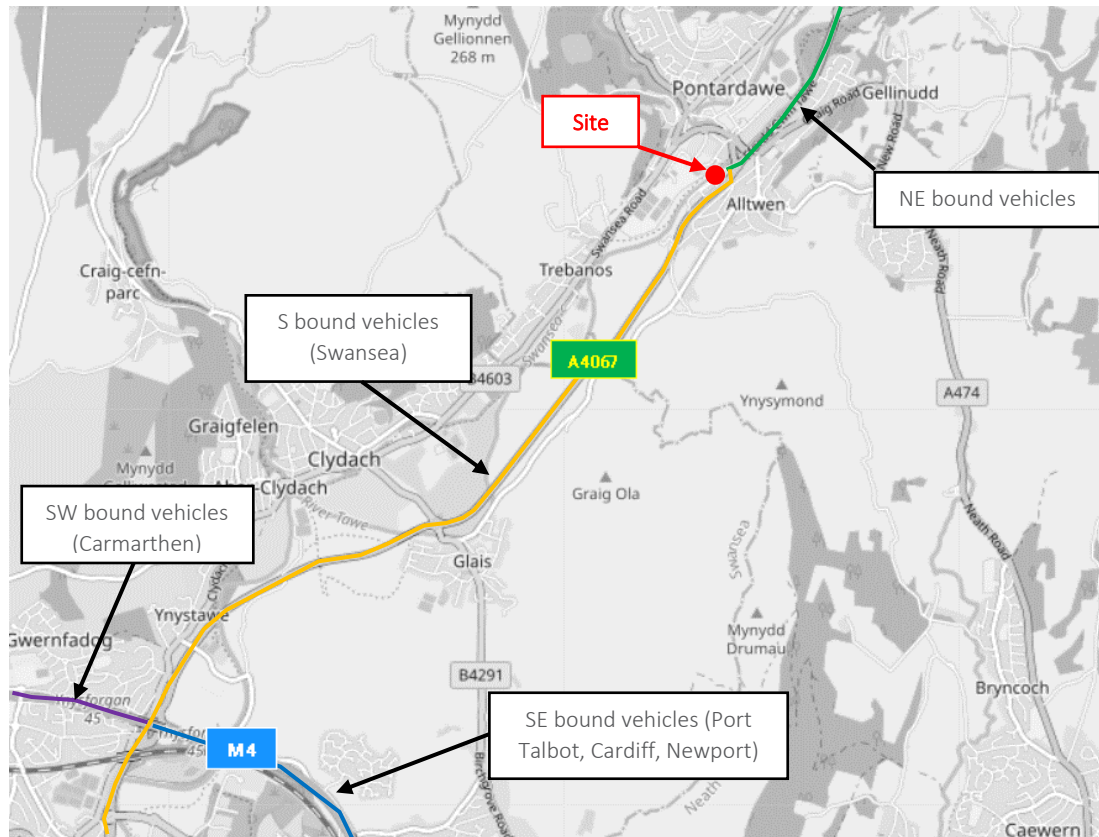


Figure 1: Construction Vehicle Routing Strategy

Each of the routes outlined in Figure 1 has been checked to confirm that there are neither weight, height or width limits that would otherwise preclude the use of the route for construction vehicles. It does however remain the driver's responsibility to ensure their vehicle can safely negotiate the prescribed route.

All of the above routes avoid the routing of traffic through densely populated residential areas with construction movements confined solely to 'A' roads or motorways within the vicinity of the site.

9.15 Construction Programme and Vehicle Movements

Construction Programme and Duration

At this stage it is not possible to fully describe the programming of the required construction works however the typical construction phase of the development is anticipated to last a total of approximately 16 weeks.

This CEMP will be in place throughout the ground clearance and new development construction. Its intent will be to minimise adverse impacts on the surrounding area.

Construction Trip Generation

Although the precise works programme has not yet been finalised, the methodologies contained within the TRICS Research Report on Construction Traffic (February 2017) together with a number of

reasonable assumptions on cost and duration of construction supplied by the wider project team have been applied in order to calculate the anticipated daily construction traffic flows.

The calculation methodology detailed within the TRICS Research Report on Construction Traffic relates to the number of road vehicle movements to a site based on the total project value. A trip rate of 29.4 (one-way trips) is applied per £100,000 of project value based upon research undertaken as part of the 2007 UK Construction Industry Performance Indicators. This total number of vehicle movements is divided by the duration of the project (minus weekends) to give the anticipated daily construction vehicle movements.

Based on a construction period of approximately 16 weeks and an estimated project value of c. £2.4m, the anticipated construction traffic flows arising from the works would equate to 706 construction vehicle arrivals over the build period of 16 weeks with an average 8-9 construction vehicle arrivals per weekday. Therefore, assuming that all vehicles arriving to the site leave within the same day there would be a maximum average of 18 two-way construction related vehicle movements per day.

9.16 Construction Traffic Management

Construction Traffic Hours of Operation

Confirmation of the restrictions on construction vehicle delivery hours will be set out following the appointment of the contractor.

In order to minimise the disruption to general traffic movements along the surrounding road network during the AM and PM peak hours, restrictions on times and days when construction traffic vehicles can access the site are likely to be required. The permitted hours for construction traffic will be set out in the planning consent.

In case of emergency, any work required to be undertaken outside of core working hours (not including repairs or maintenance) will be agreed with Neath Port Talbot Council prior to undertaking the works.

Construction Vehicle Arrivals and Storage

Site deliveries will adopt a 'just in time' arrangement whenever practical so as to minimise queuing and on-site storage requirements. Deliveries to the site will be staggered with drivers given specific time windows for arrival and these will be recorded within the booking system by the site manager. This will prevent convoying of vehicles to and from the site and ensure that construction traffic does not queue on the local highway network.

Prior to arrival on-site, drivers of vehicles will be instructed to call ahead to confirm they will arrive during their allocated timeslot. If there are any issues with arriving during the allocated time, drivers will be instructed to contact the site manager as soon as this is known to obtain another timeslot. A number of spare slots will be reserved throughout the day to maintain flexibility.

The site will provide a vehicle loading area for one HGV during the construction as shown on the Construction Compound Layout (ref: 15297-HYD-XX-XX-DR-TP-0002) provided in **Error! Reference source not found..** During the twelve-hour delivery period, there would be 24 time slots available (assuming 30-minute periods) and as such there would be suitable capacity to accommodate the anticipated number of arrivals per day on the peak days of delivery.

All plant and construction materials will be stored within the site boundary in the location indicated on the Construction Compound Layout (ref: 15297-HYD-XX-XX-DR-TP-0002) included in **Error! Reference source not found..** Deliveries of building materials will be phased throughout the construction period to ensure there is sufficient storage space available for direct offloading and storage on the site.

Vehicle Access and Driver Information

The construction access point is proposed in the same location as the proposed vehicular access for the development scheme, via the internal Tesco Superstore service road car park access road.

Vehicles will enter and exit the site in a forward gear using the construction vehicle turning area as outlined on the Construction Compound Layout (ref: 15297-HYD-XX-XX-DR-TP-0002) in **Error! Reference source not found..** Swept path analysis which confirms that a 16.5m HGV can turn within this area and exit the site in a forward gear is also provided.

As set out within Health and Safety Executive (HSE) guidance, the Banksman directing vehicle movements (signallers) will be trained and authorised to do so. On the rare occasions when reversing is required and in addition to a competent Banksman directing vehicle movements consistent with HSE guidance, consideration will be given to:

Aids for drivers - mirrors, CCTV cameras or reversing alarms that can help drivers see movement all-round the vehicle;

Lighting - so that drivers and pedestrians on shared routes can see each other easily. Lighting may be needed after sunset or in bad weather; and

Clothing - persons on site should wear high-visibility clothing.

To avoid construction traffic congestion and nuisance to the surrounding area, all suppliers and contractors will be made aware of the prescribed construction routes and time slot allocated within the booking system.

The site entrance will be appropriately signed to avoid congestion or queuing onto the highway. The site entrance will also be maintained and kept clean and clear.

Proposed Site Layout and Compound

The materials storage, site welfare and delivery area will be accommodated on-site. An indicative Construction Compound Layout (ref: 15297-HYD-XX-XX-DR-TP-0002) is included in **Error! Reference source not found..**

The contractor will implement a clear and concise construction warning signage scheme on-site to assist in internal traffic control and separate construction vehicles and pedestrians.

Signage will also identify the site office and parking areas for workers, site visitors and delivery vehicles.

Signage will be positioned at the entrance to the construction compound so it is visible to all vehicles arriving to the site.

The site will have secure perimeters to protect the community and pedestrians on adjacent footways from construction work and vehicle movements. These will be erected and maintained by construction workers.

9.17 Construction Workforce

Number of Workers and Parking

The level of construction workers on-site will vary during each phase of construction. It is envisaged that workers will travel mainly by private vehicle, although sustainable transport options will be encouraged and promoted, including car sharing.

Some construction workers will require access to tools and materials which are usually stored within vehicles and as such, some workers will need to travel by vehicle and park on-site. To accommodate this, there will be 11 on-site car parking spaces for construction workers. These spaces will be carefully managed to ensure that these vehicles are booked into the site in advance and on arrival.

Sustainable Travel Opportunities

The client will ensure that where reasonable and practicable local labour and sub-contractors will be utilised for the duration of construction, thus minimising distances travelled on the network and maximising opportunities to consider alternative modes of transport to the site. As it is envisaged that workers will mainly travel by private vehicle, sustainable travel will be best achieved through the promotion of car sharing.

The nearest bus stop is located on Lon Tanyrallt south of the site, approximately 333m walking distance from the site equating to a 4-minute walk. This stop is accessed by travelling south via the footbridge over the A4067 which connects to Lon Tanyrallt. Service X6 provides a route between Swansea and Ystradgynlais running at a 20-minute frequency Monday to Saturday. The use of this service by construction workers will be promoted and encouraged via travel information displayed within the site office.

9.18 Traffic Noise and Environmental Impact Mitigation

Introduction

This section sets out specific measures to be adopted to mitigate construction impacts in pursuance of the Environmental Code of Construction Practice.

Construction Traffic Noise

The following will be applied during construction to minimise the traffic noise impacts:

- Apply and strictly adhere to low-speed limits within the site and within the vicinity of the site onto the A4067;
- As far as possible, ensure all contractor vehicles are fitted with adequate noise control equipment in good working order;
- Large vehicles will not arrive or leave the site at noise sensitive times; and
- Ensure no parking or queuing of construction traffic on surrounding roads.

Environmental Conditions

The potential exists for mud to be spread onto the surrounding highway network. As such, measures will be implemented to minimise this as far as possible. Measures will include (but are not limited to):

- Use of an approved mechanical water-assisted road sweeper to clean the site of any mud or debris deposited by site vehicles within the vicinity of the site. The road sweeper is to be available whenever needed and will be properly used and maintained;
- The avoidance of dry sweeping large areas;
- Provision of wheel washing on all site exits and lorry jet washing facilities (to include rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practical);
- Adequate sheeting of vehicles carrying waste materials;
- A water bowser will be present on site to aid in dust control, should this be a likely issue - this may well depend on the time of year in which construction takes place; and
- Measures will be taken to ensure that mud and debris is not swept into gullies.

Dust control will be best achieved at source, and if possible, activities will be carried out in a manner so as to preclude dust generation.

If dust is generated, steps will be taken to protect workers in the vicinity who shall, as a minimum, be issued with dust masks. Dust will, if possible, be contained in the location in which it is generated, and be controlled and managed therein.

Vehicle Emissions

Suppliers and drivers of construction vehicles will be required to (as far as practical):

- Switch off their vehicle's engine when stationary to prevent exhaust emissions;
- Maintain vehicles including engines in tune and catalysts working efficiently; and
- All vehicles used by contractors must comply with MOT emission standards at all times.

9.19 Archaeology

At the time of preparing this CEMP it is unknown if any special precautions are required with regards to archaeology.

9.20 Air Quality

9.20.1 Introduction

This section of the report determines the potential best practicable measures for control of air quality because of the construction works, to determine mitigation requirements for input into the CEMP.

9.20.2 Methodology

The IAQM's guidance on assessing impacts from construction¹ has been followed to prepare this report, which considers the risk of impacts during the construction phase in terms of nuisance dust, human health (PM₁₀ exposure), and ecological impacts.

¹ IAQM, "Guidance on the Assessment of Dust from Demolition and Construction" (Institute of Air Quality Management (IAQM)), February 2014), <http://www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf>.

With regard to ecological receptors, risk assessment should be undertaken where high-sensitivity receptors are located within 50m of a Site boundary. The Multi Agency Geographic Information for the Countryside (MAGIC) website, which incorporates Natural England's interactive maps², has been reviewed to identify whether any statutory ecological sensitive receptors are situated within 50m of the Site boundary or within 50m of any routes used by construction vehicles on the public highway, up to a maximum of 500m from the site entrance (depending on the size of the Site). The local area was screened for the following designations:

- RAMSAR;
- Sites of Special Scientific Interest (SSSI);
- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA), and
- Local Designated Sites (e.g., Local Nature Reserves (LNRs), Ancient Woodland).

With regard to human receptors, based on the IAQM guidance, residential dwellings, schools, and healthcare facilities are considered as high sensitivity receptors in relation to both dust soiling and adverse health effects of PM₁₀. Indicative examples of medium sensitivity receptors include places of work, offices, and hotels. Car showrooms are also an example of a high sensitivity receptor to dust soiling.

Within distances of 20m of the site boundary there is a high risk of dust impacts. Up to 100m from the construction site, there may still be a high risk, particularly if the receptor is downwind of the prevailing wind direction from the dust source. At distances >100m up to 350m, the risk of impacts is considered to be low.

The IAQM guidance states that the potential dust emission magnitude from Demolition, Earthworks, Construction and Trackout should all be assessed individually. In addition, the sensitivity of the area to adverse dust impacts should also be defined.

The overall significance of the risk of adverse impacts during the construction phase can then be defined using the 'risk of impacts matrix' for each stage of the construction phase described above. Further details of the risk assessment are provided in section 3.

9.20.3 Construction Phase Assessment

Overview

The construction phase of the scheme will involve a number of activities that will produce polluting emissions to air. Predominantly, these will be emissions of dust. As such, a qualitative construction dust risk assessment has been undertaken.

The risk of impacts and the significance of each stage of the construction phase is classified as Negligible, Low, Medium or High, determined against a matrix which considers the distance from source, receptor sensitivity, background pollution concentrations, and the potential dust emission magnitude of the works.

Construction Traffic Emissions

² Natural England and MAGIC partnership organisations., "Multi Agency Geographic Information for the Countryside,," 2020, <https://magic.defra.gov.uk/MagicMap.aspx>.

The IAQM's guidance states that, from experience of assessing exhaust emissions from site traffic, it is unlikely that any significant adverse impacts on local air quality would be caused and in the vast majority of cases, quantitative assessment is not needed. As such, short term effects of construction traffic emissions have not been assessed.

9.20.4 Potential Dust Emission Magnitude

Demolition

There are currently no buildings on Site which are required to be demolished prior to construction phase activities. As such, emissions magnitude from demolition has not been considered further.

Earthworks

The total area of the Site is approximately 8,000 m², with underlying loamy soil texture³ which has the potential for high dust release when dry due to the small particle size. The total material to be moved is anticipated to be <25,000 tonnes and approximately 5 heavy earth moving vehicles will be active at any one time. No concrete batching or sandblasting will be undertaken.

Accordingly, the potential dust emission magnitude for earthworks is considered to be 'Medium', in accordance with IAQM guidance.

Construction

The total volume of new structures associated with the scheme is estimated to fall within the IAQM's 'Medium' threshold of 25,000 - 100,000m³. The construction materials will likely comprise concrete, tarmac, glass and steel which are considered to be potentially dusty construction materials.

Based on the above, the potential dust emission magnitude for construction is considered to be 'Medium', in accordance with IAQM guidance.

Trackout

Factors which determine the dust emission magnitude are vehicle size, vehicle speed, vehicle numbers, geology and duration. With specific reference to vehicle numbers, IAQM guidance advises that numbers are for vehicles that leave the Site after moving over unpaved ground, where they will accumulate mud and dirt that can be tracked out onto the public highway.

An estimated unpaved road length of less than 50m is anticipated. It is understood that the maximum number of outward Heavy-Duty Vehicle (HDV) movements which leave the Site after moving over unpaved ground, where they will accumulate mud and dirt that can be tracked out onto the public highway, is unlikely to exceed the IAQM's 'Low' threshold of <10 HDV (>3.5t) outward movements.

Accordingly, the potential dust emission magnitude during Trackout is considered to be 'Small', in accordance with IAQM guidance.

9.20.5 Potential Dust Emission Magnitude Summary

Table 3 – Summary of Potential Dust Emission Magnitude

Activity	Potential Dust Emission Magnitude
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³ Soilscales, <http://www.landis.org.uk/soilscales/>

Earthworks	Medium
Construction	Medium
Trackout	Small

9.20.6 Sensitivity of Area

Meteorological Conditions

Detailed, hourly sequential meteorological data for the period 2017 to 2021 were obtained from Mumbles Head meteorological measurement station, using the WorldMet R package⁴. The meteorological data forms a reasonably representative model of prevailing weather conditions at the Site based on proximity.

The modelled wind rose (Figure 2) shows that the prevailing winds are from the West / South West. As such, receptors downwind (i.e., East North East) of the Site are more at risk of adverse dust impacts than those located upwind.

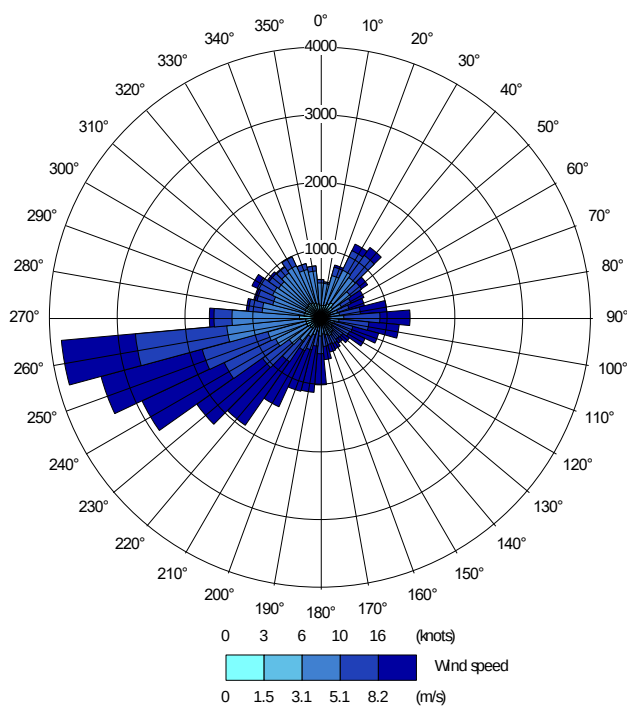


Figure 2 – Wind Rose for Mumbles Head Meteorological Station (2017 – 2021)

9.20.7 Human Receptors

Dust Deposition

Figure 3 shows the construction phase distance buffers (20m, 50m, 100m and 350m) plotted around the Site boundary, as well as identified high and medium sensitivity human receptor locations identified within these buffers:

⁴ David Carslaw, NOAA Integrated Surface Database (ISD) Surface Meteorological Observations: Davidcarslaw/WorldMet, R, 2018, <https://github.com/davidcarslaw/worldmet>.

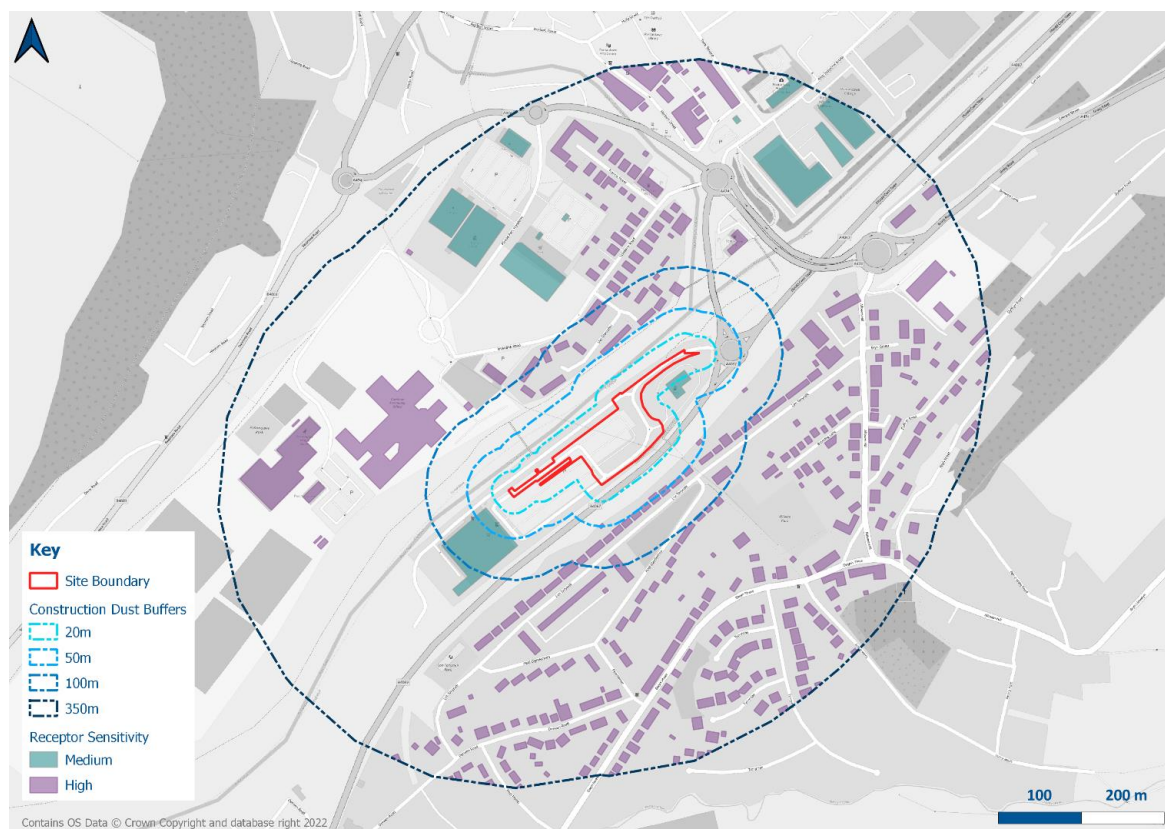


Figure 3 – Construction Phase Human Receptors

There are more than 10 high sensitivity receptors within 50m of the Site boundary, and therefore the overall sensitivity of the surrounding area to nuisance dust soiling effects during Earthworks and Construction is defined as '**Medium**', in accordance with IAQM guidance.

For Trackout activities, the sensitivity for 'Small' Sites is assessed where receptors are located within 50m from Trackout routes up to 50m from the Site access. There are less than 10 high-sensitivity receptors within 50m of the anticipated Trackout routes. As such, the sensitivity to dust soiling impacts from Trackout is defined as '**Low**'.

9.20.8 Human Health (PM_{10})

Defra provides estimated background concentrations of key Air Quality Strategy (AQS) pollutants on the UK-AIR website⁵. These estimates are produced using detailed modelling tools and are presented as concentrations at central 1km² National Grid square locations across the UK. At the time of writing, the most recent background maps were from August 2020 and based on monitoring data from 2018.

Defra's 2022 (year of assessment) predicted annual mean PM_{10} concentration at the Site⁶ is 11.7 $\mu\text{g}/\text{m}^3$ which is below 32 $\mu\text{g}/\text{m}^3$ in the vicinity of the Site⁷ and are not likely to exceed 24 $\mu\text{g}/\text{m}^3$. The IAQM guidance states where PM_{10} concentrations are <24 $\mu\text{g}/\text{m}^3$ and there are fewer than 100 high sensitivity receptors within 20m of the Site boundary, the overall sensitivity of the surrounding area to human health impacts is defined as '**Low**'.

⁵ UK-AIR Background Mapping Data for Local Authorities, Background Mapping data for local authorities - 2018 - Defra, UK.

⁶ Grid reference 272500,203500

⁷ The concentration at which exceedance of the 24-hour AQS objective

9.20.9 Ecological Receptors

No sensitive ecological receptors were identified within 50m of the Site boundary or potential trackout route and therefore has not been considered further within this assessment.

9.20.10 Summary of Sensitivity

The sensitivity of the surrounding area to the potential impacts discussed above is summarised below in Table 4.

Table 4 - Sensitivity of Surrounding Area

Potential Impact	Sensitivity of the surrounding area		
	Earthworks	Construction	Trackout
Nuisance Dust Soiling	Medium	Medium	Low
Human Health	Low	Low	Low

9.20.11 Risk of Impacts

Using the methodology prescribed in the IAQM guidance, the overall risk of impacts can be defined by combining the sensitivity of the area with the potential dust emission magnitude of each stage of the construction phase as described above.

Table 5 provides a summary of the construction dust risk assessment. Overall, the development is considered to be **Medium Risk** for potential nuisance dust soiling effects, **Low Risk** for PM₁₀ health effects in the absence of mitigation.

Table 5 - Risk of adverse impacts during construction phase

Potential Impact	Risk of Impacts		
	Earthworks	Construction	Trackout
Nuisance Dust Soiling	Medium Risk	Medium Risk	Negligible
Human Health	Low Risk	Low Risk	Negligible

Full details of the mitigation requirements for Medium-Risk sites are summarised in section 4 which should be adopted in the CEMP.

9.20.12 *Mitigation Measures*

The qualitative construction dust risk assessment shows that the Site is **Medium Risk** for adverse impacts during construction, in the absence of mitigation.

To effectively reduce the risk of impacts to negligible, appropriate mitigation measures will be adopted. In order to mitigate the worst-case dust impacts, the IAQM's Highly Recommended mitigation measures for Medium-Risk sites will be implemented into the CEMP to effectively reduce any potential dust impacts.

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this Appendix. The DMP may include monitoring of dust deposition, dust flux, real-time PM₁₀ continuous monitoring and/or visual inspections.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exception incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

Monitoring

- Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.

- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- No bonfires and burning of waste materials.

Construction

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.

- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site log book.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10m from receptors where possible.

9.21 Noise & Vibration

9.21.1 Introduction

Excessive noise and vibration as a result of construction activities has the potential to produce a significant negative effect on nearby noise sensitive receivers. This section describes a noise management plan in order to control and limit noise and vibration so that affected properties and other sensitive receptors are protected from excessive noise and vibration levels.

This document is prepared with regard to relevant British Standards and Legislative Guidelines including:

- British Standard 5228-1:2009 'Noise and Vibration Control on Construction and Open Sites;
- British Standard 5228-2:2009 'Noise and Vibration Control on Construction and Open Sites;
- British Standard 6472-1:2008 'Guide to Evaluation of Human Exposure to Vibration in Buildings' Part 1: Vibration Sources Other Than Blasting;
- British Standard 6472:2008 'Evaluation of Human Exposure to Vibration in Buildings (1Hz to 80Hz);
- The Control of Pollution Act 1974;
- The Environmental Protection Act 1990;

Proposals have been made for the development of land north of the Wagtail Lawrence Hill for a commercial use. The proposed development includes for the construction of a two-storey restaurant with associated car parking and landscaping;

A number of residential properties are located in the vicinity of the proposed development site. The nearest noise sensitive receivers are situated at the following locations:

- Properties to the South West on Lon Tanyrallt
- Properties to the North West on Llys Glanrafon

Cwmtawe Community School is located slightly further west; however this is at a greater distance than the identified residential receptors, and therefore impacts are likely to be similar or lower in magnitude. The school body may need to be consulted regarding expected periods of higher sensitivity such as examinations and works avoided during this period if possible or carefully monitored.

As indicated in the overlay figures below:



Figure 4: Noise and Vibration Sensitive Receptors, site outline and proposed building plot.



Figure 5: Noise and Vibration Sensitive Receptor-Cwmtawe Community School

At this time there is no specific management construction phasing scheme therefore, this assessment will focus on providing general advice and best practice guidance on the control of noise and vibration from construction and open sites.

9.21.2 Noise and Vibration Management

General

Access to the development site will be facilitated at all reasonable times for inspection and/or noise measurements by the local authority environmental health personnel, following appropriate site-specific induction and/or health and safety training.

Notifications

An early establishment of relations should be conducted and maintained throughout the scheme of site work between the development team and community. Good relations can be achieved and maintained by providing insight into the proposed construction scheme, updating local residents on continued progress and by treating complaints fairly and expeditiously.

Occupiers of nearby properties should be informed in advance of specific works taking place that may be considered highly noise sensitive (e.g. piling operations), including the duration and likely noise and vibration impacts. In the case of work required in response to an emergency, the local authority and local residents will be advised as soon as reasonably practicable that work is taking place.

Potentially affected residents will also be notified of a Helpline phone number.

Construction Site Management

Best Practicable Means (BPM) should be followed by the contractor and all subsequent sub-contractors in order to reduce undue noise and vibration on the local community.

The following guidance should be followed for the BPM:

Each item of plant used on the worksites will comply with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United Kingdom Statutory Instrument (SI) 2001/1701.

The recommendations set out in Annex B of Part 1 of BS 5228 and Sections 7.3 and 9.2 of Part 4 of BS 5228 with regard to noise and vibration options will be adopted unless agreed in advance with the relevant local authority.

Materials will be handled with care e.g. material such as scaffolding and steelwork will be placed rather than dropped.

Drop heights of materials from lorries and other plant will be kept to a minimum.

With regards to the piling of foundations, if this is required for any of the proposed buildings, the avoidance of driven piling, for example by using rotary bored piling where possible, will ensure noise and vibration effects during these works will be reduced.

Fixed and semi-fixed ancillary plant such as generators, compressors and pumps liable to create noise and/or vibration whilst in operation will, as far as reasonably practicable, be located away from sensitive receptors.

The use of barriers to absorb and/or deflect noise away from noise sensitive areas will be employed where required and reasonably practicable.

All plant used on site, paying particular attention to the integrity of silencers and acoustic enclosures will be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable.

As far as reasonably practicable, any plant, equipment or items fitted with noise control equipment found to be defective will not be operated until repaired.

Where reasonably practicable, fixed items of construction plant should be electrically powered in preference to diesel or petrol driven.

Vehicles and mechanical plant employed for any activity associated with the construction works will, where reasonably practicable, be fitted with effective exhaust silencers and will be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable.

Machines in intermittent use should be shut down or throttled down to a minimum during periods between work.

Static noise emitting equipment operating continuously will be housed within a suitable acoustic enclosure.

9.21.3 *Vibration Management*

There is potential for excessive vibration causing disturbance to local residents and/or dwellings. The significance of vibration can be assessed using the Vibration Dose Value (VDV) or more commonly for demolition/construction the Peak Particle Velocity (PPV).

With regards to the protection of dwellings, as per the guidance of BS 5228 2:2009, the lowest transient vibration threshold for cosmetic damage to buildings is 15 mm s⁻¹ at 4 Hz.

It should be noted that with regards to continuous vibration, such as may occur during sheet piling operations, threshold levels may need to be reduced by 50%.

It is therefore proposed that the upper vibration threshold level be limited to 7.5 mm s⁻¹ at the site boundary to reduce the risk of damage.

A scheme of vibration surveillance may be necessary at the site boundaries should high impact construction events, such as piling, be conducted in proximity to the identified noise sensitive receivers.

Testing of high impact activities, such as piling, should be conducted to determine their compliance to the relevant British standards and best practice guidelines. Should high impact activities be determined to be within the threshold tolerance, surveillance may be ceased until the following is undertaken:

If the proximity of high impact activities to the identified noise sensitive receivers is increased; and the frequency of high impact activities is increased It must be ensured that local residents are instructed in writing of any high impact activities likely to generate excessive levels of vibration prior to the commencement of the activity.

9.21.4 Vehicle Movement

The following measures should be considered when developing a scheme of site vehicle movement:

- Site access should be selected at an appropriate location as far from the identified receivers as practicable;
- Deliveries should be programmed to arrive during daytime hours only (within the hours outlined in Section 2.3);
- Delivery vehicles should be prohibited from waiting within the delivery area with their engines running; and Speed should be limited to 5 mph.

9.21.5 Reversing Alarms

As far as reasonably practicable the noise from reversing alarms should be controlled and limited. This will be managed through the following hierarchy of techniques:

The site layout will be designed to limit and where reasonably practicable, avoid the need for the reversing of vehicles. Drivers will be familiar with the worksite layout.

Banksmen will be utilised to avoid, as far as reasonably practicable, the use of reversing alarms.

Reversing alarms incorporating one of more of the features listed below or any other comparable system will be used where reasonably practicable;

highly directional sounders;

ii) use of broadband signals;

self-adjusting output sounders;

and flashing warning lights.

Reversing alarms will be set to the minimum output noise level required for health and safety compliance.

9.21.6 Noise and Vibration Management Conclusion

This document has been prepared using the guidance of the relevant British standards, legislation and best practice guidelines regarding construction noise and vibration assessment and control. At this stage no explicit conditions are attached to the proposals.

This plan contains a "best practicable means" noise management plan in order to best protect the amenity of the identified nearest noise sensitive receivers as best as reasonably practicable.

Appropriate measures have been suggested for the construction phase of the proposed development at this stage of the planning process.

9.22 Vegetation & Tree Protection

Based on the current land use, there will be a requirement for only minimal vegetation clearance. Tree protection measures are unlikely to be required.

10. SUMMARY

This CEMP has been prepared to demonstrate to the local authority that the works required to construct the new McDonald's Restaurant will be carried out in a controlled manner, to minimise any environmental impact on the site, surrounding area and neighbours.

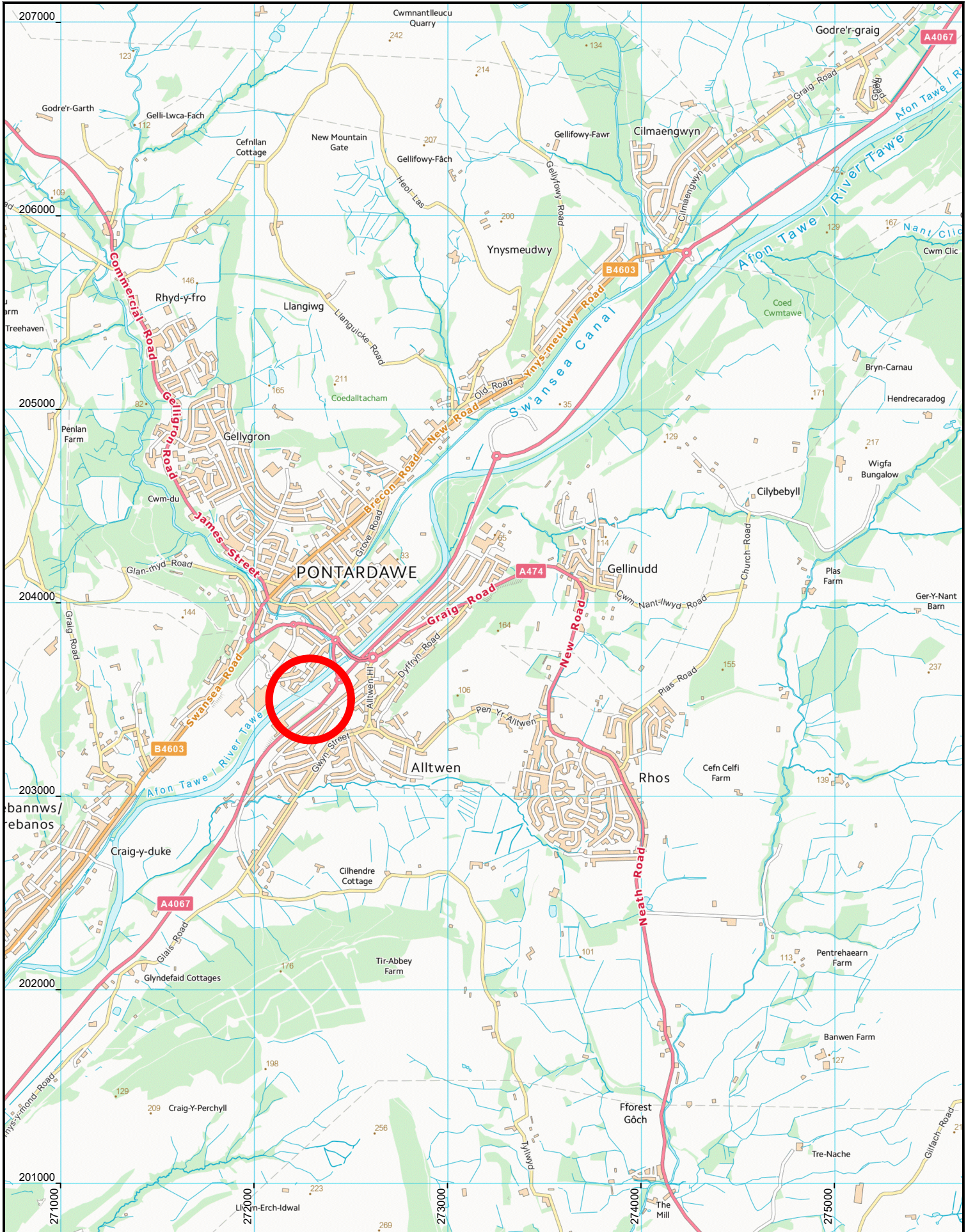
This document will be submitted as part of the planning application to discharge the anticipated planning condition(s).

This document will be updated on receipt of additional information e.g., on appointment of a Principal Contractor, on receipt of archaeological/ecology surveys, if required.

Appendix A

Drawings

- 15297-HYD-XX-XX-DR-GE-1001 – Hydrock - Site Location Plan;
- 6682-SA-8823-P004 C – Scurr Architects - Site Layout Plan;
- 6682-SA-8823-P007 A – Scurr Architects - Landscape Plan; and
- 15297-HYD-XX-XX-DR-TP-0002 – Hydrock – Construction Routes.



Site Ref: SN70

0 500 Metres

5-19 Cowbridge Road East
Cardiff
CF11 9AB
t: +44(0) 2920 023 665
e: cardiff@hydrock.com

CLIENT

McDonald's Restaurants Limited

PROJECT

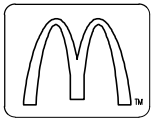
McDonald's Pontardawe

P1	FIRST ISSUE	EP	30/04/20	MH	30/04/20	AE	30/04/20
REV.	REVISION NOTES/COMMENTS						
DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE		

TITLE

SITE LOCATION PLAN

HYDROCK PROJECT NO. C-15297-C	SCALE @ A4 1:25,000
PURPOSE OF ISSUE SUITABLE FOR INFORMATION	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 15297-HYD-XX-XX-DR-GE-1001	REVISION P1



Notes:
All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Proposed Site Finishes:

- Tarmacadam - Car park and footpaths as indicated.
- Charcoal imprinted concrete - Drive thru lane.
- Marshalls 200 x 100mm Charcoal Keyblock paving - Patio & footpaths as indicated.
- Charcoal brushed concrete - drive thru lane and delivery route.
- Brushed concrete - Corral floor slab & new recycling area. See Structural Engineers drawings for further details.
- Safety floor M30 50mm thick, wet pour bonded rubber. To be confirmed by Project Manager.
- Tactile blister paving.
- Existing Soft landscaping.
- New soft landscaping - refer to Landscape Architect's detailed drawing layout for further information.
- Area of proposed SUDS features (details & specification to be confirmed).

External Fixtures & Fittings:

Aurilum - Range Euroline 3 Mix 2015
Electrogalvanised steel structure, PPC RAL 7022. Table legs made of extruded aluminium, PPC RAL 7022. Table seats & plate in 12mm HPL panel with 12mm beech plywood HPL veneer.
Coffee table, single chair, bench, 2 seat table and round table must be fixed to the ground.

- 2 Seat Rectangular Table.
- 4 seats - Round Table.
- 4 seats - Rectangular Table.
- One Armrest Bench (left or right).
- Coffee Table.
- Single Chair.
- Cycle Stand
Stainless steel Sheffield cycle stands @ 800mm centres.
- Pedestrian Guarding
1500mm x 800mm long x 1100mm high. Timber effect galvanneal steel.
6m Indicative lighting column - position to be confirmed by M&E consultant.
- Dust Bin with "Tidy Man" Sticker.
- Target Trash Bin
Combo Delta Large Aperture Litter Bin by Glasdon.
500mm x 410mm high x 1550mm high. Bin body & door: Black.
- Ash Bin.
- New retaining wall - Refer to structural engineers' details for specification.
- New timber faced retaining wall - Refer to structural engineers' details for specification.
- Amco safety barrier.
- Existing elements to be removed / demolished.
- Outline of Existing Tesco Facilities to be removed or relocated where noted (Recycling Area & Trolley Bays).
- Outline of Proposed Relocated Recycling Area.
- Outline of Proposed Relocated Motorcycle Parking.
- Existing pylons & overhead 33KV cables.
- Drop kerb - Adjacent to accessible parking, pedestrian crossings and along delivery route.
- Electricity Kiosk
Green Electricity Meter Housing, 2000w x 1000mm x 2200mm high. Indistinct location only. Position to be agreed with M&E Consultant after service entry positions have been established.
- Cranked Bollard
McDonald's standard cranked bollard 1200mm high, 300mm offset painted white.
- Bollard - Braspas
115mm OD SSS bollard - as door guard - 1000mm high or similar approved.
- COD
PPC Aluminium Speaker Post (RAL 7022 Grey) 500w x 2000 x 1570mm high with white acrylic canopy over 2350w x 3000w x 2000mm high.
- Height Restrictor
PPC black 150mm dia circular hollow section steel Goal Post height restrictor with warning bar suspended on chains. With panel above to read "Maximum Height 2.7m / 8' 10" White text on green background. GSA size = 3600mm wide x 3200mm high.
- PLAY FRAME (E11-003)
Tubular aluminium climbing frame with coloured (red, white & timber) laminate side panels, clear acrylic windows and fabric roof canopy. 3.6m x 3.6m x 4.5m high. See manufacturers information for further details.
- Luma Gen2 BGPT04 60 LED DM10 18KLM NW Lamp(s) - LED-HB 5,25 740 Mounting Height: 6m
- Luma Gen2 BGPT04 80 LED DX10 15KLM NW Lamp(s) - LED-HB 5,25 740 Mounting Height: 6m

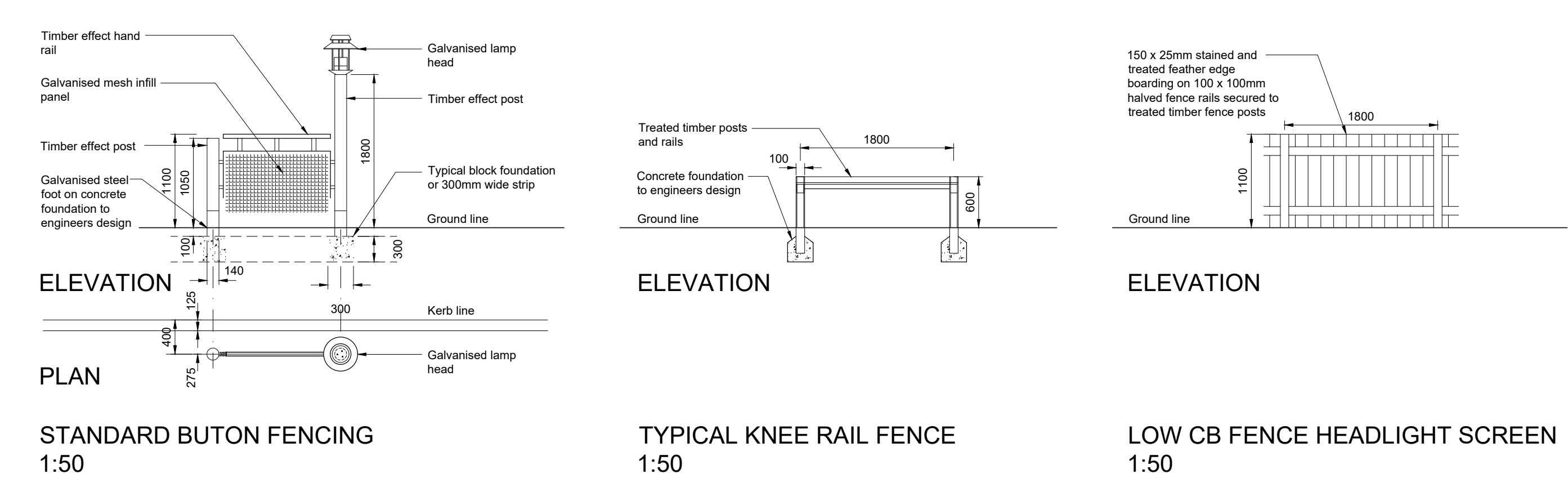
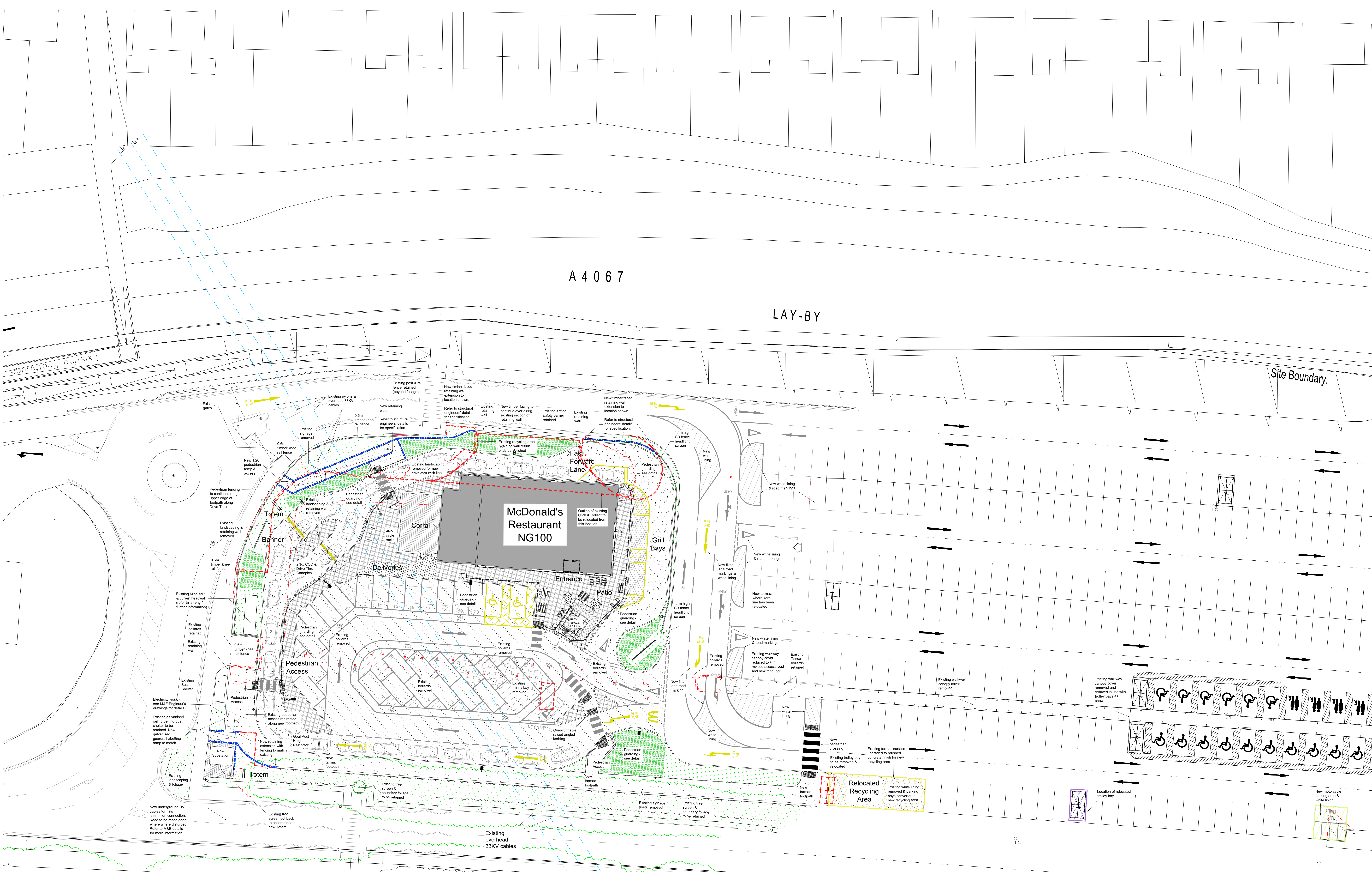
Road Marking Notes:

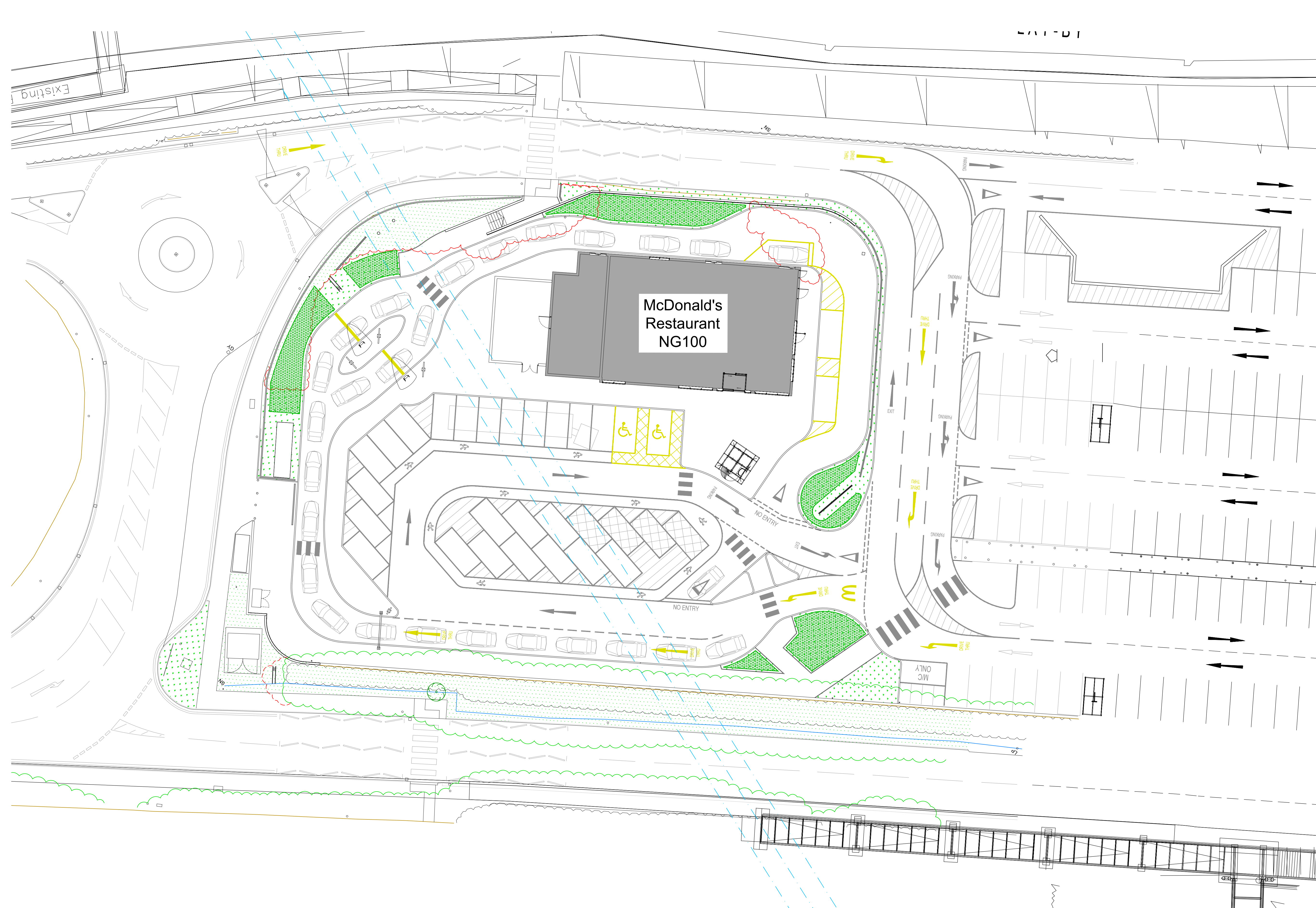
Golden arch road markings to be yellow thermoplastic.
Drive thru related road markings to be yellow thermoplastic.
Accessible parking bays to be lined in yellow thermoplastic - to current Part M standards.
Parked order bays and numbers to be lined in yellow thermoplastic.
All other road markings to be white thermoplastic material unless otherwise stated.

REV	DATE	DESCRIPTION	BY	CHKD
C	28.06.20	Updated to show latest Squiri external lighting layout.	DM	-
B	17.08.21	Updated to show latest Tesco RCD layout. Pedestrian access revised & signs added. Street area increased to A10.	DM	JR
A	17.03.22	Updated to show latest highway marking.	DM	DM

GENERAL NOTES:
All works shall be in accordance with the relevant British Standards and the latest edition of the relevant British Standards.
All materials and products shall be of the highest quality and shall be suitable for the intended use.
All materials and products shall be of the highest quality and shall be suitable for the intended use.
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PROPOSED: 8882-SA-823-P004 C
McDonald's Restaurants Ltd
Scuri Architects
8882-SA-823-P004 C
As Proposed





Notes:
All drawings to be read in conjunction with all other drawings as noted on issue sheet.
To be read in conjunction with Landscape Architects drawings for additional details/specifications.

-  Proposed cultivated turf
-  Existing landscaping
-  Area of proposed SUDS features (details & specification to be confirmed)
-  Existing foliage & tree outline to remain
-  Existing foliage & tree outline to be removed / cut back where shown

A	17.05.22	Updated to latest Hydropack tracking.	DM	JK
REV.	DATE.	DRAWING REVISIONS.	BY.	CHECKED

GENERAL NOTES:
All works are to be undertaken in accordance with the Building Regulations and the latest British Standards.
All proprietary materials and products are to be used directly in accordance with the manufacturer's recommendations.
All dimensions to be checked on site prior to construction.
All risks assessed to comply with the designer's responsibility under the Construction (Design Management) Regulations 2015.

PROPOSED DEVELOPMENT AT:
Tesco, Gwyn's Drift, Pontardawe
SWANSEA SA8 3AZ

STORE No: -
NB 8823

ON BEHALF OF:-
McDonald's Restaurants Ltd

DRAWING TITLE:-
Site Layout Plan
Landscaping

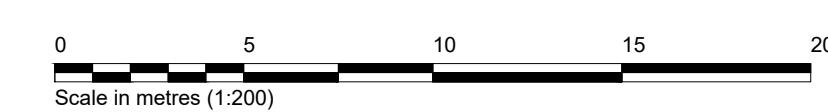
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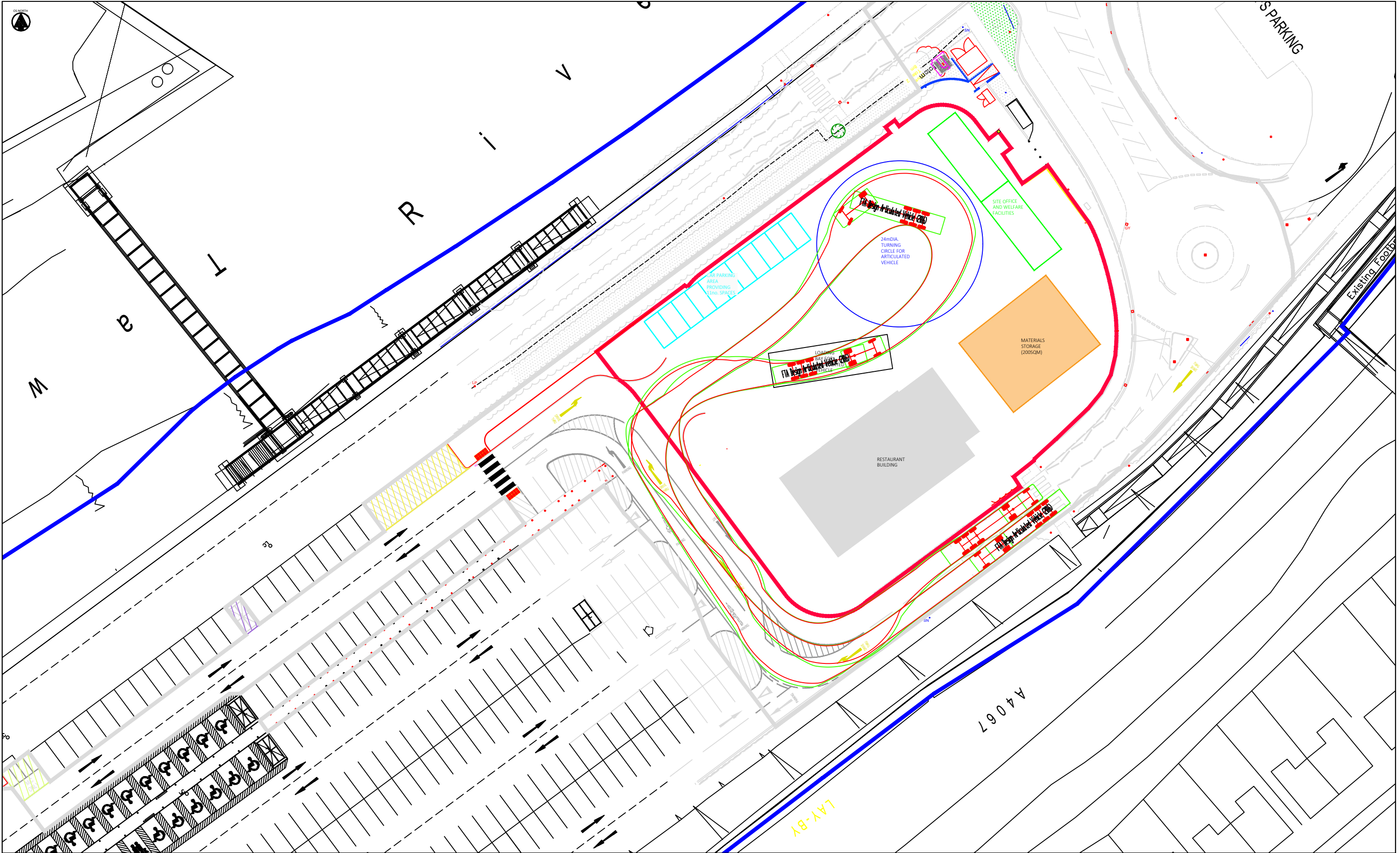
CHECKED BY:
JK

DATE:
APR 2022

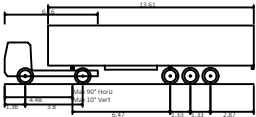
DRAWING No:
6682-SA-8823-P007 A

NG100





VEHICLE MODELS USED IN SWEEP PATH ANALYSIS



FTA Design Articulated Vehicle (2016)
Overall Length 16.480m
Overall Width 2.550m
Overall Body Height 3.870m
Min Body Ground Clearance 0.515m
Max Track Width 2.470m
Lock to lock time 3.00s
Kerb to Kerb Turning Radius 6.600m

NOTES

NOTES (CONTINUED)

REVISIONS (CONTINUED)

REVISIONS

FIRST ISSUE					
P01	DESIGNED BY R.OSBORNE	21/07/22	CHECKED BY D.HORN	21/07/22	APPROVED BY R.MCHUGH



MERCHANTS' HOUSE NORTH
WAPPING ROAD
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BS1 4RW
t: (0117) 9459 225
e: bristol@hydrock.com

CLIENT
MCDONALDS RESTAURANTS

PROJECT
MCDONALDS PONTARDAWE

CONSTRUCTION COMPOUND LAYOUT

HYDROCK PROJECT NO. 15297	SCALE @ A3 1:500
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STATUS DESCRIPTION
INFORMATION

DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 15297-HYD-XX-XX-DR-TP-0002	STATUS S2 REVISION P01
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