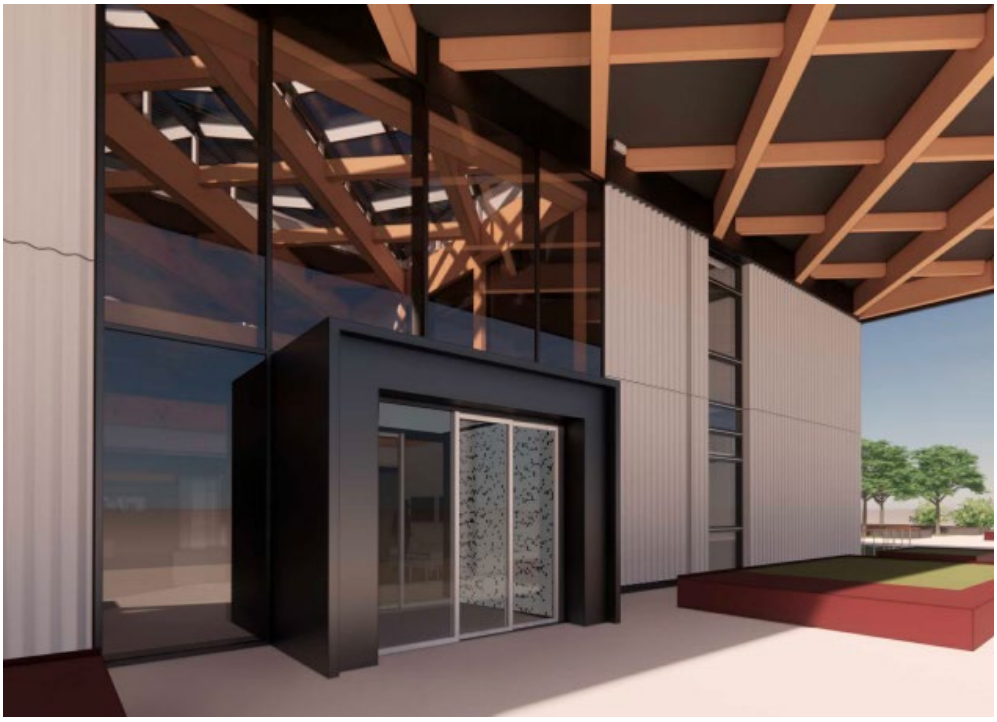
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

(Including Traffic Management and Dust & Noise Management).

Thornton Building
(previously known as TOSP)
Genome Campus
Hinxton
CB10 1SA



5th August 2022 - Rev A

Originator: Jon Carter
Senior Project Manager

This CEMP has been prepared in accordance with and to address the requirements of Condition 14 of the TOSP Decision Notice (ref 21/05384/REM). This is considered to set out the primary CEMP criteria against which this document has been prepared, however to ensure accordance with Outline Planning Permission regard has been given to Condition 51. Compliance with the Outline CEMP (and its supplement), the Outline CTMP, and Outline Construction Waste Management (CWM) Plans for the Wellcome Genome Campus, approved by the local planning authority (LPA) on 22 July 2022, is assumed for all construction works, and this detailed CEMP only seeks to supplement with additional information as required, relative to this RMA and where required by Condition 14 of the TOSP Decision.

It is noted that no piling is proposed as part of the proposals, so no Piling Method Statement is submitted.

Introduction

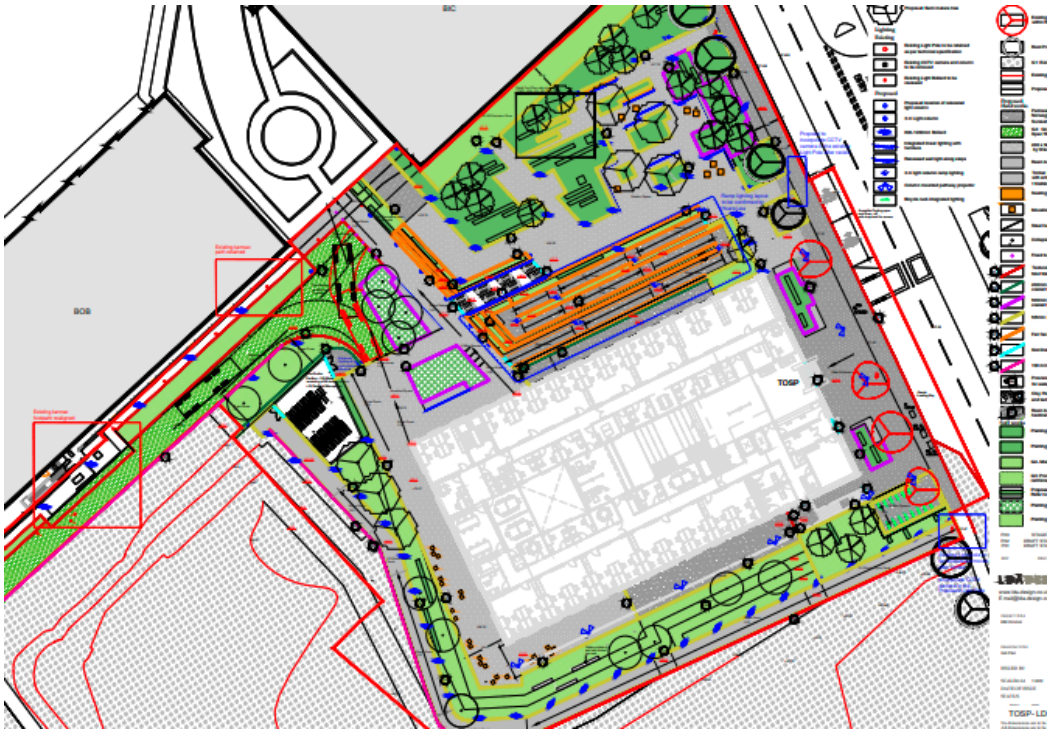
The new Thornton building at the Genome campus, Hinxton consists of a cast insitu lower ground floor concrete frame with a CLT and glulam beam structure on the floors above. the new building comprising office space for translation with associated meeting rooms, canteen, toilets, full shower facilities with changing rooms and integral plantroom in the lower ground floor. Externally a large access ramp to upper ground floor will be formed along with separate secure cycle shelter and hard/soft landscape areas.

Access to the site has been preplanned and will be coordinated to limit the impact on neighbours and local stakeholders. See Appendix C

Regular reviews of the works and management of the logistics will be a key part of ensuring that Kier Construction will adapt to the changing needs of those who may be impacted by this project.

The project will be fully planned using the latest 3d modelling software in order to plan all works during the construction phase.

Kier Construction will work responsibly and professionally in a manner that meets the Kier Construction Standards and the requirements of the Client.



Programme

Please see Appendix E.

Vehicle Sizes / Numbers / Parking Arrangements (also refer to Traffic Management Plan within appendix C).

To minimize disruption to the local neighbours, where practical we will stipulate in orders to our suppliers and subcontractors that deliveries should avoid peak drop off and collection times; 0830 - 0915 and 16.30-17.15

Lorry drivers with large loads/articulated trailers will be asked to telephone the Kier Construction Site Materials and Deliveries Manager in advance, who will then give permission to approach site. Access into the site compound will be off the A1301 via the site access gates south of the genome campus roundabout.
Access will only be permitted from the North bound carriageway with all south bound vehicles being directed around the A11 roundabout to avoid right hand turning across the flow of traffic.
Larger vehicles will be guided on site with a vehicle banksman. Permission to gain access onto the site by large vehicles will only be given if the compound area is clear for the vehicle to be accommodated on site. Any vehicles without appointment will be turned away.

Kier will have a manned security guard with gatehouse positioned at the new site entrance in the Genome Campus perimeter which will be manned 0700-1800. There will be an additional key for the main gate, which will be held by the campus security for emergency access.

All site traffic will enter through the new site entrance with signage erected to indicate this and additional signage will be erected at the Genome entrance to warn site traffic of no entry.

Contractor parking will be within the Construction area and designated contractor parking only. No Contractor's vehicles will be permitted to park in any of the local car parks or on local roads. Car/van sharing will be promoted to limit the number of vehicles accessing the site.

All off-loading will be within the boundaries of site and will be carried out by telehandler or truck mounted mobile crane. All plant operators will be competent CPCS trained personnel, and all lifting operations will have detailed lift plans, compiled by a CPCS Appointed Person, in place prior to the operation taking place. CPCS Lift Supervisors and Slinger Signallers will manage the lifting on site.

Any deliveries arriving to site early will be held in the identified off site holding area. (refer to the Traffic management Plan within appendix C)

A conditions survey of the adjacent public highway will be carried out during Kiers enabling works period at the front end of the project.

Normal Hours of Operation

Construction Operation Hours:-

Monday - Friday	0800 – 1800 hours
Saturday-	0800 – 1300 hours – as required and compliant with planning requirements.

Dust Mitigation Measures during the Contract Period (refer to dust and noise management plan within appendix

Through design and selection of methodology consideration will be given to mitigate the generation of dust. E.g. Selection of materials, limiting the cutting of materials without extraction (wherever suitable) and prohibiting dry cutting of cementitious materials.
Should dust become an issue during the groundworks phase, damping down will be used if required.
Should dust become an issue, Kier Construction would propose to utilise hoses and mist sprayers as required for maximum dousing down areas.

Due to limited traffic movement on site, Kier Construction do not envisage any dust issues that require additional control measures.

Control of Noise emanating from the site during the Construction Period
The Kier Construction site team have a broad framework for liaison with residents and those likely to be affected by the execution of the works, being aware of the impact of construction activities and from experience have found that this can be minimised by encouraging open dialogue from the commencement of the works. These basic principles will be utilised taking things forward to working on this project and observing the sensitivities to the client/public and the environment.
Kier Construction strives on all our sites to be a good neighbour by: -

- Being considerate – think of all the interfaces, passers-by and the public in general.
- Being quiet – minimise noise where possible, use every effort to use quietest equipment available.
- Being clean and tidy – all pavements, roads, paths etc. will be kept clean and tidy.
- Being safe and carry out works with the utmost care.
- Being responsible – control site activities and people to this code.
- Being accountable – provide a contact board, so the public can communicate concerns.

On this project Kier Construction will carry out letter drops to inform of the start on site, and a public information noticeboard will be erected at the site entrance and newsletters will be posted quarterly.
We will arrange a meeting with the site buildings adjacent to the new build to talk through the construction activities as we understand the vibration sensitivities of the scientific instruments within these buildings.

The site will be registered with the national Considerate Constructor Scheme and will comply with their Codes of Practice.

Kier will also have a dedicated project webpage with a contact section via email.

Kier Construction will take all reasonable precautions to keep noise, pollution and nuisance to a minimum.

Specific systems to maintain neighbour interface will include: -

- Single point contact with Kier Construction Project Manager.
- Safety Advisor available for consultations.
- Adequate signage and protection to be erected and maintained.

Noise and Vibration Management

The adjoining Ogilvie building (Bob) contains instruments sensitive to vibration.
Kier will investigate alternative construction methods to minimize vibration within 50m of the building and install vibration monitoring equipment adjacent to the instruments for early warning.

Wherever possible Kier Construction will endeavor to mitigate noise and vibration through design and selection of materials and methodology.

Radios/audio equipment are not permitted on the site, Kier Construction will ensure that this is communicated to all sub-contractors and is monitored throughout the works on site.

The actual level of noise generated by construction is very difficult to predict at any given time due to the nature of the work and the number of variables that need to be considered. However, there are various ways of reducing the amount of noise that the construction works contribute to the ambient noise, including: -

- Training for staff and operatives.

- Raised awareness with signage and Induction/Toolbox Talks.
- Avoidance of unnecessary noise.
- Strategic placement/orientation of plant.
- Strategic placement of access roads, unloading areas and material storage.
- Proper use of and well-maintained plant.
- Working method/sequence.
- Co-ordination of site activities.
- Off-site fabrication/cutting.
- Best available techniques not entailing excessive cost.
- Acoustic screening/enclosures.
- Restrict hours of noisy work to provide respite periods during the day.
- Regular monitoring and review.

These measures, implemented by a management team who demonstrate their commitment by example, will contribute to minimum noise levels during the construction works.

Please find attached our Noise Risk Register within Appendix A for this contract detailing activities, sources, type of noise and action plan.

Security arrangements

A monitored cctv system will be utilised to cover out of hours periods which will have a security guard call out service 24/7 if any issues are identified on the camera system.

The perimeter of the working area will have heras fencing erected in accordance with the instructions supplied by manufacturers, suppliers and designers.
The layout and arrangement of this is shown on the drawings in the Appendices.

Corporate signage and site-specific information boards/hazard signage will be displayed. As the fence can be viewed through this will also provide clear visibility for the local community.

Fencing measures shall be implemented to prevent unauthorized persons (including children) from accessing beneath fencing and gates. We shall ensure that there is no risk to the general public from collapse, sharp edges, splinters, protruding wire or other defects.

Perimeter fencing shall be inspected daily with a recorded inspection at least weekly. A formal close down process will be in place to ensure that the site is correctly secured at the end of each shift.

Soil Management and Material Storage Arrangements

All materials will be stored within the site boundary in designated storage areas (refer to Appendix C.

All material arising from excavations on site are to be retained within the genome campus where it will then be landscape at a future date instead of moving off site.

The extent of excavation during the reduced level dig of the site will be limited to the access

roads, new building footprint and associated hard landscaping including retaining wall/ramp constructions.

All site operatives, visitors and construction vehicles loading, off-loading, parking and turning will take place within the site area during the construction period to mitigate disruption to all stake holders.

All the above are shown on our site layout drawing in Appendix 'C' attached with this statement.

Arrangement during the construction period to minimise the deposit of mud and other similar debris on the adjacent public Highway.

It will be a condition on all orders, that delivery drivers will be responsible for the cleanliness of their vehicles prior to leaving site. Site staff will strictly enforce this rule.

Through design and programming of the works Kier Construction will strive to minimise works that could generate mud on the roads e.g., the excavation of the temporary access road will be undertaken as an enabling works package with the road being stoned up to levels as the excavation progresses, so plant/lorries work off of clean hardcore and not subsoil. The team will also aim to get the permanent works access road in with an additional base course in early to provide a clean, controlled section of road prior to vehicles exiting the site on to the highway.

Wheel jet washing facilities will be provided at the site vehicle inner gate Inside the construction main compound and car park) as required – a water stand pipe and power are both available at the site cabins for this purpose.

In the unlikely event that roads in the immediate vicinity become dirty due to the site works, Kier Construction will place a call off order with a local road sweeper company to attend site if required. An operative with a sweeping brush will also be available during the entire duration of the works for any accidental deposits on the road outside site and to help control our new access road and gate.

Routing Agreement for Construction Traffic

Pedestrian and vehicle routing around site are as shown on attached site plans contained in Appendix C. Segregation of pedestrian and vehicles is of paramount importance to avoid potential incidents.

Site Waste Management Plan

The Kier Construction Environmental Management Plan is contained in Appendix B to this document.

The Environmental Management Plan and Site Waste Management Plan are live documents held on site and are populated and updated as the project progresses. Kier Construction operate the Smart waste online system to keep a live, on-going record of waste generated on site.

Traffic Management Plan incorporating the routing of Construction Traffic and details of heavy vehicle movement patterns

Delivery Vehicular access to site will be utilizing the new entrance for the genome campus south of the genome main entrance roundabout as the Traffic Management Plan. Large articulated vehicles will be turned on site and will also exit monitored by the site gateman. There will be no reversing onto the Highway as turning facilities are available on site.

Refer to full Traffic Management Plan within appendix C.

Thornton Building

APPENDIX A

NOISE RISK REGISTER FOR THE WORKS

Kier Construction – Thornton building

NOISE RISK REGISTER - Rev '0' 4th July 2022

Item No.	Activity	Main Noise Source	Noise Level (L/M/H)	Noise Duration Int./Cont	Noise Type	Comments	Action
1	Reduced level dig / hardcore	Excavator/roller	M	Continuous	Engine		• Use well maintained plant.
2	Excavate and concrete foundations/lift pits						
a)	Excavation	Excavator	M	Continuous	Engine		• Use well maintained plant.
b)	Discharging concrete	Concrete lorry	H	Intermittent	Consistent		• Stagger foundation pours where practical.
c)	Compacting concrete	Vibrator	M	Intermittent	Consistent		• Use well maintained plant.
3	PCC stairs	Crane	M	Continuous	Engine		• Use well maintained plant. • Strategic placement of plant.
4	Underslab drainage and service ducts	Excavator	M	Continuous	Engine		• Use well maintained plant.
5	Substructure masonry	Mixer	L	Continuous	Engine		• Use premixed mortar.
6.	Concrete works						
a)	Preparation of sub-base	Excavator/roller	M	Continuous	Engine		• Use well maintained plant.
b)	Discharging concrete	Concrete lorry	H	Intermittent	Consistent		• Use well maintained plant.
c)	Pumping concrete	Lorry mounted pump	H	Intermittent	Percussive/ engine		• Use well maintained plant. • Strategic placement of plant.
d)	Compacting concrete	Vibrator	H	Intermittent	Consistent		• Use well maintained plant.
e)	Surfacing finishing	Float	M	Continuous	Consistent		• Use well maintained plant.
7	Screed	Pump	M	Intermittent	Percussive/ engine		• Use well maintained plant. • Strategic placement of plant.
8	External masonry walls	Mixer	L	Continuous	Engine		• Use premixed mortar.
9	Internal masonry walls	Mixer	L	Continuous	Engine		• Use premixed mortar.

Item No.	Activity	Main Noise Source	Noise Level (L/M/H)	Noise Duration Int./Cont	Noise Type	Comments	Action
a)	Loading out	Crane	M	Continuous	Engine		• Use well maintained plant. • Strategic placement of plant.
b)	Fixing	Hand tools	H	Continuous		High level activity, screening ineffective	
10	Roofing	Hand tools	M	Continuous	Percussive	High level activity, screening ineffective	
11	External metal cladding						
13.	Patent glazing/curtain walling	Hand tools	M	Intermittent	Percussive		Sub-Contractor to reduce.
14.	Brise Soleil/louvres	Hand tools	M	Intermittent	Percussive		Sub-Contractor to reduce.
15.	Internal finishes	Various	L	Intermittent	Background		
	General						
16.	Material unloading	Delivery vehicle	M	Intermittent	Engine		• Strategic placement of unloading/ storage areas.
17.	Material distribution	Crane Forklift	L M	Intermittent Intermittent	Motor Engine		• Strategic placement of access roads. • Strategic placement of loading out towers. • Acoustic screening/hoarding.
18.	Cutting	Hand tools	M	Intermittent	Percussive		• Raised awareness by Site Induction. • Cut off site where practical. • Designated cutting areas strategically placed.
19.	Fixing	Hand tools	M	Intermittent	Percussive		• Raised awareness by Site Induction. • Pre assembly off site where practical.

Item No.	Activity	Main Noise Source	Noise Level (L/M/H)	Noise Duration Int./Cont	Noise Type	Comments	Action
20.	Plant	Various	M M	Intermittent Background	Engine		• Use well maintained plant. • Use plant for its intended purpose. • Use baffles etc. recommended by the manufacturer. • Avoid the use of plant which is near the end of its useful life. • Strategic placement of plant. • Acoustic screening if possible. • Turn off when not in use.

Thornton Building

APPENDIX B

SITE WASTE MANAGEMENT PLAN (PRELIMINARY)

AND

KIER CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan (EMP)

Project Name:	Thornton building	**Contract No:**	
Completed by:	Jon Carter	**Date:**	04/7/22

Revision Number:	Description of changes made:	Updated by:	Date of Update:

This document forms Appendix B.10 of the Construction Phase Plan.

1. Introduction

This EMP has been prepared in accordance with the Kier SHEMS Environmental Management Standards and Guidance. It identifies specific environmental issues associated with PHS, and stipulates the procedures that will be used to manage them. Relevant environmental information will be communicated as required.

All amendments to this EMP must be made by project management in consultation with the Safety, Health and Environmental Manager or Environmental Manager / Adviser and documented.

2. Environmental Aspects & Impacts

Prior to commencement of the project an environmental aspect and impact assessment must be undertaken in accordance with the Risk and Impact Management Standard SHEMS-STD-GR-014. For guidance on completing the assessment please contact your Safety, Health and Environmental Manager or Environmental Manager / Adviser.

The assessment looks at each site activity against the following environmental aspects:

- Emissions to Air;
- Emission to Land;
- Emissions to Water;
- Waste Generation;
- Nuisance & Environmental Health;
- Ecology & Biodiversity;
- Cultural Heritage;
- Use of Raw Materials;
- Use of Natural Resources.

Details of the control measures identified in the assessment will be communicated to relevant subcontractors. Subcontractors must manage all risks / impacts associated with their work activity / package in accordance with this document.

Where the subcontractor identifies additional environmental risk / impacts the Project Environmental Co- ordinator (PEC) and Project Manager must be informed and the aspect and impact assessment reviewed and amended as required.

In the event subcontractors undertake works that require reference to document(s) listed in section 2.3 of the Construction Phase Plan (Part A), these will be provided / incorporated into their contract as part of the subcontract documentation.

Kier may, from time to time, externally communicate information relating to significant environmental aspects and the company's performance. Such decisions will be made by appropriate management and documented.

3. Specific Project Environmental Requirements

This section incorporates information derived from documents scheduled in 2.3 of the Construction Phase Plan.

Unexploded ordnance (if info. provided elsewhere, reference where)

- N/A – site area restricted to footprint of existing building. Desk top study deemed the area to be low risk.

External (client / enforcing authority) requirements

- Anticipated Planning condition for site hours to be 08:00 till 18:00 Mon-Fri.
- KPI monitoring requirements - power usage, water consumption, waste all to be monitored via the SmartWaste system.
- No specified requirement for materials with recycled content and low embodied energy.
- Project will be registered for Considerate Constructors scheme.

Watercourses & wells

- There are no water courses on site or in the direct vicinity of the project but it is noted the river Cam is to the west of the site the other side of the circulation road plot boundaries.
- Protection required – Surface water drainage gullies and swales to be protected from site run-off / pollution at all times.

Waste Management (significant waste streams that will be generated) - refer to the project Site Waste Management Plan / Resource Management Plan

- Re-use of demolition materials where possible to make up levels if specification compliant.
- Waste segregation will take place off site at a recycling center.
- Use of prefabricated materials whenever possible/suitable.
- Prohibition of the burning of waste on site during construction.
- No concrete crushing will take place on site.

Contaminated ground, issues with groundwater & dewatering

- All soils tested have been classified as Inert

Standing heritage & archaeology

- No issues identified.

Materials & design

- Materials with recycled content and low embodied energy.
- SHEMS-POL-GR-004 Responsible Procurement Policy - use of local suppliers and labour where possible.
- Timber Minimum Standard e.g. use of FSC / PEFC / GiB timber.
- Local supply chain to be utilised where possible - reducing nuisance, carbon emissions and providing socio-economic benefits to the immediate and surrounding area.

Sensitive neighbours (if info provided elsewhere, reference where)

- The site is not located within an enclosed residential area so sensitive issues with local neighbours are not envisaged as being an issue. Site will operate within agreed working hours and liaise closely with other users on the Campus.
- Vibration sensitivity is of paramount importance to the adjacent buildings and vibration monitors will need to be set up to continually monitor during the construction process

Ecology & biodiversity

- The site is prepared for future development having minimal topsoil and vegetation, consequently the biodiversity and ecology risk of the site itself is reduced but particular attention will be paid to managing water run off due to the close proximity of the River Cam which is to the west of the Genome Campus site boundary.
- Tree Protection Orders (TPOs) – no TPO's on the project.
- Invasive species – not applicable.

4. General Project Environmental Requirements

4.1 Waste Management

All waste will be managed in accordance with the Waste Management Standard SHEMS-STD-GR-065 and where relevant, the Earthworks and Contaminated Land Procedure SHEMS-STD-GR-061.

PHS project team will manage waste through the implementation of a bespoke version of the Building Research Establishment (BRE) SMARTWaste tool. The project team will also use SMARTWaste Site Waste Management Plan to identify waste streams, forecast waste volumes and identify suitable methods to eliminate, or where this is not practicable, reduce waste generated by the project.

When considering management options for identified waste streams, Kier and supply chain members will adhere to the principles outlined in the waste hierarchy below.

Kier and its sub-contractors must ensure waste is stored away from drains, boreholes, wells and controlled waters. Containers shall be in good condition and, where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the area surrounding the site, all necessary steps must be taken to ensure no contamination occurs. This may include the use of containment bunds with rain shelters and the use of sealed containers, i.e. clip-top drums and fluorescent tube coffins.

Before waste is treated and / or removed from PHS, all subcontractors / waste contractors must provide the project team with legible copies of the following documentation:

- Environmental permits (mobile plant licences) and exemption certificates authorising on-site crushing and screening activities;
- Waste Carriers Registration Certificates;
- Environmental Permits, (Waste Management Licences and PPC Permits);
- Notification certificate of exemption from environmental permitting.

The project team and, where applicable, subcontractors will ensure that the removal of all inert / non-hazardous waste is recorded on Waste Transfer Notes (WTNs). These documents must be kept for a minimum of two years. These documents will be stored on site and made available on request, with copies uploaded to the SMARTWaste tool.

The project team and, where applicable, subcontractors will ensure the removal of all hazardous waste is recorded on Hazardous Waste Consignment Notes (HWCNs). These documents must be kept for a minimum of three years. These documents will be stored on site and made available on request, with copies uploaded to the SMARTWaste tool.

Legible copies of all WTNs and HWCNs, recording the removal of waste from PHS must be issued to Kier. This includes waste generated on site by subcontractors.

When removing hazardous waste from PHS, a premises code must be used on all Hazardous Waste Consignment Notes.

In Wales this is the 6 digit alpha numeric code assigned to the project when registering the site as a producer of hazardous waste with Natural Resources Wales. The relevant code for PHS is TBC

In England the premises code is generated in accordance with section 4.4.2 of the Waste Management Standard SHEMS-STD-GR-065.

4.2 Storage of Fuel, Oils & Building Chemicals

Fuel, oil and chemicals will be managed in accordance with the Pollution Prevention Standard SHEMS-STD- GR-064 and COSHH Standard SHEMS- STD-GR-051. Please also refer to the Oil and Fuel Storage (SHEMS- MST-CIS-0045) and Chemical and Paint Storage (SHEMS-MST-CIS-0042) Minimum Standards.

Containers must be stored within a Spill Nappy (or similar), bund or any other suitable secondary containment system (SCS). All containers must be located in a safe place to minimise the risk of damage and locked-off when not in use.

For oil tanks, intermediate bulk containers and mobile bowsers the SCS will be able to hold:

- Where one container is being stored - a minimum of 110% of the total volume;
- Where more than one container is being stored - a minimum of 110% of the largest container's storage volume, or at least 25% of their total volume (whichever is greater);
- For drum storage, the interceptor tray will be able to hold at least 25% of the total storage capacity of the drums.

Bunded areas must be made impermeable to water and oil and protected from the ingress of rainwater. The base and walls must not be penetrated by any valve, pipe or opening that is used for draining the system.

4.3 Particulate Matter (Dust) & Noise

Dust and noise will be managed in accordance with the Nuisance Management Standard SHEMS-STD-GR-063 and Pollution Prevention Standard SHEMS-STD-GR-064.

4.3.1 Mobile Crushing & Screening Process

Not applicable

4.3.2 General Site Activities

With regard to nuisance, the methodology in which work activities are undertaken will apply Best Practicable Means (BPM) in order to minimise negative impact on local, sensitive receptors, such as schools and domestic dwellings. However, if measures to reduce excessive dust and noise are unsuccessful, work will stop and an alternative method devised before work can resume.

The following measures will be considered when attempting to reduce noise and dust:

- Use sheeted lorries and sealed / covered skips;
- Use dust extraction equipment when drilling and cutting;
- Damp down haulage roads and stockpiled materials in dry or windy weather;
- Sweep access roads regularly;
- Grass over topsoil which is being stockpiled for landscaping or off-site re-use;
- Locate plant and equipment away from sensitive receptors;
- Use screens, including earth bunds to act as acoustic barriers;
- Isolate plant and equipment when not in use;
- Keep engine compartment doors closed.
- Limit vehicle movements on-site, e.g. use of one-way system.

4.4 Previously Unidentified Issues

If one or more of the following is discovered, work in that location must stop immediately and the Project Environmental Co-ordinator (PEC) informed:

- Contaminated soils;
- Archaeological remains or features;
- Suspicious objects;
- Underground storage tanks;
- Invasive species, e.g. Japanese Knotweed;
- Protected species, e.g. badgers, bats, amphibians, reptiles and plant life.

4.5 Subcontractor and Supplier Environmental Reporting

Subcontractors and suppliers will adhere fully to the Responsible Procurement Policy SHEMS-POL-GR-004. Where applicable, they will also provide the following information / documentation on a weekly basis to the Kier project team:

- A record of the number of litres of fuel delivered to site, e.g. red diesel (gas oil), white diesel and petrol;
- Legible copies of all waste transfer notes (WTNs) and hazardous/special waste consignment notes (H/SWCNs);
- Legible copies of all chain of custody certificates belonging to suppliers delivering new timber to site;
- Legible copies of all timber delivery notes.

4.6 Emergency & Incident Preparedness

In order to minimise the risk of a pollution incident, subcontractors will ensure all operatives understand the environmental risks associated with their work activity and what control measures are in place to eliminate or reduce negative environmental impact.

Major Environmental Incidents shall be reported and managed in accordance with MIRP Standard SHEM-GR-STD-013.

Environmental emergency planning must be managed in accordance with the Fire Management Site Standard SHEMS-STD-GR-021 and Appendix B.6 of the Construction Phase Plan. The Major Incident Response Plan must be implemented where relevant.

Reporting and investigation of environmental incidents must be undertaken in accordance with the Incident and Near Miss Reporting Standard SHEMS-STD-GR-011.

4.7 Monitoring, Auditing & Reporting

Please refer to 6.18 of the Construction Phase Plan.

4.8 Management Structure & Responsibilities

Please refer to 6.1 and 6.2 of the Construction Phase Plan.

4.9 Training Awareness & Competence

Please refer to 6.14 of the Construction Phase Plan

4.10 Energy and Fuel Use

By following the measures outlined below a site can reduce its fuel and energy consumption and as a consequence reduce its emissions and save money.

4.10.1 Power Planning Tool

If a generator is required the Kier Power Planning tool should be used to ensure that the correct sized generator is specified for the project. The tool can also be used to determine the size of the temporary electricity supply required for the project.

Over the course of a project use the tool to regularly review the size of generator required and downsize where appropriate.

The tool will also advise if a hybrid generator is appropriate for your site. A hybrid unit moderates generator use at times of low demand, such as overnight.

SHEMS-FOR-GR-037 Kier Power Planning Tool (Existing Sites)
SHEMS-FOR-GR-038 Kier Power Planning Tool (New Sites)

4.10.2 Energy Saving Measures

The site will give consideration to adopting the following energy/fuel saving measures:

- Using energy efficient fluorescent, LED or metal halide lamps for security lighting and task lighting
- Ensuring external lighting is fitted with daylight sensors to ensure that they turn off automatically between dawn and dusk.
- Using transformers fitted with a timer, or a timed distribution board, that will automatically switch off and on, at pre-set times, non-critical temporary electric supplies. DO NOT connect emergency lighting to any timed circuit as you will damage the battery back-up pack.
- Using hybrid lighting towers, which are powered by a rechargeable battery
- Ensuring temporary cabins are fitted with: low energy lighting (T5 Fluorescent or LED, timers to electric heaters, point of use water heaters door closers and passive infra-red (PIR) sensors to lighting in low use areas
- Using well maintained, low emission, fuel efficient plant
- Avoiding plant being left idling
- Ensuring tyres are inflated to the specified pressure

Schedule I - Environmental Aspect & Impact Assessment

Activity	Aspect	Impact	Normal / Abnormal or Emergency	Initial Impact	Kier SHEMS Control *Hard copies available from MyKier*	Local Control *Must be included in relevant method statements*	Residual Impact
Site Set-Up & Accommodation	Emissions to Air	Dust, SOx and NOx could impact local air quality. Carbon emissions from plant / equipment contribute to climate change.	Normal	B5	Pollution prevention procedure and guidance	Mains power connection installed. Meter installed - first reading to be entered for November. Well maintained generators where needed.	B3
	Emissions to Land	Spill of fuel / COSHH substances to land causing pollution.	Abnormal or Emergency	C4	Pollution prevention procedure and guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainge - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C2

	Emissions to Water	Spill of fuel / COSHH substances into a watercourse / drain causing pollution.	Abnormal or Emergency	C4	Pollution prevention procedure and guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainge - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C3
	Waste Generation	Generation of canteen & office waste.	Normal	C3	Waste management procedure and guidance	Provide separate wheelie bins and possibly segregated collections for paper / card etc. Segregate hazardous waste. Implement site waste management plan.	C2
	Nuisance & Env. Health	Security lighting & generator noise could cause nuisance to local users.	Normal	B5	Nuisance management procedure and guidance	Position and direct lighting away from adjacent buildings. Minimise lighting to site core hours. Work only within agreed hours.	B3
	Ecology & Biodiversity	Damage could occur to ecology if not identified / protected. Biodiversity could be enhanced by preserving or improving habitats.	Abnormal or Emergency	C4	Ecology and biodiversity procedure and guidance	Preliminary Ecological Appraisal completed, recommendations are implemented for all areas affected by the works.. No other significant issues identified.	C2

	Cultural Heritage	Damage could occur to cultutral heritage if not identified / protected. Public awareness of cultural heritage could be enhanced by discovery and / or preservation of features.	Normal	D2	Archaeology and heritage procedure and guidance	Surveys completed, no issues with cultural heritage identifie. No control measures required.	D1
	Use of Raw Materials	Use of materials for hoarding (e.g. timber), steps, access routes, signage.	Normal	C3	Materials guidance	Implement timber policy, use materials efficiently.	C2
	Use of Natural Resources	Poor energy and water efficiency resulting in excessive use of natural resources.	Normal	C3	Natural resource guidance	Energy and water supplies are metered and readings recorded monthly e.g. on smartER. Consider low-flow taps, waterless urinals, eco-cabins, timer switches, daily checks etc. Display appropriate 'switch off' signage / posters and / or implement educational campaigns / initiatives to improve energy / water consumption.	C2
Site Clearance	Emissions to Air	Dust, SOx and NOx could impact local air quality. Carbon emissions from plant / equipment contribute to climate change.	Normal	B5	Pollution prevention procedure and guidance	Appropriate dust suppression used where needed and effectiveness monitored.	B4

	Emissions to Land	Spill of fuel / COSHH substances to land causing pollution.	Abnormal or Emergency	C4	Pollution prevention procedure and guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainge - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C2
	Emissions to Water	Spill of fuel / COSHH substances into a watercourse / drain causing pollution.	Abnormal or Emergency	C4	Pollution prevention procedure and guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainge - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C3
	Waste Generation	Vegetation waste, fly-tipped & residual wastes.	Normal	C2	Waste management procedure and guidance	No control measures required	C2

	Nuisance & Env. Health	Noise from plant / equipment, lighting etc.	Normal	B5	Nuisance management procedure and guidance	Work only within agreed hours. Direct lighting away from properties. Minimise vehicle movements.	B4
	Ecology & Biodiversity	Damage could occur to ecology if not identified / protected. Biodiversity could be enhanced by preserving or improving habitats.	Abnormal or Emergency	C3	Ecology and biodiversity procedure and guidance	Preliminary Ecological Appraisal completed, recommendations are implemented for all areas affected by the works.	C2
Groundworks / Earthworks	Emissions to Air	Dust, SOx and NOx could impact local air quality. Carbon emissions from plant / equipment contribute to climate change.	Normal	C3	Earthworks and Contaminated Land Procedure and Guidance	Appropriate dust suppression used where needed and effectiveness monitored.	C2
	Emissions to Land	Spill of fuel / COSHH substances to land causing pollution.	Abnormal or Emergency	C4	Earthworks and Contaminated Land Procedure and Guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainage - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C3

	Emissions to Water	Spill of fuel / COSHH substances into a watercourse / drain causing pollution.	Abnormal or Emergency	C4	Earthworks and Contaminated Land Procedure and Guidance	Fuel storage located on hardstanding. Substances are stored in accordance with COSHH assessments. Fuel storage location is within 10m of live surface water drainage - drainage gullies have been blocked off using polythene liner to mitigate the risk of a major spill. Drain bund available onsite - drainage run goes through interceptor. Monitoring of run-off from crushed concrete - ensure run-off does not enter surface water drainage. Bunding, spill kits, instructions, supervised refuelling, spill response training and regular monitoring.	C3
	Waste Generation	Generation of various wastes e.g. hazardous & non-hazardous soil, hazardous & non-hazardous asphalt, concrete, hard core, stone, formwork contaminated with mold oil etc.	Normal	C4	Earthworks and Contaminated Land Procedure and Guidance	Reuse suitable excavated material on site, consider CL:AIRE code of practice for reuse on other sites. Surplus / unsuitable soil to be subject to full waste characterisation and if going to landfill, WAC testing. Tarmac to be tested for concentration of coal tar found to be present from the use of PAK marker spray. Implement site waste management plan.	C3

	Nuisance & Env. Health	Dust, noise, vibration, mud on road may cause nuisance to local residents.	Normal	C3	Earthworks and Contaminated Land Procedure and Guidance	Work only within agreed hours. Consider siting of plant / equipment, monitoring requirements, communication with neighbours. Provide appropriate wheel washing facilities.	C2
	Use of Raw Materials	Use of timber or sacrificial material etc. for formwork / falsework. Use of mold oil. Topsoil quality could be affected by poor stockpiling / mixing with subsoil.	Normal	C3	Earthworks and Contaminated Land Procedure and Guidance	Reuse formwork / falsework, use materials efficiently. Core of topsoil stockpile to be no more than 1 metre from surface / topsoil and subsoil to be stockpiled separately.	C2
	Use of Natural Resources	Fuel use in plant & equipment.	Normal	B5	Earthworks and Contaminated Land Procedure and Guidance	Maintain plant / equipment, turn off when not in use, monitor & record fuel use e.g. on smartER.	B3
Road Cleaning	Emissions to Land	Unauthorised discharge onto land (i.e. discharge on site) could cause land pollution - particularly if road sweeper has been on another site.	Abnormal or Emergency	C3	Pollution prevention procedure and guidance	No discharge on site..	C2
	Emissions to Water	Unauthorised discharge onto land (i.e. discharge on site) could cause pollution of watercourse via run-off - particularly if road sweeper has been on another site.	Abnormal or Emergency	D2	Pollution prevention procedure and guidance	No discharge on site..	D1
	Waste Generation	Discharge of road sweeper tank onto open ground is fly-tipping and could cause local pollution of land / water.	Normal	C3	Waste management procedure and guidance	Road sweeper to be managed as per other waste contractors. Implement site waste management plan.	C2
	Nuisance & Env. Health	Road sweeping prevents nuisance from mud on road (positive impact). Noise outside of	Normal	C2	Nuisance management procedure and guidance	No control measures required	C2

		site hours could cause nuisance.					
Traffic / Parking	Emissions to Land	Leaks / spills from vehicles parked on site could cause local pollution.	Abnormal or Emergency	C2	Pollution prevention procedure and guidance	Parking on hardstanding	C2
	Emissions to Water	Leaks / spills from vehicles parked on site could cause local pollution from run-off.	Abnormal or Emergency	C3	Pollution prevention procedure and guidance	Protect sensitive land by use of suitable material to construct temporary car parks. Provide spill kits, instructions & spill response.	C2
	Nuisance & Env. Health	Parking on local roads could cause nuisance to neighbours.	Normal	C2	Nuisance management procedure and guidance	No control measures required	C2

Thornton Building

APPENDIX C

SITE ARRANGEMENT & TRAFFIC PLANS

After detailed site visits and discussions Kier Construction have developed a full traffic management plan that will satisfy The Thornton building Project and ourselves for construction activities.

It is our intention to get all delivery vehicles on to site as quickly as possible to alleviate congestion. Vehicles will enter and exit the site via the separate entrance to the south of the genome campus roundabout. They will then utilise the turning areas within the Contractor's compound supervised by a Banksman and always exit the site forward facing.

Vehicle access and egress will be safely managed & coordinated throughout the works with a dedicated banksman/gateman in attendance as required.

Restricted car parking will be provided in the designated site compound parking areas only.

Site Management

Upon possession of the site, temporary Heras fencing will be erected to the perimeter of the main works site to provide a secure and safe working area. A solid hoarding will then be provided to the access gate areas and separate gates will allow a dedicated pedestrian access route to the site offices. This will be erected to allow suitable visibility splays for vehicles exiting the site.

Temporary site offices and welfare facilities will be placed within the compound area. A temporary electrical supply will be required.

Materials storage and waste segregation will be located within the site area with a drop-down area adjacent to the main gate. As space is limited 'just in time' deliveries will minimise the requirement for material storage. All deliveries will be booked in with site management 48 hours in advance. Any delivery arriving outside of the predetermined slot may be turned away if there is no on site waiting space available and directed to the identified off site holding area..

Craneage Plan

Craneage will be by truck mounted mobile cranes and crawler cranes – primarily to erect the concrete frame to the lower area , the CLT frame and glulam beams to the upper areas also precast concrete/CLT stairs. Hard standing areas will be provided on the site for mobile cranes to be positioned – a detailed lift plan will be developed by Construction Plant Certification scheme qualified Appointed Persons - as the project progresses.

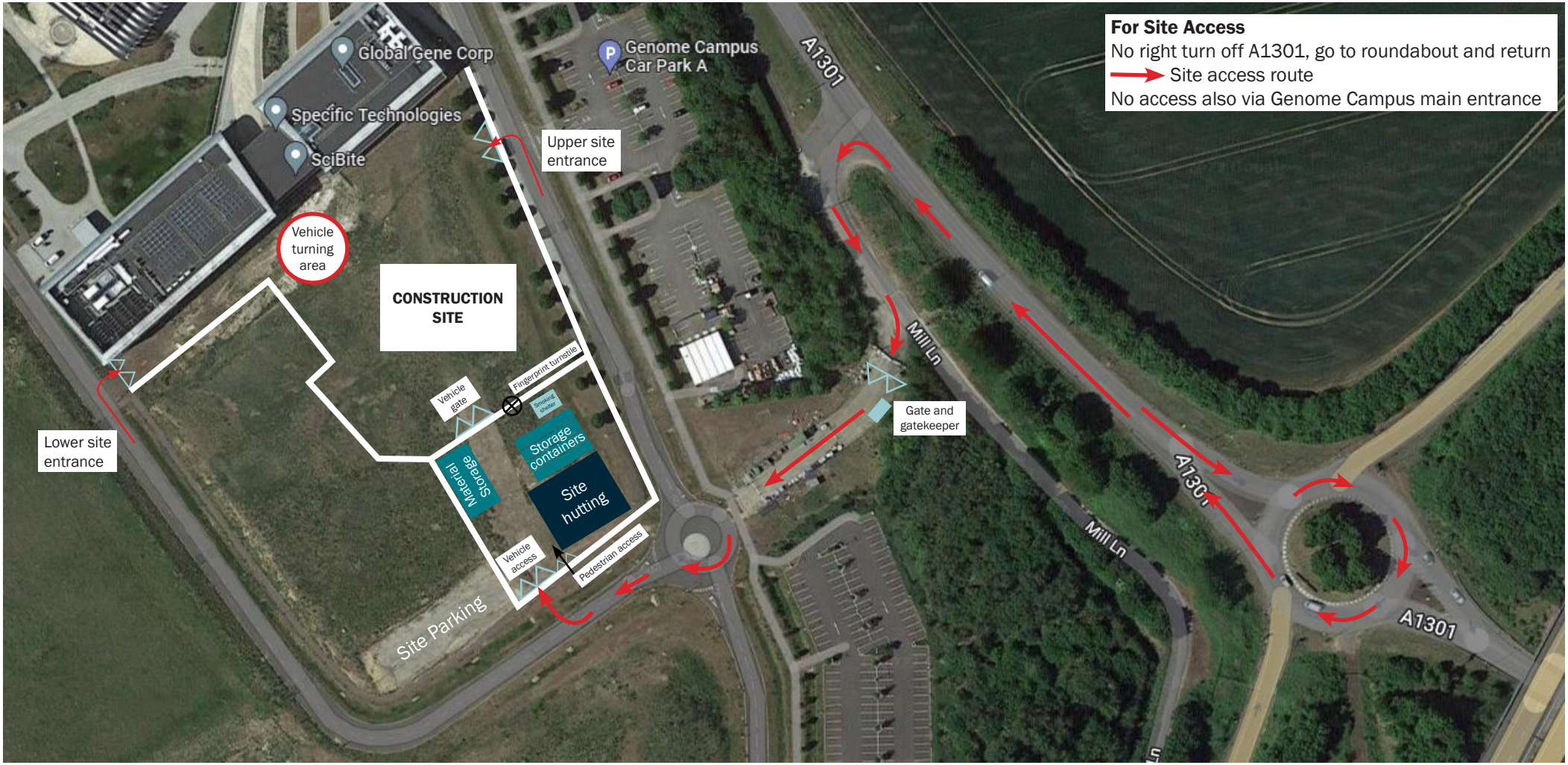
Material Distribution / Access

Materials will be scheduled to be delivered to site as required ideally adopting a 'just in time' approach. A dedicated hard standing area will be assigned on the construction phase site.

The external elevations will be accessed using MEWPs or via scaffolding.
Loading bays will be provided to allow loading and unloading of materials and waste.
Access stairs will be used and placed strategically to enable access/safe means of escape – NB ladders will not be used to access upper levels/scaffolding.

Refer to the following detailed Traffic Management plan for the project:

Appendix C


For Site Access
No right turn off A1301, go to roundabout and return
Site access route
No access also via Genome Campus main entrance
Global Gene Corp
Specific Technologies
SciBite
Genome Campus Car Park A
A1301
Upper site entrance
Vehicle turning area
CONSTRUCTION SITE
Lower site entrance
Fingerprint turnstile
Vehicle gate
Smoking shelter
Storage containers
Material Storage
Site hutting
Vehicle access
Pedestrian access
Site Parking
Mill Ln
Gate and gatekeeper
A1301
Mill Ln
A1301

Construction Site Entrance

Thornton Building

Appendix D

Dust Management, Noise Management & Stakeholder Engagement Communications

Introduction

The following sets out the general approach to eliminate, mitigate and manage dust and noise emissions in relation to the Thornton building during the Construction Phase. Also, to highlight stakeholder engagement and communication routes

Site

The site is located on the welcome trust genome campus at Hinxton,Cambridge.

General Description of Works to be carried out

- Groundwork's
- Concrete frame and retaining walls
- CLT
- Glulam beams
- Steel frame
- External cladding
- Internal Works
- External Finishing Works

Nominated Representative

A member of the Site Management Team will be nominated as the "nominated representative" responsible for the implementation of the dust and noise mitigation and management strategy and will fulfil this duty on a day to day basis.

It will be this person's responsibility to ensure:

- The dust mitigation measures are implemented on site.
- The dust monitoring is carried out as set out in this protocol; and
- The vibration mitigation measures are implemented on site.
  This will consist of vibration monitors placed adjacent to the sensitive equipment of the Olgivie Building with autodial function to Kier Site Managers mobiles for pre-warnings prior to reaching unacceptable vibration levels.
- The remedial action in the event that the trigger levels are exceeded, as detailed below; and
- The results of the monitoring are reported recorded within site records accordingly

Site Activities

Noise and Dust generating activities may occur during the construction phase of the development and all efforts will be made to eliminate, mitigate this.

Working Hours

All construction works will be carried out during the hours of 0730 to 1800hrs Monday to Friday with limited works being planned for Saturday. There will be no works on Sundays or bank holidays.

Due regard will be given to activities that have potential to generate noise and will be carried out at times which are less likely to cause nuisance to all.

Local Resident Liaison;

Kier will issue local residents a newsletter which advises of forthcoming activities. It is our intention to continue with this policy throughout the construction phase. We will also supplement this activity with letter drops to advise of any unusual activities as they may occur.

In addition, The Urban&Civic appointed Project Manager, working with the Urban&Civic appointed Communications, Communities and Partnerships representative will act as a central point of contact between Urban&Civic, the Principal Contractors, the local community and other third parties.

The Urban&Civic appointed Communications, Communities and Partnerships representative will have the responsibility of keeping the local community informed of construction progress through the Community Liaison Group and be the main point of contact with them should any issues arise.

Potential Receptors to Dust & Noise

- General Public
- Local residents/stakeholders
- Operatives
- Kier staff and visitors

DUST---Assessment of Potential Risk: Construction Phase

The initial enabling works, excavations and demolition works do have a potential to cause air borne dust.

Additionally movement of plant and equipment and disturbance of running surfaces has the potential to generate air borne dust.

The general construction activities have also the potential to generate dust through day to day activities in three different categories:

1. Silica Dust---Concrete/Masonry etc.
2. Non Silica Dust---Plasterboard
3. Wood Dust---Skirting/Architraves/Kitchens/furniture etc.

Dust mitigation will be in place throughout the duration of the construction phase as well as effective dust monitoring at the site boundary. Monitoring will be via Casella Guardian2 boundary monitors (or similar) with data logging and will monitor noise, dust and vibration.

Dust Control

	Element	**Dust Mitigation and Control Methods**
	Communications	Develop a stakeholder communication Plan Display name and contact details of responsible person for dust issues on site boundary. Display Office contact information
	Dust Management	Implement the Kier Minimum Standards for managing dust.
	Site Management	Record all complaints and incidents and resulting actions in a site log book. Record any exceptional events Liaise with the project stakeholders.
	Monitoring	Undertake daily on and off-site visual inspections.
		Increase frequency of inspections during periods of high-risk activities or in dry periods Follow the Kier monitoring protocol.

	Preparing and Maintaining the Site	Use site layout to locate activities away from sensitive receptors Erect solid screens and barriers around site. Avoid site run off of water and mud Keep site fencing barriers and scaffold clean. Reduce storage of dusty materials to a minimum. Minimise emissions from stockpiles by covering or damping down.
	Construction Traffic	Sheeting and containment of delivery Vehicles Compliance to the Construction Logistics Plan to manage delivery of goods. Record inspections of haul routes in the site log book. Implement the sustainable Travel Plan for site workers. Access to the site via paved areas Regularly sweeping of access roads using water assisted dust sweepers. Damping Down during dry periods Limiting Vehicle speeds Switching off all engines when not in use Provision of Debris Netting barrier where required All vehicles will be monitored and washed down during inclement weather before leaving site if necessary.
	Measures specific to Excavations	Minimize drop heights when loading and off loading In dry periods damp down general area Sheeting and containment of the loads immediately
	Measures specific to RC Frame	As the general floor levels progress it is proposed to concentrate on the façade at the work face---thus containing any potential dust risk early in the construction programme and prevent noise break out
	Measures specific to Cladding---PC Panels and integrated windows	Due to being manufactured off site---This greatly reduces the risk of dust---to both operative's and third parties

	Distribution of Materials via Hoist and Scaffold Tower	The scaffold Tower (Subject to a Temporary Works design) will be fully screened off. Water will be available on the common Hoist Tower---to allow for dust suppression as required.
	Cutting---Masonry/Concrete.	Cutting equipment will use water as a dust suppressant. Dust extraction units will be fitted to equipment wherever possible and site personnel will ensure equipment is in good working order. Note General Cladding Panels are manufactured off site---thus minimising the risk of dust generation due to reduced workload on site. Face Fit dust masks will be provided to Operatives.
	Cutting---Wood---Carpentry/Kitchens	Dust extract equipment will be fitted to all saws Face Fit Dust Masks will be provided in accordance with the agreed Risk Assessments and method statements.
	General Construction Activities.	Effective barriers around dusty activities and site boundary will be introduced and the area cordoned off with a permit to enter system in operation. Site will not allow runoff of water or mud onto the public highway. The need for dust masks will be risk assessed and implemented in accordance with the agreed method statements. Ensure suitable cleaning materials are available at all times to clean up spills.
	Waste Management	Only use registered waste carriers to remove waste off site. No bonfires on site. All floor plates will be cleaned regularly---damping down as required during the process. Waste Bins will be made available at all levels A central waste management area will located at ground level---Material will be sorted and segregated off site
		Rubbish Skips will be covered Use enclosed chutes and conveyors.

Noise Control

Noise can emanate from a wide variety of sources across all activities:

	Source of Noise	**Noise Mitigation and Control Methods**
	Construction Traffic/Plant and Equipment Tools	Switching off all engines when not in use All vehicles to be fitted with silencers All Plant and Equipment will be in good working order, regularly serviced and maintained All plant and equipment will be used in an efficient way by trained personnel. Stationary plant will be cited with consideration to the local environment, railway assets and those likely to suffer nuisance as a consequence. All equipment will be selected with due regard to the noise emission's levels and ear protection will be worn in accordance with the manufacturers and hirers recommendations our as stated within the agreed method Statement and Risk Assessments
	Noise break out at Boundary.	Careful selection of noise reduction equipment and areas will provide better noise and indeed dust control at the boundary.
	General Construction Activities	Site Management will manage and control all activities and personnel on site. Kier will sign up to the considerate constructor's scheme. All personnel will inducted and will be aware of the requirements to minimise Noise Regular Tool Box Talks will be given to ensure risks and the need to wear ear defenders are fully understood
	Concrete Frame and Cladding	See comments under Dust Control Section. .

Noise & Dust Monitoring;

Dust

Kier will undertake visual inspections of all construction activities for evidence of dust and record the findings within the site records and, throughout the construction phase, will ensure all contractors comply to all relevant method statements and risk assessments. Dust, noise and vibration monitors will be located at locations at the site boundary,

Kier will respond directly to any concerns raised in relation to dust directly.

Noise
Kier will monitor the site and surrounding area but as the site is a long way from any domestic neighbour we will closely liaise with the adjacent building on the Genome campus as we will have to in relationship to vibration.

Monitoring

We propose to undertake vibration monitoring with data logging and will monitor noise, dust and vibration to determine levels at specified locations at known times during the working day. All equipment will be fully calibrated, and in good working order at all times. Monitoring will always be carried out by a competent member of the Kier site staff, with daily logs being maintained throughout the construction period.

We will obtain background noise during periods of non-activity on site.

Monitoring will be undertaken not less than twice daily, once in the morning, and once during the afternoon, at each specified monitoring location. Data will be gathered during normal site operation.

We feel it will not be necessary to carry out dust monitoring during periods of significant precipitation. All such periods will be recorded in the site log sheets.

Kier also recognises the need to monitor the effect of dust and noise on the workforce and record their findings accordingly and wherever possible ensure that exposure is eliminated, minimised or if unavoidable, the right protective measures are adopted.

Monitoring Process	• Visual monitoring of downwind site boundaries on a regular basis. • Monitoring using meters and acting on empirical data recorded • Stop works as required and take mitigation measures. • Review and up-date dust control measures as required. • All personnel will be inducted and / or trained as required.

Complaints Procedures

Kier will clearly display contact details at the main construction site entrance and will issue site contact details in regular newsletters.

Kier will keep accurate records of any complaints received.

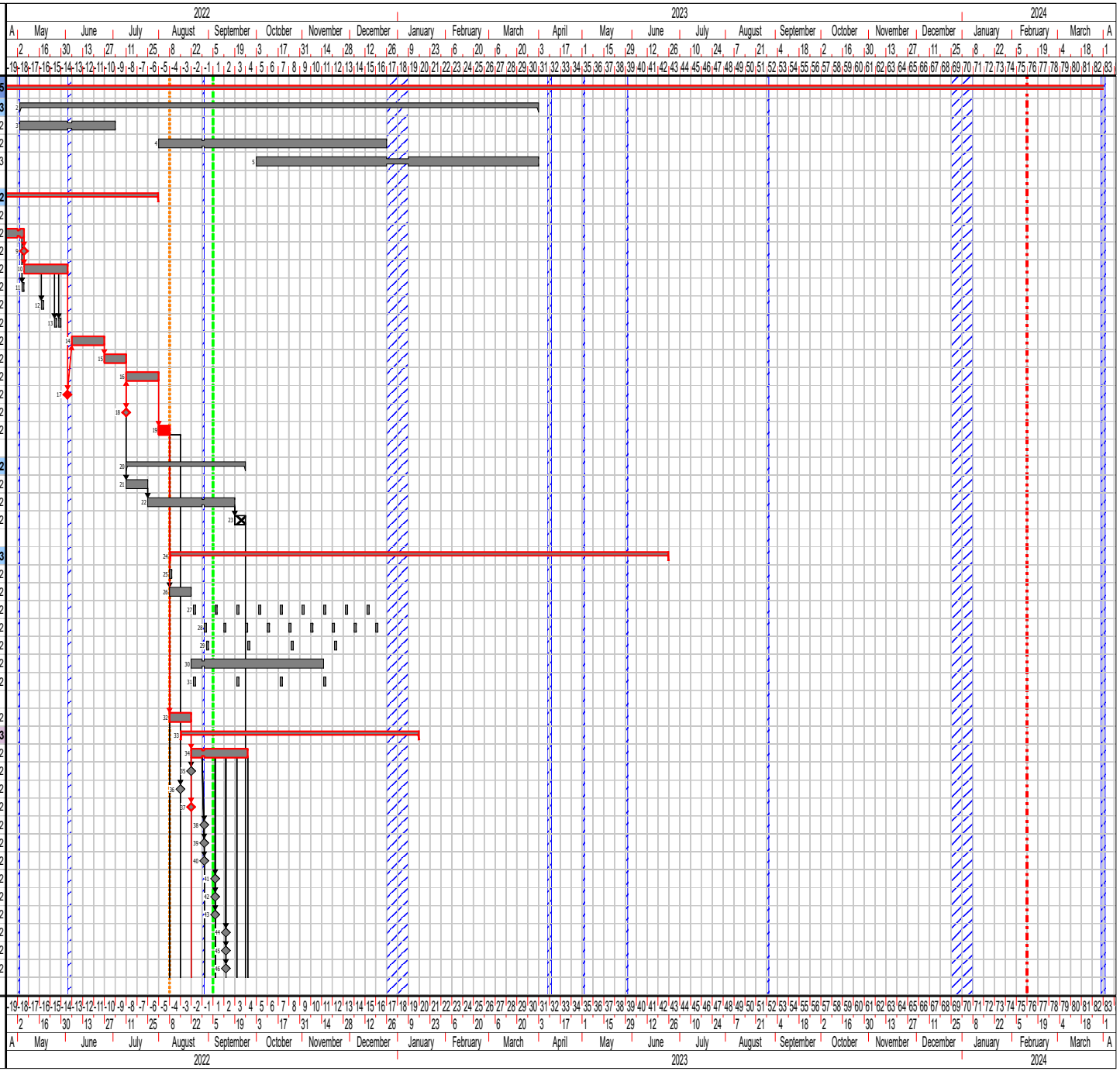
Kier also propose that we will liaise with the ***Local Authority Environmental Protection Team*** on any complaints received if deemed necessary and advise how we have addressed them.

Thornton Building

Appendix E

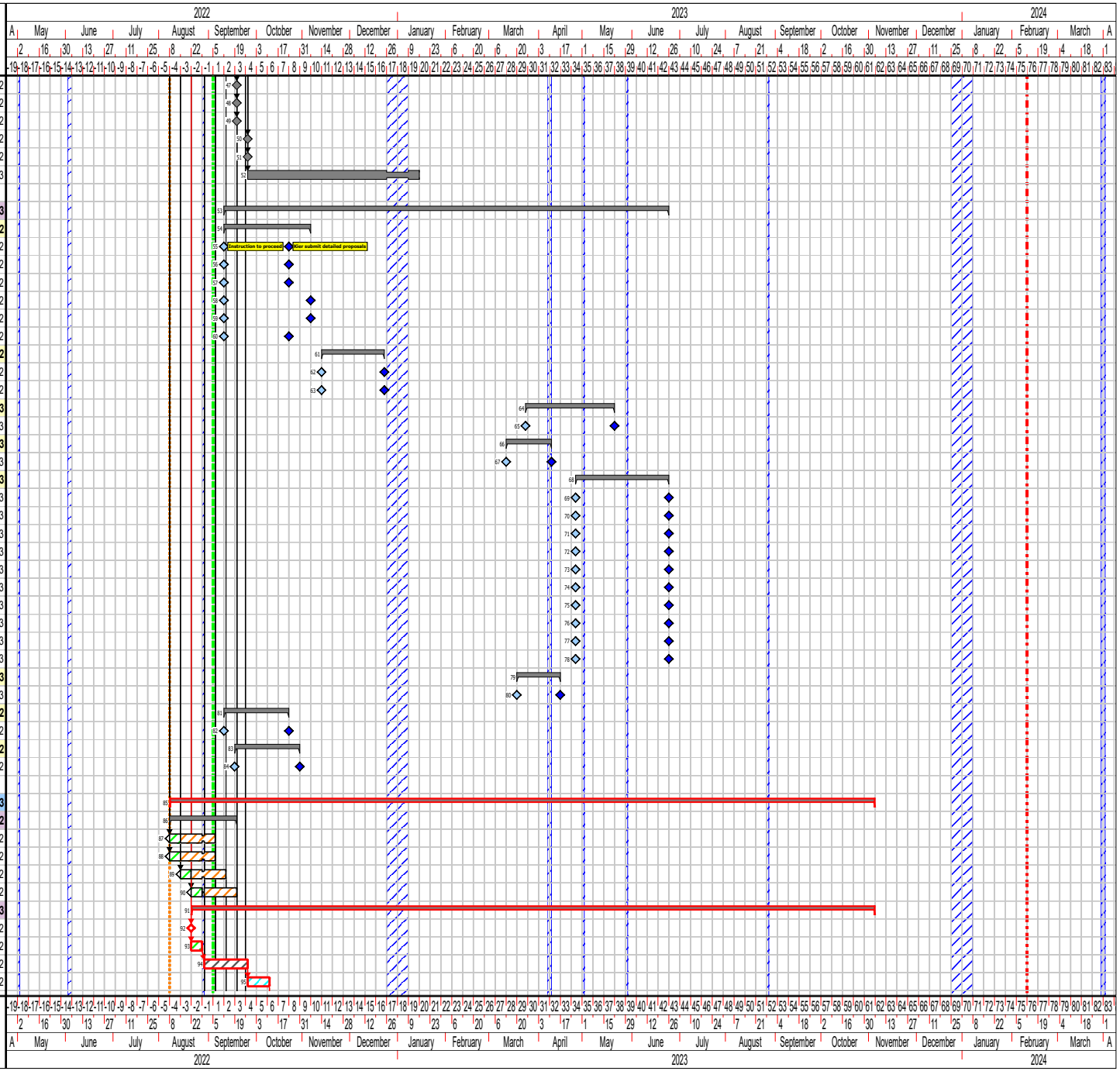
Programme

Line	Name	Start	Finish
1	**THORNTON BUILDING**	**17/03/22**	**10/02/25**
2	**Client/Other Projects**	**03/05/22**	**31/03/23**
3	Enabling Works	03/05/22	01/07/22
4	Car Park E	01/08/22	23/12/22
5	DA2	03/10/22	31/03/23
6	**Tender Period**	**17/03/22**	**29/07/22**
7	Receipt of tender documentation	17/03/22	17/03/22
8	Tender period	17/03/22	04/05/22
9	Tenders returned	04/05/22	04/05/22
10	Extension of time	05/05/22	01/06/22
11	Site visit	04/05/22	04/05/22
12	Mid tender interview	17/05/22	17/05/22
13	Kier internal adjudication meetings	25/05/22	27/05/22
14	Tender review & clarifications	06/06/22	24/06/22
15	Internal approval & sign off	27/06/22	08/07/22
16	Prepare Contract Documents & finalise	11/07/22	29/07/22
17	Tenders returned	01/06/22	01/06/22
18	Contractor appointment	08/07/22	08/07/22
19	Execute & sign contract	01/08/22	05/08/22
20	**Planning (Pre-commencement Conditions)**	**11/07/22**	**23/09/22**
21	No. 14 - Kier prepare & submit CEMP	11/07/22	22/07/22
22	Discharge	22/07/22	16/09/22
23	Time Risk Allowance (TRA) - Planning contingency	19/09/22	23/09/22
24	**Design Development**	**08/08/22**	**26/06/23**
25	Kick-off/launch meeting	08/08/22	08/08/22
26	Review/validate RIBA Stage 3 design (understand principles)	08/08/22	19/08/22
27	Design Team Meetings	23/08/22	13/12/22
28	Client Design Team Meetings	30/08/22	19/12/22
29	Design workshop(s) - number & frequency TBC	31/08/22	22/11/22
30	Building Regs Application/Approval	22/08/22	14/11/22
31	Risk/VE Workshops as required	23/08/22	15/11/22
32	Novation of Consultants (agree IRS)	08/08/22	19/08/22
33	**RIBA Stages 4 & 5 Design Development**	**15/08/22**	**13/01/23**
34	RIBA Stage 4 design development	22/08/22	26/09/22
35	Bulk earthworks	22/08/22	22/08/22
36	Groundworks	15/08/22	15/08/22
37	Concrete frame	22/08/22	22/08/22
38	CLT/Glulam frame	30/08/22	30/08/22
39	MEP Services	30/08/22	30/08/22
40	Precast stair	30/08/22	30/08/22
41	Cladding	06/09/22	06/09/22
42	Curtain walling, windows & doors	06/09/22	06/09/22
43	Roof finishes	06/09/22	06/09/22
44	Brick / blockwork	13/09/22	13/09/22
45	SFS	13/09/22	13/09/22
46	Lift	13/09/22	13/09/22



KIER	**Thornton Building** **GRL Construction Ltd**	**Tender Programme** Alt 2 - Optimum Programme - sprinklers added	Ref: EA-22-032-TP02 / Revision: B Date: 25 July 2022 / Drawn by: PA GIFA: 4,200m² / Page: 1 of 10

Line	Name	Start	Finish
47	Partitions & ceilings	20/09/22	20/09/22
48	Floor finishes	20/09/22	20/09/22
49	Raised access floor	20/09/22	20/09/22
50	Decorations	27/09/22	27/09/22
51	FF&E	27/09/22	27/09/22
52	RIBA Stage 5 review & co-ordinate CDPs	27/09/22	13/01/23
53	**VE Options**	**12/09/22**	**26/06/23**
54	**Mechanical & Electrical**	**12/09/22**	**07/11/22**
55	Alternative AHU Manufacturer	12/09/22	24/10/22
56	Alternative DX split system manufacturer	12/09/22	24/10/22
57	Alternative manufacturer to KGN Pillinger	12/09/22	24/10/22
58	Rationalise ventilation systems	12/09/22	07/11/22
59	Rationalise hot water systems - install local electrical point of use water heaters	12/09/22	07/11/22
60	Omit Arc fault detection devices	12/09/22	24/10/22
61	**Internal Doors**	**14/11/22**	**23/12/22**
62	Alternative internal door manufacturer	14/11/22	23/12/22
63	Alternative ironmongery manufacturer	14/11/22	23/12/22
64	**Blinds**	**24/03/23**	**22/05/23**
65	Alternative blinds manufacturer	24/03/23	22/05/23
66	**Brise Soleil**	**13/03/23**	**11/04/23**
67	Alternative brise soleil - aero profile shaped in lieu of flat fins	13/03/23	11/04/23
68	**Fixed Furniture & Equipment**	**26/04/23**	**26/06/23**
69	Alternative adjustable task chair with no arms	26/04/23	26/06/23
70	Alternative stackable upholstered meeting chairs	26/04/23	26/06/23
71	Alternative cork stools	26/04/23	26/06/23
72	Alternative cushions to upholstered banquette seat	26/04/23	26/06/23
73	Alternative reception desk to Reception	26/04/23	26/06/23
74	Alternative reception desk to IT Hub	26/04/23	26/06/23
75	Alternative to fixed hot desks	26/04/23	26/06/23
76	Alternative to stackable mobile tables	26/04/23	26/06/23
77	Alternative to mid double cupboard with one shelf	26/04/23	26/06/23
78	Alternative post unit	26/04/23	26/06/23
79	**Alternative roof covering**	**20/03/23**	**17/04/23**
80	Change from Bauder Total roofing system to Bauder Flex	20/03/23	17/04/23
81	**Addition of Sprinkler requirement**	**12/09/22**	**24/10/22**
82	Sprinkler system as per insurance requirements	12/09/22	24/10/22
83	**Alternative Standard Cladding Products**	**19/09/22**	**31/10/22**
84	Change Cladding material from bespoke patterns and profiles	19/09/22	31/10/22
85	**Key Package Procurement**	**08/08/22**	**03/11/23**
86	**Packages Without Design**	**08/08/22**	**19/09/22**
87	Site accommodation	08/08/22	05/09/22
88	Temporary hoarding/fencing	08/08/22	05/09/22
89	Groundworks	15/08/22	12/09/22
90	Bulk earthworks	22/08/22	19/09/22
91	**Contractor Designed Portion (CDPs)**	**22/08/22**	**03/11/23**
92	**RC Frame**	22/08/22	22/08/22
93	Order	22/08/22	26/08/22
94	Design	30/08/22	26/09/22
95	Design review	27/09/22	10/10/22



KIER	**Thornton Building** **GRL Construction Ltd**	**Tender Programme** Alt 2 - Optimum Programme - sprinklers added	Ref: EA-22-032-TP02 / Revision: B Date: 25 July 2022 / Drawn by: PA GIFA: 4,200m² / Page: 2 of 10

Line	Name	Start	Finish
96	Client team review	11/10/22	24/10/22
97	Fab/Procure/Deliver	25/10/22	14/11/22
98	**CLT/Glulam**	30/08/22	30/08/22
99	Order	30/08/22	12/09/22
100	Design	13/09/22	05/12/22
101	Design review	06/12/22	19/12/22
102	Client review	20/12/22	16/01/23
103	Fab/Procure/Deliver	17/01/23	27/02/23
104	**PC stair**	30/08/22	30/08/22
105	Order	30/08/22	12/09/22
106	Design	13/09/22	24/10/22
107	Design review	25/10/22	07/11/22
108	Client team review	08/11/22	21/11/22
109	Fab/Procure/Deliver	22/11/22	30/01/23
110	**MEP**	30/08/22	30/08/22
111	Order	30/08/22	12/09/22
112	Sprinkler design	13/09/22	10/10/22
113	Design	13/09/22	05/12/22
114	Design review	11/10/22	24/10/22
115	Client team review	25/10/22	07/11/22
116	Planning approval	08/11/22	30/01/23
117	Design review	06/12/22	19/12/22
118	Client team review	20/12/22	16/01/23
119	Fab/Procure/Deliver	17/01/23	09/06/23
120	Lead-in	31/01/23	13/03/23
121	**Curtain walling, windows, doors & rooflights**	06/09/22	06/09/22
122	Order	06/09/22	19/09/22
123	Design	20/09/22	03/10/22
124	Design review	04/10/22	17/10/22
125	Client team review	18/10/22	31/10/22
126	Fab/Procure/Deliver	01/11/22	12/12/22
127	**Rainscreen cladding, brise soleil & louvres**	06/09/22	06/09/22
128	Order	06/09/22	19/09/22
129	Design	20/09/22	12/12/22
130	Design review	13/12/22	09/01/23
131	Client team review	10/01/23	23/01/23
132	Fab/Procure/Deliver	24/01/23	04/05/23
133	**SFS**	13/09/22	13/09/22
134	Order	13/09/22	26/09/22
135	Design	27/09/22	17/10/22
136	Design review	18/10/22	31/10/22
137	Client team review	01/11/22	14/11/22
138	Fab/Procure/Deliver	15/11/22	09/01/23
139	**Collabotorium stair**	20/09/22	20/09/22
140	Order	20/09/22	03/10/22
141	Design/Drawings	04/10/22	14/11/22
142	Design review	15/11/22	28/11/22
143	Client team review	29/11/22	12/12/22
144	Site survey	08/09/23	08/09/23
145	Fab/Procure/Deliver	11/09/23	03/11/23
146	**Raised Access Flooring**	20/09/22	20/09/22

Line Name Start Finish

KIER	**Thornton Building** **GRL Construction Ltd**	**Tender Programme** Alt 2 - Optimum Programme - sprinklers added	Ref: EA-22-032-TP02 Date: 25 July 2022 GIFA: 4,200m²	Revision: B Drawn by: PA Page: 3 of 10

Line	Name	Start	Finish
147	Order	20/09/22	10/10/22
148	Design/Drawings	11/10/22	07/11/22
149	Design review	08/11/22	21/11/22
150	Client team review	22/11/22	05/12/22
151	Fab/Procure/Deliver	06/12/22	23/01/23
152	**Glazed screens/partitions**	20/09/22	20/09/22
153	Order	20/09/22	10/10/22
154	Design/Drawings	11/10/22	24/10/22
155	Design review	25/10/22	07/11/22
156	Client team review	08/11/22	21/11/22
157	Fab/Procure/Deliver	22/11/22	19/12/22
158	**Architectural Metalwork (roof ladders, guardrails/barriers, fall arrest system, etc.)**	11/10/22	11/10/22
159	Order	11/10/22	31/10/22
160	Design/Drawings	01/11/22	28/11/22
161	Design review	29/11/22	12/12/22
162	Client team review	13/12/22	09/01/23
163	Fab/Procure/Deliver	10/01/23	06/03/23
164	**Balustrades**	11/10/22	11/10/22
165	Order	11/10/22	31/10/22
166	Design/Drawings	01/11/22	12/12/22
167	Design review	13/12/22	09/01/23
168	Client team review	10/01/23	23/01/23
169	Fab/Procure/Deliver	24/01/23	03/04/23
170	**External escape stair**	11/10/22	11/10/22
171	Order	11/10/22	31/10/22
172	Design/Drawings	01/11/22	28/11/22
173	Design review	29/11/22	12/12/22
174	Client team review	13/12/22	09/01/23
175	Fab/Procure/Deliver	10/01/23	03/04/23
176	**Internal doors & ironmongery**	11/10/22	11/10/22
177	Order	11/10/22	31/10/22
178	Design/Drawings	01/11/22	28/11/22
179	Design review	29/11/22	12/12/22
180	Client team review	13/12/22	09/01/23
181	Fab/Procure/Deliver	10/01/23	03/04/23
182	**Construction**	05/09/22	09/02/24
183	**Preliminaries**	05/09/22	11/10/22
184	Take delivery of starter unit & gatehouse	05/09/22	05/09/22
185	Heras fencing to perimeter - incl. tree protection	06/09/22	12/09/22
186	Timber hoarding to perimeter	06/09/22	19/09/22
187	Complete concrete tie-in to roundabout	13/09/22	19/09/22
188	Site clearance	13/09/22	19/09/22
189	Hardstanding to compound area / delivery routes	20/09/22	26/09/22
190	Establish site accommodation	27/09/22	03/10/22
191	Temporary service connections	04/10/22	10/10/22
192	Remove starter unit	11/10/22	11/10/22
193	**Site Prep**	26/09/22	09/11/22
194	Topsoil strip & stockpile	26/09/22	30/09/22
195	Excavate to reduce level	03/10/22	28/10/22
196	Sub-base/crane mat(s)/margins	24/10/22	04/11/22

Line Name Start Finish

KIER	**Thornton Building** **GRL Construction Ltd**	**Tender Programme** Alt 2 - Optimum Programme - sprinklers added	Ref: EA-22-032-TP02 Date: 25 July 2022 GIFA: 4,200m²
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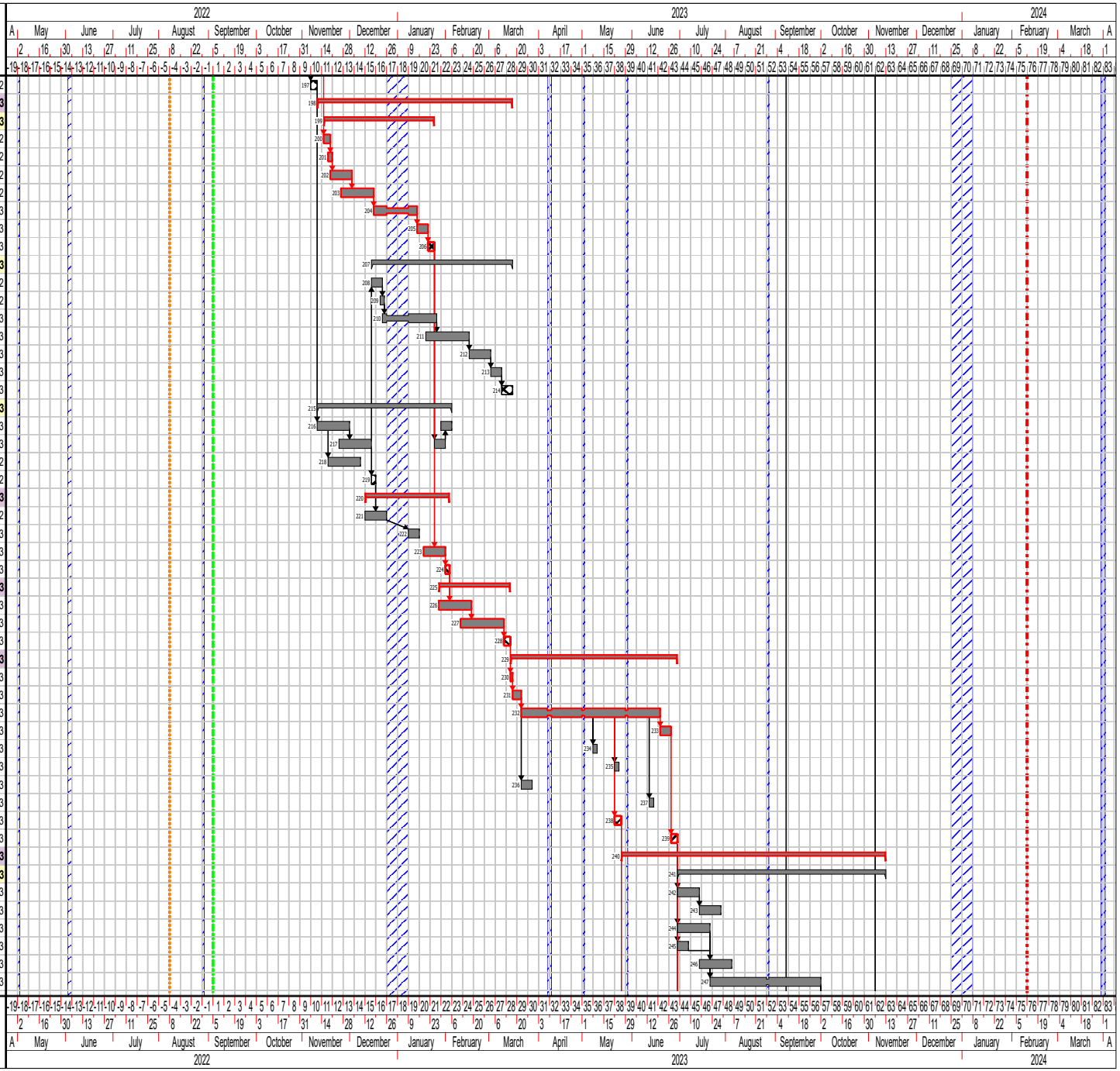
Line	Name	Start	Finish
197	Time Risk Allowance (TRA)	07/11/22	09/11/22
198	**Substructure**	**10/11/22**	**15/03/23**
199	**Retaining Wall**	**15/11/22**	**24/01/23**
200	Excavate retaining wall base	15/11/22	17/11/22
201	Blinding	17/11/22	18/11/22
202	Construct foundation - FRC	18/11/22	01/12/22
203	Construct wall - FRC	25/11/22	15/12/22
204	Cure & strike formwork	16/12/22	12/01/23
205	Drainage & backfill	13/01/23	19/01/23
206	Time Risk Allowance (TRA)	20/01/23	24/01/23
207	**External Ramp**	**15/12/22**	**15/03/23**
208	Excavate retaining wall base	15/12/22	21/12/22
209	Blinding	21/12/22	22/12/22
210	Construct foundation - FRC	22/12/22	25/01/23
211	Construct walls - FRC	19/01/23	15/02/23
212	Cure & strike formwork	16/02/23	01/03/23
213	Drainage & backfill	02/03/23	08/03/23
214	Time Risk Allowance (TRA)	09/03/23	15/03/23
215	**Pad Foundations**	**10/11/22**	**03/02/23**
216	Excavate & construct pad foundations	10/11/22	03/02/23
217	Excavate & construct strip foundations	24/11/22	31/01/23
218	Excavate & construct lift pits	17/11/22	07/12/22
219	Time Risk Allowance (TRA)	15/12/22	16/12/22
220	**Lower Ground Floor Slab**	**12/12/22**	**02/02/23**
221	Below slab drainage/ductwork	12/12/22	23/12/22
222	Final grade sub-base	09/01/23	13/01/23
223	Construct slab - FRC	18/01/23	31/01/23
224	Time Risk Allowance (TRA)	01/02/23	02/02/23
225	**RC Frame**	**27/01/23**	**14/03/23**
226	Construct rc walls & columns to underside of GF slab	27/01/23	16/02/23
227	Construct GF slab	10/02/23	09/03/23
228	Time Risk Allowance (TRA)	10/03/23	14/03/23
229	**Timber frame**	**15/03/23**	**29/06/23**
230	Slab check	15/03/23	15/03/23
231	Install brackets	16/03/23	21/03/23
232	CLT/Glulam erection	22/03/23	19/06/23
233	Final snagging	20/06/23	26/06/23
234	Install stair 2	08/05/23	09/05/23
235	Install stair 1	22/05/23	23/05/23
236	Erect steel columns to overhang (incl. temporary propping)	22/03/23	28/03/23
237	Remove temporary propping	13/06/23	14/06/23
238	Time Risk Allowance (TRA)	22/05/23	24/05/23
239	Time Risk Allowance (TRA)	27/06/23	29/06/23
240	**Envelope**	**25/05/23**	**10/11/23**
241	**Roof**	**30/06/23**	**10/11/23**
242	Steel plant room	30/06/23	13/07/23
243	Louvre screen	14/07/23	27/07/23
244	Upstands/kerbs to roof voids	30/06/23	20/07/23
245	Concrete slab to ASHP enclosure	30/06/23	06/07/23
246	Rooflights	14/07/23	03/08/23
247	Roof covering - warm roof	21/07/23	29/09/23



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Thornton Building

GRL Construction Ltd

Tender Programme

Alt 2 - Optimum Programme - sprinklers added

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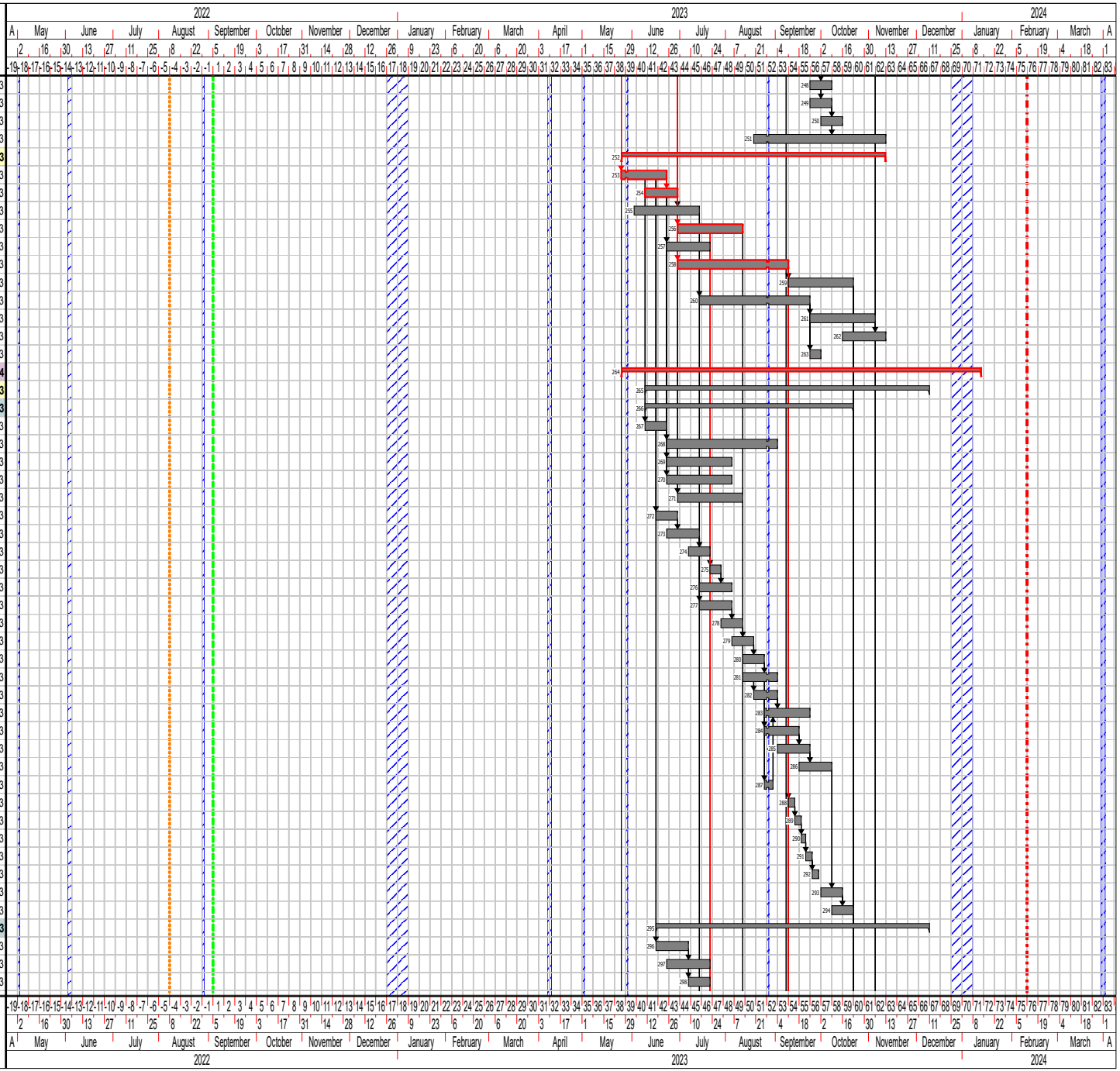
Line	Name	Start	Finish
248	Riser weathering boxes	25/09/23	06/10/23
249	Collapsible handrail	25/09/23	06/10/23
250	Paving slabs on pedestals	02/10/23	13/10/23
251	Roof plant	18/08/23	10/11/23
252	**External Walls**	**25/05/23**	**10/11/23**
253	LGF - SFS infills	25/05/23	22/06/23
254	LGF - windows, doors & louvres	09/06/23	29/06/23
255	GF - windows & doors	02/06/23	13/07/23
256	FF - windows	30/06/23	10/08/23
257	Curtain walling	23/06/23	20/07/23
258	Cladding - north elevation	30/06/23	08/09/23
259	Cladding - east elevation	11/09/23	20/10/23
260	Cladding & brise soleil - south elevation	14/07/23	22/09/23
261	Cladding - west elevation	25/09/23	03/11/23
262	Parapet cappings	16/10/23	10/11/23
263	External escape stair	25/09/23	29/09/23
264	**Internal Fit Out**	**25/05/23**	**11/01/24**
265	**Lower Ground Floor**	**09/06/23**	**08/12/23**
266	**Plant/Amenity Areas**	**09/06/23**	**20/10/23**
267	Bases/plinths to plant room	09/06/23	22/06/23
268	Plant room installation	23/06/23	01/09/23
269	Transformer room installation	23/06/23	03/08/23
270	LV switch room installation	23/06/23	03/08/23
271	Water tank room installation	30/06/23	10/08/23
272	Stud partitions & board one side	16/06/23	29/06/23
273	1st fix MEP	23/06/23	13/07/23
274	Complete wall boarding	07/07/23	20/07/23
275	Board inner face of external walls	21/07/23	27/07/23
276	Tape & joint	14/07/23	03/08/23
277	High level MEP	14/07/23	03/08/23
278	Test & lag	28/07/23	10/08/23
279	Plasterboard ceilings	04/08/23	17/08/23
280	Skim ceilings	11/08/23	24/08/23
281	Mist coat +1	11/08/23	01/09/23
282	Suspended ceiling grid & service tiles	18/08/23	01/09/23
283	2nd fix MEP	25/08/23	22/09/23
284	2nd fix Carpentry	25/08/23	15/09/23
285	Decorations	04/09/23	22/09/23
286	Floor finishes	18/09/23	06/10/23
287	1st fix IPS & Vanity units to WCs	25/08/23	30/08/23
288	Vinyl flooring to WCs	11/09/23	13/09/23
289	2nd fix ISP & Vanity units to WCs	14/09/23	18/09/23
290	WC cubicles	19/09/23	20/09/23
291	Sanitaryware	21/09/23	25/09/23
292	Wall tiling to WCs	26/09/23	28/09/23
293	FF&E	02/10/23	13/10/23
294	Builders clean & snag	09/10/23	20/10/23
295	**Breakouts, etc.**	**16/06/23**	**08/12/23**
296	Head tracks	16/06/23	06/07/23
297	High level MEP	23/06/23	20/07/23
298	Test & lag	07/07/23	20/07/23



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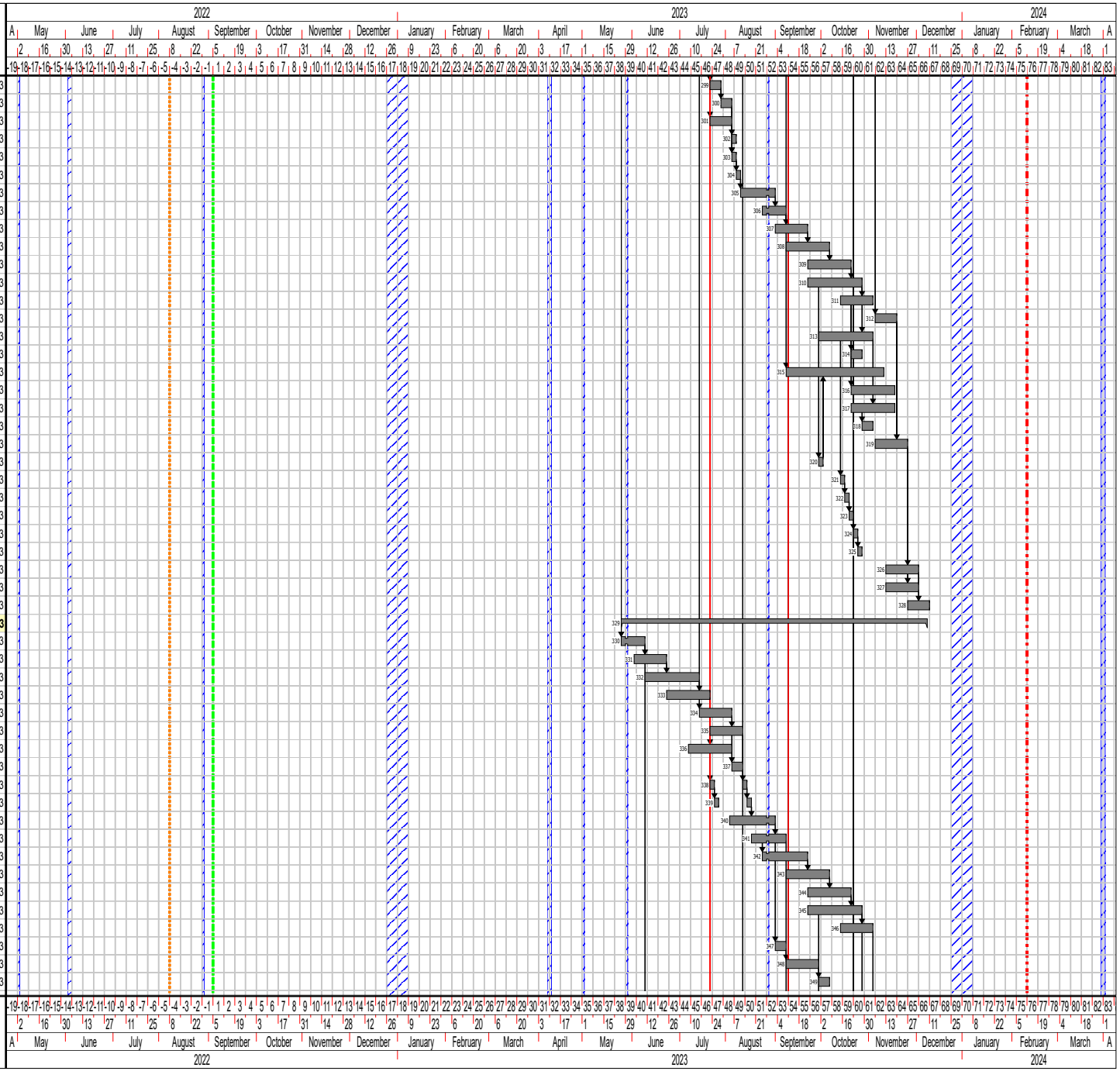
Line	Name	Start	Finish
299	Plasterboard ceilings	21/07/23	27/07/23
300	Skim ceilings	28/07/23	03/08/23
301	Timber slatted ceiling to seminar room	21/07/23	03/08/23
302	Floor screed to WCs	04/08/23	07/08/23
303	Dust sealer to slab	04/08/23	07/08/23
304	Mark pedestal positions	08/08/23	09/08/23
305	MEP below raised access floor	10/08/23	31/08/23
306	Raised access floor	24/08/23	07/09/23
307	1st fix stud partitions & board one side	01/09/23	21/09/23
308	MEP within walls	08/09/23	05/10/23
309	Complete wall boarding (incl. external walls)	22/09/23	19/10/23
310	Tape & joint/skim walls	22/09/23	26/10/23
311	Mist coat +1	13/10/23	02/11/23
312	Collabotorium stair	06/11/23	17/11/23
313	Carpentry - doorsets, skirtings, etc.	29/09/23	02/11/23
314	Suspended ceiling grid & service tiles	20/10/23	26/10/23
315	2nd fix MEP	08/09/23	09/11/23
316	Kitchen	20/10/23	16/11/23
317	Decorations	20/10/23	16/11/23
318	Acoustic rafts to seminar room	27/10/23	02/11/23
319	Floor finishes	06/11/23	24/11/23
320	1st fix IPS & Vanity units to WCs	29/09/23	02/10/23
321	Vinyl flooring to WCs	13/10/23	16/10/23
322	2nd fix ISP & Vanity units to WCs	17/10/23	18/10/23
323	WC cubicles	19/10/23	20/10/23
324	Sanitaryware	23/10/23	24/10/23
325	Wall tiling to WCs	25/10/23	26/10/23
326	FF&E	13/11/23	01/12/23
327	AV fit out	13/11/23	01/12/23
328	Builders clean & snag	27/11/23	08/12/23
329	**Ground Floor**	**25/05/23**	**07/12/23**
330	Spread of flame retardant	25/05/23	08/06/23
331	Head tracks	02/06/23	22/06/23
332	High level MEP	09/06/23	13/07/23
333	Test & lag	23/06/23	20/07/23
334	Plasterboard ceilings	14/07/23	03/08/23
335	Skim ceilings	21/07/23	10/08/23
336	Timber slatted ceiling to Group Offices	07/07/23	03/08/23
337	Floor screed to Entrance/Reception, WCs & Stairs	04/08/23	10/08/23
338	Dust sealer to slab	21/07/23	14/08/23
339	Mark pedestal positions	25/07/23	16/08/23
340	MEP below raised access floor	03/08/23	31/08/23
341	Raised access floor	17/08/23	07/09/23
342	1st fix stud partitions & board one side	24/08/23	21/09/23
343	MEP within walls	08/09/23	05/10/23
344	Complete wall boarding (incl. external walls)	22/09/23	19/10/23
345	Tape & joint/skim walls	22/09/23	26/10/23
346	Mist coat +1	13/10/23	02/11/23
347	Install glazed partition framing (& measure glazing)	01/09/23	07/09/23
348	Off-site glazing prep	08/09/23	28/09/23
349	Install glazing	29/09/23	05/10/23



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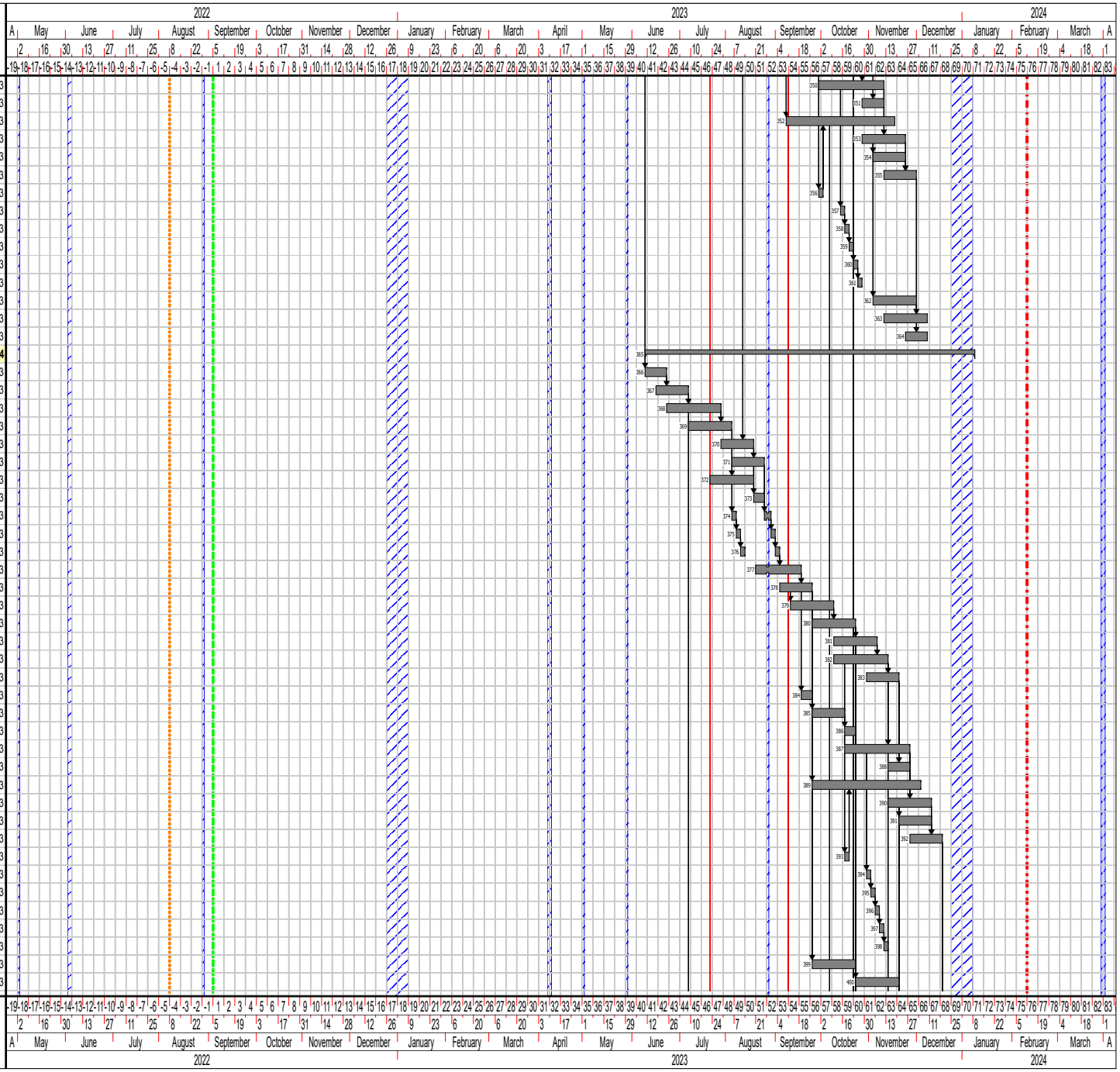
Line	Name	Start	Finish
350	Carpentry - doorsets, skirtings, etc.	29/09/23	09/11/23
351	Suspended ceiling grid & service tiles	27/10/23	09/11/23
352	2nd fix MEP	08/09/23	16/11/23
353	Decorations	27/10/23	23/11/23
354	Acoustic rafts to offices	03/11/23	23/11/23
355	Floor finishes	10/11/23	30/11/23
356	1st fix IPS & Vanity units to WCs	29/09/23	02/10/23
357	Vinyl flooring to WCs	13/10/23	16/10/23
358	2nd fix ISP & Vanity units to WCs	17/10/23	18/10/23
359	WC cubicles	19/10/23	20/10/23
360	Sanitaryware	23/10/23	24/10/23
361	Wall tiling to WCs	25/10/23	26/10/23
362	FF&E	03/11/23	30/11/23
363	AV fit out	10/11/23	07/12/23
364	Builders clean & snag	24/11/23	07/12/23
365	**First Floor**	**09/06/23**	**08/01/24**
366	Spread of flame retardant	09/06/23	22/06/23
367	Head tracks	16/06/23	06/07/23
368	High level MEP	23/06/23	27/07/23
369	Test & lag	07/07/23	03/08/23
370	Plasterboard ceilings	28/07/23	17/08/23
371	Skim ceilings	04/08/23	24/08/23
372	Timber slatted ceiling to Group Offices	21/07/23	17/08/23
373	Floor screed to stairs	18/08/23	24/08/23
374	Dust sealer to slab	04/08/23	29/08/23
375	Dry screed board	08/08/23	31/08/23
376	Mark pedestal positions	10/08/23	04/09/23
377	MEP below raised access floor	21/08/23	18/09/23
378	Raised access floor	05/09/23	25/09/23
379	1st fix stud partitions & board one side	12/09/23	09/10/23
380	MEP within walls	26/09/23	23/10/23
381	Complete wall boarding (incl. external walls)	10/10/23	06/11/23
382	Tape & joint/skim walls	10/10/23	13/11/23
383	Mist coat +1	31/10/23	20/11/23
384	Install glazed partition framing (& measure glazing)	19/09/23	25/09/23
385	Off-site glazing prep	26/09/23	16/10/23
386	Install glazing	17/10/23	23/10/23
387	Carpentry - doorsets, skirtings, etc.	17/10/23	27/11/23
388	Suspended ceiling grid & service tiles	14/11/23	27/11/23
389	2nd fix MEP	26/09/23	04/12/23
390	Decorations	14/11/23	11/12/23
391	Acoustic rafts to offices	21/11/23	11/12/23
392	Floor finishes	28/11/23	18/12/23
393	1st fix IPS & Vanity units to WCs	17/10/23	18/10/23
394	Vinyl flooring to WCs	31/10/23	01/11/23
395	2nd fix ISP & Vanity units to WCs	02/11/23	03/11/23
396	WC cubicles	06/11/23	07/11/23
397	Sanitaryware	08/11/23	09/11/23
398	Wall tiling to WCs	10/11/23	13/11/23
399	Install lift no. 1	26/09/23	23/10/23
400	Install lift no. 2	24/10/23	20/11/23

Line | Name | Start | Finish



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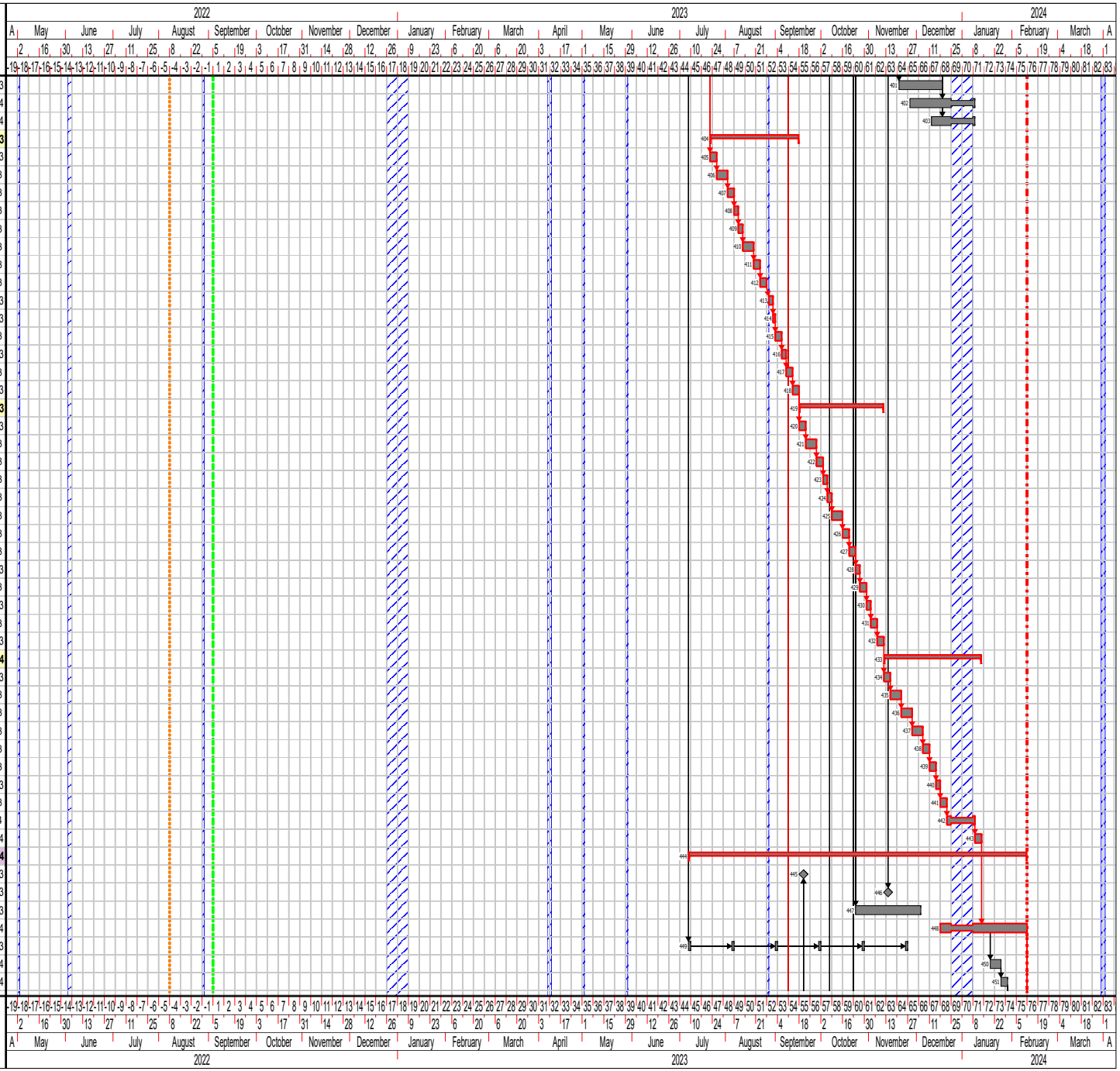
Line	Name	Start	Finish
401	FF&E	21/11/23	18/12/23
402	AV fit out	28/11/23	08/01/24
403	Builders clean & snag	12/12/23	08/01/24
404	**Stairwell 1 - fire escape stair**	**21/07/23**	**15/09/23**
405	Erect scaffold	21/07/23	25/07/23
406	1st fix MEP	26/07/23	01/08/23
407	Board walls & ceilings/soffits	02/08/23	04/08/23
408	Skim walls & ceilings/soffits	07/08/23	08/08/23
409	Mist coat +1	09/08/23	10/08/23
410	2nd fix MEP	11/08/23	17/08/23
411	Carpentry	18/08/23	22/08/23
412	Decorations	23/08/23	25/08/23
413	Remove scaffold	29/08/23	30/08/23
414	Access ladder to roof	31/08/23	31/08/23
415	Flooring	01/09/23	05/09/23
416	Curing	06/09/23	07/09/23
417	Handrails/Balustrades	08/09/23	12/09/23
418	Builders clean & snag	13/09/23	15/09/23
419	**Stairwell 2**	**18/09/23**	**09/11/23**
420	Erect scaffold	18/09/23	20/09/23
421	1st fix MEP	21/09/23	27/09/23
422	Board walls & ceilings/soffits	28/09/23	02/10/23
423	Skim walls & ceilings/soffits	03/10/23	04/10/23
424	Mist coat +1	05/10/23	06/10/23
425	2nd fix MEP	09/10/23	13/10/23
426	Carpentry	16/10/23	18/10/23
427	Decorations	19/10/23	23/10/23
428	Remove scaffold	24/10/23	25/10/23
429	Flooring	26/10/23	30/10/23
430	Curing	31/10/23	01/11/23
431	Handrails/Balustrades	02/11/23	06/11/23
432	Builders clean & snag	07/11/23	09/11/23
433	**Stair 3 - Collabotorium**	**10/11/23**	**11/01/24**
434	Erect scaffold	10/11/23	14/11/23
435	1st fix MEP	15/11/23	21/11/23
436	Timber wall cladding	22/11/23	28/11/23
437	2nd fix MEP	29/11/23	05/12/23
438	Carpentry	06/12/23	08/12/23
439	Decorations	11/12/23	13/12/23
440	Remove scaffold	14/12/23	15/12/23
441	Flooring	18/12/23	20/12/23
442	Handrails/Balustrades	21/12/23	08/01/24
443	Builders clean & snag	09/01/24	11/01/24
444	**Testing & Commissioning**	**07/07/23**	**09/02/24**
445	Power available	19/09/23	19/09/23
446	Ready for air test	13/11/23	13/11/23
447	Pre-commissioning/Integrity testing	24/10/23	04/12/23
448	Final test & commission	18/12/23	09/02/24
449	Familiarisation visits	07/07/23	24/11/23
450	Training	18/01/24	24/01/24
451	Final ceiling tiles	25/01/24	29/01/24



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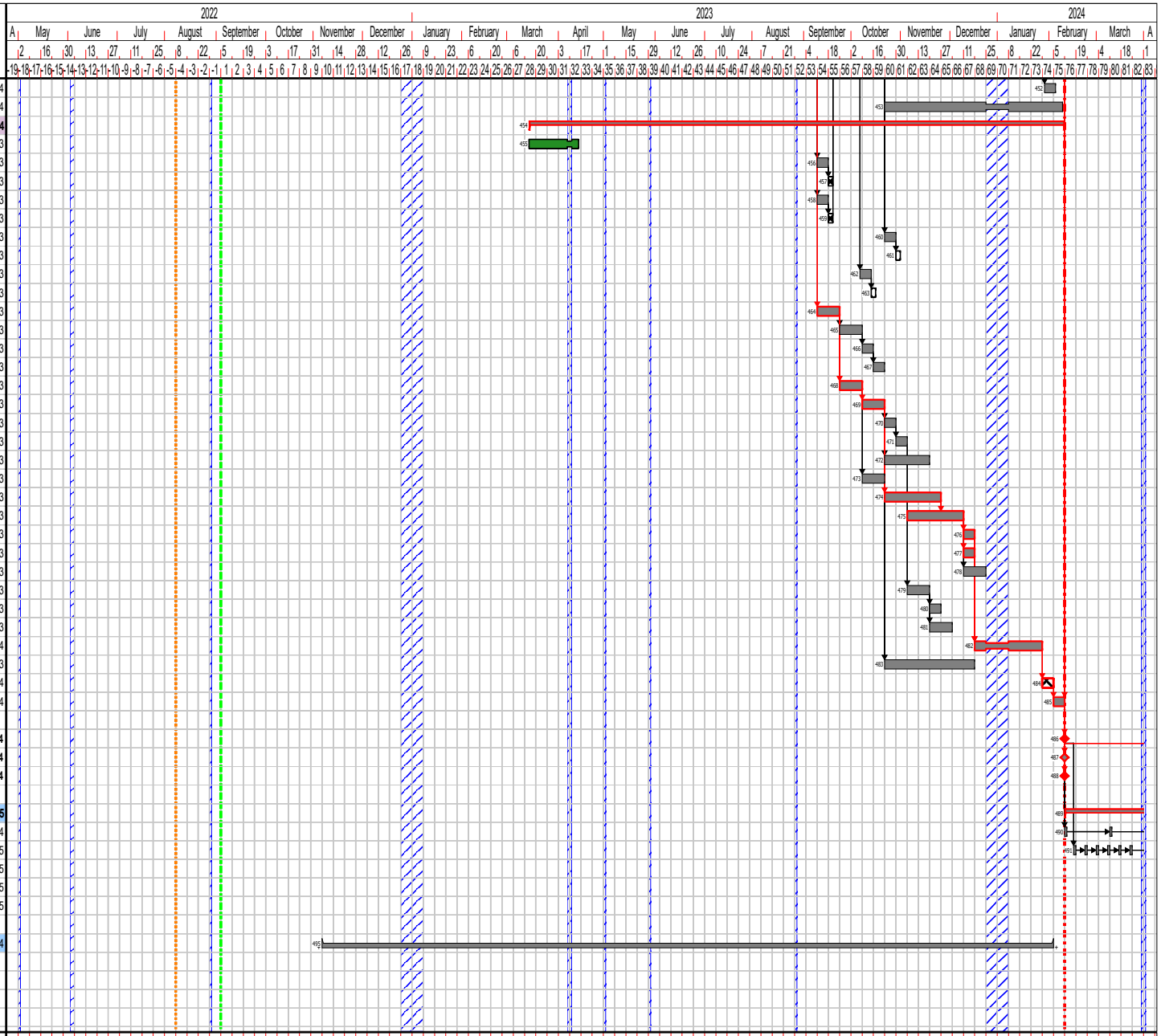
Line	Name	Start	Finish
452	Sparkle clean	30/01/24	05/02/24
453	Client snagging regime (progressive - floor by floor)	23/10/23	08/02/24
454	**External Works**	**15/03/23**	**09/02/24**
455	Sprinkler tank	15/03/23	13/04/23
456	HV electrical connection to transformer room	11/09/23	15/09/23
457	Time Risk Allowance (TRA)	18/09/23	19/09/23
458	LV electrical connection to switch room	11/09/23	15/09/23
459	Time Risk Allowance (TRA)	18/09/23	19/09/23
460	Water connection to tank room	23/10/23	27/10/23
461	Time Risk Allowance (TRA)	30/10/23	31/10/23
462	Data connection to COMMS Room	06/10/23	12/10/23
463	Time Risk Allowance (TRA)	13/10/23	16/10/23
464	FW drainage - connection to existing system (MHs14-11)	11/09/23	22/09/23
465	FW drainage - north elevation (MHs 10, 4-1)	25/09/23	06/10/23
466	FW drainage - west elevation (MHs 8 & 9)	09/10/23	13/10/23
467	FW drainage - south elevation (MHs 15 & 7)	16/10/23	20/10/23
468	SW drainage - connection to existing system (MHs ex 7 & 8-6)	25/09/23	06/10/23
469	SW drainage - north elevation (MHs 6-4, 12-3 & 1-2)	09/10/23	20/10/23
470	SW drainage west elevation (MHs 13-15)	23/10/23	27/10/23
471	SW drainage - south elevation (MHs 16-17)	30/10/23	03/11/23
472	Light columns & bollards	23/10/23	17/11/23
473	Timber decking (incl. fnds & structure)	09/10/23	20/10/23
474	Construct cycle shelter	23/10/23	24/11/23
475	Paving - north elevation	06/11/23	08/12/23
476	Reinforced grass - north elevation	11/12/23	15/12/23
477	Resin bound gravel - north elevation	11/12/23	15/12/23
478	Paving - east elevation	11/12/23	22/12/23
479	Paving - south elevation	06/11/23	17/11/23
480	Resin bound gravel - south elevation	20/11/23	24/11/23
481	Paving - west elevation	20/11/23	01/12/23
482	Street furniture	18/12/23	26/01/24
483	Landscaping/Planting	23/10/23	15/12/23
484	Time Risk Allowance (TRA)	29/01/24	02/02/24
485	Clear site	05/02/24	09/02/24
486	**Planned Completion Date**	**09/02/24**	**09/02/24**
487	**Terminal Float**	**09/02/24**	**09/02/24**
488	**Completion date**	**09/02/24**	**09/02/24**
489	**Aftercare**	**12/02/24**	**10/02/25**
490	Training (to be agreed if required)	12/02/24	07/05/24
491	Soft Landings support meetings	16/02/24	03/02/25
492	Seasonal commissioning (& adjustments to settings if required)	29/04/24	31/01/25
493	Post Occupancy Evaluation (POE)/Building Performance Evaluation (BPE)	10/05/24	06/02/25
494	End of Defects Liability/Rectification Period	10/02/25	10/02/25
495	Time Risk Allowance (TRA)	07/11/22	02/02/24



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