Kelland Homes Ltd

Final Construction Environmental Management Plan

Clonburris, County Dublin

604097 R03 (01)

JUNE 2023

RSK GENERAL NOTES

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Client: Kelland Homes Ltd

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1 INTRODUCTION

Introduction

1.1 RSK Ireland Ltd has been commissioned by Kelland Homes Ltd., to prepare a Final construction environmental management plan (FCEMP) in order to discharge pre-commencement Condition 23 of Decision order Number 0478 (Register Reference SDZ22A/0010, granted 2nd May 2023) n for the development of lands within the townland of Cappagh, Dublin 22.. The proposed development is located within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015.

1.2 This CEMP further develops the outline CEMP prepared for the site in June 2022 and is intended to form the basis for management of the main environmental aspects of the construction of the development in order to protect surface waters and residential and local business community in close proximity to the site.

1.3 The client, Kelland Home Ltd (KHL) is the main Contractor for the project.

1.4 This FCEMP contains the site-specific control measures that will be applied by KHL and where relevant their sub-contractors during the construction stages. All works must be carried out in accordance with the mitigation measures as outlined in the individual chapters of the Environmental Impact Assessment Report (EIAR).

1.5 A copy of the final CEMP will be provided to each contractor working on behalf of KHL and a copy maintained in the site office for reference by the entire workforce. It must be accessible to all site personnel, subcontractors and representatives of the relevant enforcement authority.

1.6 It should be noted that this CEMP is a live document and is subject to change throughout the project. Agreement to the changes may be sought from the local authority if considered necessary.

Aim

1.7 The aims of the CEMP will be to;

- Ensure construction works and activities are completed in accordance with mitigation and best practice approach presented in the supported Ecology reports and any associated planning documentation;
- Ensure construction works and activities are completed in accordance with all planning conditions for the development and that the CEMP is updated as required;
- Ensure construction works and activities have minimal impact/disturbance to local landowners and the local community;
- Ensure construction works and activities have no adverse effect on the integrity of any European Site;

- Ensure that construction traffic to and from the site is strictly managed to avoid unnecessary traffic movements;
- Identify a dedicated person on site to liaise with the Public regarding any concerns that they may have in relation to the site operation;
- Adopt a sustainable approach to construction; and,
- Provide adequate environmental training and awareness for all project personnel.

Document Structure

1.8 This CEMP is structured as follows:

- Section 1 provides an introduction, with scope of the FCEMP;
- Section 2 describes the project and overview of construction activities;
- Section 3 references contractual and legal requirements;
- Section 4 details key roles and responsibilities;
- Section 5 details the environmental mitigation measures to be employed during the construction phase;
- Section 6 details the methods of communication;
- Section 7 details the details the approach to environmental training, logs and site awareness;
- Section 8 details the emergency response and preparedness procedures in the event of an incident; and
- Section 9 details the approach to monitoring and audit procedures.

2 THE PROJECT

Description of the Development

2.1 The proposal is for the development of a c. 6.3 Ha site within the townland of Cappagh, Dublin 22 to provide 294 no. dwellings, crèche and retail / commercial unit. The development will comprise of the following:

- 118 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses;
- 104 no. 2 & 3 bed duplex units accommodated in 10 no. 3 storey buildings;
- 72 no. 1 & 2 bedroom apartments in 2 no. 4 & 6 storey buildings;
- 1 no. 2 storey creche (c.520.2m²); and
- 1 no. 2 storey retail /commercial unit (c.152.1m²).

2.2 The proposed development also provides for all associated site development works above and below ground, public and communal open spaces, hard and soft landscaping and boundary treatments, surface car parking, bicycle parking, bin and bicycle storage, public lighting, plant (M&E), utility services & 4 no. ESB sub-stations.

2.3 The application is being made in accordance with the Clonburris Strategic Development Zone Planning Scheme 2019 and relates to a proposed development within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015.

2.4 Car parking will be provided surrounding the proposed development with up to 401 no. surface car parking spaces and 797 no. cycle parking spaces provided throughout. Vehicular access will be provided via two new entranceways on the Ninth Lock Road and the R113 on both the east and west sides of the site.

2.5 Landscaping features will be provided throughout the site between the residential units and road network. It is proposed to maintain an existing hedgerow within the central portion of the site. Two storey developments will dominate the northern portion of the site with three storey duplexes located to the southern end of the site. Proposed apartment blocks (4 and 6 storey) will be situated to the western portion of the site.

2.6 Cappagh House ruins position in the southeastern corner of the site has a granted permission to be demolished (SDZ20A/0021) and therefore this is excluded from this report.

Site Location and Plan

2.7 The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). It is also located within the Clonburris Strategic Development Zone (SDZ), within part of the development areas of Clonburris Urban Centre (i.e. CUC-S4) and Clonburris Southeast (i.e. CSE-S1 & CSE-S2), as identified in the Clonburris SDZ Planning Scheme 2019. The site is centred at Irish Grid Reference 306425 232483.

2.8 The site comprises predominantly a greenfield site overlain by grasses with some historical development in the form of a large, dilapidated stone building in the southeast and some hardstanding within the northeast adjacent to the existing railway line to the north of the site. The stone building is heavily overgrown with ivy and the area of woodland that previously existed around the building has been recently cleared. A number of drainage ditches partially filled with stagnant water are present within the centre portion of the site.

2.9 The site has a gradual fall towards the southern portion of the site and lies at an elevation of between c.56 and c.54 metres above ordnance datum (m AOD).

Figure 1: Boundary and current status

2.10 Access to the development site will by via the permitted road network (under Ref. SDZ20A/0021) which provides access from the Ninth Lock Road to the east and the R113 (Fonthill Road) to the west.

2.11 Construction traffic will access the site via the R113 roundabout.

2.12 Surface water runs through drains to join existing stormwater network at the southeastern end of the site, running along Ninth Lock Road to Station Road to discharge into an open watercourse in the industrial estate and ultimately into the Camac River.

2.13 The Screening Report for Appropriate Assessment prepared for the site concluded that the proposed development, individually or in-combination with other plans or projects, is not likely to have a significant effect on any European designated site in view of the site's conservation objectives. An appropriate assessment is, therefore determined as not required.

2.14 The EIA Screening and Statement prepared for the site, has determined that, based on best scientific knowledge, the proposed development is unlikely to result in significant effects on the environment and, as such, an Environmental Impact Assessment is not required.

2.15 There are no public rights of way across any part of the development site.

Project Programme

2.16 A copy of the proposed layout of the development is provided in Appendix 1.

2.17 KHL Master programme is included in Appendix 2. Construction is proposed to commence on 16th June 2023 with an estimated completion date in 36 months. The development will be constructed in three Phases.

2.18 KHL has developed a detailed construction work programme including plans to minimise risks to construction workers and local residents from dust, noise and vibration and to watercourses from pollution. This is detailed in the following sections of this report, to address any restrictions with regards to undertaking certain tasks within sensitive bird breeding seasons/ Retention of existing hedgerow etc. to minimise the impact of the construction of the identified species which use the site and its environs.

Construction Management

2.19 KHL will be required to comply with this FCEMP and any revisions made to the document. A broad overview of the proposed construction methodologies is provided below.

Site set up and Compound

2.20 The site compound will be set up as part of the initial site preparation works. The proposed location of the compound will be the western area of the development (Phase K2A) to the north of the Main Link Road. The layout of the compound is shown on Figure 2 below and the proposed compound Location drawing included in Appendix 1.

2.21 The compound will provide a site office, canteen, first aid room and welfare facilities as well as foul drainage and potable water supply and a designated storage area for materials and wastes. There will also be a designated parking area established for site personnel and contractors.

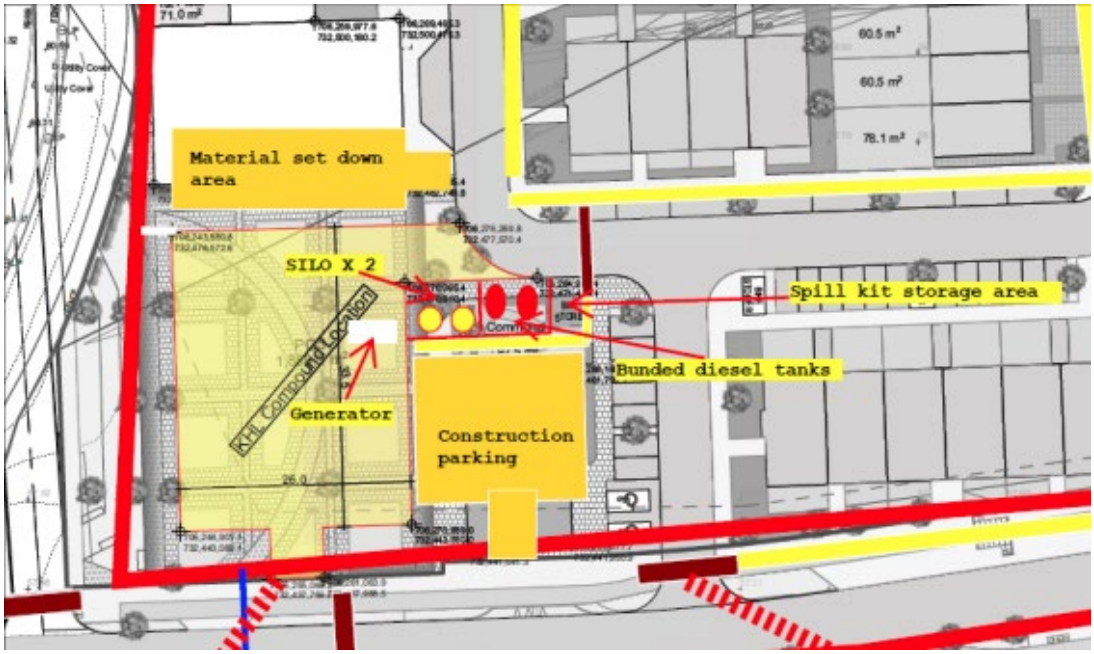

Figure 2: Construction compound Layout

2.22 KHL will ensure that the following information is displayed in the compound as a minimum:

- Traffic Management and Site Information/Services Plan;
- Silt Run-off Prevention and Protection Poster;
- Noise and dust abatement measures and,
- Nominated Community Liaison Officer.

2.23 Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.

2.24 All construction materials, debris, temporary hardstands etc. in the vicinity of the site compound will be removed off-site on completion of the works and area developed as a public open space

Site Access

2.25 Access to the site during construction will be via from the west from the R113 (Fonthill Road) roadway. Pedestrian access will coincide with vehicular access.

2.26 The access points will be sufficient to facilitate all construction traffic and delivery of all construction materials and components. The entrances will be improved/developed as part of the initial enabling works to define its location and surfaced to accommodate articulated deliveries. This will provide a dust free holding area for delivery trucks for the duration of the construction period. Any loads of material leaving site will be evaluated and covered during transportation if deemed necessary.

2.27 All access roads used by construction personnel and vehicles will be monitored for mud and any construction materials and cleared using a shovel/broom and if required a

mechanical road sweeper.. All material collected will be disposed to a licensed waste facility

Parking

2.28 All construction traffic will access the site via the proposed access off the Southern Link Road.

2.29 A free area of the site will be dedicated to providing parking for construction personnel. The car park will be temporary in nature and will be created by laying of temporary surface for vehicles as shown on Figure 3 below.

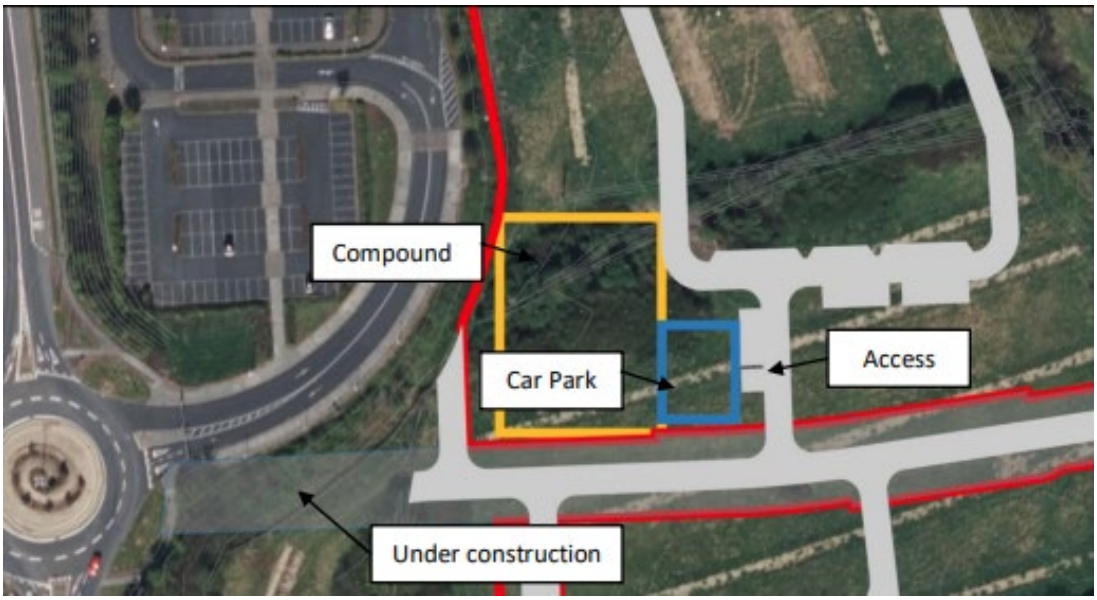

Figure 3: Construction car park location

2.30 Where possible staff will be encouraged to arrive to site by public transport, walking or cycling to limit the impact of construction traffic on the local network. Details of public transport and the cycle network are included in the Pinnacle Consulting Engineers Traffic Management Plan.

2.31 No parking shall be permitted by any site personnel on the public road network.

2.32 At the peak of construction, it is anticipated that there will be a requirement for approximately c.75-100 construction workers, which with an allowance for shared journeys could equate to a maximum of around 45-65 arrivals and departures per day.

Hoarding and Fencing

2.33 The Southern boundary is an existing masonry wall / ibex fence. 2.1m high heras fence will be located to the north/east/ west boundaries.

2.34 Security will be either netwatch or on site security personnel.

2.35 The purpose of the heras fencing will be to reduce unauthorised access to the workings areas, plant and equipment. The fence will be checked daily and maintained as necessary.

2.36 Appropriate sight lines / visibility splays will be maintained around the site to ensure safety of both vehicles and pedestrians.

2.37 Signs will be erected on the boundary fencing that describes the site as being a construction site, accessible to worker and authorized personnel only, i.e., “Construction Site – Do Not Enter – Authorised Personnel Only”.

2.38 Display information boards will also be erected detailing out of hours contact details, telephone helpline number (for comments / complaints) and information on the works.

2.39 It will be the responsibility of the site manager to open and lock the gates each working day to ensure the site is not left open and unattended at any time.

Security

2.40 KHL will provide site security that is sufficient and adequate to ensure that the site is secure and protected from unauthorised access and casual trespass for the duration of the works.

2.41 The following security measures will be provided:

- Site and compound boundaries i.e., fencing, gates, locks etc;
- Polluting materials to be well secured;
- Site office positioned in a suitable place to deter unauthorised access;
- Procedure to inform Garda Síochána about the site and taking their advice on security; and,
- Procedure for dealing with vandalism, graffiti etc.

2.42 Construction plant and equipment will only be parked over-night within the site compound.

Site Lighting

2.43 Entry and egress routes to the site will be illuminated via approved street lighting arrangements. Lighting will be positioned so as not to cause a distraction to passing motorists.

2.44 Site task lighting will all be low lux level and maintained at a low trajectory only so as to prevent over spill to surrounding properties, ecological receptors or structures used by protected species.

2.45 Motion sensor lighting and low energy/photocell lighting will be installed to reduce usage and energy consumption during construction.

2.46 If the construction phase occurs during peak bat activity seasons (late April to late October), night-working will, were possible be avoided to ensure that the area remains optimal for commuting and foraging bats. The construction should also follow the mitigation hierarchy, for example, avoid lighting first and if lighting is necessary then implement mitigation as per BCT lighting guidelines (BCT 2018). Any lighting such as security lighting during the period of works should be switched off when not in use and should not remain illuminated throughout the night.

Working hours

2.47 The normal hours of working on any part of the development during the construction period will be:

- 07:00 hours to 19.00 hours Mondays to Fridays; and,
- 08:00 hours to 14:00 hours on Saturdays.

2.48 No heavy / noisy construction equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc) shall be operated on or adjacent to the construction site before 07:00 hours on weekdays and 09:00 hours on Saturdays nor after 19:00 hours on weekdays and 13:00 hours on Saturdays, nor at any time on Sundays, Bank Holidays or Public Holidays.

2.1 Any works other than the pumping out of excavations, security and emergency works outside these normal hours will be subject to the requirement to obtain consent from South Dublin County Council. The agreement should include working hours and methods to ensure that the 'best practicable' means to control potential nuisance are included.

Deliveries

2.2 There will be no stacking of lorries on the site boundary outside of the working hours.

2.3 Material deliveries will be received on a phased requirement basis, ensuring site works can accommodate deliveries and mitigate risk of delivery trucks queue forming on or outside the site boundary and local roads.

2.4 All deliveries will be notified to the KHL Project Manager/Traffic Management Co-ordinator in advance with specific times identified. These will be collated and held in a diary by the Co-ordinator who will manage the deliveries daily. The Co-ordinator will highlight any clashes and anticipated busy periods to streamline the processing of deliveries.

2.5 On arrival at the agreed locations, drivers must wait and ring for attention in accordance with the relevant site signage. They will then be escorted to the appropriate location for unloading by KHL Banksmen.

2.6 Based on Condition 18 of Reg. Ref. SDZ22A0010, deliveries of materials to site will only be permitted between the hours of 07:00 and 19:00 Monday to Friday, and 09:00 to 13:00 on Saturdays.

2.7 No deliveries will be scheduled for Sundays or Bank Holidays.

2.8 There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times. This will only be undertaken in exceptional circumstances. Kelland Homes will advise South Dublin County Council in advance if delivers are to take place outside of the standard condition hours

Construction Activities

2.9 Construction activity will involve all the necessary operations to construct the development as described. A high-level overview of the construction activities involved is provided below. This list is not exhaustive and is provided to give an overview of the likely type of

activities. Note also that the precise order in which these activities will take place is not known at this stage.

- Site Offices / Staff Welfare Units and Storage Compound;
- Temporary staff parking;
- Site Clearance – isolate and remove any existing utilities, vegetation removal, topsoil stripping, storage of topsoil for future reuse, breakout and crushing of hardcore and rock,
- Removal of excess material;
- Construction of new units - foundation trenching, establishment of foundations, installation of utilities, SuDS, importation of building materials by HGV, storage of building materials, erection of units, erection of scaffolding, roofing, internal fit out and painting;
- Construction of access routes and parking areas - site levelling, earthworks, soil compaction, installation of road base, kerbing, road drainage, tarmacking and paving surface; and,
- Landscaping and Signage.

Typical Equipment

2.10 A list of typical equipment to be used on site during the construction period is summarised below;

- Hand Tools including Hammers, Crow Bars, Shovels, Wheelbarrows;
- Power Tools including Stihl Saws, Battery Drills, Angle Grinders;
- Machinery/Plant including excavators, , Generators, Hiab Lorry, mobile Crane, tipper trucks, Forklift, Scaffold including Hop Ups and Aluminium Towers;
- Pumps to enable excavation and service trenches to remain dry;
- Haulage and delivery vehicles articulated and non-articulated; and,
- Fuel tank delivery vehicles.

Site Clearance and Earthworks

2.11 Vegetation clearance, Vegetation maintenance, earthworks and ground preparation will be required as part of the development, with an estimated 4,761m³ of soil imported on to site.

2.12 All suitable non-hazardous excavated material will be reused on site where possible, i.e., to level out ground in specified areas and/or for landscaping. Any excavated waste that cannot be reused shall be handled and transported from site by an appropriately registered contractor.

2.13 Stripping and removal of topsoil will be coordinated with the proposed staging for the development. The extent of topsoil strip (and consequent exposure of subsoil) will be limited to the immediate vicinity of active work area(s) and will be programmed to minimise soil handling / double soil movements.

2.14 Disturbed subsoil layers for construction of the road, drainage, pumping station and services will be stabilised as soon as practicable (e.g., backfill of service trenches, construction of road capping layers, construction of building foundations and completion of landscaping).

2.15 Weathered rock and bedrock where encountered will be excavated, stored and processed for reuse on site where feasible.

2.16 The infill material and landscaping that is required will be locally sourced and placed and levelled in appropriate lift thicknesses to ensure the material is not over compacted thereby retaining its drainage properties.

2.17 Only suitable material will be allowed on site, this may be achieved through chemical testing prior to importation. Provided the imported material is a product with known characteristics, minimal monitoring or validatory sampling of imported loads of the material will be required, however visual inspection of all material in each load will be conducted as a minimum.

2.18 KHL will consider opportunities for importing excavated material arising on separate construction site(s) through Article 27 or similar mechanisms. No material will be accepted until the source site provides a description / classification and evidence of chemical composition of the material.

2.19 The rate at which fill will be required on site will depend on phasing. At c.30m³ per load, the importation of fill on to the site will generate c. 160 HGV movements. This will be spread out over a 3– 5-year period with minimal impact on the local road network.

2.20 During ground works, various spoil heaps will be created on site at the locations shown on Figure 4.

Figure 4: Spoil heap locations

2.21 Suitable material will be mounded to create a berm and in turn will allow for the material to be deposited onto the HGVs by excavator when needed.

2.22 Upon completion of earthworks, drainage and services to serve the development will be constructed and commissioned. Road construction and building construction will be completed thereafter.

3 ENVIRONMENTAL POLICIES AND LEGAL REQUIREMENTS

3.1 All site works shall be undertaken in compliance with the CEMP and with all applicable legal and regulatory requirements.

Environmental Policies

3.2 As part of the appointment, KHL will provide a copy of their Safety and Environmental Policy. They will ensure that a copy of their Health, Safety and Environmental Policy is clearly displayed on site notice boards during the construction period. All employees are expected to comply with the requirements of the Environmental Policy.

3.3 KHL will ensure their employees and support staff (sub-contractors, suppliers etc.) actively promote and administer a strong environmental culture. To achieve this, a number of initiatives will be in operation during the life of the project. This will include the use of poster campaigns to raise awareness of topical subjects, and toolbox talks involving all members of the project team and site workforce.

Health and Safety Management

3.4 KHL shall be responsible for ensuring that the construction works Health and Safety Plan is implemented and followed on site. The works will be carried out in accordance with all relevant health and safety legislation and Codes of Practice and site rules relating to the works will be observed.

Legislation and other legal requirements

3.5 KHL shall comply as necessary with all relevant Statutory requirements such as the 2005 Safety Health and Welfare at Work Act, The Construction Regulations (SI 291 of 2013), the General Application Regulations (SI 299 of 2007), etc. (and any amendments thereof).

3.6 In addition, KHL shall comply with all the reasonable safety requirements of the Client, the Project Supervisor for the Design Process and the Project Supervisor for the Construction Stage.

3.7 A legislation register shall be held by KHL and reviewed periodically and updated as necessary. Any legislative changes shall be disseminated to project management immediately, after which the method statements of any affected operations shall be changed accordingly.

3.8 A consents and licenses register shall also be held by KHL which will contain a schedule of all consent submissions and a tracker to confirm they are in place for the start of works. This will be tracked and managed by the Site Manager and confirmation and approved documentation will be sent to the HSEQ manager before works begin, when new consents are obtained, or when consent is withdrawn, or terminated.

4 ENVIRONMENTAL MANAGEMENT IMPLEMENTATION

Roles and Responsibilities

4.1 KHL and all appointed sub-contractors will be responsible for ensuring that the potential risks to the environment and local community are adequately avoided or controlled by the application of measures documented within this CEMP.

4.2 The main organisations and persons involved in the construction stage works are set out below.

The Client / Main Contractor

4.3 Kelland Homes Ltd shall be responsible for:

- Securing the land including access required for all works;
- Setting and communicating appropriate standards for environmental management and ensuring that their environmental policy is delivered;
- Review and approval of the CEMP; and
- Appointing a Site Manager / Site Supervisor.

Site Manager / Site Supervisor

4.4 The Site Manager shall be responsible for:

- Undertaking weekly Site Compound Checks, and appointing persons to supervise refuelling of tanks and bowsers;
- Ensuring the required consents are in place before work starts;
- Ensuring environmental and waste requirements are included on requisitions and in subcontracts and orders;
- Ensuring oil, including diesel is stored in properly bunded tanks / drip trays;
- Ensuring Waste Transfer Notes / Waste Consignment Notes are checked against invoices before payment;
- Liaising with statutory authorities as required and ensuring records of communication (including verbal communication) are kept. Statutory authorities should always be accompanied on site visits;
- Ensuring employees and subcontractors implement the controls set out in the CEMP;
- Ensuring employees and subcontractors receive Induction Training (including project environmental issues) and Toolbox Talks, as appropriate;
- Ensuring personnel needed for audits are available when required;

- Verifying actions resulting from Corrective Action Requests and Observations raised during audits are completed by the deadlines;
- Ensuring environmental training is provided;
- Reporting incidents to the immediately, and to statutory authorities where required;
- Logging and monitoring incidents and non-conformances;
- Disseminating information, including changes to legislation, and relay to relevant contractor's employees;
- Identifying employees who require environmental training and maintain training records in line with the contract for the works;
- Providing advice and dealing with queries and correspondence on environmental issues;
- Identifying significant environmental impacts for the project and assist in setting up contracts to include the necessary controls;
- Monitoring the progress in closing out Corrective Action Requests and Observations raised during audits;
- Ensuring all records are retained and readily available;
- Carrying out monthly site audits; and
- Appointing any third-party specialists as required.

All Staff

4.5 All staff have responsibility for the environment, responsibilities include but are not limited to:

- In the case of an incident, stopping work, implementing control procedures and reporting it to the Site Manager;
- Contacting the Waste Representative when waste needs collecting;
- Passing any queries or correspondence on public health or environmental issues to the Site Manager; and,
- Working in accordance with environmental procedures, the CEMP and Method Statements.

The Community Liaison Officer

4.6 The Community Liaison Officer shall be responsible for:

- Responding to telephone and email queries within 48 hours of receipt;
- Sharing key contact information associated with site development with key stakeholders and update these details as required;
- As a general courtesy, alerting the community to any disruptive works one week in advance of commencement, where reasonably practicable;

- Minimising the impact of site traffic and associated parking on the local road network;
- Arranging any necessary meetings that may be requested by community representatives regarding any on-site issues; and,
- Circulating updates as required on the projects progress to include information of relevance and interest to the local community.

Table 1: Project Contacts

Contacts	
Contact	Contact details
Client – Kelland Homes Limited Project Supervisor Construction Stage (PSCS)	Dave Ruston 085 803 7859 davidr@kellandhomes.ie
KHL Contracts Manager	Gary Byrne 087 261 0398
Site Manager / Water Manager / Community Liaison Officer	Dave Ruston 085 803 7859 davidr@kellandhomes.ie
Ecologist - RSK Ireland Ltd	Aisling McParland 0044 28 90 660 993

5 ENVIRONMENTAL MANAGEMENT OF SITE ACTIVITIES

General

5.1 The following outlines how potential impacts from the construction phase of the project will be mitigated.

Air Quality - Dust

5.2 During Construction, dust emissions from a site can cause a nuisance for neighbours and contribute to air pollution. The principal activities that have the potential to result in fugitive emissions of dust from site construction works are considered to be excavations, earthworks (cut and fill) and the movement of site traffic on paved and unpaved roadways. Dust can be spread onto the public highway and along public access paths by vehicles entering and exiting the site.

5.3 Sensitive receptors in the locality of the construction site to potential effects from dust are considered to be the residential properties located within 25m north, east and south of the developments red boundary line.

5.4 At the construction planning stage, the siting of construction activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance.

5.5 Good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures quickly before the potential for nuisance occurs:

- During working hours, technical staff shall be on site and available to monitor dust control methods as appropriate;
- Complaint registers will be kept on site detailing all telephone calls and letters of complaint received in connection with construction activities, together with details of any remedial actions carried out;
- It is the responsibility of KHL and all relevant sub-contractors at all times to demonstrate full compliance with the dust control conditions herein;
- At all times, the procedures put in place will be strictly monitored and assessed.

5.6 The dust minimisation measures shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem.

5.7 The roads around the site are all surfaced, and no dust is anticipated arising from unsealed surfaces.

Table 2: Fugitive Dust Measures

Issue	Control Measure
Site planning	• Display the name and contact details of the person(s) accountable for air quality and dust issues on the site boundary • All site personnel to be fully trained • Trained and responsible manager on site during working times to maintain logbook and carry out site inspections • Plan site layout - machinery and dust causing activities should be located away from sensitive receptors • Hard surface site haul routes
Site Operations	• Maintain a complaint logbook for all dust and air quality complaints which includes source(s)/cause(s) and migration measures / controls taken to reduce emissions. • Conduct regular dust inspections to monitor compliance with dust management plan, record the findings of the inspection within inspection logbook. Increase the frequency of the inspections during prolonged dry and windy conditions or when any activities with higher potential to produce dust are being conducted on site. • If possible, the machinery and dust causing activities should be located as far away as possible from receptors. • If required, operations will be fully enclosed where there is a high potential for dust production, or the activities will take an extensive period to undertake. • Dust suppression techniques should be employed for cutting, grinding or sawing activities. • Earthworks and stockpiles will be sited and managed to avoid adverse effects from dust and to prevent damage to underlying soil. Suitable material will be mounded to create a berm and in turn will allow for the material to be deposited onto the HGVs by excavator when needed. • Only remove the cover in small areas during work and not all at once. • Cover, seed or fence stockpiles to prevent wind 'whipping', where practicable for any long term storage of materials. • Use Hessian, mulches or tackifiers if required, where it is not possible to revegetate or cover with topsoil. • Minimise dropping material from heights from conveyors, loading shovels or handling equipment and use fine water sprays on equipment where appropriate. • All vehicles to switch off engines - no idling vehicles • Site construction vehicles will be retained on site during the construction period. To minimise noise and emissions, all construction machinery will be switched off when not in use and speed limits imposed on internal roads and across the site • Minimise movement of construction traffic around site • If possible, remove materials that have a potential to produce dust from the site as soon as possible. • Deliveries to and removal of plant, equipment, machinery and waste from the site to take place within permitted hours.

Issue	Control Measure
	• Materials deliveries report to site office and unload within materials storage area • Ensure equipment is readily available on site to clean any dry spillages • Use mobile bowsers and water cannons for dust suppressant where applicable. Move around the site as required and practicable. • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems • For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriate to prevent dust. • All site roads will be swept and sprayed with water in prolonged spells of dry weather to prevent dust causing a nuisance off-site • No site runoff of water or mud • Hard surfacing and effective cleaning of haul routes and appropriate 10mph speed limit around site. • Ensure all site fencing, barriers and scaffolding is clean / High level walkways and surfaces such as scaffolding can be cleaned regularly using safe 'wet' methods, as opposed to dry methods. • No burning of materials is permitted on site • Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust
Track out	• Public roads outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. • Road 'wet' Sweeping contactor engaged to maintain approach and access roads for trucks entering and leaving the site • Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport. • Record any inspections of haul routes and any subsequent action in the site logbook.

5.8 Dust monitoring will form part of the daily site inspections and will include dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary. Weekly checks will also be undertaken to monitor compliance with the DMP.

5.9 Static Monitoring Stations (if required) will be installed in key locations providing weekly reports to the Contactor before, during and following construction works.

5.10 KHL will consider the feasibility of implementing a rainwater harvesting system on site to provide a more sustainable source of water supply for dust suppressant.

Noise and Vibration

5.11 KHL shall at all times apply the principles of Best Practicable Means and carry out all construction work in such a manner as to reduce any disturbance from noise and vibration to a minimum as receptors are located within 25m of the site boundaries..

5.12 No construction work will be permitted, nor plant to include pneumatic drills, construction vehicles, generators, etc or machinery operated between the hours of 19.00 to 07.00 hrs on weekdays.

5.13 No construction work will be permitted, nor plant to include pneumatic drills, construction vehicles, generators, etc or machinery operated before 09.00 on Saturdays no after 13.00 on Saturday, nor at any time on Sundays, Bank Holidays or Public Holidays.

5.14 A *Construction Management Plan (CMP)* is included in Appendix 4 of this document, for KHL to follow and comply with. This Plan shall be followed for the duration of the construction phase, but in particular for the site groundworks phase which includes significant filling of the site to raise the ground levels.

5.15 KHL will monitor levels of noise and vibration during critical construction periods at nearby sensitive locations and/or development site boundaries.

5.16 KHL will erect localised screening if deemed necessary at site compounds, areas of major excavation, structures etc. where potential of exceedance of the construction noise criteria has been identified and in particular around noisy plant such as breaker or drill bit when in operation in close proximity to noise sensitive boundaries.

5.17 Noise control audits will be conducted at regular intervals throughout the construction programme. The frequency of the audits may be increased or reduced as deemed necessary.

General Construction Noise

5.18 KHL shall ensure to comply with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 Parts 1 and 2 “Code of practice for noise and vibration control on construction and open sites” and Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

5.19 Each item of plant used on the project is operated in compliance with the noise limits quoted in the relevant European Commission Directive 2000/14/EC [S.I. No. 632 of 2001] as amended by S.I. 241 of 2006 and all subsequent amendments thereof, and will adopt the recommendations set out in BS 5228 – 1:2009+A1 2014 Code of practice for noise and vibration control on open sites: Part1 Noise with regard to noise mitigation options.

5.20 KHL shall ensure that all plant has appropriate certification to indicate that it conforms to regulatory limits (where applicable). Where feasible the quietest available plant and machinery will be used.

5.21 Generators and other potentially noisy plant will be located away as far from sensitive receptors as is practical. Noisy plant will be screened as appropriate to prevent nuisance. No generators or machinery will be permitted to operate at night (is between the hours of 19:00-07:00hrs) weekdays, nor between 13:00 to 09:00 Saturday.

5.22 Site activities may be staggered when working in proximity to any receptor, such as concrete cutting or pneumatic breaking should where possible. This proposed method of working will provide effective noise management of site activities to ensure that any receptor is not exposed to unacceptably high levels of noise over extended periods.

5.23 All appropriate equipment will be fitted with silencers, mufflers or acoustic covers where possible. No item of plant or equipment will be allowed to operate where any part of its housing that is designed for sound proofing is absent or not fully in place

5.24 Machines in intermittent use shall be shut down in the intervening periods between works or throttled down to a minimum during periods when not in use

5.25 All plant and equipment will be maintained and subject to regular maintenance and inspection by trained personal to ensure noise emissions are reduced, this may include but not be limited to the proper use any maintenance of tools and equipment, the positing of machinery on site to reduce the emission of noise, the avoidance of unnecessary noise, the protection of persons against noise and the operation of sound measuring equipment.

5.26 Noise due to the normal operation of the proposed development, expressed as LAeq over 15 minutes at the façade of a noise sensitive location, shall not exceed the daytime background level by more than 10 dB(A).

5.27 All pneumatic percussive tools such as pneumatic hammers shall be fitted with dampers, mufflers or silencers of the type recommended by the manufacturer.

5.28 A nominated person from the project team will be appointed to liaise with local residents and businesses regarding noise nuisance events as required.

5.29 Noise control audits will be conducted at regular intervals through the construction phase of the development. In the first instance it is envisaged that such audits will take place on a monthly basis. This subject to review and the frequency of audits may be increased if deemed necessary.

5.30 The purpose of the audits will be to ensure that all appropriate steps are being taken to control construction noise emissions. To this end, consideration will be given to issues such as the following:

- Hours of operation being correctly observed o Opportunities for noise control ‘at source’
- Optimum siting of plant items
- Plant items being left to run unnecessarily
- Correct use of proprietary noise control measures
- Materials handling
- Poor maintenance
- Correct use of screening provided and opportunities for provision of additional screening.

Vehicle Noise

5.31 Vehicles and plant used during construction will be maintained in good and efficient working order. When not in use machinery is to be switched off and not left running. Site vehicles will not be over-revved.

5.32 All machinery will be properly maintained and silenced according to manufacturer’s instructions.

5.33 Acoustic covers will be fitted to appropriate machinery.

5.34 All vehicles to observe set speed limits on site and local roads.

5.35 Toolbox talks will be communicated to site staff and subcontractors so that they are fully informed of noise and vibration control.

Vibration

5.36 KHL will review the results of Environmental vibration monitoring periodically and take action as appropriate where required. Below is a list of vibration mitigation measures that will be considered during the project

- Breaking out concrete / rock elements using low vibration generating plant tools.
- Choosing alternative, lower-impact equipment or methods wherever possible.
- Scheduling the use of vibration-causing equipment, such as pneumatic breakers and jackhammers, at the least sensitive time of day.
- Routing, operating or locating high vibration sources as far away from sensitive areas as Possible.
- Operations shall be sequenced so that vibration causing activities do not occur simultaneously at any one location or in proximity to a receptor.
- Keeping equipment well maintained in particular the dampening mechanisms associated with pneumatic breakers.

Pollution Control

General

5.37 KHL will adhere to best practice guidance as detailed below, particularly the CIRIA guidance document C532 Control of water pollution from construction sites. The construction approach will also adhere to the requirements set out in the Inland Fisheries Ireland guidance document Requirements for the Protection of Fisheries Habitat during Construction and Development Works and Development Sites.

- The Good Practice Guidance notes proposed by EA/SEPA/EHS:
- PPG 1: Understanding your environmental responsibilities - good environmental practices
- GPP 2: Above ground oil storage tanks
- PPG 3: Use and design of oil separators in surface water drainage systems
- GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer
- GPP 5: Works and maintenance in or near water
- PPG 6: Working at construction and demolition sites
- PPG 7: Safe storage - The safe operation of refuelling facilities
- GPP 8: Safe storage and disposal of used oils
- GPP 8: Safe storage and disposal of used oils
- GPP 8: Safe storage and disposal of used oils
- GPP 19: Vehicles: Service and Repair
- GPP 21: Pollution incident response planning

- GPP 22: Dealing with spills
- GPP 26 Safe storage - drums and intermediate bulk containers
- PPG 27: Installation, decommissioning and removal of underground storage tanks
- CIRIA Environmental Good Practice on Site.
- CIRIA Control of Water Pollution from Construction Sites. Technical Guidance C648.
- CIRIA SuDS Manual Technical Guidance C697.
- Development on Unstable Land. Department of Environment (DOE), UK.

5.38 Where possible, hard surfaces that are positively drained will be laid at an early stage in the construction to allow permanent facilities to be used to collect silt and hydrocarbons.

5.39 The extent of exposed ground will be minimised at all times during construction and any soil stockpiles outside areas specifically designed for the purpose will be sealed to prevent the creation of contaminated run off. Earth works will be programmed to minimise soil handling / double soil movements.

5.40 Any temporary soil stockpiles will be located >20m from any surface water course covered with a waterproof membrane during periods of heavy rainfall to prevent any material from washing out and flowing north from the project site.

5.41 Areas where stockpiles are located will be positively drained through a grit trap or similar where silt will be collected before water is discharged. The three main stockpile locations are shown

5.42 Foundations will be constructed in a way that will minimise the risk of contamination of the groundwater caused by pollutants spreading from wet concrete; silt runoff from any deep strip activities and excessive noise generation.

5.43 Standard dust suppression measures will be implemented during periods of dry weather. This will avoid any impacts arising from the spread of dust particles during the construction phase

Surface Water Run-off and Silt Mitigation

5.44 No pollutants, including sediments will be allowed to enter any surface watercourses/drainage and downstream to the Camac River during construction operations. KHL will follow the principles of the CEMP in order to prevent sediment or other contaminates entering any adjacent watercourse.

5.45 All watercourses drain and potential conduits for silt laden runoff will be identified and where necessary, measures shall be taken to minimise direct sediment run-off from the working site into watercourses. Pollution prevention will be achieved with both physical and procedural measures such as sediment traps and drainage ditches ‘in the dry’, where required

5.46 During construction surface water from across the site, if required will be collected, channelled and/or treated prior to discharge. Measures when required will include silt busters, settlement ponds, silt bags/dewatering bags, sandbags, grips, strawbales, and a series of measures may be required together. Settlement systems will be large enough to function effectively and designed in accordance with Construction Industry Research and Information Association (CIRA) best practice.

5.47 KHL shall provide dedicated persons to ensure that the required mitigation is installed and maintained to an appropriate standard.

5.48 Terram will be placed under new drain covers and in road gullies, where appropriate, in order to intercept silt-laden surface run-off and prevent it from entering the surface water drainage network. This mitigation will be assessed on a regular basis (especially after heavy rain) and maintained if required.

5.49 Areas should only be stripped of cover as short a time as possible in order to limit the amount of time that the soil is exposed. The disturbed area should be re-seeded as appropriate as soon as possible after construction.

5.50 A road sweeper will be utilised where necessary to control mud deposits at entry and exits to the site and will further reduce the potential for silt pollution on and from the construction site.

5.51 Any wheel-wash provided at a later date will be sufficiently sized and managed to ensure suspended solids and hydrocarbons are not released into the water environment. All pollution prevention measures in accordance with guidance from Inland Fisheries Ireland (2016) will be implemented. This will include the installation of the above construction phase surface water management measures such as sediment traps and drainage ditches 'in the dry', where required.

5.52 All surface water infrastructure is to be pressure tested by an approved method during the construction phase and prior to connection to the public networks, all in accordance with Local Authority Requirements.

Water Pumping

5.53 If pumping of water is required onsite, this will be done by pumping water over a vegetated area on the site or ditches, through terram and/or through installed silt fencing. These methods will slow the water flow and filter any potential silt from the water.

5.54 The requirement for water pumping will be planned in advance (as far as is practicable).

5.55 KHL will ensure that all necessary discharge consents are in place before commencing any dewatering activities.

Storage of fuels and hazardous materials

5.56 Construction plant and equipment will be checked daily for any visual signs of oil or fuel leakage, as well as wear and tear.

5.57 Chemicals or fuels will be contained within impermeable bunds constructed in line with current best practice within the site compound as shown on Figure 2. Pollution Prevention Plans will be prepared, and site staff trained to implement them.

5.58 Chemical, fuel and oil stores will be sited on impervious bases and within a secured bund of 110% of the storage capacity, within the compound as shown on area. The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated.

5.59 Consideration will be given to the phasing of construction to reduce the time when temporary facilities for storage of chemicals refuelling, and vehicle maintenance are used to a minimum.

5.60 Diesel shall be stored in integral bunded fuel bowers. All connections shall be situated within the bund. Fuel shall be stored at least 10m away from any watercourse, where practicable.

5.61 Oils and lubricants used on the site shall be stored in temporary vessels designed to hold 110% of the containers. No oil or lubricants shall be stored within 10m of a watercourse, where practicable.

5.62 Refuelling will only take place in designated areas away from surface water drainage systems, on hardstanding, by appropriately trained personnel. The funnels/nozzles used will be appropriate to the equipment being used.

5.63 Refuelling on the site shall be undertaken at least 10m from any given watercourses (where practicable); mobile plant shall be pulled back from watercourses for refuelling as far as possible and in line with best practice to ensure protection of the water environment

5.64 Tanks will be locked when not in use.

5.65 All plant shall be checked for leaks of fuel and lubricants before being allowed onto the site.

5.66 Pumps and generators used on the site will have integral drip trays where possible. All items of plant without an integral drip tray shall be stored over a portable drip tray. Drip trays shall be inspected and kept free of accumulated rainwater as necessary. Any oily water shall be disposed of at an appropriate licensed facility.

5.67 Any cleaning/arisings from drip trays etc. to be disposed of as hazardous waste in accordance with applicable guidance and legislation.

5.68 Where site personnel are required to refuel vehicles, this will only be carried out at the designated refuelling location within the site storage compound, which must employ pollution control mechanisms to prevent escape of fluids to the river. No refuelling is permitted on site, i.e., within the river or adjacent due to risk of spillage.

Cement / Concrete

5.69 Wet concrete operations will be carried out in dry conditions.

5.70 The majority of concrete used on this project will be supplied by ready mix concrete lorries.

5.71 All concrete pours will be carefully planned, and special procedures adopted as required. The deliveries will be booked in with the logistics manager, but the frequency of deliveries will be controlled by the supervisor of the RC frame contractor. The concrete batch plant will be notified when the current load is almost completely discharged and then the following delivery will be loaded and sent to site.

5.72 Any in-situ concrete work to be lined and areas bunded (where possible) to stop any accidental spillage.

5.73 Smaller individual amounts for grouting and patching may need to be mixed on site, as well as larger amounts for general block and brick laying. All washout material and spillage will be contained to prevent cement material from entering the watercourse.

5.74 The wash out area will be >10m from any watercourse or surface water drain. The wash down or washout of trucks will take place off site in an appropriate facility. Washing out of

vehicles or equipment will only take place in a controlled area(s). The wash-out will comprise either a lined skip or a pit lined with heavy-gauge polythene.

5.75 All vehicles used to transport the cement around the site will be suitable for the amount to be carried. Extra care is to be taken when using site roads and these will be assessed for suitability in transporting large loads.

5.76 All staff should be informed of washing procedures.

5.77 Concrete batching will take place off site or in a designed area with an impermeable surface.

5.78 Excess concrete remaining after a pour will be returned to the batch plant.

5.79 At completion of each work section, solidified concrete will be broken out and disposed of in accordance with the Waste Management Plan.

Flood Risk and Drainage Strategy

5.80 There is sufficient capacity in the existing drainage and watermain services to meet the demands imposed by the proposed development.

5.81 The primary flood risk associated with construction is considered to be the potential increase in surface water runoff associated with the creation of temporary construction roads, site compounds etc and the compaction of the native soils.

5.82 A regular maintenance and inspection schedule will be devised to ensure that any potential blockage or restriction within the proposed storm water drainage systems does not occur.

Foul Water Drainage

5.83 During construction, foul water flows generated will be managed via the usual method of temporary portable facilities with internal storage. No septic tanks will be utilised. Mess, sanitation and welfare facilities will be located at the construction compound. Foul effluent will make use of chemical facilities with routine removal for offsite disposal.

5.84 The foul water drainage network which is to service the Site is to pass through a pumping station that is to be built along the R112 Fonthill Road and from there to connect through a rising main to the existing 9B sewer trunk connection. Foul water will be treated at Ringsend WwTP, which discharges into Dublin Bay.

5.85 The proposed wastewater infrastructure will connect into a permitted foul pumping station and pipe network within proposed road corridors to facilitate drainage connections to future wastewater drainage infrastructure within the adjoining SDZ lands (including future Irish Water pumping station permitted under SDZ21A/0006).

5.86 All new sewers are to be inspected by CCTV survey post construction; to identify any possible physical defects for rectification prior to operational phase.

Surface Water Drainage

5.87 Surface water runoff from areas stripped of topsoil and surface water collected in excavations will be directed to on-site attenuation pond where measures will be

implemented to capture and treat sediment laden runoff prior to discharge of surface water at a controlled rate.

5.88 The proposed development will connect into the permitted infrastructural works as approved under the Clonburris Strategic Development Zone Planning Scheme (2019) and permitted under Ref. SDZ20A/0021, with the proposed development connecting into the permitted surface water drainage attenuation systems which includes 1 no. pond, 3 no. modular underground storage systems and 1 no. detention basin combined with modular underground storage systems.

5.89 Surface water on Site drains to the south-east to existing stormwater networks on Ninth Lock Road. The drainage run continues south on Ninth Lock Road where it splits into parallel runs along Station Road which later merge and discharge to an open watercourse within the industrial estate. The watercourse discharges into the Camac River which joins the River Liffey ca. 8.1 km downstream before entering Dublin Bay another ~7.6 km further downstream.

5.90 Runoff from the subject site would be attenuated to greenfield runoff rates. An agreed outflow rate of 3.1 l/s/ha for all events up to the design Q100 event is to be adopted. The above agreed rate from the overall SDZ lands were modelled on behalf of South Dublin County Council and it was concluded that there would be no significant effect on downstream flows. Surface water discharge will pass via a fuel / oil separator.

Ecology / Biodiversity summary

5.91 There are no designated sites within the red boundary line nor in the immediate area adjacent to the site. However, the Site is part of a watershed area that feeds into several Natura 2000 sites. The Appropriate Assessment report (*RSK Ireland, Appropriate Assessment Screening Report, Clonburris K1, Dublin 22, 604090 01 (04), June 2022*), concluded the construction activities on the site will not have a likely significant impact on the designation species of the Natura sites.

5.92 RSK completed several bat surveys at the site reported in *Clonburris Bat Report, Clonburris, Clondalkin, Dublin 22, 604097- 03 (00), November 2022*. The report concludes the site is of negligible importance for commuting and foraging bats, though bats frequently foraging along the southern treeline of the site with roost potential in the building. Tree and hedgerow habitat shall therefore be protected from light spill from works on the site by ensuring that light is not spilled onto adjacent hedgerow and woodland habitat or at a minimum is mitigated through measures outlined in best practice guidance.

5.93 The Site is poorly connected with the wider landscape but does contain a number of internally connecting hedgerows and there is access to the Canal to the south which provides good foraging ground but is unlikely to be used extensively by larger mammals such as badger. It provides nesting and foraging habitat to a range of bird species. A feature of the Site is an old stone building which provides nesting space for birds and potentially roosting space for bats and barn owl. In the event that clearance of areas will be required that have nesting potential for smaller species of birds this will not be undertaken outside the bird nesting season, which runs from 1st March to 31st August inclusive.

5.94 Invasive alien species identified on site include cherry laurel, butterfly bush, snowberry and piri-piri burr. These will be removed from site according to best practice guidance.

5.95 Japanese knotweed has been recorded beside Cappagh House. It was treated in 2021 and 2022, additionally a third party will remove this species under granted permission SDZ20A/ 002.

5.96 Clearance of vegetation, including scrub, log and leaf piles should take place in between September - October, the reason for this is so that it occurs outside of the hibernating season for hedgehogs and bird breeding season.

5.97 Any vegetation clearance, or removal of log piles, dense scrub and hedgerows is required during November-March, will be undertaken under the supervision of a qualified ecologist to check for hibernating hedgehogs.

5.98 If a hedgehog is discovered on site, works in that location will stop and a suitably qualified ecologist will assess the situation and advise on an appropriate plan of action; which may include the translocation of the hedgehog. Once the plan has been created and implemented the ecologist will inform Kelland Homes Ltd. when work can start again.

5.99 KHL will also consult and take advise from the ecologist (RSK Ireland) in the event that further surveys and/or monitoring for bats, newts, breeding birds and barn owl are required to assess the effectiveness of the proposed mitigation measures.

5.100 A number of compensation measures are proposed in order to mitigate impacts to key ecological receptors, as detailed in the RSK *Ecological Impact Assessment (EcIA) Clonburris, K1, Dublin 604097 02 (00) November 2022* and the RSK Biodiversity Management Plan *(Clonburris Urban Centre & South East Biodiversity Management Plan 604097 R7 (07), March 2023)*. Improvement measures include the erection of bat and bird boxes, the set aside of an area of land to be managed for wildlife and the compensatory planting of native hedgerows and trees and the creation of pools suitable for amphibians.

5.101 There will be 210m² planted with bulbs, and 2,830m² planted with native wildflowers in the central and eastern areas of the site and 174m² in the southeast of the site will be an attenuation pond with wetland planting. These new habitats will provide suitable habitat for common frog and mitigate against losses during the development.

Tree Protection fencing

5.102 Tree protective fencing and signage will be erected prior to excavation and construction works to protect limbs and roots as detailed in the Arboricultural Assessment (Arborist Associates, 2023).

5.103 A buffer distance shall be kept between works and trees to protect roots (Root Protection Zone, RPZ). Only when protective screening and fencing and been erected will construction work begin. Holes needed to erect the protective fencing will be dug manually with no machinery.

5.104 Existing ground levels within the RPZ of the trees and hedgerows will be retained and incorporated into the finished landscaping of the development to prevent any root damage. If any paths or hard landscaping will encroach on the RPZ, it will be installed using a 'No-Dig' method or with the use of a cellular confinement system such as 'CellWeb' (Arborist Associates, 2023).

Ecological Clerk of Works (EcoCoW)

5.105 RSK compiled a biodiversity management plan for site, reported in *Kelland Homes Ltd. Clonburris Urban Centre & South East Biodiversity Management Plan 604097 R7 (07), March 2023* which includes but not limited to

- supervision of all works in the vicinity of sensitive ecological features during construction;
- Prevention of the spread of invasive species.

5.106 An Ecological Clerk of Works (EcoCoW) will carry out site visits to conduct checks during the construction and restoration phase to check compliance with the Construction Environment Management Plan and the BMP.

5.107 It is thought that a small number of bats were roosting within the building, and it is likely that roosts are currently in use by bats. A bat derogation licence will be applied for, and a suitably qualified ecologist will be present on site while the building is slowly disassembled to handle any roosting bats uncovered during works. If any bat roosts are confirmed, bats will be removed by an ecologist operating under licence. Bat boxes will be provided to replace any destroyed roosts.

5.108 The ruined building will be surveyed for indications that it is in use by barn owl. If evidence is found demolition will be deferred until after the young have fledged, with a buffer enforced around the building in order to prevent disturbance.

5.109 No badger setts were identified on site however, the site has some suitable foraging and commuting habitat and potential snuffle holes were identified. Due to badger setts being extremely sensitive to vibration during construction phases, a walkover survey for mammals will be completed 48 hours prior to the commencement of each phase of construction, to ensure setts have not been created in the interim, within 30m of the site boundary.

5.110 In the event that a badger sett is identified on site, no works may be undertaken within 25m of a badger sett without first obtaining a licence. It may be necessary to exclude badgers from the sett, and this may only be undertaken at certain times of year.

5.111 Any clearance of scrub and trees required prior to commencement of works will be undertaken outside of the bird nesting season (defined as 1st March and 31st August). If any vegetation removal works are required to commence during the bird breeding season, then a further inspection by a suitably qualified ecologist, in and within at least 20m of the area to be impacted, is required immediately prior to commencement of the work. This is to ensure that no active nests and nest sites are illegally destroyed or disturbed. If active nests are identified, then an appropriate stand-off distance (10-20 m) will be maintained, and vegetation removal will have to cease until young birds have successfully fledged.

5.112 The habitat present on the site is suitable for common frogs. During vegetation clearance, and when removing ditches, an EcoCoW will be present so that if any frogs are identified on site, that work can be stopped until a strategic translocation plan can be developed and implemented.

5.113 Where areas of standing water are to be infilled, then this will be preceded by precautionary mitigation measures. The water body will be gradually drained/pumped out, and this will be accompanied by netting to capture any amphibians which may be present.

In the unlikely event that they do then appear on the site, work must stop and the appropriate licence must be obtained.

5.114 A destructive search will be completed on a precautionary basis for newts and frog, either by hand (e.g. for log piles) or by supervision of machine excavation through gradual turf stripping etc. This will be conducted prior to construction works in the identified suitable habitat areas. If either newts or common frogs are found to be present, construction will be stopped by EcoCoW. Relocation of the newts may be needed under licence, as well as the creation of the habitat detailed above.

5.115 Checks for the presence of non- native species will be undertaken by the EcoCoW when on site and prior to commencement of works. Japanese Knotweed was noted and treated by a third party. The EcoCoW will follow guidance for control and management if invasive species are found on site, these guidelines will be species specific (National Biodiversity Data Centre, 2021). Further details on procedure the EcoCoW will follow should invasive species be found on site are detailed in Section 2.11 of the BMP (*Plan 604097 R7 (07), March 2023)*.

5.116 Should occurrences of any non-native invasive species be identified on site a suitably qualified ecologist shall be consulted and an Invasive Species Management Plan drawn up to agree mitigation and control measures. In the interim no works shall be undertaken within 10m of any identified invasive species.

Archaeology

5.117 There is potential for archaeological features to be present beneath the site, particularly related to the overgrown ruin of Cappagh House within the southeast corner of the site. Grounds works associated with the development will therefore have the potential to impact on these features in the absence of measures to protect such features. Permission for the demolition of Cappagh House granted under SDZ20A/002 and not dealt with under our application.

5.118 Previous reporting indicates the recommendations for the preservation of feature AA3 (charcoal Production pit).

5.119 KHL will undertake all ground disturbance works in accordance with the advice provided by the appointed archaeologist. In the event that any archaeological features are identified these will either be integrated into the development plans and preserved in situ or recorded and excavated under archaeological conditions.

5.120 In the event that further mitigation measures are required, KHL will ensure that no works proceed without prior approval from the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH).

Traffic Management

5.121 Construction traffic will consist of the following –

- Private vehicles owned and driven by site staff and management;
- Construction vehicles e.g., excavation plant, dump trucks; and
- Haulage and materials delivery vehicles involved in site development works.

5.122 Pinnacle Consulting Engineers has prepared a Construction Traffic Management Plan (April 2022) for KHL. All project staff and material suppliers will be required to adhere to the final CTMP.

5.123 KHL will implement the Construction Traffic Management Plan (TMP) outlining procedures to follow and prescribed routes when working on the site. The TMP shall incorporate any restrictions imposed by the planning consents, National Roads Authority and/or the Garda Síochána.

5.124 Construction traffic will access the site via the R113 roundabout. Access to the site for staff who chose to wall or cycle to work will be co located with the vehicular access

5.125 The TMP shall be circulated to all parties who are employed or have a legitimate interest in the works. The TMP contains details on public transport and cycle routes to the site.

5.126 KHL will ensure that Construction Traffic Routeing Signs are erected prior to works commencing, and that these are maintained in good and clean condition throughout the duration of the works particularly at the main site access.

5.127 Management of Construction Traffic shall include the following measures:

- Construction Staff shall be encouraged to arrive before 8:00am and after 18:00pm to avoid the peak hour periods, carpooling, where feasible;
- Managed parking shall be provided on site with staff encouraged to travel by sustainable/public transport means;
- Dedicated parking provisions shall be provided to prevent overspill onto surrounding network;
- Appointment of Construction Manager/Community Liaison Officer;
- Agreed haulage routes along designated HGV routes;
- Road cleaning and sweeping along section the R113 (Fonthill Road) to the west;
- Construction signage at all entrances and exits;
- HGVs inspected for dirt and mud before exiting onto public road network;
- Control and timing of deliveries where possible;
- Entrances and exits manned by flag men during deliveries.

5.128 KHL will ensure that the importation of any additional subsoil and hardcore fill will be sourced from local quarries and suppliers in order to reduce travel distance and traffic impact.

5.129 KHL will ensure that deliveries are received on a phased requirement basis, ensuring site works can accommodate deliveries and that queues of delivery trucks do not form on local roads or outside the site boundary.

5.130 Drivers of construction vehicles / HGVs will be advised that vehicular movements in locations, such as local community areas, shall be restricted to 50 km/h. Special speed limits of 30 km/h shall be implemented for construction traffic in sensitive areas such as school locations. Such recommended speed limits will only apply to construction traffic and shall not apply to general traffic.

5.131 During the course of the works, it is not envisaged that road closures will be required for any extended period of time. Temporary or partial road closures maybe required to facilitate utility connections such as watermain, foul water, surface water etc. Should works be required on the external road network, road opening licences will be sought from the Local Authority via the Road Management Office.

5.132 Tracked vehicles or cranes will not be allowed to travel on finished public roads without prior written permission of the construction manager and only with use of the timber mats or other approved precautions to prevent damage to the roads.

5.133 The major construction items include excavation and construction of attenuation tank, site wide drainage, housing and roads. It is anticipated that the peak of HGV movements to and from the site will be during excavation works and construction of the foundations and reducing of site levels. The peak LGV movements to and from the site will be during the construction. It is anticipated that the construction traffic impact on the surrounding local road network to the proposed development site will be minimal.

Road Condition

5.134 KHL will, in conjunction with the local authority:

- Undertake additional inspections and reviews of the roads forming the haul routes one month prior to the construction phase to record the condition of these roads at that particular time.
- Such surveys shall comprise, as a minimum, a review of video footage taken at that time, which shall confirm the condition of the road corridor immediately prior to commencement of construction. This shall include video footage of the road wearing course, the appearance and condition of boundary treatments and the condition of any overhead services that will be crossed. Visual inspections and photographic surveys will be undertaken of bridges and culverts that are along the haul roads.
- Where requested by the local authority prior to the commencement of construction operations, pavement condition surveys will also be carried along roads forming part of the haul route. These will record the baseline structural condition of the road being surveyed immediately prior to construction.
- Throughout the course of the construction of the proposed development, on-going visual inspections and monitoring of the haul roads will be undertaken to ensure any damage caused by construction traffic is recorded and that the relevant local authority is notified. Arrangements will be made to repair any such damage to an appropriate standard in a timely manner such that any disruption is minimised.
- Upon completion of the construction of the proposed development, the surveys carried out at preconstruction phase shall be repeated and a comparison of the pre and post construction surveys carried out.

Waste

5.135 The construction of the development will lead to the generation of waste. The key to minimising the production of waste is to implement the waste hierarchy of Prevent, Reuse, Recycle, Recover and Dispose. KHL will apply the principles in “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Waste Projects” to reduce the amount of materials used thereby minimising use of natural resources and reducing costs.

5.136 The Pinnacle Consulting Engineers has developed a Construction Demolition Waste Management Plan (CDWMP) for the site, and is included as Appendix 3. The CDWMP sets out the requirements of:

- Clearly identify all wastes that are likely to be produced during construction and classify them as ‘controlled’ (‘general’) or hazardous wastes;
- Minimise the waste generated;
- Reuse or recycle wherever possible;
- Collect, separate, store and contain securely and label all wastes;
- Allocate responsibility for waste management on site;
- Employ suitable licensed waste contractor(s) and audit their licence(s); and,
- Monitor and periodically audit the waste management scheme and activities.
- All C & D waste will be segregated at the waste facility for recycling and a breakdown of this waste will be provided from each company

5.137 Pre-contract meetings will be held with all relevant subcontractors. As part of the agenda of these meetings project goals and requirements will be explained to ensure subcontractors fully understand their role in the achieving the least waste from the site. Waste prevention and recycling measures and expected waste materials for each individual contractor will be discussed and methodology of waste segregation and disposal agreed.

5.138 A copy of the construction waste management plan will be issued to all subcontractors.

5.139 All waste will be classified in line with current waste legislation and guidance (including, soils though WM3 and WAC assessment). The waste will be removed from site by an appropriately licensed contractor; and disposed of at an appropriately licenced landfill or soil recovery facility.

5.140 The Site Manger/Assistant Manager will provide on-site briefing via induction on appropriate separation, handling, recycling, re-use and return methods to be used by all parties and at appropriate stages of the project where applicable. Toolbox talks will be carried out regularly on waste issues and all subcontractors will be expected to attend. This will ensure that everyone feels they are included and that their participation is meaningful.

5.141 Proposals for Recycling of waste include:

- Waste timber can be recycled where the waste is suitable for shredding
- Timber can also be sent for reprocessing as medium density fireboard

- Waste Concrete can be utilised as fill material where the required specifications can be met
- Excavation clay and C&D waste-derived aggregates are considered suitable for certain on-site construction applications.

5.142 Clear signage will be provided on skips indicating the type of waste permitted.

5.143 A waste register will be maintained to collate all waste management Duty of Care documentation such as waste transfer notes and consignment notes and waste classification documentation, where applicable.

5.144 All waste will be weighed and documented. Waste will be weighed on a site weighbridge if available and also independently by KHL (either by weighing mechanism on the truck or at the receiving facility). These records will be kept on site (both hard and soft copies).

5.145 For each movement of waste off-site, a signed docket will be obtained by the KHL Waste Manager, detailing the weight and type of the material and the source and destination of the material. This will be carried out for each material type. This system will also be linked with the delivery records. In this way, the percentage of C&D waste generated for each material can be determined. Further waste information is detailed in the CDWMP.

5.146 A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will be maintained on site at all times.

Contaminated Land

5.147 No areas of contaminated ground were identified within the subject site during the previous intrusive investigations undertaken. Samples from the majority of exploratory holes indicate that soils would be classed as inert under the Environmental Protection Agency Waste Acceptance.

5.148 Operatives should remain vigilant and report any suspicious/unusual ground conditions such as:

- Discoloured soil/made ground: material which appears different from the surrounding material (e.g. area of black material);
- Irradiance/Oily Sheen on Water ;
- Odours from material: areas which emit a strong smell (e.g. diesel, rotten eggs, almond)
- Waste material: area where relative percentage or type of waste material changes significantly; and
- Suspect Asbestos containing materials.

5.149 In the event that any significant unsuspected contamination is identified during the development of the site this shall be brought to the immediate attention of Kelland Homes Limited and where necessary the appropriate statutory authority and works in connection with the unsuspected contamination shall cease until such time as a remediation scheme has been submitted to and approved in writing by the Planning Service. The agreed remediation measures shall then be implemented in their entirety and appropriately verified in accordance with the planning consent for the site.

5.150 Any potentially contaminated material encountered will be classified and disposed of in accordance with Council Decision 2003/33/EC 10, which establishes criteria for the acceptance of waste at landfills. This is carried out by sampling and analysing the excavated material for a full waste acceptance criteria suite

Energy Strategy & Sustainability

5.151 KHL will be pro-active to implement measures to address the procurement of materials, the environmental impact of materials and the sourcing of materials. All imported material will be sourced from suppliers within a 14km radius of the site.

5.152 The target will be to have 10%, by value, or construction materials to be of a reused or recycled source.

6 COMMUNICATION

Internal Communication

6.1 Environmental mitigation measures shall be incorporated into the Risk Assessments and Method Statements (RAMS) prepared by all contractors. All RAMS shall be communicated to the workforce by the Site Manager.

6.2 Weekly construction meetings shall be held during the construction phase. These meetings shall include health, safety and environmental matters such as

- Works activities underway and planned;
- Mitigation measures required to be implemented;
- Results of weekly inspections and any audit results/ feedback;
- Any corrective and preventive actions required to be implemented;
- Identification of areas for continual improvement;
- Status of staff competence and training needs; and,
- Status of the CEMP and of any required consents and approvals and the need for review and updating.

6.3 Any issues resulting from daily or weekly audits shall be discussed with appropriate corrective actions agreed. A 'weekly look ahead' shall be provided at the construction meeting where any environmental constraints or special requirements can be discussed and agreed in advance, where required.

6.4 The Site Manager shall conduct daily construction briefings, as required, to ensure site personnel are advised of any specific environmental requirements and constraints.

6.5 Toolbox talks will be scheduled as and when necessary, over the duration of the project.

6.6 KHL will directly and promptly communicate any environmental issues with the relevant body/department via phone or email.

6.7 Site notice boards will display the Environmental Policy of the Client, emergency contacts list, relevant statutory and non-statutory advice and guidance; and any other relevant information. These environmental notice boards will be situated in prominent positions including the main reception area of the site office / compound.

External Communication

6.8 Prior to works commencing on site information leaflets may be circulated to inform local residents, and/or their representatives of each phase of the development with particular emphasis on safety, traffic management and the control of noise and dust throughout the construction period. Communications should take place at a minimum 2-weeks in advance of the works commencement for each construction phase. KHL will promote and maintain excellent relationships with adjacent local residents, businesses, occupiers and the general public through regular communication and updates on construction activities that may affect them.

6.9 All communications received by KHL that are relevant to the works in site, including enquiries and complaints, shall be passed to the Site Manager.

6.10 If required, KHL and/or any relevant contractor shall attend community engagement events, meetings, etc details of which shall be communicated to stakeholders in advance.

6.11 The Site Manager shall serve as the point of contact for the regulatory authorities for their specific activities. Communications from the regulatory authorities received at the site by the Site Manager shall be immediately reported to KHL.

6.12 KHL shall maintain a record of all communications.

6.13 Through the induction all members of the workforce shall be made aware that any direct approaches from members of the public should be directed to their Site Manager. The Site Manager shall record all approaches made by members of the public and shall advise the Client's Project Team of all comments received at the worksite from members of the public.

Public Liaison

6.14 KHL will establish early community relations with the surrounding residents and local community. All local residents and where relevant businesses shall be notified in advance of works commencing on site.

6.15 A Community Liaison Officer will be appointed for the duration of the construction project and will be responsible for complaint management, public consultation and liaison with the public.

6.16 The Community Liaison Officer will manage any complaints from the community in a fair and efficient manner and share key information associated with site development such as potential disruptive works as and when necessary.

Complaints Procedure

6.17 KHL shall put in place a system for recording, and responding to, all complaints received from third parties. The system shall include the timely reporting of all such complaints.

6.18 As a minimum the activity leading to the complaint should be stopped immediately; or where not possible to entirely stop the activity reduce it to the lowest possible level e.g., shut off all non-essential plant.

6.19 All complaints will be acknowledged by KHL on receipt and assessed to determine what information is required from all parties in order to formulate a response. The complainant will be called on the same day if a phone number is provided. Where a phone number is not provided an email response shall be given within three days. All complaints shall be recorded and investigated.

6.20 KHL will ensure that the complaints log is made available to the local authority if requested.

Documentation

6.21 The Site Manager shall be responsible for documenting and retaining safe all suitable records relating to environmental issues at the site and/or arising from site operations. Documents shall be stored in a suitable manner and backups created to safeguard the records. This CEMP shall be a controlled document and authorised latest version shall be signed and dated by the responsible person[s]. Other site data records and environmental management documentation would include, but not necessarily be limited to the following:

- Copies of relevant consents, permissions, or other approvals/ authorisations;
- Environmental data records including waste transfer notes/ records of waste collection and treatment/disposal;
- Records of any environmental incidents including actions taken and resolution;
- Records of complaints including actions taken and resolution;
- Records of all plant / equipment entering / leaving site together with any relevant compliance documentation (for instance in respect of noise or air pollutant emissions class);
- Copies of any enforcement notices or instructions issued by the local authority or any statutory regulatory body;
- Record of any prosecutions pending or resolved, and any penalties enforced;
- Records of daily site inspections;
- Records of weekly/monthly audits and minutes of environmental team briefings; and,
- Records of staff training including site inductions and toolbox talks.

7 ENVIRONMENTAL TRAINING AND AWARENESS

Inductions

7.1 No personnel, including sub-contractors, shall be permitted to commence employment on site without prior attendance at an induction.

7.2 All project personnel and sub-contractors shall receive an Environmental Induction Presentation, prior to commencement of works onsite delivered by KHL and tailored to suit the tasks and responsibilities of site personnel.

7.3 Environmental topics covered in the induction shall include but will not be limited to:

- Waste awareness, management and housekeeping;
- Water resources
- Pollution prevention
- Emergency response procedures;
- Management structure;
- Ecologically sensitive areas;
- Noise management and noise controls;
- Incident reporting; and,
- Environmental best practice.

Toolbox Talks

7.4 Regular 'Tool-Box Talks' on specialised topics shall supplement the induction course. Toolbox talks shall be used to highlight issues of concern and to disseminate new information not previously provided. They will also offer site personnel with the opportunity to provide feedback.

7.5 Tool-Box Talks shall include, but will not be limited to, instances where:

- There is a change to existing legislation, which requires an operational change;
- Site inspections or audits have identified corrective actions which require rolling out;
- Work is being undertaken in environmentally sensitive areas;
- There are significant changes in environmental conditions, i.e., heavy rainfall.

7.6 The frequency and topics of the Toolbox Talks shall depend upon the phase of construction. They shall be provided as often as necessary to address site-specific environmental requirements.

7.7 Toolbox talk topics for environmental management shall include, but will not be limited to:

- Control of noise and dust emissions.

- Environmental incident and reporting.
- Silt and water management.
- Waste management and segregation.

7.8 Records of all 'Tool-Box Talks' and attendance shall be kept in the site offices.

Specialist training

7.9 Specialist training for specific members of the construction crews will be provided as required. This may include, but will not be limited to:

- Emergency environmental crews.
- Environmental Monitoring.
- Surface Water Management.
- Waste representatives.
- Fuel tanker drivers.

8 EMERGENCY PREPAREDNESS AND RESPONSE

Emergency Response Plan

8.1 An outline Emergency Response Plan (ERP) is presented in this section of the CEMP. It provides procedures to be followed in the event of an emergency in terms of site health and safety and environmental protection.

8.2 The ERP is a working document and will require updating and submissions from KHL/PSCS throughout the various stages of the project. Where sub-contractors that are contracted on site are governed by their own emergency response procedure, arrangements will be made to allow for inclusion of the sub-contractor's ERP within this document.

Roles and Responsibilities

8.3 The Site Manager will be responsible for activating and coordinating the emergency response procedure. In a situation where the Site Manager is unavailable or incapable of coordinating the emergency response, the responsibility will be transferred to the next person in the chain of command.

Spill Kits

8.4 Spill kits capable of dealing with hydrocarbon and chemical spills shall be available at appropriate locations on site. Each storage location shall be clearly visible to the workforce, for instance by deploying clear signage.

8.5 The spill kit contents shall include absorbent pads, absorbent booms, absorbent granules and hazardous waste disposal sacks as a minimum. Regular checks of the spill kits shall be completed to ensure they remain adequately stocked to deal with environmental incidents.

8.6 Spill drills shall be performed periodically to confirm that the workforce can effectively contain and clear up potentially polluting spillages. All drills will be documented, and details kept on record for the duration of the works.

Fire Prevention

8.7 Means to raise the alarm in the event of a fire such as a siren or foghorn shall be available at the points of work. An assembly point marked with a sign shall be designated a safe distance from the active works locations and will be communicated to all members of the workforce before works commence.

8.8 The workforce shall assemble at the point for a rollcall to be carried out by the Site Security Officer. The Site Manager will decide the appropriate course of and will advise all personnel accordingly.

8.9 All individuals on site, including visitors, will be obliged to immediately sign in on arrival.

Extreme Weather

8.10 The Site Manager shall register to receive Met Eireann weather warnings. All warnings issued by Met Eireann with the potential to impact upon the works shall be communicated by the Site Manager to the workforce in a timely manner so that measures can be implemented where necessary.

8.11 KHL shall maintain provisions to deal with extreme hot weather events. Measures shall include provision of safe drinking water and adequate shade.

8.12 Seasonable variations will be monitored to take account of potential wet weather when planning stripping of topsoil and excavations to minimise soil erosion and run off.

Incident Reporting and Investigation

8.13 All incidents, including near misses, shall be classified according to the categories outlined below. All categories of environmental incident shall be reported to KHL as outlined in Table 3 below.

Table 3: Incident Reporting and Investigation

Incident Classification	Definition
Near Miss	An event, controlled through implementation of an effective incident control measure (e.g., drip tray used, effective use of noise barrier).
Minor Environmental Incident	Incidents that have caused minor harm or damage to the environment e.g. • a minor fuel spill below 20 litres onto ground which is immediately cleared; • a minor spill of a chemical not classified as presenting an ecotoxic risk; • exceeding noise levels; • silt runoff from site which does not enter into a surface water feature; or • excess dust emissions.
Major Environmental Incident	Incidents that have caused or may cause significant harm or damage to the environment e.g. • a minor fuel spill which impacts a sensitive land feature, a water body, or drains; • a major fuel spillage over 20 litres; • any spillage of a chemical which is classified as presenting an ecotoxic risk; • silt runoff from site which enters a water feature; or • receipt of a nuisance complaint.

KHL shall prepare an investigation report for all environmental incidents. The report is to include:

- Summary of the environmental incident, describing the:

- nature of the incident;
- details of any pollutant released including the type and quantity of pollutant released; and,
- location for the incident (e.g., grid reference);

- Receptors that were or could have been impacted;
- An analysis of what led to the incident occurring;
- Summary of immediate actions taken to mitigate the incident;
- Summary of any remedial action required; and,
- Lessons learned and future measures or actions to be implemented.

8.14 KHL shall report all environmental incidents that are required to be reported to the relevant statutory or regulatory bodies.

8.15 KHL Shall prepare an investigation report for all environmental incidents. The report is to include:

- Summary of the environmental incident, describing the:
  - nature of the incident;
  - details of any pollutant released including the type and quantity of pollutant released; and,
  - location for the incident (e.g., grid reference);
- Receptors that were or could have been impacted;
- An analysis of what led to the incident occurring;
- Summary of immediate actions taken to mitigate the incident;
- Summary of any remedial action required; and,
- Lessons learned and future measures or actions to be implemented.

8.16 KHL will verify the incident investigation and agree with their contractors any further actions which are to be implemented to prevent a reoccurrence of comparable incidents.

8.17 A timeline for the implementation of all actions shall be established and the contractor shall provide details of when they have been implemented.

8.18 An incident investigation shall be complete when all details have been recorded on file.

Emergency Contacts

8.19 In the event of an emergency occurrence at the Site, KHL shall determine the relevant statutory and regulatory bodies that must be notified. Notification shall be in accordance with the measures outlined above.

8.20 A list of emergency contacts is presented in Table 4 below. A copy of these contacts will be included in the Site Safety Manual and in the site office.

Table 4: List of emergency contacts

Emergency Contacts	
Contact	Contact details
Kelland Homes Limited	01-463 0630
Site Manager	Dave Ruston 085 803 7859
Contracts Manager	Gary Byrne 087 261 0398
Ecologists. RSK Ireland Ltd	0044 28 90 660 993
EPA (Dublin)	01 268 0100
National Parks and Wildlife Service's regional office	076 100 2557
National Environmental Complaints Line (NECL)	1850 365 121
Health and Safety Authority	1890 289 389
South Dublin County Council – environmental health	01 414 9000
Emergency Services – Ambulance, Fire, Gardai	999 / 112
Hospital – Tallaght University Hospital	1 414 2000
Bord Gáis Emergency	1850 20 50 50
Water & Wastewater Services @ CCC	1850 278 278
Clondalkin Garda Station	1 666 7600

Incident Response

8.21 All pollution incidents should be managed through the STOP - CONTAIN - NOTIFY concept.

8.22 As soon as an incident is identified, the first action should be to STOP and prevent further discharge to drainage/river/ground.

8.23 **CONTAIN** may constitute control of discharge in the event of a spill, or cessation of works if it is the works that are resulting in the incident, e.g., halting excavations until silt runoff is contained. It is recognised that due to personal health and safety risks it may not always be safe to stop the source of the spill, for instance if a significant volume of an unidentified substance has been released.

8.24 **NOTIFICATION** should take place as soon as practicable, and frequently can take place while further release is being stopped or while a spill is being contained.

Oil, fuel or chemical spill to ground

i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.

ii. If the spill is migrating, create a temporary bund to prevent further spread by using spill kit materials / sandbags.

iii. If drains or field ditches are located nearby, install drain seals/ deploy additional spill kit materials to prevent the spill discharging to the drain or ditch.

iv. Apply absorbent granules or pads (available from spill kit) to the affected area.

v. KHL will notify the local authority regarding the nature and scale of incident. The following information should be included in the notification:

- Time of discharge;
- Type/quantity of material discharged;
- Location of discharge; and
- Site contact details.

vi. KHL to be notified of the incident and communicate the information provided to the local authority.

vii. Containment measures should remain in place until the nature and extent of the contamination can be assessed and a remediation strategy must be prepared.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and Duty of Care requirements.

Discovery of unexpected contamination

i. On the discovery of unexpected contamination, KHL will immediately halt works in the area.

ii. If impacted materials have already been removed, they shall be returned to the excavation or placed on to a membrane, e.g., terram, to prevent migration of the contaminant to another area.

iii. Persons to report the situation to KHL.

- KHL to assess the requirement for any additional health and safety or environmental management control measures (source pathway receptor assessment);
- Control measures, if required, are implemented;
- Works supervisor to contact the designated environmental engineer;
- Environmental engineer to carry out an in-situ assessment of material to be carried out via visual inspection and/or sampling and analysis to delineate and characterise the material;
- Required assessments/sampling etc. are carried out and findings are discussed with KHL
- Management strategy for material formulated which is appropriate with in situ assessment results;

- Site Specific method statement to be produced for removal and disposal of contaminated material to be authored.
- Works proceed, and Client's Consultant provides a copy of the Method Statement to the relevant authority.
- Arrangements will be made by KHL for samples of the contamination to be collected and tested on fast turnaround.
- Contractor to only continue with works in the area once the test results have confirmed the contaminant and a safe means of working has been established.

KHL shall be free to continue works in areas unaffected by the contamination but will not speculatively continue to excavate material to find the extent of the contamination without supervision from a geo-environmental engineer.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements as well as relevant Duty of Care requirements.

Oil, fuel or chemical spill to surface water feature

i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.

ii. If source not readily identifiable, contain first (see below) then identify and prevent further release at source.

iii. Immediately deploy appropriately sized boom from nearest spill kit across affected surface water feature. Use stakes to attach it to the sides of the surface water feature. Tie booms together to increase length if required.

iv. Supplement with additional booms across the surface water feature, as required, to contain any migration of the spill not halted by the first installation.

v. KHL shall notify the local authority regarding the nature and scale of incident. The following information should be included in the notification:

   - Time of discharge;
   - Type/quantity of material discharged to surface water feature;
   - Location of discharge; and
   - Site contact details.

vi. KHL to be notified of the incident and communicate the information provided to the local authority.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

Oil, fuel or chemical spill to drainage system

i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.

ii. If source is not readily identifiable, contain the visible pollutant first, then identify and prevent further release at source.

iii. Immediately deploy appropriate drain cover(s) to affected gullies.

iv. Supplement with booms around the gully to contain any migration of the spill.

v. KHL shall notify the local authority and the relevant water company regarding the nature and scale of incident. The following information should be included in the notification:

- Time of discharge;
- Type/quantity of material discharged to the drain;
- Location of discharge, specifically which drain; and
- Site contact details.

vi. KHL to be notified of the incident and communicate the information provided to the local authority.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

Explosion / Fire Procedure

Explosion/fire incidents should also be dealt with through health and safety procedures. In the event that a fire is detected, or an explosion occurs:

i. Notify the emergency services and evacuate the area.

ii. Attempt to tackle the fire with site equipment only when it is safe to do so.

iii. Ensure that pollution of nearby water bodies including surface water drainage from fire control water or other substances is minimised. Where possible and safe to do so, any site drainage systems should be protected through the deployment of drain seals/ spill kit materials to ensure any firefighting waters are captured and can be disposed of appropriately.

iv. At a time when it is acceptable to do so, the local authority shall be notified regarding the nature and scale of incident. The following information should be included in the notification:

- Nature of the incident;
- Time and date of the incident;
- Quantity of fire control water discharged to surface water feature/drainage, where relevant;
- Location of discharge; and
- Site contact details.

Discharge of Silt

In the event of an unexpected discharge of silty water, then:

i. Prevent further release at source e.g., cease dewatering the excavations.

ii. Contain silt and protect sensitive receptors from further discharge:

- If a drain is located nearby, install drain seals or deploy spill kit materials to prevent discharge.
- If silt flow is in the direction of surface water features deploy hay bales around surface the feature.

- If silt is being generated by runoff from stockpiles deploy spill kit materials, silt fencing or move soil to form a bund at the base to prevent further silt laden runoff from the stockpile.

iii. If silt is discharged without prior approval the Environment Protection Agency shall be notified. If the silt discharge enters the drainage system, the relevant water company shall also be notified regarding the nature and scale of incident. The following information should be included in all notifications:

  - Time of discharge;
  - Type/quantity of material discharged;
  - Location of discharge, e.g., which drain or surface water feature; and
  - Site contact details.

Contamination of or by Waste Materials

i. Assess whether the area needs to be evacuated, such as if fumes are being given off.

ii. Assess whether the damage can be undone through segregation.

iii. Complete a risk assessment for the task including consideration of any COSHH risks.

iv. If it is safe to do so segregate the waste. If it is not safe to do so, then the full waste quantity is to be consigned as hazardous waste.

v. Contractor to report the incident to the client.

vi. Waste to be collected from site in accordance with normal practice.

Discovery of archaeological artefact or heritage feature

i. Immediately stop works in the area of the artefact or feature.

ii. Ensure the area is isolated from interference by erecting fencing around the discovery. Prevent vehicles from navigating through this area.

iii. Provide a safe means for pedestrians; and if possible, vehicles, to move around the isolated area.

iv. Contractor shall report the find to the client.

v. KHL to arrange for the find to be assessed by a qualified heritage or archaeological specialist. KHL to prevent tampering with the find until it has been assessed.

vi. Works to proceed in accordance with the recommendations given by the heritage or archaeological specialist.

Ecological discovery or damage

i. Immediately stop works in the area.

ii. KHL to immediately report the incident.

iii. KHL to arrange for a qualified ecologist to assess the discovery or damage caused.

iv. Works to proceed in accordance with the advice received from the ecologist.

Vandalism/theft procedure

Acts of theft and vandalism present the risk that damage may be caused to equipment containing hazardous substances that could cause pollution, or damage may be caused to measures which have been installed to prevent the release of pollution. On identifying an act of vandalism or theft:

i. KHL shall notify Garda Síochána of the incident.

ii. Inspect all fuel storage tanks/drums and equipment to ensure there has been no release of the fuel or other hazardous substances, e.g., hydraulic fluid.

iii. If a spill is identified follow the procedures for Oil, fuel or chemical spills.

iv. Inspect pollution protection measures, e.g., drainage or silt protection, to ensure it has not been interfered with. Where it is possible, correct any issues identified without causing further release.

v. Inspect site boundaries to identify the access point if not immediately clear and secure the site.

9 MONITORING AND AUDITING

Introduction

9.1 Appropriate monitoring of the environmental effects of construction enables the effectiveness of environmental mitigation to be evaluated. It also allows environmental problems to be identified and responded to at an early stage. Monitoring will also help KHL to identify and implement environmental improvements, which will contribute to the overall environmental performance of the project.

9.2 KHL will carry out appropriate environmental inspections and monitoring of environmental performance in the form of daily inspections, monthly audits and if required appropriate equipment.

9.3 Where problems are recognised, the corrective action will be identified by the inspector and subsequent corrective action undertaken within a defined time frame.

Daily Inspections

9.4 Daily inspections shall be undertaken and recorded as follows:

i. Visual inspection of the site perimeter to check for dust deposition (evident as soiling and marking) on vegetation, cars, windowsills and other objects.

ii. Visual inspection of the local haul roads to check their condition to ensure there is no build-up of dust or earth deposits liable to cause dust emissions as vehicles pass.

iii. Vehicle, equipment and plant inspections shall be completed to check the absence of damage or maintenance issues and that it is correctly functioning.

iv. Visual inspection of all acoustic barriers / screening to check they are present and in good condition.

v. Visual inspection of waste containers and waste storage areas to verify wastes are being correctly segregated and to confirm the absence of mixing of hazardous and non-hazardous wastes.

vi. Visual inspection of all site areas to ensure there is no deposited or wind-blown litter.

vii. If a waste collection is made, a check shall be made of the Waste Transfer Note / Hazardous Waste Consignment Note provided for the collection.

9.5 On all days when potentially dust emitting activities are being conducted, the level of dust generation shall be kept under constant review. A record shall be added to the official site diary when such activities are conducted, the dust emission conditions observed and; when necessary, the mitigation measures taken.

9.6 Any elements of the site management found to be in an unsatisfactory condition during the site inspection shall be addressed on the day. In the event it is not possible to address the matter on the day it is raised; a note of the reason why shall be made on the inspection record sheet.

Environmental Audits

9.7 Formal audits will be against an audit checklist, which will provide a mechanism to monitor and assess compliance against all project performance requirements and standards.

9.8 Only suitably trained and competent staff will be authorised to perform environmental audits at a suitable frequency to be determined by the nature / duration of the work.

9.9 All aspects of the environmental management at the site shall be assessed against this CEMP.

9.10 The audit shall include checks of the site records including the daily inspection record sheets, vehicle arrival logs and waste disposal paperwork. All audits shall be documented; where audit actions are raised, close out of these actions shall be assessed at the following audit.

Environmental Monitoring

9.11 Environmental monitoring shall be carried out as necessary and requirements for environmental monitoring shall be reviewed as consents are received and consultations completed.

9.12 Key parameters that will require environmental monitoring include:

- Energy use arising from construction site activities;
- Water use arising from construction site activities;
- Waste generation during construction; to be monitored as part of the Site Waste Management Plan to ensure the appropriate treatment, handling, management and disposal measures are applied. Records shall be kept of quantities and types of waste handled;
- Noise Control audits;
- Inspections of the surface water course and existing surface water system;
- The site compound including fuel storage and spill control equipment;
- Construction Plant and Equipment; and,
- Dust and noise pollution arising from construction site activities.

9.13 In the unlikely event that noisy plant or machinery are to be operated that may have the potential to exceed the daily noise target (70 dB $L_{Aeq,1hr}$) or following a complaint, spot checks and/or continuous monitoring may be undertaken using a sound level meter to assess noise levels during such activities. This shall be kept under review and appropriate mitigation measures instigated if necessary.

9.14 Baseline water quality samples will be collected prior to the commencement of construction to establish baseline water quality in the stream. Routine monitoring will then be undertaken throughout the construction phase. The monitoring will include a daily visual assessment of conditions at the discharge point. The results of the daily visual inspections will be maintained in an inspection log.

9.15 Documentation from environmental monitoring shall be maintained and made available as appropriate.

9.16 KHL shall be responsible for monitoring all site works.

Environmental incident and corrective action reporting

9.17 All environmental incidents and near misses shall be reported and investigated by KHL. All environmental incidents shall be reported as soon as possible. Where relevant, the appropriate statutory authority (e.g., EPA) shall be informed immediately. Copies of incident investigation reports shall be supplied by KHL and action taken to prevent recurrence.

9.18 All corrective action, incident and near miss report forms shall be held in a register maintained at the construction site office.

Non-conformity and corrective action

9.19 Where KHL has a concern or raises an issue for resolution, or where potential issues are raised from an inspection or audit of the site/ operations, or by a regulatory authority, KHL shall investigate the root cause and any implications arising from the issue and shall if necessary following discussions shall implement measures to rectify the problem.

9.20 KHL shall monitor the effectiveness of the corrective action and report the outcome to the client and where relevant the regulatory authority. All documentation of the issue/ event and corrective action/ outcome shall be retained.

9.21 Where necessary the CEMP and any associated documentation shall be revised and re-issued to avoid recurrence of the issue/ problem.

Review and updates to the CEMP

9.22 This final CEMP will be reviewed on a monthly basis; or following any significant change to the work activities, client requirements, legislation or guidance and updated accordingly. Therefore, the final CEMP will be continuously updated as required.

APPENDIX 1 :
PHASING AND COMPOUND PLANS

LEGEND

- Phase K1
- Phase K2
- Phase K2A

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RIAI	**Clarification of Further Information**
	DAVEY + SMITH ARCHITECTS

DAVEY + SMITH ARCHITECTS Unit 13,THE SEAPOINT BUILDING, 44-45 CLONTARF ROAD, CLONTARF, DUBLIN 3 I PH: 01 2447638 I EMAIL: info@davey-smith.com I WEB: www>davey-smith.com

Layout ID:	**2004 -**	Scale:	**1:1000**
		Job No:	**2004**
Project:	**Clonburris, K1**	Series:	**Planning**
		Date:	**24/03/2023**
Drawing Name:	**Phasing Plan Proposal**	Status:	**Clarification of Further Information**

Platform
Clondalkin-Fonthill Railway Station
CAPPAGH LANE
LUCAN NEWLANDS ROAD
FONTHILL ROAD
Car Park
POS 1,001.9 m²
POS 6,557.2 m²
POS 2,182.2 m²
Kickabout
POS 1,912.9 m²
POS 346.3 m²
Communal Open Space 257.9 m²
Communal Open Space on 1st Floor 71.0 m²
Communal Open Space 97.5 m²
K1L Compound Location
Whitton Avenue
WALKWAY - ACCESS TO CANAL CORRIDOR
CappaghmoreAn Cheapach Mhór
N

CONSTRUCTION

DAVEY + SMITH ARCHITECTS

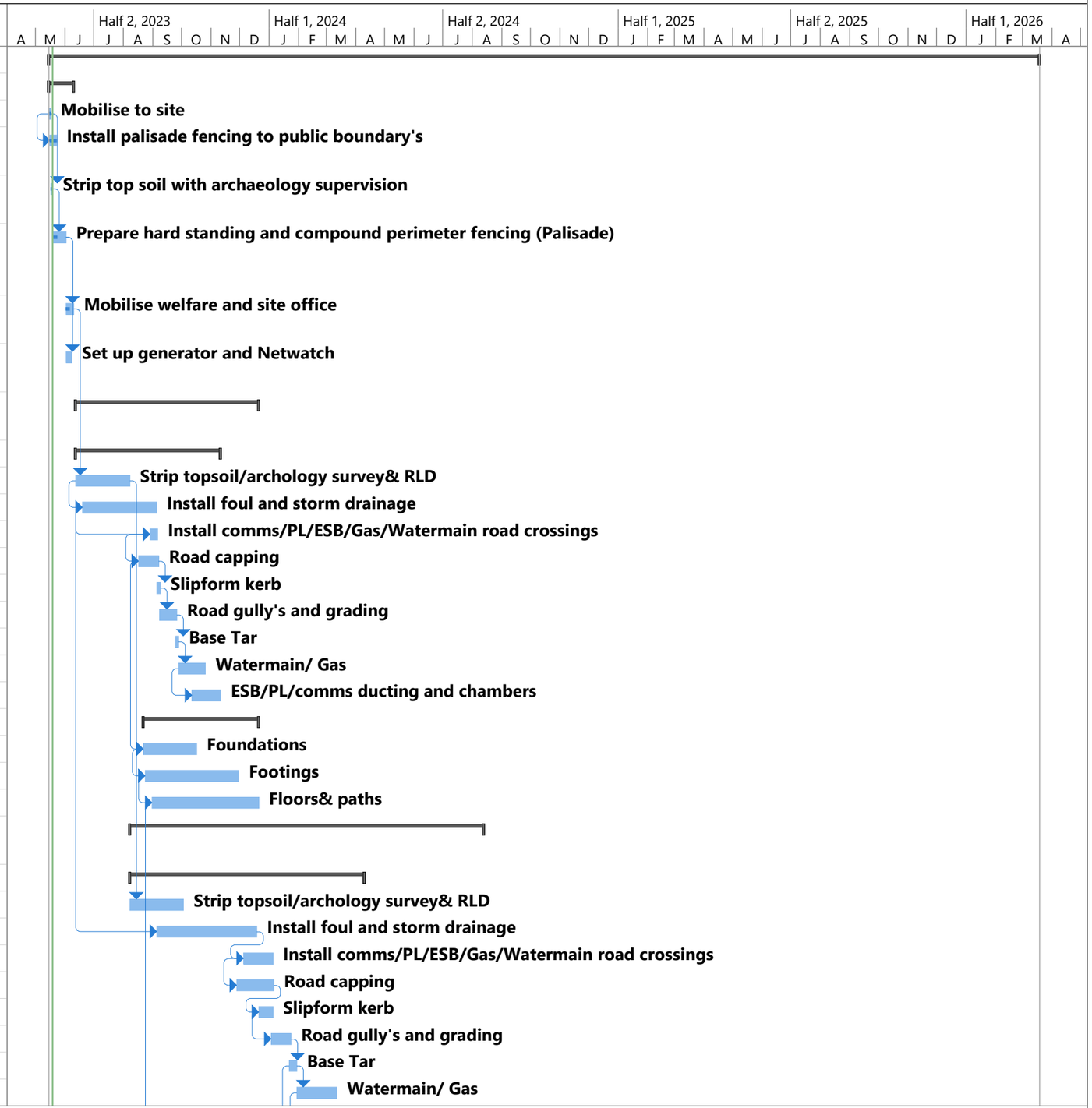
DAVEY + SMITH ARCHITECTS Unit 13,THE SEAPOINT BUILDING, 44-45 CLONTARF ROAD, CLONTARF, DUBLIN 3 I PH: 01 2447638 I EMAIL: info@davey-smith.com I WEB: www>davey-smith.com

Layout ID:	**2004 - Proposed Site Plan**	Scale:	
		Job No:	2004
Project:	**Clonburris, K1**	Series:	Planning
		Date:	09/05/2023
Drawing Name:	**- Compound Location**	Status:	CONSTRUCTION
		Revision:	

APPENDIX 2 :
MASTER PROGRAMME

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
1		**KHL Clonburris programme**	**689 days?**	**Mon 15/05/23**	**Wed 18/03/26**
2		**Site set up and compound**	**20 days**	**Mon 15/05/23**	**Fri 09/06/23**
3		Mobilise to site	2 days	Mon 15/05/23	Tue 16/05/23
4		Install palisade fencing to public boundary's	5 days	Tue 16/05/23	Mon 22/05/23
5		Strip top soil with archaeology supervision	2 days	Wed 17/05/23	Thu 18/05/23
6		Prepare hard standing and compound perimeter fencing (Palisade)	10 days	Fri 19/05/23	Thu 01/06/23
7		Mobilise welfare and site office	6 days	Fri 02/06/23	Fri 09/06/23
8		Set up generator and Netwatch	4 days	Fri 02/06/23	Wed 07/06/23
9		**K1 Development & substructural works**	**127 days**	**Mon 12/06/23**	**Wed 20/12/23**
10		**Development works**	**99 days**	**Mon 12/06/23**	**Fri 10/11/23**
11		Strip topsoil/archology survey &	30 days	Mon 12/06/23	Mon 07/08/23
12		Install foul and storm drainage	45 days	Mon 19/06/23	Mon 04/09/23
13		Install comms/PL/ESB/Gas/Wate	6 days	Tue 29/08/23	Tue 05/09/23
14		Road capping	15 days	Thu 17/08/23	Wed 06/09/23
15		Slipform kerb	4 days	Tue 05/09/23	Fri 08/09/23
16		Road gully's and grading	12 days	Fri 08/09/23	Mon 25/09/23
17		Base Tar	3 days	Mon 25/09/23	Wed 27/09/23
18		Watermain/ Gas	20 days	Thu 28/09/23	Wed 25/10/23
19		ESB/PL/comms ducting and chan	22 days	Thu 12/10/23	Fri 10/11/23
20		**Substructural works**	**87 days**	**Tue 22/08/23**	**Wed 20/12/23**
21		Foundations	40 days	Tue 22/08/23	Mon 16/10/23
22		Footings	70 days	Thu 24/08/23	Wed 29/11/23
23		Floors & paths	80 days	Thu 31/08/23	Wed 20/12/23
24		**K2 Development & substructural works**	**242 days**	**Tue 08/08/23**	**Mon 12/08/24**
25		**Development works**	**163 days**	**Tue 08/08/23**	**Tue 09/04/24**
26		Strip topsoil/archology survey &	40 days	Tue 08/08/23	Mon 02/10/23
27		Install foul and storm drainage	75 days	Tue 05/09/23	Mon 18/12/23
28		Install comms/PL/ESB/Gas/Wate	16 days	Tue 05/12/23	Thu 04/01/24
29		Road capping	22 days	Tue 28/11/23	Fri 05/01/24
30		Slipform kerb	4 days	Thu 21/12/23	Thu 04/01/24
31		Road gully's and grading	15 days	Wed 03/01/24	Tue 23/01/24
32		Base Tar	6 days	Mon 22/01/24	Mon 29/01/24
33		Watermain/ Gas	30 days	Tue 30/01/24	Mon 11/03/24



Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

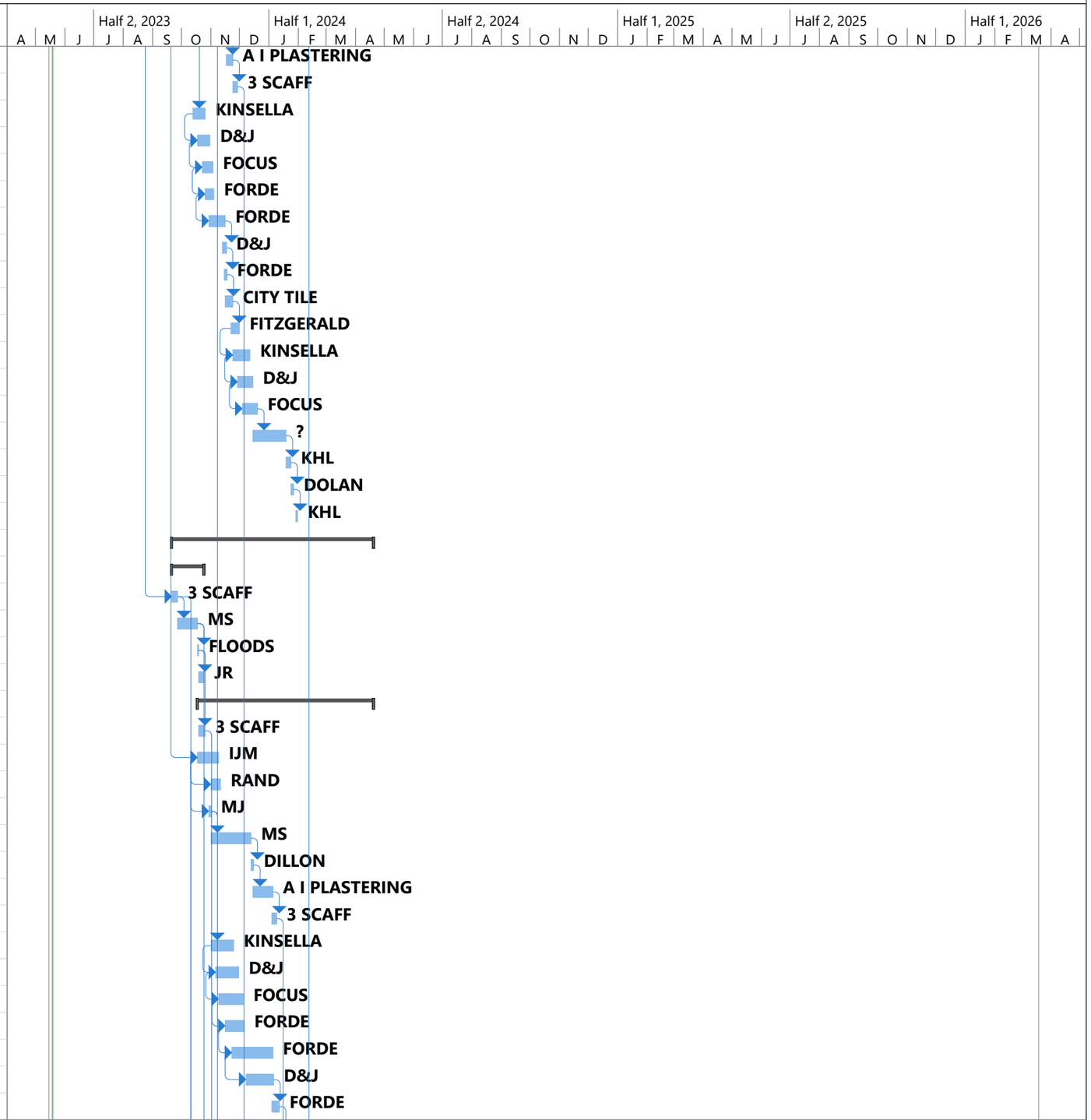
ID	Task Mode	Task Name	Duration	Start	Finish
34		ESB/PL/comms ducting and chan	30 days	Tue 20/02/24	Tue 09/04/24
35		**Substructural works**	**120 days**	**Mon 05/02/24**	**Mon 12/08/24**
36		Foundations	65 days	Mon 05/02/24	Mon 13/05/24
37		Footings	95 days	Mon 12/02/24	Mon 01/07/24
38		Floors & paths	110 days	Mon 19/02/24	Mon 12/08/24
39		**Super structure programme**	**612 days?**	**Thu 14/09/23**	**Wed 18/03/26**
40		**K1**	**612 days?**	**Thu 14/09/23**	**Wed 18/03/26**
41		**K1-A**	**144 days?**	**Thu 14/09/23**	**Fri 19/04/24**
42		**Block 22 to 25**	**63 days?**	**Thu 14/09/23**	**Mon 11/12/23**
43		ERECT SCAFFOLD	3 days	Thu 14/09/23	Mon 18/09/23
44		ERECT TIMBER FRAME	8 days	Tue 19/09/23	Thu 28/09/23
45		TILE ROOF/ PV PANELS	4 days	Tue 26/09/23	Fri 29/09/23
46		WINDOWS	1 day	Thu 28/09/23	Thu 28/09/23
47		MASONRY	15 days	Fri 29/09/23	Thu 19/10/23
48		FACIA & SOFFIT	2 days	Fri 20/10/23	Mon 23/10/23
49		RENDER	4 days	Tue 24/10/23	Fri 27/10/23
50		RELEASE SCAFFOLD	2 days	Mon 30/10/23	Tue 31/10/23
51		CARPENTRY 1ST FIX	6 days	Fri 29/09/23	Fri 06/10/23
52		PLUMB 1ST FIX	6 days	Thu 05/10/23	Thu 12/10/23
53		ELEC 1ST FIX	6 days	Wed 11/10/23	Wed 18/10/23
54		DRYWALL	5 days	Tue 17/10/23	Mon 23/10/23
55		TAPE JOINTING	11 days	Thu 19/10/23	Thu 02/11/23
56		INSTALL BOILERS & BATHS	3 days	Wed 01/11/23	Fri 03/11/23
57		SAND WALLS	2 days	Thu 02/11/23	Fri 03/11/23
58		TILER	4 days	Thu 02/11/23	Tue 07/11/23
59		KIT & ROBE	5 days	Mon 06/11/23	Fri 10/11/23
60		CARPENTRY 2ND FIX	8 days	Wed 08/11/23	Fri 17/11/23
61		PLUMB 2ND FIX	8 days	Fri 10/11/23	Tue 21/11/23
62		ELEC 2ND FIX	8 days	Tue 14/11/23	Thu 23/11/23
63		PAINTING	12 days	Fri 17/11/23	Mon 04/12/23
64		INITIAL CLEAN	2 days	Tue 05/12/23	Wed 06/12/23
65		CAULKING	2 days	Thu 07/12/23	Fri 08/12/23
66		PRE SNAG	1 day?	Mon 11/12/23	Mon 11/12/23
67		**Block 1 to 5**	**89 days**	**Tue 19/09/23**	**Tue 30/01/24**
68		ERECT SCAFFOLD	4 days	Tue 19/09/23	Fri 22/09/23
69		ERECT TIMBER FRAME	12 days	Wed 27/09/23	Thu 12/10/23
70		TILE ROOF/ PV PANELS	6 days	Wed 04/10/23	Wed 11/10/23
71		WINDOWS	2 days	Wed 11/10/23	Thu 12/10/23
72		MASONRY	23 days	Fri 13/10/23	Tue 14/11/23
73		FACIA & SOFFIT	2 days	Wed 15/11/23	Thu 16/11/23

Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
74		RENDER	5 days	Fri 17/11/23	Thu 23/11/23
75		RELEASE SCAFFOLD	3 days	Fri 24/11/23	Tue 28/11/23
76		CARPENTRY 1ST FIX	9 days	Fri 13/10/23	Wed 25/10/23
77		PLUMB 1ST FIX	9 days	Wed 18/10/23	Mon 30/10/23
78		ELEC 1ST FIX	9 days	Mon 23/10/23	Thu 02/11/23
79		DRYWALL	7 days	Thu 26/10/23	Fri 03/11/23
80		TAPE JOINTING	13 days	Mon 30/10/23	Wed 15/11/23
81		INSTALL BOILERS & BATHS	4 days	Mon 13/11/23	Thu 16/11/23
82		SAND WALLS	3 days	Wed 15/11/23	Fri 17/11/23
83		TILER	6 days	Thu 16/11/23	Thu 23/11/23
84		KIT & ROBE	7 days	Wed 22/11/23	Thu 30/11/23
85		CARPENTRY 2ND FIX	12 days	Fri 24/11/23	Mon 11/12/23
86		PLUMB 2ND FIX	12 days	Wed 29/11/23	Thu 14/12/23
87		ELEC 2ND FIX	12 days	Mon 04/12/23	Tue 19/12/23
88		PAINTING	18 days	Fri 15/12/23	Thu 18/01/24
89		INITIAL CLEAN	3 days	Fri 19/01/24	Tue 23/01/24
90		CAULKING	3 days	Wed 24/01/24	Fri 26/01/24
91		PRE SNAG	2 days	Mon 29/01/24	Tue 30/01/24
92		**Duplex block A 6 to 21**	**139 days**	**Thu 21/09/23**	**Fri 19/04/24**
93		**Masonry to 1st floor slab**	**24 days**	**Thu 21/09/23**	**Tue 24/10/23**
94		Scaffolding	4 days	Thu 21/09/23	Tue 26/09/23
95		Masonry	15 days	Wed 27/09/23	Tue 17/10/23
96		Precast floors	1 day	Wed 18/10/23	Wed 18/10/23
97		Structural slab	4 days	Thu 19/10/23	Tue 24/10/23
98		**Superstructure 1st and 2nd**	**120 days**	**Wed 18/10/23**	**Fri 19/04/24**
99		ERECT SCAFFOLD	5 days	Thu 19/10/23	Wed 25/10/23
100		ERECT TIMBER FRAME	16 days	Wed 18/10/23	Wed 08/11/23
101		TILE ROOF/ PV PANELS	8 days	Wed 01/11/23	Fri 10/11/23
102		WINDOWS	2 days	Mon 30/10/23	Tue 31/10/23
103		MASONRY	30 days	Wed 01/11/23	Tue 12/12/23
104		FACIA & SOFFIT	3 days	Wed 13/12/23	Fri 15/12/23
105		RENDER	8 days	Fri 15/12/23	Thu 04/01/24
106		RELEASE SCAFFOLD	3 days	Thu 04/01/24	Mon 08/01/24
107		CARPENTRY 1ST FIX	18 days	Wed 01/11/23	Fri 24/11/23
108		PLUMB 1ST FIX	18 days	Mon 06/11/23	Wed 29/11/23
109		ELEC 1ST FIX	18 days	Thu 09/11/23	Mon 04/12/23
110		DRYWALL	14 days	Thu 16/11/23	Tue 05/12/23
111		TAPE JOINTING	24 days	Thu 23/11/23	Thu 04/01/24
112		INSTALL BOILERS & BATH	14 days	Fri 08/12/23	Fri 05/01/24
113		SAND WALLS	6 days	Thu 04/01/24	Thu 11/01/24

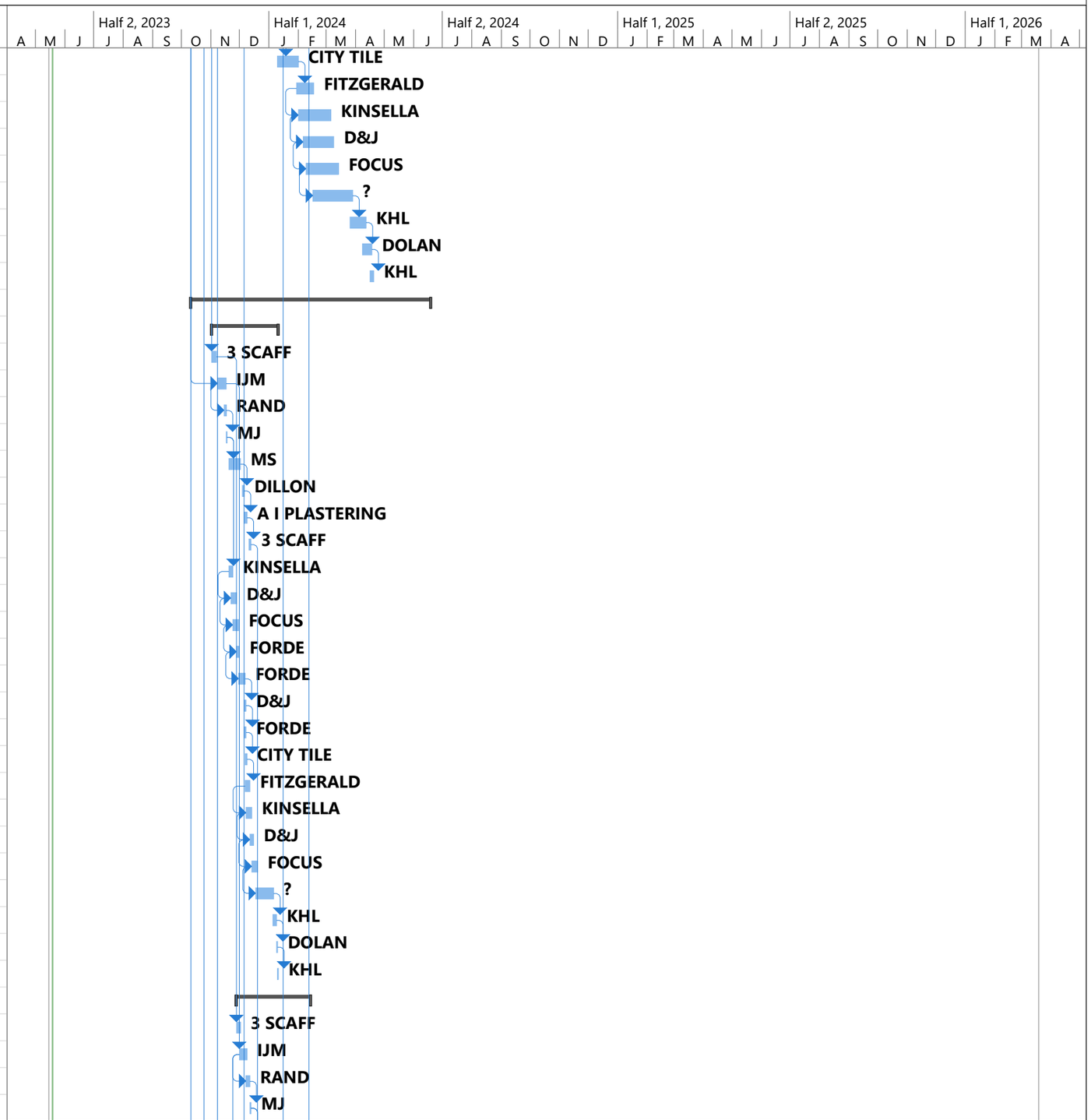


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
114		TILER	16 days	Wed 10/01/24	Wed 31/01/24
115		KIT & ROBE	14 days	Tue 30/01/24	Fri 16/02/24
116		CARPENTRY 2ND FIX	24 days	Thu 01/02/24	Tue 05/03/24
117		PLUMB 2ND FIX	24 days	Tue 06/02/24	Fri 08/03/24
118		ELEC 2ND FIX	24 days	Fri 09/02/24	Wed 13/03/24
119		PAINTING	30 days	Fri 16/02/24	Thu 28/03/24
120		INITIAL CLEAN	7 days	Tue 26/03/24	Thu 11/04/24
121		CAULKING	8 days	Mon 08/04/24	Wed 17/04/24
122		PRE SNAG	4 days	Tue 16/04/24	Fri 19/04/24
123		**K1-B**	**167 days?**	**Wed 11/10/23**	**Tue 18/06/24**
124		**Block 46/47**	**43 days?**	**Thu 02/11/23**	**Wed 10/01/24**
125		ERECT SCAFFOLD	3 days	Thu 02/11/23	Mon 06/11/23
126		ERECT TIMBER FRAME	7 days	Wed 08/11/23	Thu 16/11/23
127		TILE ROOF/ PV PANELS	2 days	Wed 15/11/23	Thu 16/11/23
128		WINDOWS	1 day	Fri 17/11/23	Fri 17/11/23
129		MASONRY	10 days	Mon 20/11/23	Fri 01/12/23
130		FACIA & SOFFIT	2 days	Mon 04/12/23	Tue 05/12/23
131		RENDER	3 days	Wed 06/12/23	Fri 08/12/23
132		RELEASE SCAFFOLD	2 days	Mon 11/12/23	Tue 12/12/23
133		CARPENTRY 1ST FIX	4 days	Mon 20/11/23	Thu 23/11/23
134		PLUMB 1ST FIX	4 days	Wed 22/11/23	Mon 27/11/23
135		ELEC 1ST FIX	4 days	Fri 24/11/23	Wed 29/11/23
136		DRYWALL	3 days	Tue 28/11/23	Thu 30/11/23
137		TAPE JOINTING	5 days	Thu 30/11/23	Wed 06/12/23
138		INSTALL BOILERS & BATHS	2 days	Wed 06/12/23	Thu 07/12/23
139		SAND WALLS	2 days	Wed 06/12/23	Thu 07/12/23
140		TILER	2 days	Thu 07/12/23	Fri 08/12/23
141		KIT & ROBE	3 days	Thu 07/12/23	Mon 11/12/23
142		CARPENTRY 2ND FIX	4 days	Fri 08/12/23	Wed 13/12/23
143		PLUMB 2ND FIX	4 days	Tue 12/12/23	Fri 15/12/23
144		ELEC 2ND FIX	4 days	Thu 14/12/23	Tue 19/12/23
145		PAINTING	8 days	Mon 18/12/23	Fri 05/01/24
146		INITIAL CLEAN	2 days	Fri 05/01/24	Mon 08/01/24
147		CAULKING	1 day	Tue 09/01/24	Tue 09/01/24
148		PRE SNAG	1 day?	Wed 10/01/24	Wed 10/01/24
149		**Block 26 to 28**	**49 days?**	**Tue 28/11/23**	**Tue 13/02/24**
150		ERECT SCAFFOLD	4 days	Tue 28/11/23	Fri 01/12/23
151		ERECT TIMBER FRAME	6 days	Fri 01/12/23	Fri 08/12/23
152		TILE ROOF/ PV PANELS	2 days	Fri 08/12/23	Mon 11/12/23
153		WINDOWS	1 day	Tue 12/12/23	Tue 12/12/23

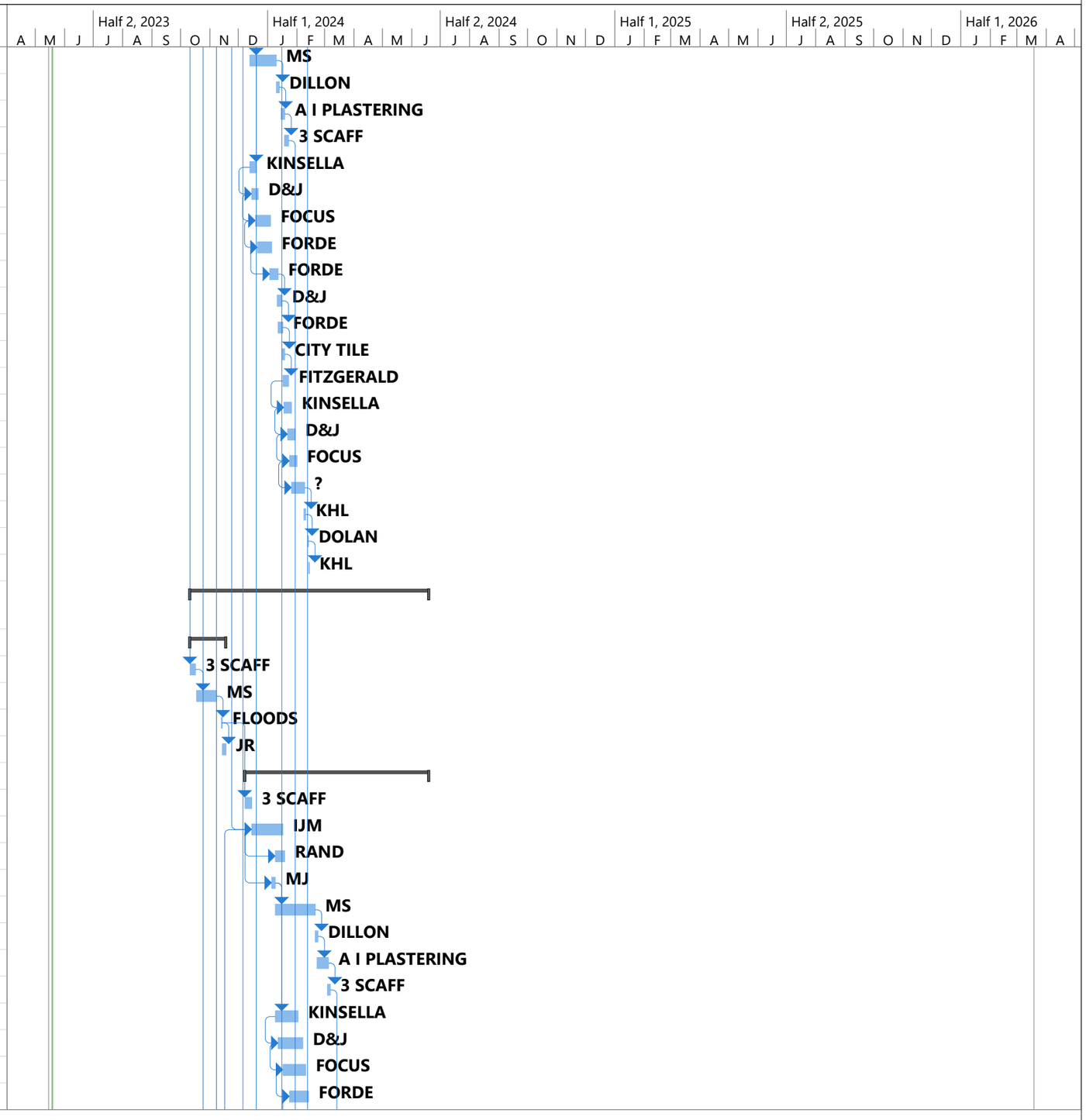


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
154		MASONRY	13 days	Wed 13/12/23	Tue 09/01/24
155		FACIA & SOFFIT	3 days	Wed 10/01/24	Fri 12/01/24
156		RENDER	4 days	Mon 15/01/24	Thu 18/01/24
157		RELEASE SCAFFOLD	2 days	Fri 19/01/24	Mon 22/01/24
158		CARPENTRY 1ST FIX	5 days	Wed 13/12/23	Tue 19/12/23
159		PLUMB 1ST FIX	5 days	Fri 15/12/23	Thu 21/12/23
160		ELEC 1ST FIX	5 days	Tue 19/12/23	Wed 03/01/24
161		DRYWALL	4 days	Thu 21/12/23	Thu 04/01/24
162		TAPE JOINTING	7 days	Wed 03/01/24	Thu 11/01/24
163		INSTALL BOILERS & BATHS	3 days	Thu 11/01/24	Mon 15/01/24
164		SAND WALLS	3 days	Fri 12/01/24	Tue 16/01/24
165		TILER	3 days	Tue 16/01/24	Thu 18/01/24
166		KIT & ROBE	4 days	Wed 17/01/24	Mon 22/01/24
167		CARPENTRY 2ND FIX	6 days	Thu 18/01/24	Thu 25/01/24
168		PLUMB 2ND FIX	6 days	Mon 22/01/24	Mon 29/01/24
169		ELEC 2ND FIX	6 days	Wed 24/01/24	Wed 31/01/24
170		PAINTING	10 days	Fri 26/01/24	Thu 08/02/24
171		INITIAL CLEAN	2 days	Thu 08/02/24	Fri 09/02/24
172		CAULKING	1 day	Mon 12/02/24	Mon 12/02/24
173		PRE SNAG	1 day?	Tue 13/02/24	Tue 13/02/24
174		**Duplex block B 30 to 45**	**167 days**	**Wed 11/10/23**	**Tue 18/06/24**
175		**Masonry to 1st floor slab**	**28 days**	**Wed 11/10/23**	**Fri 17/11/23**
176		Scaffolding	4 days	Wed 11/10/23	Mon 16/10/23
177		Masonry	15 days	Wed 18/10/23	Tue 07/11/23
178		Precast floors	1 day	Mon 13/11/23	Mon 13/11/23
179		Structural slab	4 days	Tue 14/11/23	Fri 17/11/23
180		**Superstructure 1st and 2nd**	**125 days**	**Fri 08/12/23**	**Tue 18/06/24**
181		ERECT SCAFFOLD	5 days	Fri 08/12/23	Thu 14/12/23
182		ERECT TIMBER FRAME	16 days	Fri 15/12/23	Tue 16/01/24
183		TILE ROOF/ PV PANELS	8 days	Tue 09/01/24	Thu 18/01/24
184		WINDOWS	2 days	Fri 05/01/24	Mon 08/01/24
185		MASONRY	30 days	Tue 09/01/24	Mon 19/02/24
186		FACIA & SOFFIT	3 days	Tue 20/02/24	Thu 22/02/24
187		RENDER	8 days	Thu 22/02/24	Mon 04/03/24
188		RELEASE SCAFFOLD	3 days	Mon 04/03/24	Wed 06/03/24
189		CARPENTRY 1ST FIX	18 days	Tue 09/01/24	Thu 01/02/24
190		PLUMB 1ST FIX	18 days	Fri 12/01/24	Tue 06/02/24
191		ELEC 1ST FIX	18 days	Wed 17/01/24	Fri 09/02/24
192		DRYWALL	14 days	Wed 24/01/24	Mon 12/02/24

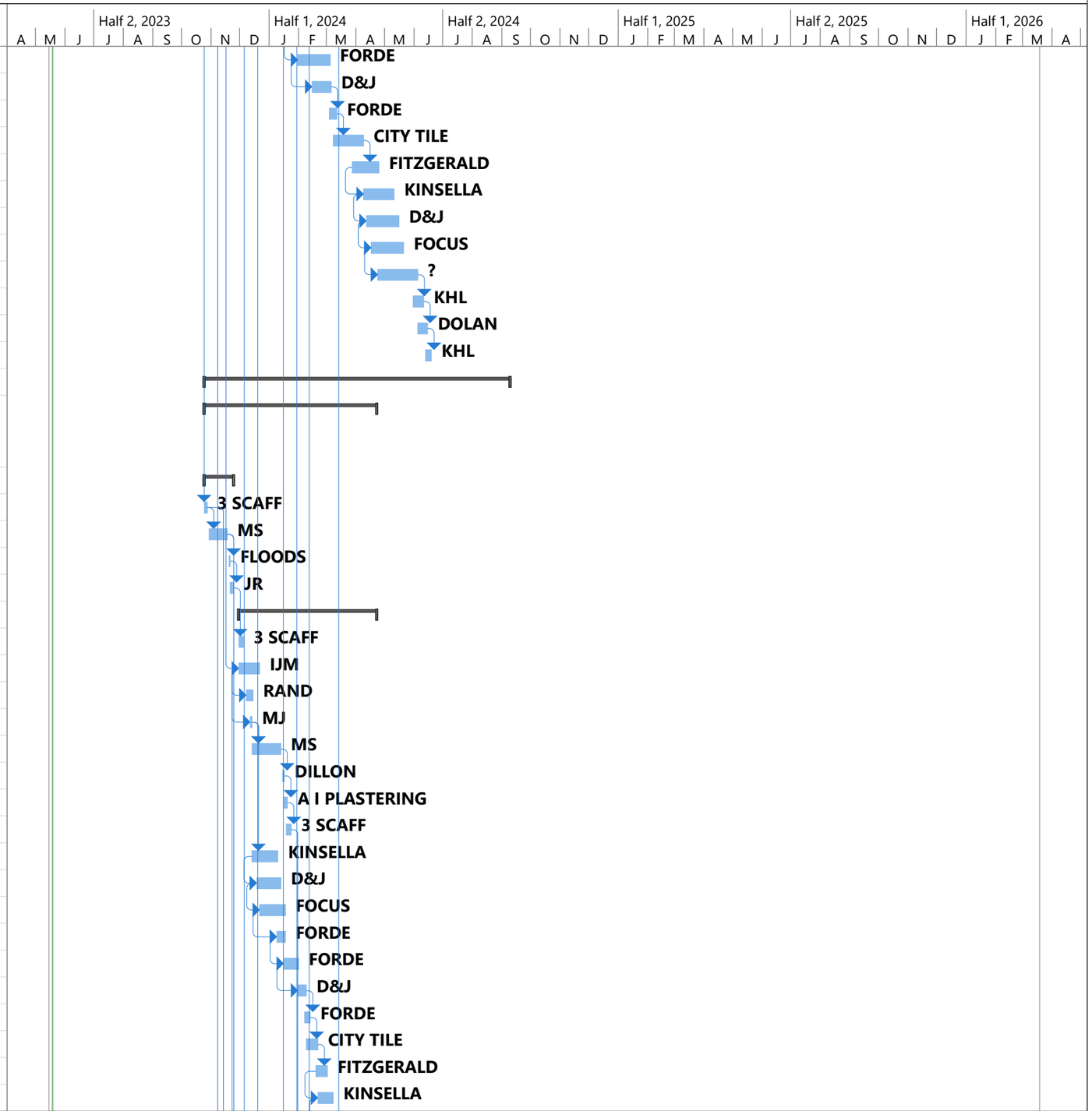


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
193		TAPE JOINTING	24 days	Wed 31/01/24	Mon 04/03/24
194		INSTALL BOILERS & BATH	14 days	Thu 15/02/24	Tue 05/03/24
195		SAND WALLS	6 days	Mon 04/03/24	Mon 11/03/24
196		TILER	16 days	Fri 08/03/24	Mon 08/04/24
197		KIT & ROBE	14 days	Thu 28/03/24	Wed 24/04/24
198		CARPENTRY 2ND FIX	24 days	Tue 09/04/24	Fri 10/05/24
199		PLUMB 2ND FIX	24 days	Fri 12/04/24	Wed 15/05/24
200		ELEC 2ND FIX	24 days	Wed 17/04/24	Mon 20/05/24
201		PAINTING	30 days	Wed 24/04/24	Tue 04/06/24
202		INITIAL CLEAN	7 days	Fri 31/05/24	Mon 10/06/24
203		CAULKING	8 days	Wed 05/06/24	Fri 14/06/24
204		PRE SNAG	4 days	Thu 13/06/24	Tue 18/06/24
205		**K1-C**	**206 days?**	**Wed 25/10/23**	**Mon 09/09/24**
206		**Duplex Block K 213 to 218 with commercial space**	**116 days**	**Wed 25/10/23**	**Mon 22/04/24**
207		**Masonry to 1st floor slab**	**23 days**	**Wed 25/10/23**	**Fri 24/11/23**
208		Scaffolding	3 days	Wed 25/10/23	Fri 27/10/23
209		Masonry	15 days	Mon 30/10/23	Fri 17/11/23
210		Precast floors	1 day	Mon 20/11/23	Mon 20/11/23
211		Structural slab	4 days	Tue 21/11/23	Fri 24/11/23
212		**Superstructure 1st and 2nd**	**90 days**	**Thu 30/11/23**	**Mon 22/04/24**
213		ERECT SCAFFOLD	3 days	Thu 30/11/23	Mon 04/12/23
214		ERECT TIMBER FRAME	16 days	Thu 30/11/23	Thu 21/12/23
215		TILE ROOF/ PV PANELS	5 days	Fri 08/12/23	Thu 14/12/23
216		WINDOWS	2 days	Tue 12/12/23	Wed 13/12/23
217		MASONRY	15 days	Thu 14/12/23	Fri 12/01/24
218		FACIA & SOFFIT	2 days	Mon 15/01/24	Tue 16/01/24
219		RENDER	4 days	Tue 16/01/24	Fri 19/01/24
220		RELEASE SCAFFOLD	3 days	Fri 19/01/24	Tue 23/01/24
221		CARPENTRY 1ST FIX	12 days	Thu 14/12/23	Tue 09/01/24
222		PLUMB 1ST FIX	12 days	Tue 19/12/23	Fri 12/01/24
223		ELEC 1ST FIX	12 days	Fri 22/12/23	Wed 17/01/24
224		DRYWALL	7 days	Tue 09/01/24	Wed 17/01/24
225		TAPE JOINTING	12 days	Tue 16/01/24	Wed 31/01/24
226		INSTALL BOILERS & BATH	7 days	Wed 31/01/24	Thu 08/02/24
227		SAND WALLS	4 days	Wed 07/02/24	Mon 12/02/24
228		TILER	8 days	Fri 09/02/24	Tue 20/02/24
229		KIT & ROBE	10 days	Mon 19/02/24	Fri 01/03/24
230		CARPENTRY 2ND FIX	12 days	Wed 21/02/24	Thu 07/03/24

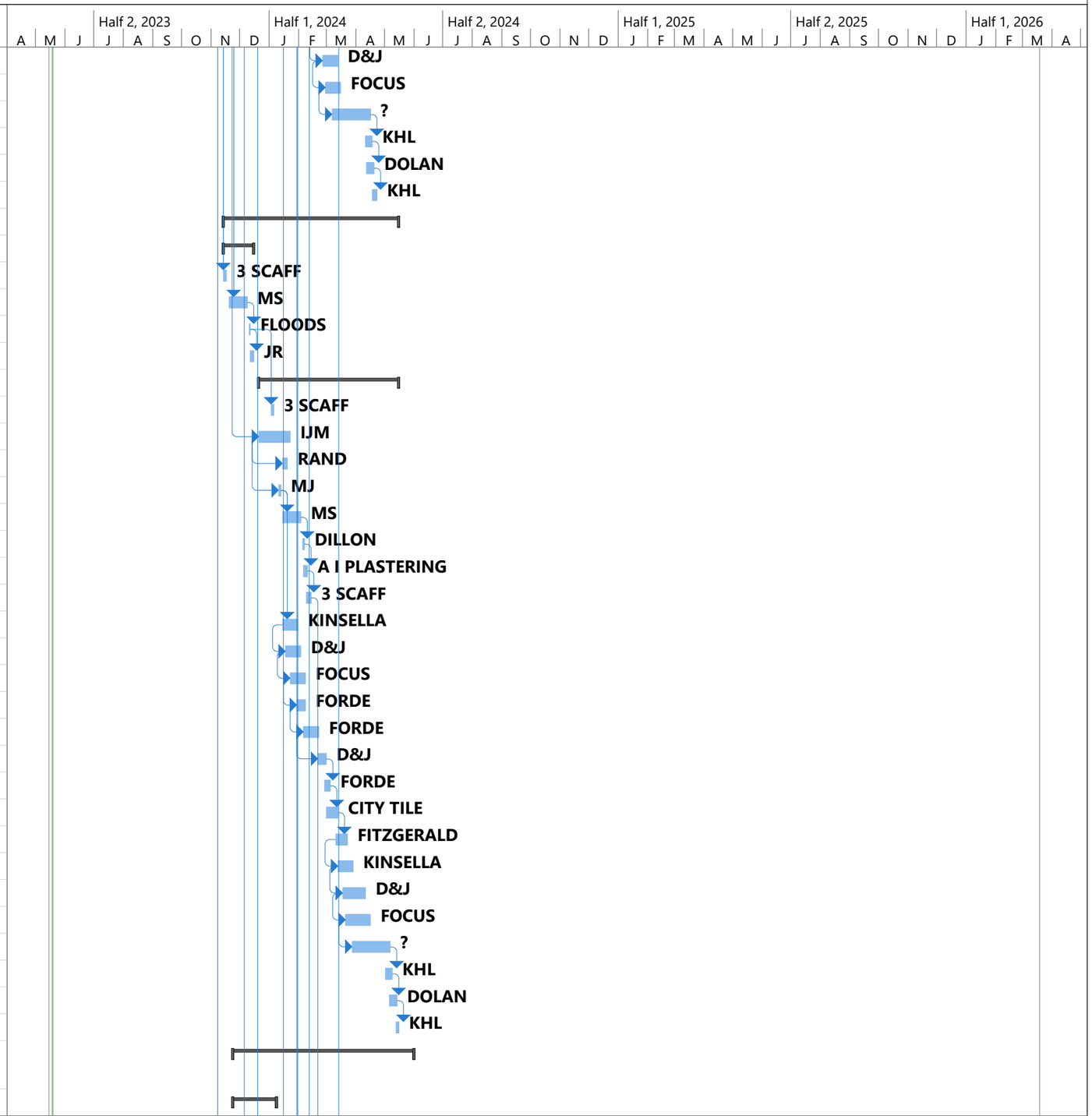


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
231		PLUMB 2ND FIX	12 days	Mon 26/02/24	Tue 12/03/24
232		ELEC 2ND FIX	12 days	Thu 29/02/24	Fri 15/03/24
233		PAINTING	22 days	Thu 07/03/24	Mon 15/04/24
234		INITIAL CLEAN	5 days	Thu 11/04/24	Wed 17/04/24
235		CAULKING	6 days	Fri 12/04/24	Fri 19/04/24
236		PRE SNAG	3 days	Thu 18/04/24	Mon 22/04/24
237		**Duplex block F 160 to 171**	**119 days**	**Tue 14/11/23**	**Wed 15/05/24**
238		**Masonry to 1st floor slab**	**24 days**	**Tue 14/11/23**	**Fri 15/12/23**
239		Scaffolding	3 days	Tue 14/11/23	Thu 16/11/23
240		Masonry	15 days	Mon 20/11/23	Fri 08/12/23
241		Precast floors	1 day	Mon 11/12/23	Mon 11/12/23
242		Structural slab	4 days	Tue 12/12/23	Fri 15/12/23
243		**Superstructure 1st and 2nd**	**92 days**	**Thu 21/12/23**	**Wed 15/05/24**
244		ERECT SCAFFOLD	3 days	Wed 03/01/24	Fri 05/01/24
245		ERECT TIMBER FRAME	16 days	Thu 21/12/23	Mon 22/01/24
246		TILE ROOF/ PV PANELS	5 days	Mon 15/01/24	Fri 19/01/24
247		WINDOWS	2 days	Thu 11/01/24	Fri 12/01/24
248		MASONRY	15 days	Mon 15/01/24	Fri 02/02/24
249		FACIA & SOFFIT	2 days	Mon 05/02/24	Tue 06/02/24
250		RENDER	4 days	Tue 06/02/24	Fri 09/02/24
251		RELEASE SCAFFOLD	3 days	Fri 09/02/24	Tue 13/02/24
252		CARPENTRY 1ST FIX	12 days	Mon 15/01/24	Tue 30/01/24
253		PLUMB 1ST FIX	12 days	Thu 18/01/24	Fri 02/02/24
254		ELEC 1ST FIX	12 days	Tue 23/01/24	Wed 07/02/24
255		DRYWALL	7 days	Tue 30/01/24	Wed 07/02/24
256		TAPE JOINTING	12 days	Tue 06/02/24	Wed 21/02/24
257		INSTALL BOILERS & BATH	7 days	Wed 21/02/24	Thu 29/02/24
258		SAND WALLS	4 days	Wed 28/02/24	Mon 04/03/24
259		TILER	8 days	Fri 01/03/24	Tue 12/03/24
260		KIT & ROBE	10 days	Mon 11/03/24	Fri 22/03/24
261		CARPENTRY 2ND FIX	12 days	Wed 13/03/24	Thu 28/03/24
262		PLUMB 2ND FIX	12 days	Mon 18/03/24	Wed 10/04/24
263		ELEC 2ND FIX	12 days	Thu 21/03/24	Mon 15/04/24
264		PAINTING	22 days	Thu 28/03/24	Mon 06/05/24
265		INITIAL CLEAN	5 days	Thu 02/05/24	Wed 08/05/24
266		CAULKING	6 days	Mon 06/05/24	Mon 13/05/24
267		PRE SNAG	3 days	Mon 13/05/24	Wed 15/05/24
268		**Duplex block E 205 to 212**	**123 days**	**Fri 24/11/23**	**Fri 31/05/24**
269		**Masonry to 1st floor slab**	**25 days**	**Fri 24/11/23**	**Mon 08/01/24**

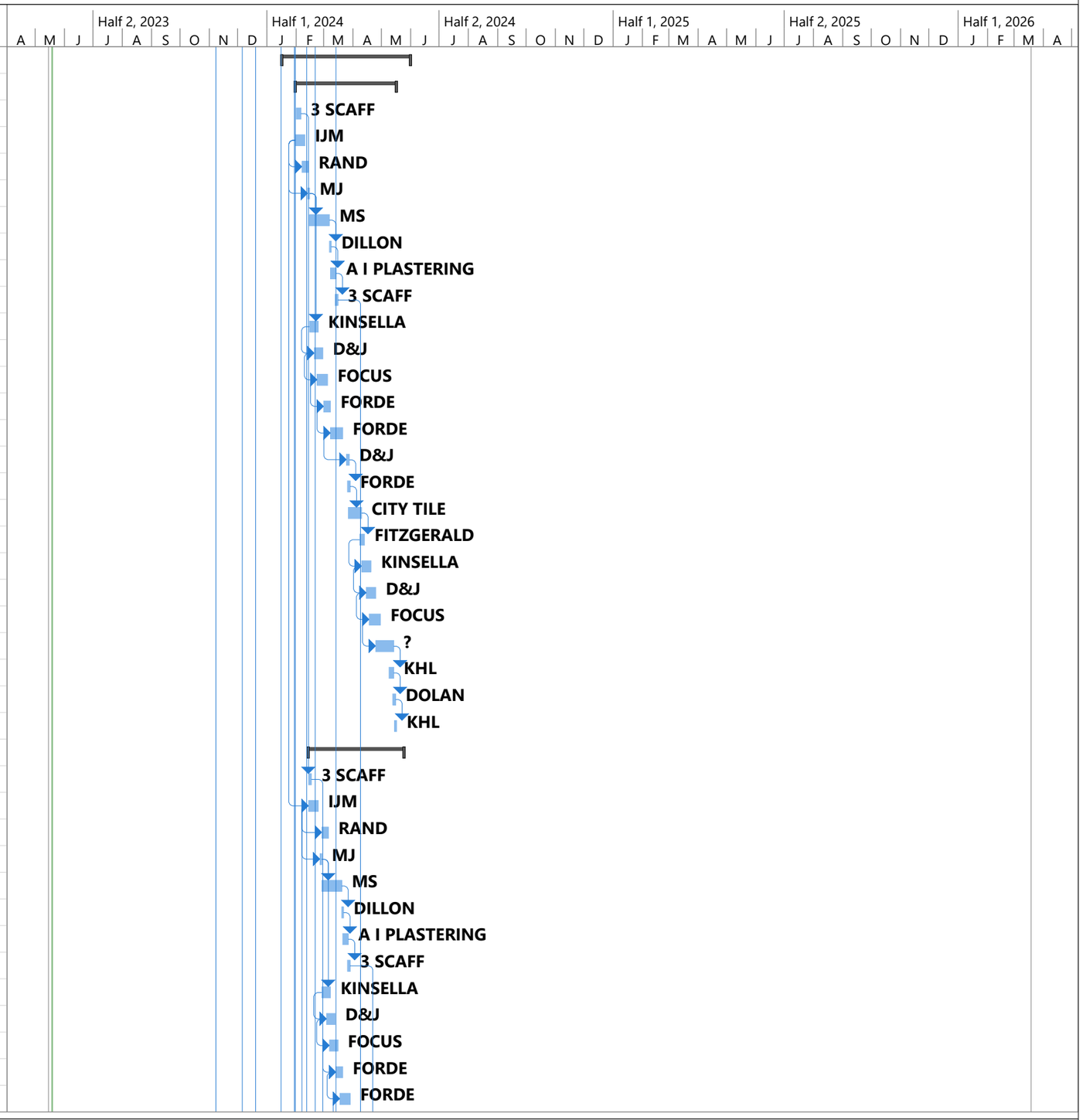


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
274		**Superstructure 1st and 2nd**	**92 days**	**Wed 17/01/24**	**Fri 31/05/24**
299		**Block 201 to 204**	**71 days**	**Wed 31/01/24**	**Thu 16/05/24**
300		ERECT SCAFFOLD	3 days	Thu 01/02/24	Mon 05/02/24
301		ERECT TIMBER FRAME	8 days	Wed 31/01/24	Fri 09/02/24
302		TILE ROOF/ PV PANELS	5 days	Wed 07/02/24	Tue 13/02/24
303		WINDOWS	2 days	Tue 13/02/24	Wed 14/02/24
304		MASONRY	15 days	Thu 15/02/24	Wed 06/03/24
305		FACIA & SOFFIT	2 days	Thu 07/03/24	Fri 08/03/24
306		RENDER	4 days	Fri 08/03/24	Wed 13/03/24
307		RELEASE SCAFFOLD	3 days	Wed 13/03/24	Fri 15/03/24
308		CARPENTRY 1ST FIX	7 days	Thu 15/02/24	Fri 23/02/24
309		PLUMB 1ST FIX	7 days	Tue 20/02/24	Wed 28/02/24
310		ELEC 1ST FIX	7 days	Fri 23/02/24	Mon 04/03/24
311		DRYWALL	5 days	Fri 01/03/24	Thu 07/03/24
312		TAPE JOINTING	9 days	Fri 08/03/24	Wed 20/03/24
313		INSTALL BOILERS & BATHS	3 days	Mon 25/03/24	Wed 27/03/24
314		SAND WALLS	3 days	Tue 26/03/24	Thu 28/03/24
315		TILER	4 days	Wed 27/03/24	Tue 09/04/24
316		KIT & ROBE	5 days	Mon 08/04/24	Fri 12/04/24
317		CARPENTRY 2ND FIX	8 days	Wed 10/04/24	Fri 19/04/24
318		PLUMB 2ND FIX	8 days	Mon 15/04/24	Wed 24/04/24
319		ELEC 2ND FIX	8 days	Thu 18/04/24	Mon 29/04/24
320		PAINTING	13 days	Thu 25/04/24	Mon 13/05/24
321		INITIAL CLEAN	3 days	Thu 09/05/24	Mon 13/05/24
322		CAULKING	3 days	Mon 13/05/24	Wed 15/05/24
323		PRE SNAG	2 days	Wed 15/05/24	Thu 16/05/24
324		**Block 197 to 200**	**67 days**	**Wed 14/02/24**	**Fri 24/05/24**
325		ERECT SCAFFOLD	3 days	Wed 14/02/24	Fri 16/02/24
326		ERECT TIMBER FRAME	8 days	Wed 14/02/24	Fri 23/02/24
327		TILE ROOF/ PV PANELS	5 days	Wed 28/02/24	Tue 05/03/24
328		WINDOWS	2 days	Mon 26/02/24	Tue 27/02/24
329		MASONRY	15 days	Wed 28/02/24	Tue 19/03/24
330		FACIA & SOFFIT	2 days	Wed 20/03/24	Thu 21/03/24
331		RENDER	4 days	Thu 21/03/24	Tue 26/03/24
332		RELEASE SCAFFOLD	3 days	Tue 26/03/24	Thu 28/03/24
333		CARPENTRY 1ST FIX	7 days	Wed 28/02/24	Thu 07/03/24
334		PLUMB 1ST FIX	7 days	Mon 04/03/24	Tue 12/03/24
335		ELEC 1ST FIX	7 days	Thu 07/03/24	Fri 15/03/24
336		DRYWALL	5 days	Thu 14/03/24	Wed 20/03/24
337		TAPE JOINTING	9 days	Mon 18/03/24	Thu 28/03/24

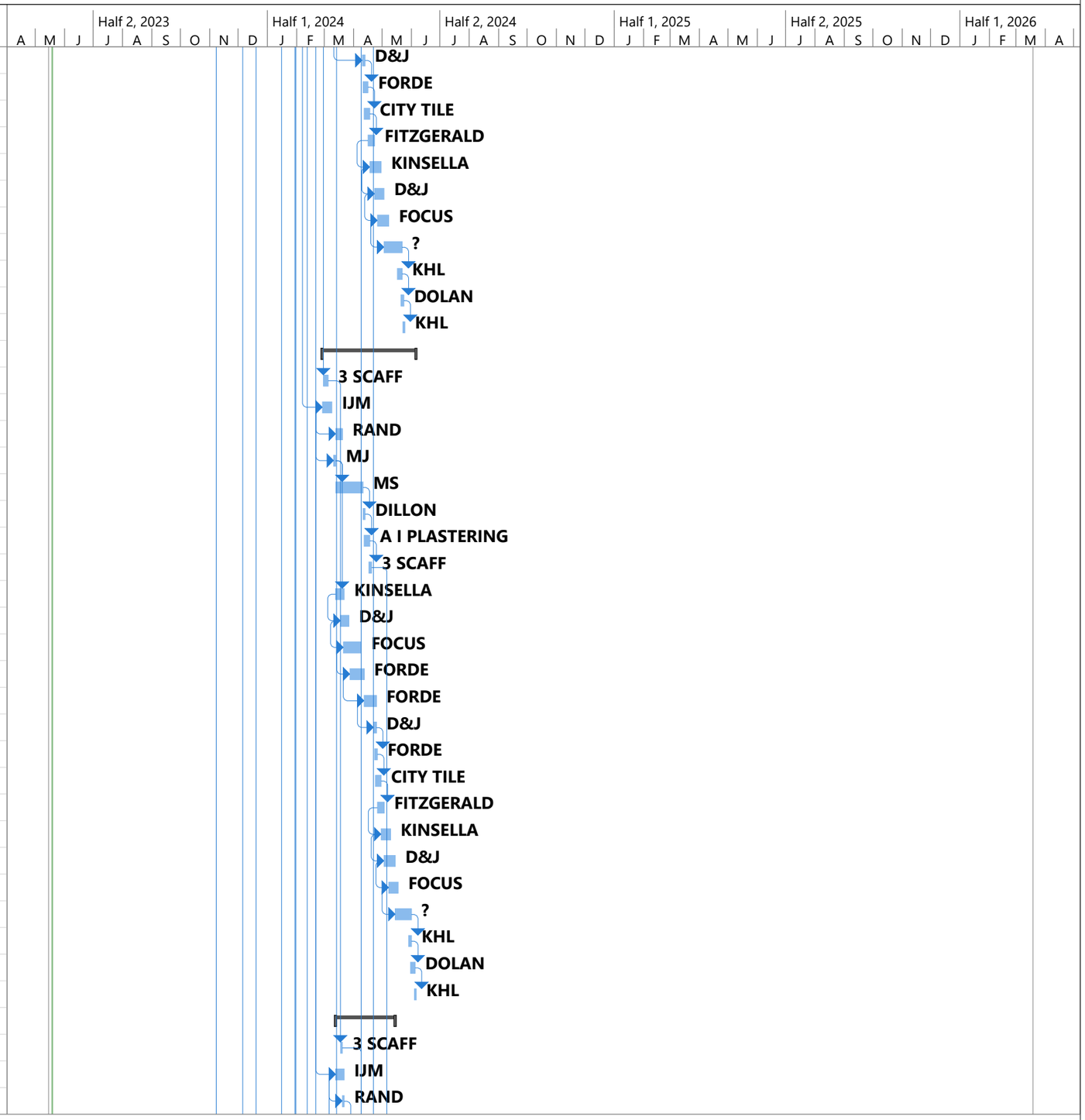


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
338		INSTALL BOILERS & BATHS	3 days	Wed 10/04/24	Fri 12/04/24
339		SAND WALLS	3 days	Thu 11/04/24	Mon 15/04/24
340		TILER	4 days	Fri 12/04/24	Wed 17/04/24
341		KIT & ROBE	5 days	Tue 16/04/24	Mon 22/04/24
342		CARPENTRY 2ND FIX	8 days	Thu 18/04/24	Mon 29/04/24
343		PLUMB 2ND FIX	8 days	Tue 23/04/24	Thu 02/05/24
344		ELEC 2ND FIX	8 days	Fri 26/04/24	Tue 07/05/24
345		PAINTING	13 days	Fri 03/05/24	Tue 21/05/24
346		INITIAL CLEAN	3 days	Fri 17/05/24	Tue 21/05/24
347		CAULKING	3 days	Tue 21/05/24	Thu 23/05/24
348		PRE SNAG	2 days	Thu 23/05/24	Fri 24/05/24
349		**Block 193 to 196**	**65 days**	**Wed 28/02/24**	**Wed 05/06/24**
350		ERECT SCAFFOLD	3 days	Thu 29/02/24	Mon 04/03/24
351		ERECT TIMBER FRAME	8 days	Wed 28/02/24	Fri 08/03/24
352		TILE ROOF/ PV PANELS	5 days	Wed 13/03/24	Tue 19/03/24
353		WINDOWS	2 days	Mon 11/03/24	Tue 12/03/24
354		MASONRY	15 days	Wed 13/03/24	Wed 10/04/24
355		FACIA & SOFFIT	2 days	Thu 11/04/24	Fri 12/04/24
356		RENDER	4 days	Fri 12/04/24	Wed 17/04/24
357		RELEASE SCAFFOLD	3 days	Wed 17/04/24	Fri 19/04/24
358		CARPENTRY 1ST FIX	7 days	Wed 13/03/24	Thu 21/03/24
359		PLUMB 1ST FIX	7 days	Mon 18/03/24	Tue 26/03/24
360		ELEC 1ST FIX	7 days	Thu 21/03/24	Mon 08/04/24
361		DRYWALL	5 days	Thu 28/03/24	Thu 11/04/24
362		TAPE JOINTING	9 days	Fri 12/04/24	Wed 24/04/24
363		INSTALL BOILERS & BATHS	3 days	Mon 22/04/24	Wed 24/04/24
364		SAND WALLS	3 days	Tue 23/04/24	Thu 25/04/24
365		TILER	4 days	Wed 24/04/24	Mon 29/04/24
366		KIT & ROBE	5 days	Fri 26/04/24	Thu 02/05/24
367		CARPENTRY 2ND FIX	8 days	Tue 30/04/24	Thu 09/05/24
368		PLUMB 2ND FIX	8 days	Fri 03/05/24	Tue 14/05/24
369		ELEC 2ND FIX	8 days	Wed 08/05/24	Fri 17/05/24
370		PAINTING	13 days	Wed 15/05/24	Fri 31/05/24
371		INITIAL CLEAN	3 days	Wed 29/05/24	Fri 31/05/24
372		CAULKING	3 days	Fri 31/05/24	Tue 04/06/24
373		PRE SNAG	2 days	Tue 04/06/24	Wed 05/06/24
374		**Block 191/192**	**39 days**	**Wed 13/03/24**	**Tue 14/05/24**
375		ERECT SCAFFOLD	2 days	Mon 18/03/24	Tue 19/03/24
376		ERECT TIMBER FRAME	7 days	Wed 13/03/24	Thu 21/03/24
377		TILE ROOF/ PV PANELS	2 days	Wed 20/03/24	Thu 21/03/24



Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

Kelland Homes (Stage 1A) K1 & K2 master programme

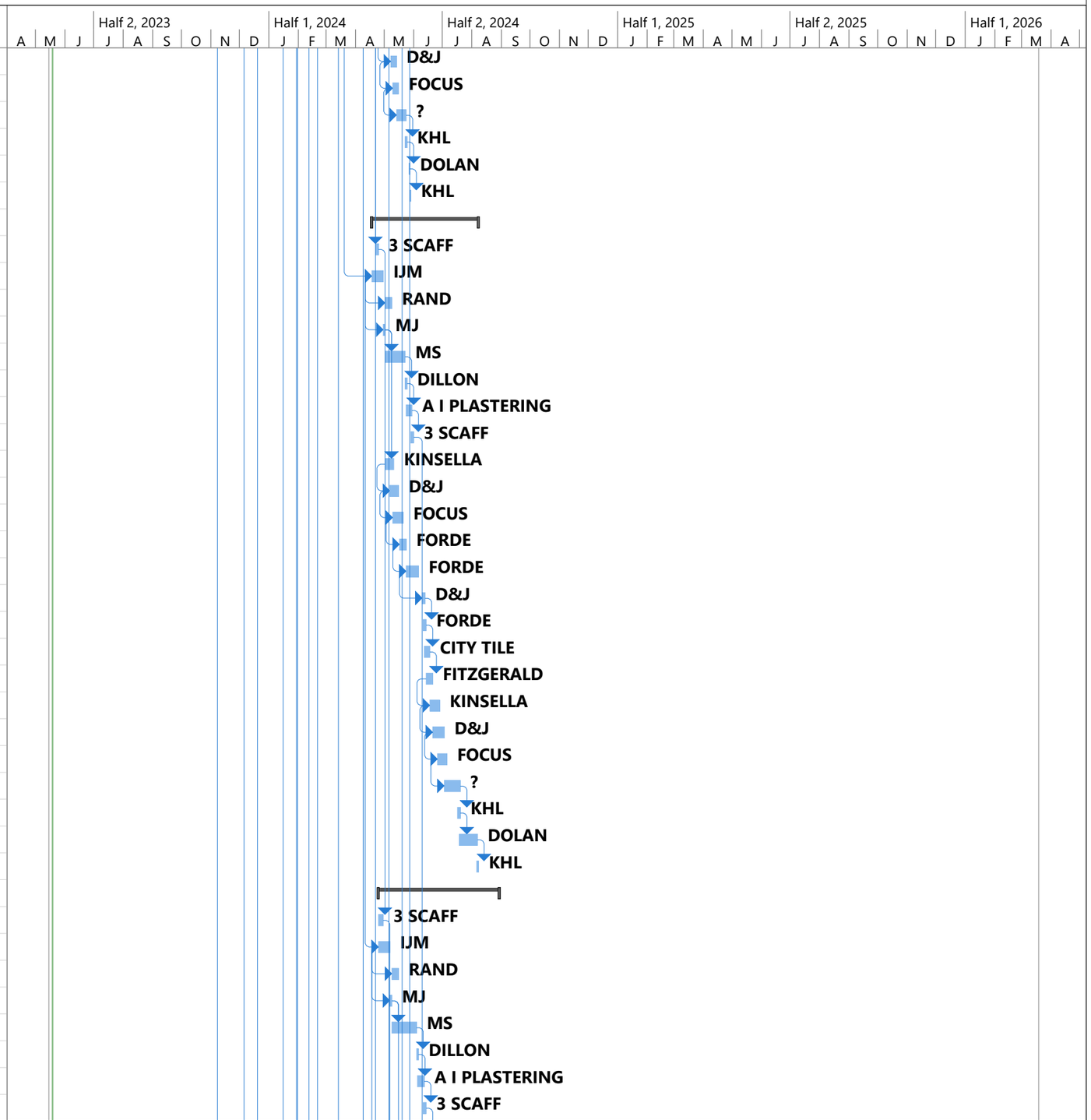
ID	Task Mode	Task Name	Duration	Start	Finish
378		WINDOWS	1 day	Fri 22/03/24	Fri 22/03/24
379		MASONRY	10 days	Mon 25/03/24	Mon 15/04/24
380		FACIA & SOFFIT	2 days	Tue 16/04/24	Wed 17/04/24
381		RENDER	3 days	Thu 18/04/24	Mon 22/04/24
382		RELEASE SCAFFOLD	2 days	Tue 23/04/24	Wed 24/04/24
383		CARPENTRY 1ST FIX	4 days	Mon 25/03/24	Thu 28/03/24
384		PLUMB 1ST FIX	4 days	Wed 27/03/24	Tue 09/04/24
385		ELEC 1ST FIX	4 days	Mon 08/04/24	Thu 11/04/24
386		DRYWALL	3 days	Wed 10/04/24	Fri 12/04/24
387		TAPE JOINTING	5 days	Fri 12/04/24	Thu 18/04/24
388		INSTALL BOILERS & BATHS	2 days	Thu 18/04/24	Fri 19/04/24
389		SAND WALLS	2 days	Thu 18/04/24	Fri 19/04/24
390		TILER	2 days	Fri 19/04/24	Mon 22/04/24
391		KIT & ROBE	3 days	Fri 19/04/24	Tue 23/04/24
392		CARPENTRY 2ND FIX	4 days	Mon 22/04/24	Thu 25/04/24
393		PLUMB 2ND FIX	4 days	Wed 24/04/24	Mon 29/04/24
394		ELEC 2ND FIX	4 days	Fri 26/04/24	Wed 01/05/24
395		PAINTING	8 days	Tue 30/04/24	Thu 09/05/24
396		INITIAL CLEAN	2 days	Thu 09/05/24	Fri 10/05/24
397		CAULKING	1 day	Mon 13/05/24	Mon 13/05/24
398		PRE SNAG	1 day	Tue 14/05/24	Tue 14/05/24
399		**Block 189 /190**	**39 days?**	**Wed 27/03/24**	**Tue 28/05/24**
400		ERECT SCAFFOLD	2 days	Tue 09/04/24	Wed 10/04/24
401		ERECT TIMBER FRAME	7 days	Wed 27/03/24	Fri 12/04/24
402		TILE ROOF/ PV PANELS	2 days	Thu 11/04/24	Fri 12/04/24
403		WINDOWS	1 day	Mon 15/04/24	Mon 15/04/24
404		MASONRY	10 days	Tue 16/04/24	Mon 29/04/24
405		FACIA & SOFFIT	2 days	Tue 30/04/24	Wed 01/05/24
406		RENDER	3 days	Thu 02/05/24	Mon 06/05/24
407		RELEASE SCAFFOLD	2 days	Tue 07/05/24	Wed 08/05/24
408		CARPENTRY 1ST FIX	4 days	Tue 16/04/24	Fri 19/04/24
409		PLUMB 1ST FIX	4 days	Thu 18/04/24	Tue 23/04/24
410		ELEC 1ST FIX	4 days	Mon 22/04/24	Thu 25/04/24
411		DRYWALL	3 days	Wed 24/04/24	Fri 26/04/24
412		TAPE JOINTING	5 days	Fri 26/04/24	Thu 02/05/24
413		INSTALL BOILERS & BATHS	2 days	Thu 02/05/24	Fri 03/05/24
414		SAND WALLS	2 days	Thu 02/05/24	Fri 03/05/24
415		TILER	2 days	Fri 03/05/24	Mon 06/05/24
416		KIT & ROBE	3 days	Fri 03/05/24	Tue 07/05/24
417		CARPENTRY 2ND FIX	4 days	Mon 06/05/24	Thu 09/05/24

Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
418		PLUMB 2ND FIX	4 days	Wed 08/05/24	Mon 13/05/24
419		ELEC 2ND FIX	4 days	Fri 10/05/24	Wed 15/05/24
420		PAINTING	8 days	Tue 14/05/24	Thu 23/05/24
421		INITIAL CLEAN	2 days	Thu 23/05/24	Fri 24/05/24
422		CAULKING	1 day	Mon 27/05/24	Mon 27/05/24
423		PRE SNAG	1 day?	Tue 28/05/24	Tue 28/05/24
424		**Block 185 to 188**	**70 days**	**Thu 18/04/24**	**Wed 07/08/24**
425		ERECT SCAFFOLD	3 days	Mon 22/04/24	Wed 24/04/24
426		ERECT TIMBER FRAME	8 days	Thu 18/04/24	Mon 29/04/24
427		TILE ROOF/ PV PANELS	5 days	Thu 02/05/24	Wed 08/05/24
428		WINDOWS	2 days	Tue 30/04/24	Wed 01/05/24
429		MASONRY	15 days	Thu 02/05/24	Wed 22/05/24
430		FACIA & SOFFIT	2 days	Thu 23/05/24	Fri 24/05/24
431		RENDER	4 days	Fri 24/05/24	Wed 29/05/24
432		RELEASE SCAFFOLD	3 days	Wed 29/05/24	Fri 31/05/24
433		CARPENTRY 1ST FIX	7 days	Thu 02/05/24	Fri 10/05/24
434		PLUMB 1ST FIX	7 days	Tue 07/05/24	Wed 15/05/24
435		ELEC 1ST FIX	7 days	Fri 10/05/24	Mon 20/05/24
436		DRYWALL	5 days	Fri 17/05/24	Thu 23/05/24
437		TAPE JOINTING	9 days	Fri 24/05/24	Wed 05/06/24
438		INSTALL BOILERS & BATHS	3 days	Mon 10/06/24	Wed 12/06/24
439		SAND WALLS	3 days	Tue 11/06/24	Thu 13/06/24
440		TILER	4 days	Wed 12/06/24	Mon 17/06/24
441		KIT & ROBE	5 days	Fri 14/06/24	Thu 20/06/24
442		CARPENTRY 2ND FIX	8 days	Tue 18/06/24	Thu 27/06/24
443		PLUMB 2ND FIX	8 days	Fri 21/06/24	Tue 02/07/24
444		ELEC 2ND FIX	8 days	Wed 26/06/24	Fri 05/07/24
445		PAINTING	13 days	Wed 03/07/24	Fri 19/07/24
446		INITIAL CLEAN	3 days	Wed 17/07/24	Fri 19/07/24
447		CAULKING	3 days	Fri 19/07/24	Tue 06/08/24
448		PRE SNAG	2 days	Tue 06/08/24	Wed 07/08/24
449		**Block 180 to 184**	**81 days**	**Thu 25/04/24**	**Thu 29/08/24**
450		ERECT SCAFFOLD	3 days	Thu 25/04/24	Mon 29/04/24
451		ERECT TIMBER FRAME	8 days	Thu 25/04/24	Mon 06/05/24
452		TILE ROOF/ PV PANELS	5 days	Thu 09/05/24	Wed 15/05/24
453		WINDOWS	2 days	Tue 07/05/24	Wed 08/05/24
454		MASONRY	18 days	Thu 09/05/24	Mon 03/06/24
455		FACIA & SOFFIT	2 days	Tue 04/06/24	Wed 05/06/24
456		RENDER	5 days	Wed 05/06/24	Tue 11/06/24
457		RELEASE SCAFFOLD	3 days	Tue 11/06/24	Thu 13/06/24

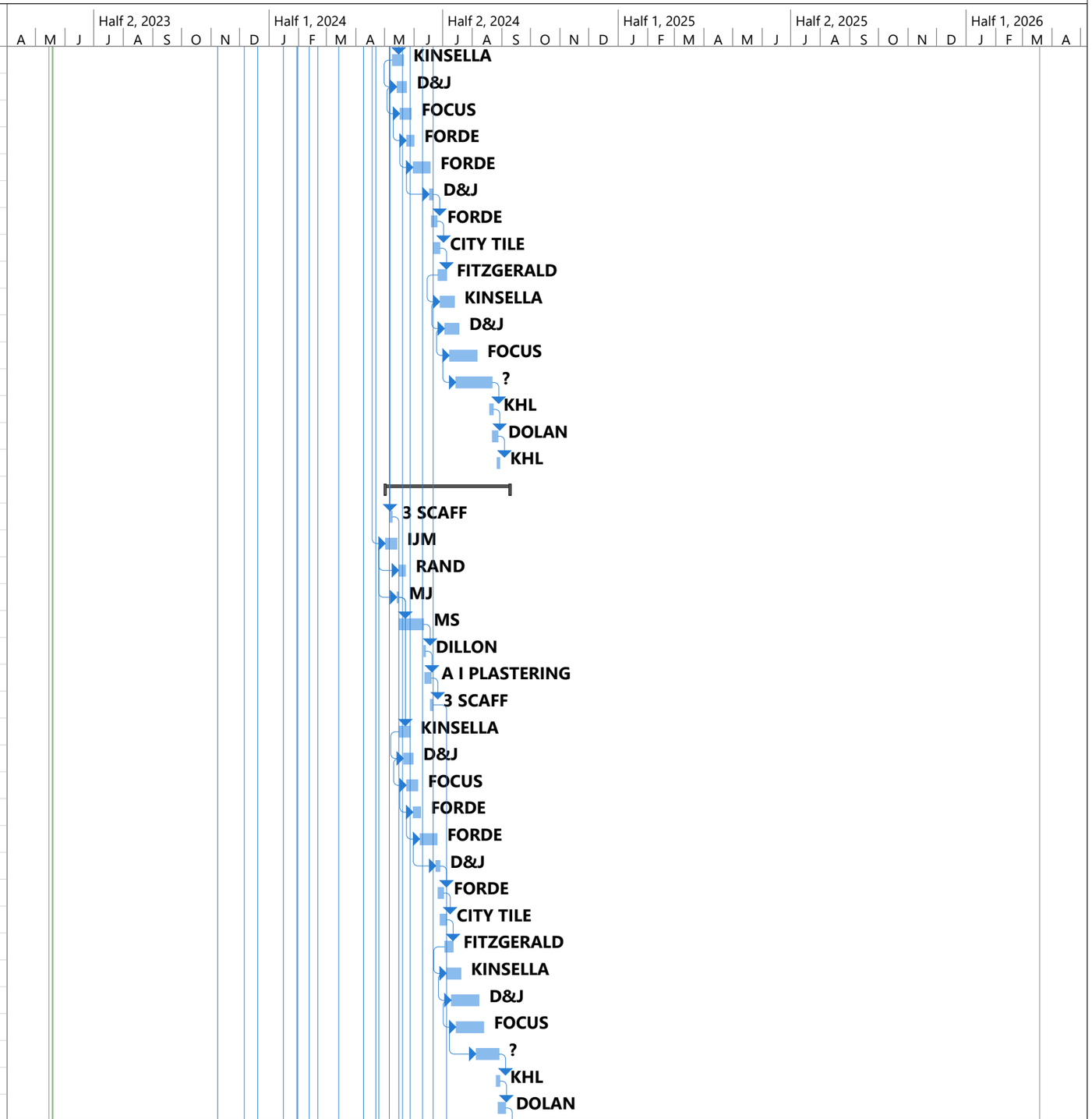


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
458		CARPENTRY 1ST FIX	8 days	Thu 09/05/24	Mon 20/05/24
459		PLUMB 1ST FIX	8 days	Tue 14/05/24	Thu 23/05/24
460		ELEC 1ST FIX	8 days	Fri 17/05/24	Tue 28/05/24
461		DRYWALL	6 days	Fri 24/05/24	Fri 31/05/24
462		TAPE JOINTING	12 days	Fri 31/05/24	Mon 17/06/24
463		INSTALL BOILERS & BATHS	4 days	Mon 17/06/24	Thu 20/06/24
464		SAND WALLS	4 days	Wed 19/06/24	Mon 24/06/24
465		TILER	5 days	Fri 21/06/24	Thu 27/06/24
466		KIT & ROBE	7 days	Wed 26/06/24	Thu 04/07/24
467		CARPENTRY 2ND FIX	11 days	Fri 28/06/24	Fri 12/07/24
468		PLUMB 2ND FIX	11 days	Wed 03/07/24	Wed 17/07/24
469		ELEC 2ND FIX	11 days	Mon 08/07/24	Mon 05/08/24
470		PAINTING	18 days	Mon 15/07/24	Wed 21/08/24
471		INITIAL CLEAN	4 days	Mon 19/08/24	Thu 22/08/24
472		CAULKING	4 days	Thu 22/08/24	Tue 27/08/24
473		PRE SNAG	3 days	Tue 27/08/24	Thu 29/08/24
474		**Block 176 to 179**	**83 days**	**Thu 02/05/24**	**Mon 09/09/24**
475		ERECT SCAFFOLD	3 days	Mon 06/05/24	Wed 08/05/24
476		ERECT TIMBER FRAME	8 days	Thu 02/05/24	Mon 13/05/24
477		TILE ROOF/ PV PANELS	5 days	Thu 16/05/24	Wed 22/05/24
478		WINDOWS	2 days	Tue 14/05/24	Wed 15/05/24
479		MASONRY	18 days	Thu 16/05/24	Mon 10/06/24
480		FACIA & SOFFIT	2 days	Tue 11/06/24	Wed 12/06/24
481		RENDER	5 days	Wed 12/06/24	Tue 18/06/24
482		RELEASE SCAFFOLD	3 days	Tue 18/06/24	Thu 20/06/24
483		CARPENTRY 1ST FIX	8 days	Thu 16/05/24	Mon 27/05/24
484		PLUMB 1ST FIX	8 days	Tue 21/05/24	Thu 30/05/24
485		ELEC 1ST FIX	8 days	Fri 24/05/24	Tue 04/06/24
486		DRYWALL	6 days	Fri 31/05/24	Fri 07/06/24
487		TAPE JOINTING	12 days	Fri 07/06/24	Mon 24/06/24
488		INSTALL BOILERS & BATHS	4 days	Mon 24/06/24	Thu 27/06/24
489		SAND WALLS	4 days	Wed 26/06/24	Mon 01/07/24
490		TILER	5 days	Fri 28/06/24	Thu 04/07/24
491		KIT & ROBE	7 days	Wed 03/07/24	Thu 11/07/24
492		CARPENTRY 2ND FIX	11 days	Fri 05/07/24	Fri 19/07/24
493		PLUMB 2ND FIX	11 days	Wed 10/07/24	Wed 07/08/24
494		ELEC 2ND FIX	11 days	Mon 15/07/24	Mon 12/08/24
495		PAINTING	18 days	Mon 05/08/24	Wed 28/08/24
496		INITIAL CLEAN	4 days	Mon 26/08/24	Thu 29/08/24
497		CAULKING	6 days	Wed 28/08/24	Wed 04/09/24

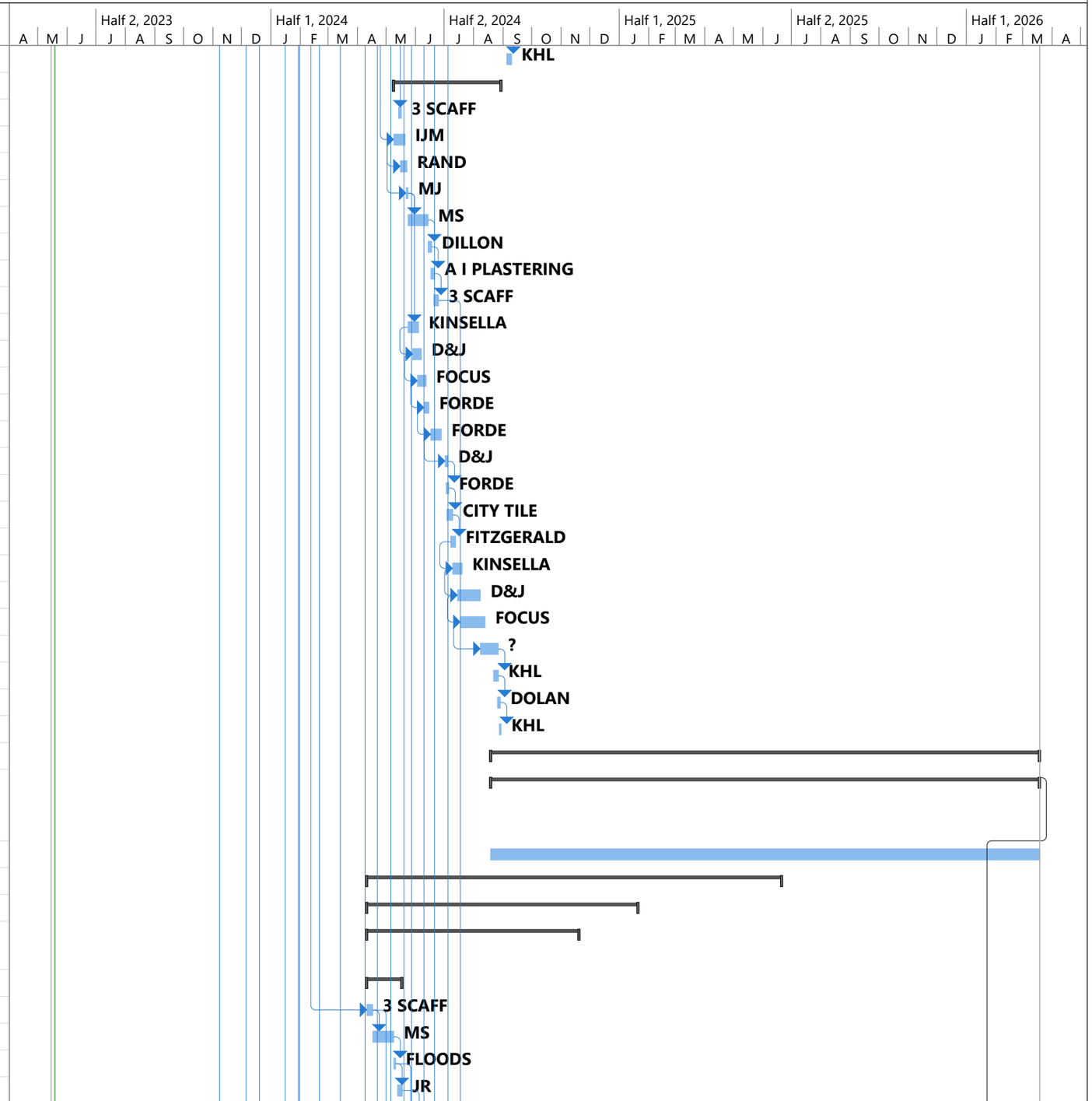


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
498		PRE SNAG	3 days	Thu 05/09/24	Mon 09/09/24
499		**Block 172 to 175**	**71 days**	**Thu 09/05/24**	**Thu 29/08/24**
500		ERECT SCAFFOLD	3 days	Tue 14/05/24	Thu 16/05/24
501		ERECT TIMBER FRAME	8 days	Thu 09/05/24	Mon 20/05/24
502		TILE ROOF/ PV PANELS	5 days	Thu 16/05/24	Wed 22/05/24
503		WINDOWS	2 days	Wed 22/05/24	Thu 23/05/24
504		MASONRY	15 days	Fri 24/05/24	Thu 13/06/24
505		FACIA & SOFFIT	2 days	Fri 14/06/24	Mon 17/06/24
506		RENDER	4 days	Mon 17/06/24	Thu 20/06/24
507		RELEASE SCAFFOLD	3 days	Thu 20/06/24	Mon 24/06/24
508		CARPENTRY 1ST FIX	7 days	Fri 24/05/24	Mon 03/06/24
509		PLUMB 1ST FIX	7 days	Wed 29/05/24	Thu 06/06/24
510		ELEC 1ST FIX	7 days	Mon 03/06/24	Tue 11/06/24
511		DRYWALL	5 days	Mon 10/06/24	Fri 14/06/24
512		TAPE JOINTING	9 days	Mon 17/06/24	Thu 27/06/24
513		INSTALL BOILERS & BATHS	3 days	Tue 02/07/24	Thu 04/07/24
514		SAND WALLS	3 days	Wed 03/07/24	Fri 05/07/24
515		TILER	4 days	Thu 04/07/24	Tue 09/07/24
516		KIT & ROBE	5 days	Mon 08/07/24	Fri 12/07/24
517		CARPENTRY 2ND FIX	8 days	Wed 10/07/24	Fri 19/07/24
518		PLUMB 2ND FIX	8 days	Mon 15/07/24	Wed 07/08/24
519		ELEC 2ND FIX	8 days	Thu 18/07/24	Mon 12/08/24
520		PAINTING	13 days	Thu 08/08/24	Mon 26/08/24
521		INITIAL CLEAN	3 days	Thu 22/08/24	Mon 26/08/24
522		CAULKING	3 days	Mon 26/08/24	Wed 28/08/24
523		PRE SNAG	2 days	Wed 28/08/24	Thu 29/08/24
524		**K1-D**	**393 days?**	**Mon 19/08/24**	**Wed 18/03/26**
525		**Apartment A with commercial and creche**	**393 days?**	**Mon 19/08/24**	**Wed 18/03/26**
526		Programme to be issued	393 days?	Mon 19/08/24	Wed 18/03/26
527		**K2**	**294 days**	**Thu 11/04/24**	**Fri 20/06/25**
528		**K2-A**	**185 days**	**Thu 11/04/24**	**Mon 20/01/25**
529		**Duplex block C 48 to 59**	**149 days**	**Thu 11/04/24**	**Tue 19/11/24**
530		**Masonry to 1st floor slab**	**27 days**	**Thu 11/04/24**	**Fri 17/05/24**
531		Scaffolding	4 days	Thu 11/04/24	Tue 16/04/24
532		Masonry	16 days	Wed 17/04/24	Wed 08/05/24
533		Precast floors	2 days	Thu 09/05/24	Fri 10/05/24
534		Structural slab	5 days	Mon 13/05/24	Fri 17/05/24

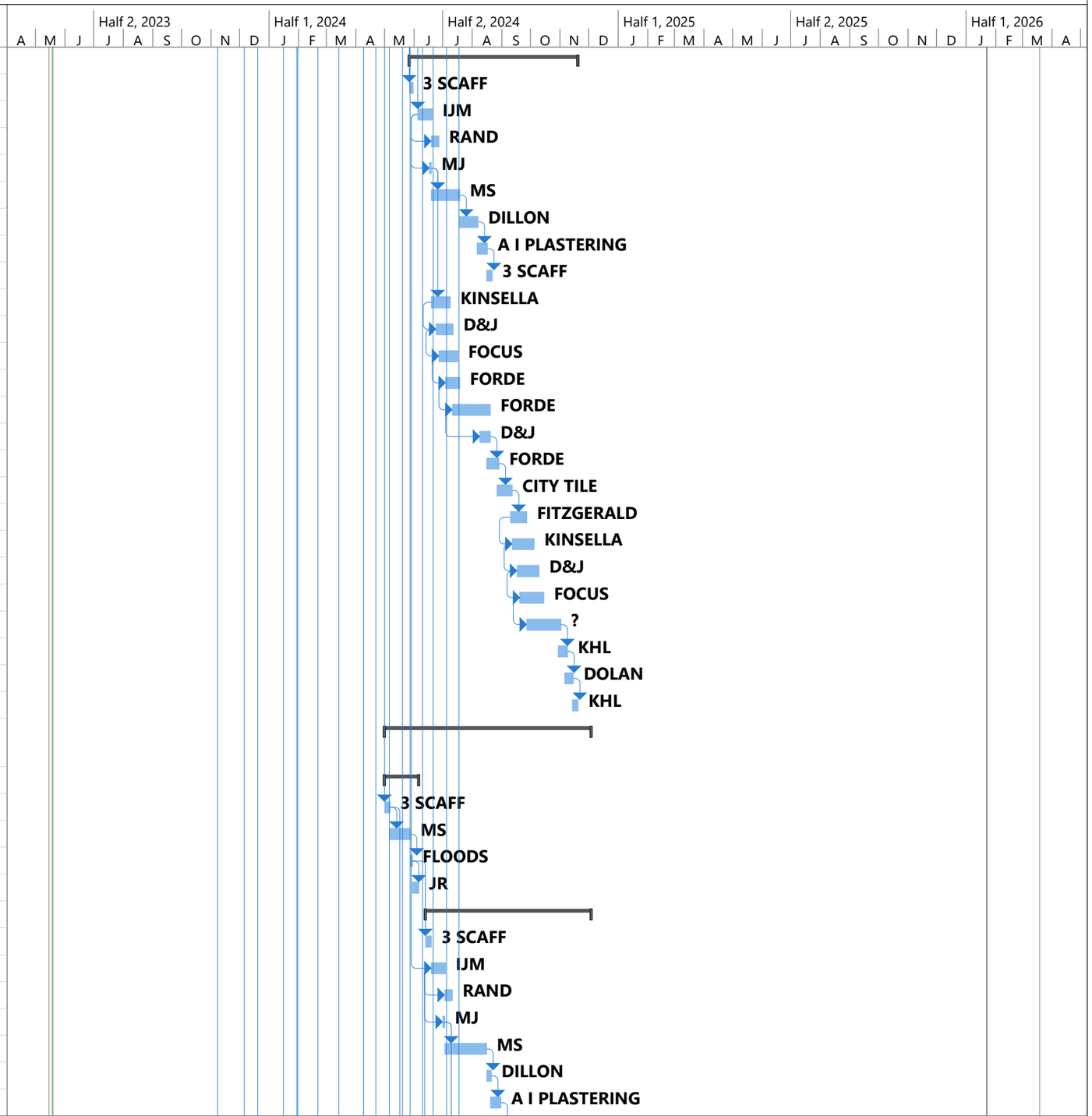


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
535		**Superstructure 1st and 2nd**	**117 days**	**Mon 27/05/24**	**Tue 19/11/24**
536		ERECT SCAFFOLD	4 days	Mon 27/05/24	Thu 30/05/24
537		ERECT TIMBER FRAME	11 days	Wed 05/06/24	Wed 19/06/24
538		TILE ROOF/ PV PANELS	6 days	Wed 19/06/24	Wed 26/06/24
539		WINDOWS	2 days	Mon 17/06/24	Tue 18/06/24
540		MASONRY	22 days	Wed 19/06/24	Thu 18/07/24
541		FACIA & SOFFIT	3 days	Fri 19/07/24	Tue 06/08/24
542		RENDER	9 days	Tue 06/08/24	Fri 16/08/24
543		RELEASE SCAFFOLD	4 days	Fri 16/08/24	Wed 21/08/24
544		CARPENTRY 1ST FIX	14 days	Wed 19/06/24	Mon 08/07/24
545		PLUMB 1ST FIX	14 days	Mon 24/06/24	Thu 11/07/24
546		ELEC 1ST FIX	14 days	Thu 27/06/24	Tue 16/07/24
547		DRYWALL	11 days	Thu 04/07/24	Thu 18/07/24
548		TAPE JOINTING	18 days	Thu 11/07/24	Mon 19/08/24
549		INSTALL BOILERS & BATH	7 days	Fri 09/08/24	Mon 19/08/24
550		SAND WALLS	9 days	Fri 16/08/24	Wed 28/08/24
551		TILER	12 days	Tue 27/08/24	Wed 11/09/24
552		KIT & ROBE	13 days	Tue 10/09/24	Thu 26/09/24
553		CARPENTRY 2ND FIX	17 days	Thu 12/09/24	Fri 04/10/24
554		PLUMB 2ND FIX	17 days	Tue 17/09/24	Wed 09/10/24
555		ELEC 2ND FIX	17 days	Fri 20/09/24	Mon 14/10/24
556		PAINTING	26 days	Fri 27/09/24	Fri 01/11/24
557		INITIAL CLEAN	8 days	Wed 30/10/24	Fri 08/11/24
558		CAULKING	7 days	Wed 06/11/24	Thu 14/11/24
559		PRE SNAG	4 days	Thu 14/11/24	Tue 19/11/24
560		**Duplex block D 60 to 71**	**145 days**	**Wed 01/05/24**	**Tue 03/12/24**
561		**Masonry to 1st floor slab**	**26 days**	**Wed 01/05/24**	**Wed 05/06/24**
562		Scaffolding	4 days	Wed 01/05/24	Mon 06/05/24
563		Masonry	15 days	Tue 07/05/24	Mon 27/05/24
564		Precast floors	2 days	Tue 28/05/24	Wed 29/05/24
565		Structural slab	5 days	Thu 30/05/24	Wed 05/06/24
566		**Superstructure 1st and 2nd**	**114 days**	**Thu 13/06/24**	**Tue 03/12/24**
567		ERECT SCAFFOLD	4 days	Thu 13/06/24	Tue 18/06/24
568		ERECT TIMBER FRAME	11 days	Wed 19/06/24	Wed 03/07/24
569		TILE ROOF/ PV PANELS	6 days	Wed 03/07/24	Wed 10/07/24
570		WINDOWS	2 days	Mon 01/07/24	Tue 02/07/24
571		MASONRY	22 days	Wed 03/07/24	Thu 15/08/24
572		FACIA & SOFFIT	3 days	Fri 16/08/24	Tue 20/08/24
573		RENDER	9 days	Tue 20/08/24	Fri 30/08/24

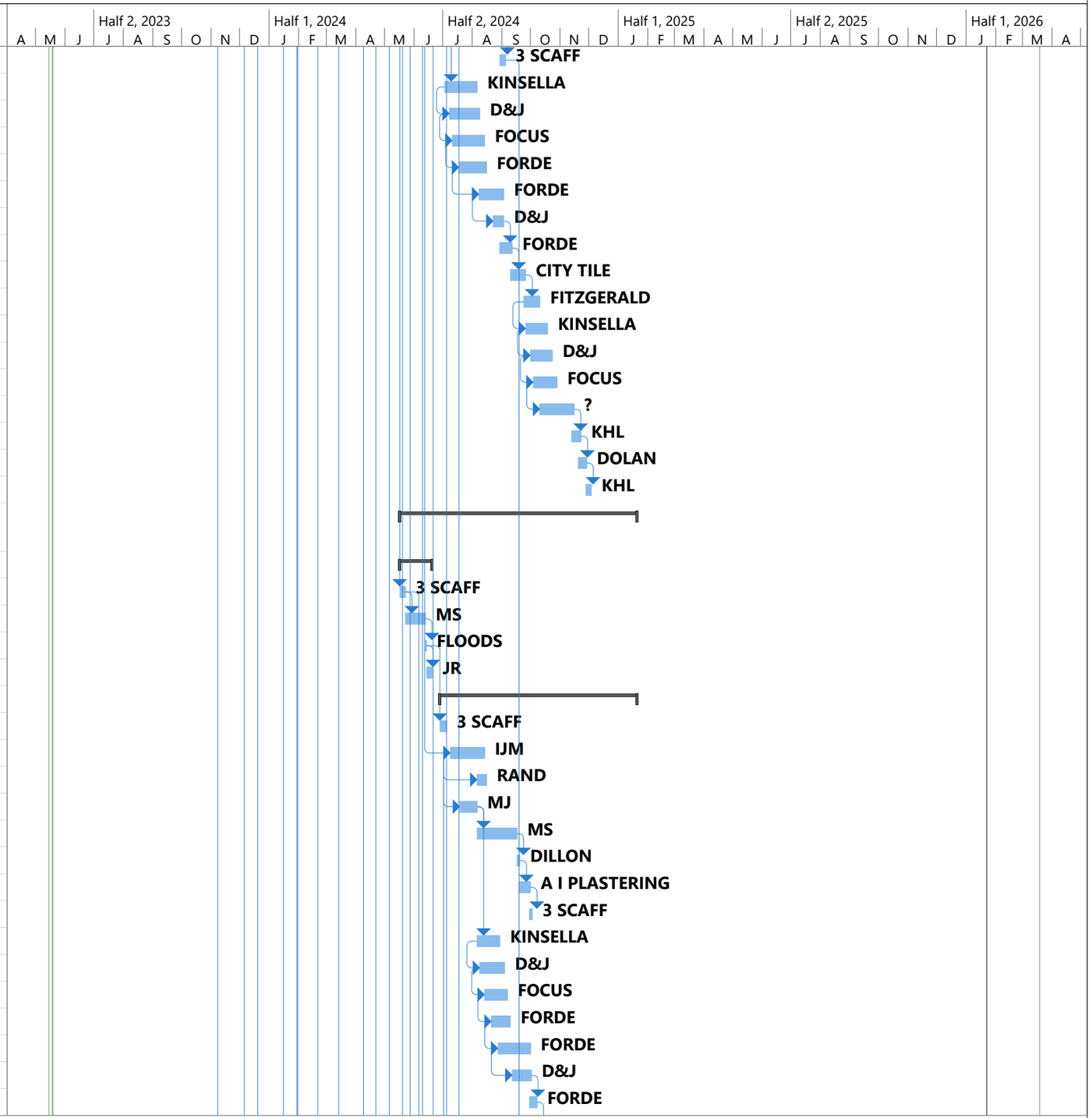


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
574		RELEASE SCAFFOLD	4 days	Fri 30/08/24	Wed 04/09/24
575		CARPENTRY 1ST FIX	14 days	Wed 03/07/24	Mon 05/08/24
576		PLUMB 1ST FIX	14 days	Mon 08/07/24	Thu 08/08/24
577		ELEC 1ST FIX	14 days	Thu 11/07/24	Tue 13/08/24
578		DRYWALL	11 days	Thu 18/07/24	Thu 15/08/24
579		TAPE JOINTING	18 days	Thu 08/08/24	Mon 02/09/24
580		INSTALL BOILERS & BATH	7 days	Fri 23/08/24	Mon 02/09/24
581		SAND WALLS	9 days	Fri 30/08/24	Wed 11/09/24
582		TILER	12 days	Tue 10/09/24	Wed 25/09/24
583		KIT & ROBE	13 days	Tue 24/09/24	Thu 10/10/24
584		CARPENTRY 2ND FIX	17 days	Thu 26/09/24	Fri 18/10/24
585		PLUMB 2ND FIX	17 days	Tue 01/10/24	Wed 23/10/24
586		ELEC 2ND FIX	17 days	Fri 04/10/24	Mon 28/10/24
587		PAINTING	26 days	Fri 11/10/24	Fri 15/11/24
588		INITIAL CLEAN	8 days	Wed 13/11/24	Fri 22/11/24
589		CAULKING	7 days	Wed 20/11/24	Thu 28/11/24
590		PRE SNAG	4 days	Thu 28/11/24	Tue 03/12/24
591		**Duplex Block G 144 to 159**	**159 days**	**Fri 17/05/24**	**Mon 20/01/25**
592		**Masonry to 1st floor slab**	**24 days**	**Fri 17/05/24**	**Wed 19/06/24**
593		Scaffolding	4 days	Fri 17/05/24	Wed 22/05/24
594		Masonry	15 days	Thu 23/05/24	Wed 12/06/24
595		Precast floors	1 day	Thu 13/06/24	Thu 13/06/24
596		Structural slab	4 days	Fri 14/06/24	Wed 19/06/24
597		**Superstructure 1st and 2nd**	**129 days**	**Fri 28/06/24**	**Mon 20/01/25**
598		ERECT SCAFFOLD	5 days	Fri 28/06/24	Thu 04/07/24
599		ERECT TIMBER FRAME	16 days	Tue 09/07/24	Tue 13/08/24
600		TILE ROOF/ PV PANELS	8 days	Tue 06/08/24	Thu 15/08/24
601		WINDOWS	2 days	Fri 19/07/24	Mon 05/08/24
602		MASONRY	30 days	Tue 06/08/24	Mon 16/09/24
603		FACIA & SOFFIT	3 days	Tue 17/09/24	Thu 19/09/24
604		RENDER	8 days	Thu 19/09/24	Mon 30/09/24
605		RELEASE SCAFFOLD	3 days	Mon 30/09/24	Wed 02/10/24
606		CARPENTRY 1ST FIX	18 days	Tue 06/08/24	Thu 29/08/24
607		PLUMB 1ST FIX	18 days	Fri 09/08/24	Tue 03/09/24
608		ELEC 1ST FIX	18 days	Wed 14/08/24	Fri 06/09/24
609		DRYWALL	14 days	Wed 21/08/24	Mon 09/09/24
610		TAPE JOINTING	24 days	Wed 28/08/24	Mon 30/09/24
611		INSTALL BOILERS & BATH	14 days	Thu 12/09/24	Tue 01/10/24
612		SAND WALLS	6 days	Mon 30/09/24	Mon 07/10/24



Project: Kelland Homes stage 1A master programme
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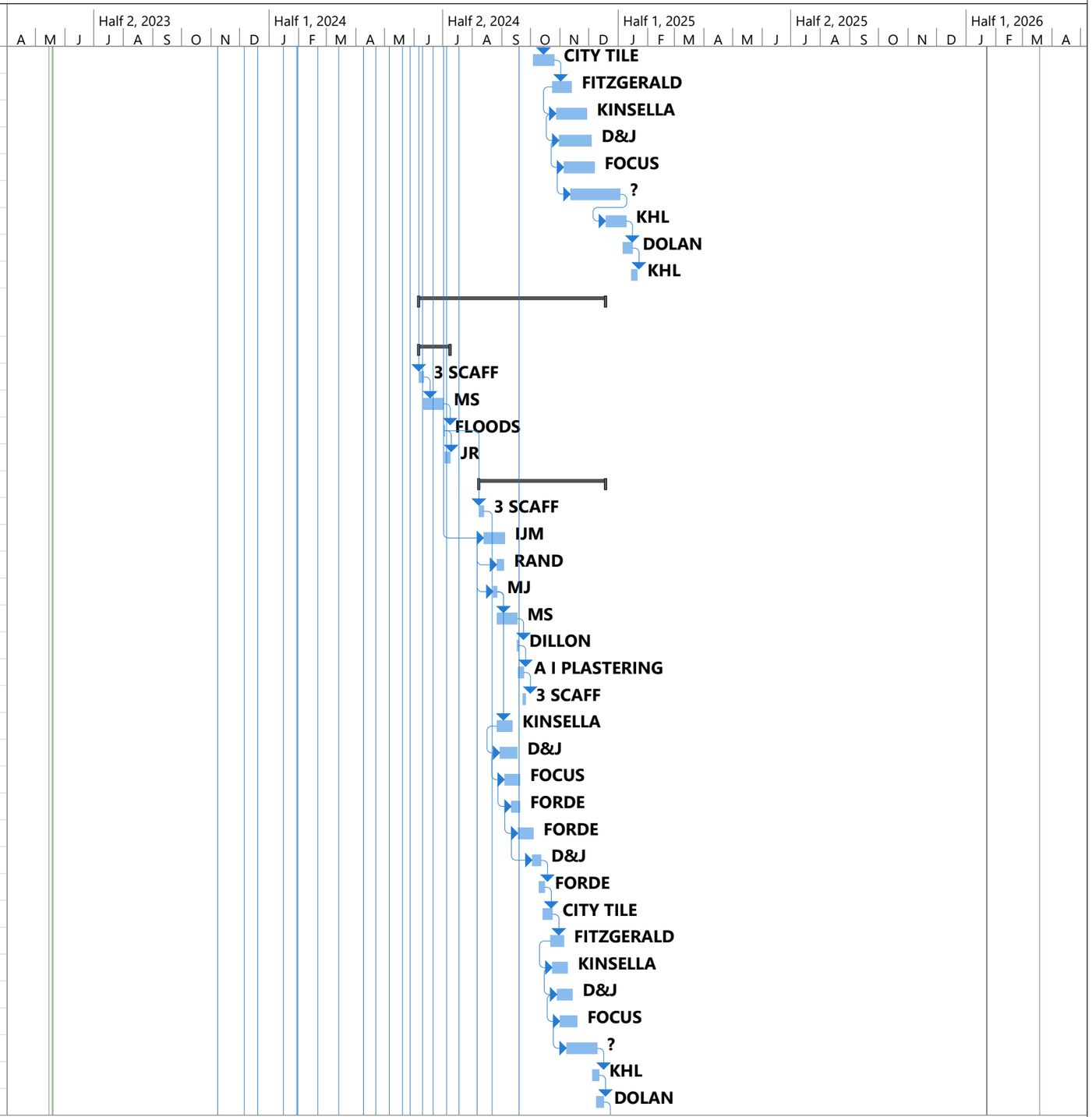
Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
613		TILER	16 days	Fri 04/10/24	Fri 25/10/24
614		KIT & ROBE	14 days	Thu 24/10/24	Tue 12/11/24
615		CARPENTRY 2ND FIX	24 days	Mon 28/10/24	Thu 28/11/24
616		PLUMB 2ND FIX	24 days	Thu 31/10/24	Tue 03/12/24
617		ELEC 2ND FIX	24 days	Tue 05/11/24	Fri 06/12/24
618		PAINTING	30 days	Tue 12/11/24	Thu 02/01/25
619		INITIAL CLEAN	7 days	Thu 19/12/24	Wed 08/01/25
620		CAULKING	8 days	Mon 06/01/25	Wed 15/01/25
621		PRE SNAG	4 days	Wed 15/01/25	Mon 20/01/25
622		**Duplex Block H 72 to 79**	**130 days**	**Thu 06/06/24**	**Wed 18/12/24**
623		**Masonry to 1st floor slab**	**23 days**	**Thu 06/06/24**	**Mon 08/07/24**
624		Scaffolding	3 days	Thu 06/06/24	Mon 10/06/24
625		Masonry	15 days	Tue 11/06/24	Mon 01/07/24
626		Precast floors	1 day	Tue 02/07/24	Tue 02/07/24
627		Structural slab	4 days	Wed 03/07/24	Mon 08/07/24
628		**Superstructure 1st and 2nd**	**95 days**	**Thu 08/08/24**	**Wed 18/12/24**
629		ERECT SCAFFOLD	3 days	Thu 08/08/24	Mon 12/08/24
630		ERECT TIMBER FRAME	16 days	Tue 13/08/24	Tue 03/09/24
631		TILE ROOF/ PV PANELS	5 days	Tue 27/08/24	Mon 02/09/24
632		WINDOWS	2 days	Fri 23/08/24	Mon 26/08/24
633		MASONRY	15 days	Tue 27/08/24	Mon 16/09/24
634		FACIA & SOFFIT	2 days	Tue 17/09/24	Wed 18/09/24
635		RENDER	4 days	Wed 18/09/24	Mon 23/09/24
636		RELEASE SCAFFOLD	3 days	Mon 23/09/24	Wed 25/09/24
637		CARPENTRY 1ST FIX	12 days	Tue 27/08/24	Wed 11/09/24
638		PLUMB 1ST FIX	12 days	Fri 30/08/24	Mon 16/09/24
639		ELEC 1ST FIX	12 days	Wed 04/09/24	Thu 19/09/24
640		DRYWALL	7 days	Wed 11/09/24	Thu 19/09/24
641		TAPE JOINTING	12 days	Wed 18/09/24	Thu 03/10/24
642		INSTALL BOILERS & BATH	7 days	Thu 03/10/24	Fri 11/10/24
643		SAND WALLS	4 days	Thu 10/10/24	Tue 15/10/24
644		TILER	8 days	Mon 14/10/24	Wed 23/10/24
645		KIT & ROBE	10 days	Tue 22/10/24	Mon 04/11/24
646		CARPENTRY 2ND FIX	12 days	Thu 24/10/24	Fri 08/11/24
647		PLUMB 2ND FIX	12 days	Tue 29/10/24	Wed 13/11/24
648		ELEC 2ND FIX	12 days	Fri 01/11/24	Mon 18/11/24
649		PAINTING	22 days	Fri 08/11/24	Mon 09/12/24
650		INITIAL CLEAN	5 days	Thu 05/12/24	Wed 11/12/24
651		CAULKING	6 days	Mon 09/12/24	Mon 16/12/24



Project: Kelland Homes stage 1A master programme
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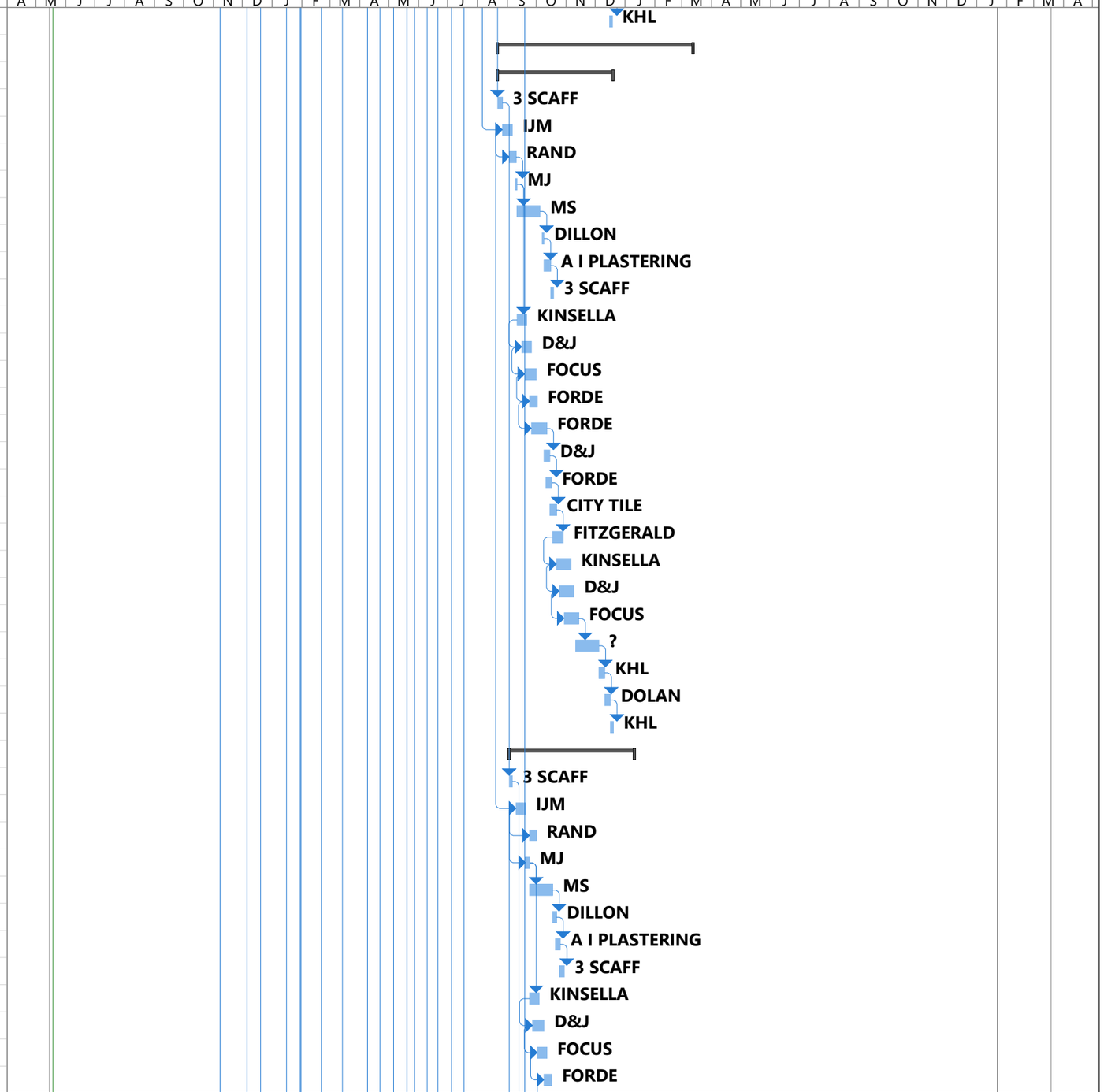
Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
652		PRE SNAG	3 days	Mon 16/12/24	Wed 18/12/24
653		**K2-B**	**137 days**	**Thu 22/08/24**	**Wed 12/03/25**
654		**Block 139 to 143**	**86 days**	**Thu 22/08/24**	**Thu 19/12/24**
655		ERECT SCAFFOLD	3 days	Thu 22/08/24	Mon 26/08/24
656		ERECT TIMBER FRAME	8 days	Tue 27/08/24	Thu 05/09/24
657		TILE ROOF/ PV PANELS	5 days	Tue 03/09/24	Mon 09/09/24
658		WINDOWS	2 days	Mon 09/09/24	Tue 10/09/24
659		MASONRY	18 days	Wed 11/09/24	Fri 04/10/24
660		FACIA & SOFFIT	2 days	Mon 07/10/24	Tue 08/10/24
661		RENDER	5 days	Wed 09/10/24	Tue 15/10/24
662		RELEASE SCAFFOLD	3 days	Wed 16/10/24	Fri 18/10/24
663		CARPENTRY 1ST FIX	8 days	Wed 11/09/24	Fri 20/09/24
664		PLUMB 1ST FIX	8 days	Mon 16/09/24	Wed 25/09/24
665		ELEC 1ST FIX	8 days	Thu 19/09/24	Mon 30/09/24
666		DRYWALL	6 days	Tue 24/09/24	Tue 01/10/24
667		TAPE JOINTING	12 days	Thu 26/09/24	Fri 11/10/24
668		INSTALL BOILERS & BATHS	4 days	Wed 09/10/24	Mon 14/10/24
669		SAND WALLS	4 days	Fri 11/10/24	Wed 16/10/24
670		TILER	5 days	Tue 15/10/24	Mon 21/10/24
671		KIT & ROBE	7 days	Fri 18/10/24	Mon 28/10/24
672		CARPENTRY 2ND FIX	11 days	Tue 22/10/24	Tue 05/11/24
673		PLUMB 2ND FIX	11 days	Fri 25/10/24	Fri 08/11/24
674		ELEC 2ND FIX	11 days	Wed 30/10/24	Wed 13/11/24
675		PAINTING	18 days	Mon 11/11/24	Wed 04/12/24
676		INITIAL CLEAN	4 days	Thu 05/12/24	Tue 10/12/24
677		CAULKING	4 days	Wed 11/12/24	Mon 16/12/24
678		PRE SNAG	3 days	Tue 17/12/24	Thu 19/12/24
679		**Block 108 to 112**	**86 days**	**Tue 03/09/24**	**Fri 10/01/25**
680		ERECT SCAFFOLD	3 days	Tue 03/09/24	Thu 05/09/24
681		ERECT TIMBER FRAME	8 days	Tue 10/09/24	Thu 19/09/24
682		TILE ROOF/ PV PANELS	5 days	Tue 24/09/24	Mon 30/09/24
683		WINDOWS	2 days	Fri 20/09/24	Mon 23/09/24
684		MASONRY	18 days	Tue 24/09/24	Thu 17/10/24
685		FACIA & SOFFIT	2 days	Fri 18/10/24	Mon 21/10/24
686		RENDER	5 days	Mon 21/10/24	Fri 25/10/24
687		RELEASE SCAFFOLD	3 days	Fri 25/10/24	Tue 29/10/24
688		CARPENTRY 1ST FIX	8 days	Tue 24/09/24	Thu 03/10/24
689		PLUMB 1ST FIX	8 days	Fri 27/09/24	Tue 08/10/24
690		ELEC 1ST FIX	8 days	Wed 02/10/24	Fri 11/10/24
691		DRYWALL	6 days	Wed 09/10/24	Wed 16/10/24

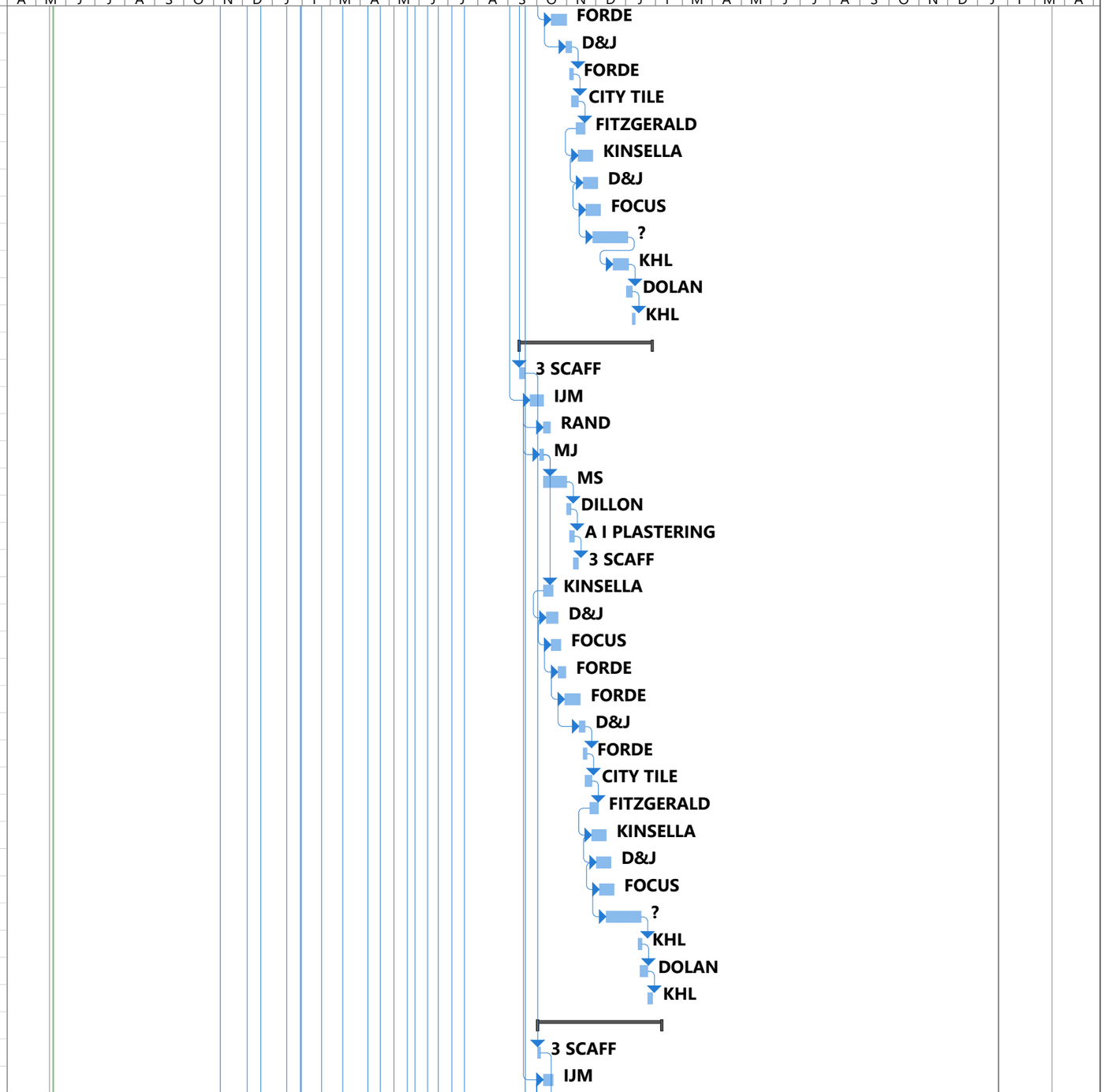


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
692		TAPE JOINTING	12 days	Wed 16/10/24	Thu 31/10/24
693		INSTALL BOILERS & BATHS	4 days	Thu 31/10/24	Tue 05/11/24
694		SAND WALLS	4 days	Mon 04/11/24	Thu 07/11/24
695		TILER	5 days	Wed 06/11/24	Tue 12/11/24
696		KIT & ROBE	7 days	Mon 11/11/24	Tue 19/11/24
697		CARPENTRY 2ND FIX	11 days	Wed 13/11/24	Wed 27/11/24
698		PLUMB 2ND FIX	11 days	Mon 18/11/24	Mon 02/12/24
699		ELEC 2ND FIX	11 days	Thu 21/11/24	Thu 05/12/24
700		PAINTING	18 days	Thu 28/11/24	Thu 02/01/25
701		INITIAL CLEAN	4 days	Thu 19/12/24	Fri 03/01/25
702		CAULKING	4 days	Thu 02/01/25	Tue 07/01/25
703		PRE SNAG	3 days	Wed 08/01/25	Fri 10/01/25
704		**Block 133 to 138**	**90 days**	**Fri 13/09/24**	**Tue 28/01/25**
705		ERECT SCAFFOLD	4 days	Fri 13/09/24	Wed 18/09/24
706		ERECT TIMBER FRAME	10 days	Tue 24/09/24	Mon 07/10/24
707		TILE ROOF/ PV PANELS	5 days	Tue 08/10/24	Mon 14/10/24
708		WINDOWS	2 days	Fri 04/10/24	Mon 07/10/24
709		MASONRY	18 days	Tue 08/10/24	Thu 31/10/24
710		FACIA & SOFFIT	2 days	Fri 01/11/24	Mon 04/11/24
711		RENDER	5 days	Mon 04/11/24	Fri 08/11/24
712		RELEASE SCAFFOLD	3 days	Fri 08/11/24	Tue 12/11/24
713		CARPENTRY 1ST FIX	8 days	Tue 08/10/24	Thu 17/10/24
714		PLUMB 1ST FIX	8 days	Fri 11/10/24	Tue 22/10/24
715		ELEC 1ST FIX	8 days	Wed 16/10/24	Fri 25/10/24
716		DRYWALL	6 days	Wed 23/10/24	Wed 30/10/24
717		TAPE JOINTING	12 days	Wed 30/10/24	Thu 14/11/24
718		INSTALL BOILERS & BATHS	4 days	Thu 14/11/24	Tue 19/11/24
719		SAND WALLS	4 days	Mon 18/11/24	Thu 21/11/24
720		TILER	5 days	Wed 20/11/24	Tue 26/11/24
721		KIT & ROBE	7 days	Mon 25/11/24	Tue 03/12/24
722		CARPENTRY 2ND FIX	11 days	Wed 27/11/24	Wed 11/12/24
723		PLUMB 2ND FIX	11 days	Mon 02/12/24	Mon 16/12/24
724		ELEC 2ND FIX	11 days	Thu 05/12/24	Thu 19/12/24
725		PAINTING	18 days	Thu 12/12/24	Thu 16/01/25
726		INITIAL CLEAN	4 days	Tue 14/01/25	Fri 17/01/25
727		CAULKING	6 days	Thu 16/01/25	Thu 23/01/25
728		PRE SNAG	3 days	Fri 24/01/25	Tue 28/01/25
729		**Block 128 to 132**	**85 days**	**Wed 02/10/24**	**Fri 07/02/25**
730		ERECT SCAFFOLD	3 days	Wed 02/10/24	Fri 04/10/24
731		ERECT TIMBER FRAME	8 days	Tue 08/10/24	Thu 17/10/24

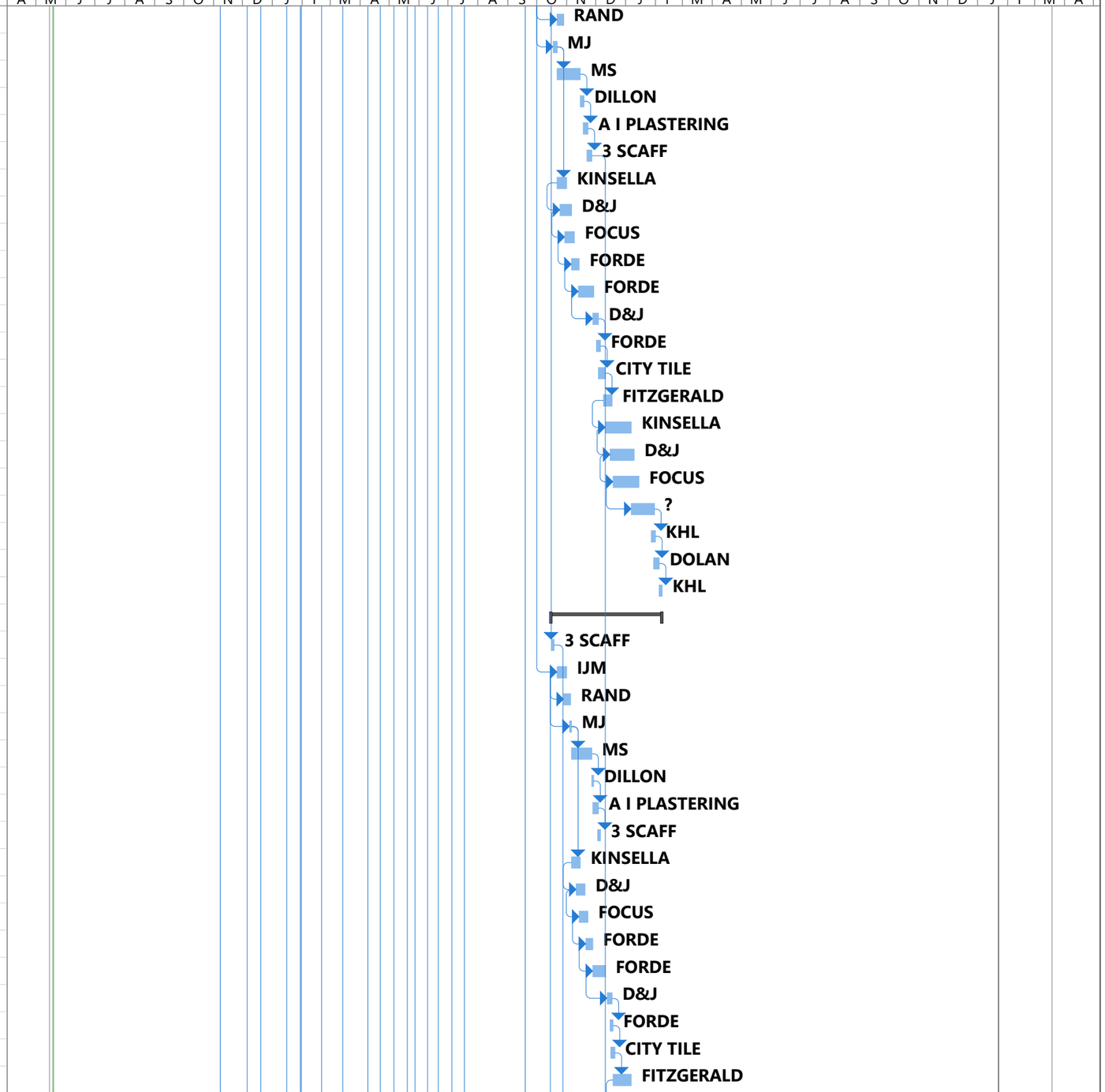


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
732		TILE ROOF/ PV PANELS	5 days	Tue 22/10/24	Mon 28/10/24
733		WINDOWS	2 days	Fri 18/10/24	Mon 21/10/24
734		MASONRY	18 days	Tue 22/10/24	Thu 14/11/24
735		FACIA & SOFFIT	2 days	Fri 15/11/24	Mon 18/11/24
736		RENDER	5 days	Mon 18/11/24	Fri 22/11/24
737		RELEASE SCAFFOLD	3 days	Fri 22/11/24	Tue 26/11/24
738		CARPENTRY 1ST FIX	8 days	Tue 22/10/24	Thu 31/10/24
739		PLUMB 1ST FIX	8 days	Fri 25/10/24	Tue 05/11/24
740		ELEC 1ST FIX	8 days	Wed 30/10/24	Fri 08/11/24
741		DRYWALL	6 days	Wed 06/11/24	Wed 13/11/24
742		TAPE JOINTING	12 days	Wed 13/11/24	Thu 28/11/24
743		INSTALL BOILERS & BATHS	4 days	Thu 28/11/24	Tue 03/12/24
744		SAND WALLS	4 days	Mon 02/12/24	Thu 05/12/24
745		TILER	5 days	Wed 04/12/24	Tue 10/12/24
746		KIT & ROBE	7 days	Mon 09/12/24	Tue 17/12/24
747		CARPENTRY 2ND FIX	11 days	Wed 11/12/24	Mon 06/01/25
748		PLUMB 2ND FIX	11 days	Mon 16/12/24	Thu 09/01/25
749		ELEC 2ND FIX	11 days	Thu 19/12/24	Tue 14/01/25
750		PAINTING	18 days	Tue 07/01/25	Thu 30/01/25
751		INITIAL CLEAN	4 days	Tue 28/01/25	Fri 31/01/25
752		CAULKING	4 days	Thu 30/01/25	Tue 04/02/25
753		PRE SNAG	3 days	Wed 05/02/25	Fri 07/02/25
754		**Block 113 to 116**	**75 days**	**Wed 16/10/24**	**Fri 07/02/25**
755		ERECT SCAFFOLD	3 days	Wed 16/10/24	Fri 18/10/24
756		ERECT TIMBER FRAME	8 days	Tue 22/10/24	Thu 31/10/24
757		TILE ROOF/ PV PANELS	5 days	Tue 29/10/24	Mon 04/11/24
758		WINDOWS	2 days	Mon 04/11/24	Tue 05/11/24
759		MASONRY	15 days	Wed 06/11/24	Tue 26/11/24
760		FACIA & SOFFIT	2 days	Wed 27/11/24	Thu 28/11/24
761		RENDER	4 days	Thu 28/11/24	Tue 03/12/24
762		RELEASE SCAFFOLD	3 days	Tue 03/12/24	Thu 05/12/24
763		CARPENTRY 1ST FIX	7 days	Wed 06/11/24	Thu 14/11/24
764		PLUMB 1ST FIX	7 days	Mon 11/11/24	Tue 19/11/24
765		ELEC 1ST FIX	7 days	Thu 14/11/24	Fri 22/11/24
766		DRYWALL	5 days	Thu 21/11/24	Wed 27/11/24
767		TAPE JOINTING	9 days	Thu 28/11/24	Tue 10/12/24
768		INSTALL BOILERS & BATHS	3 days	Fri 13/12/24	Tue 17/12/24
769		SAND WALLS	3 days	Mon 16/12/24	Wed 18/12/24
770		TILER	4 days	Tue 17/12/24	Fri 20/12/24
771		KIT & ROBE	5 days	Thu 19/12/24	Mon 06/01/25

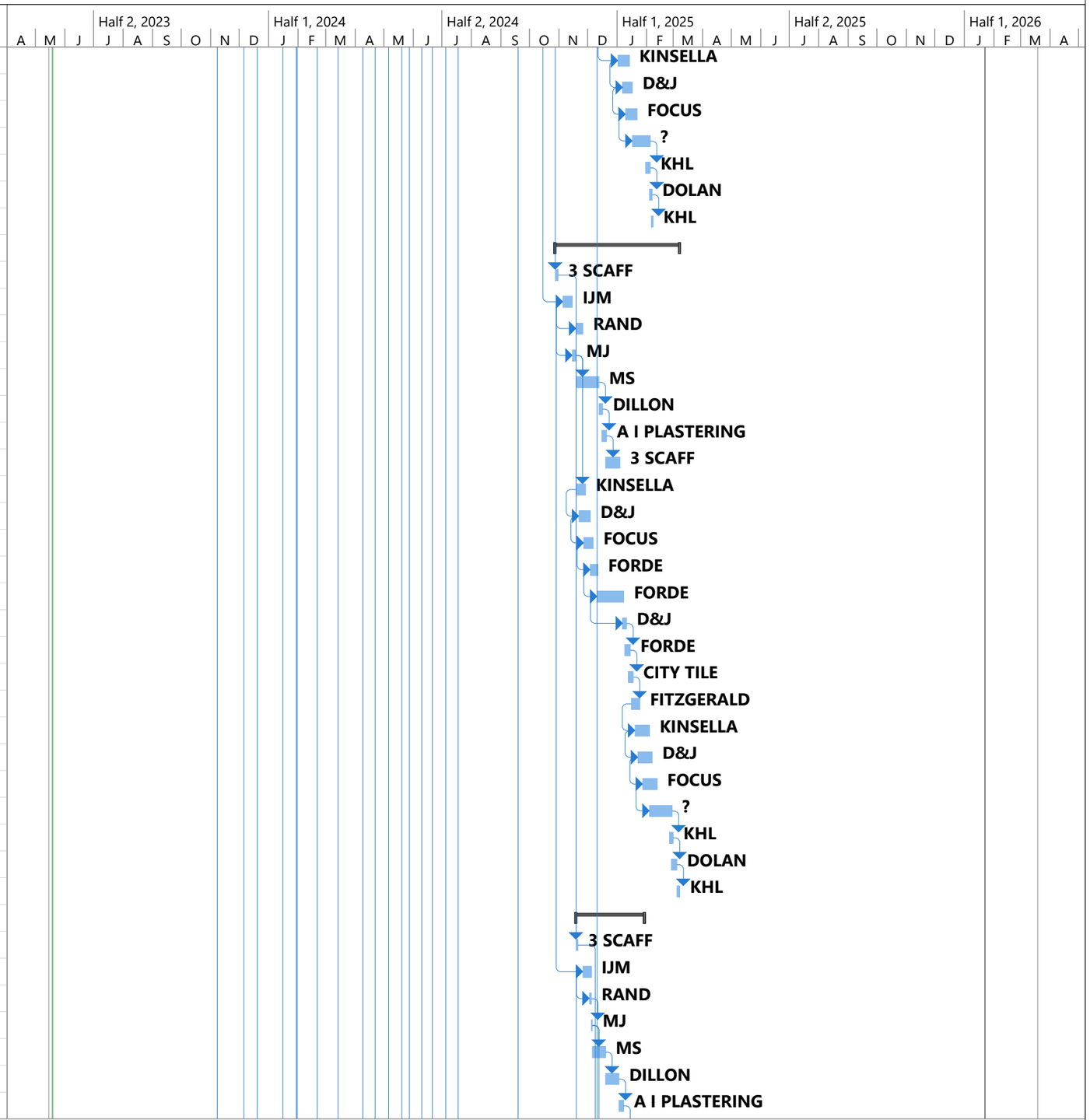


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
772		CARPENTRY 2ND FIX	8 days	Thu 02/01/25	Mon 13/01/25
773		PLUMB 2ND FIX	8 days	Tue 07/01/25	Thu 16/01/25
774		ELEC 2ND FIX	8 days	Fri 10/01/25	Tue 21/01/25
775		PAINTING	13 days	Fri 17/01/25	Tue 04/02/25
776		INITIAL CLEAN	3 days	Fri 31/01/25	Tue 04/02/25
777		CAULKING	3 days	Tue 04/02/25	Thu 06/02/25
778		PRE SNAG	2 days	Thu 06/02/25	Fri 07/02/25
779		**Block 117 to 121**	**87 days**	**Mon 28/10/24**	**Fri 07/03/25**
780		ERECT SCAFFOLD	3 days	Mon 28/10/24	Wed 30/10/24
781		ERECT TIMBER FRAME	8 days	Tue 05/11/24	Thu 14/11/24
782		TILE ROOF/ PV PANELS	5 days	Tue 19/11/24	Mon 25/11/24
783		WINDOWS	2 days	Fri 15/11/24	Mon 18/11/24
784		MASONRY	18 days	Tue 19/11/24	Thu 12/12/24
785		FACIA & SOFFIT	2 days	Fri 13/12/24	Mon 16/12/24
786		RENDER	5 days	Mon 16/12/24	Fri 20/12/24
787		RELEASE SCAFFOLD	3 days	Fri 20/12/24	Fri 03/01/25
788		CARPENTRY 1ST FIX	8 days	Tue 19/11/24	Thu 28/11/24
789		PLUMB 1ST FIX	8 days	Fri 22/11/24	Tue 03/12/24
790		ELEC 1ST FIX	8 days	Wed 27/11/24	Fri 06/12/24
791		DRYWALL	6 days	Wed 04/12/24	Wed 11/12/24
792		TAPE JOINTING	12 days	Wed 11/12/24	Tue 07/01/25
793		INSTALL BOILERS & BATHS	4 days	Tue 07/01/25	Fri 10/01/25
794		SAND WALLS	4 days	Thu 09/01/25	Tue 14/01/25
795		TILER	5 days	Mon 13/01/25	Fri 17/01/25
796		KIT & ROBE	7 days	Thu 16/01/25	Fri 24/01/25
797		CARPENTRY 2ND FIX	11 days	Mon 20/01/25	Mon 03/02/25
798		PLUMB 2ND FIX	11 days	Thu 23/01/25	Thu 06/02/25
799		ELEC 2ND FIX	11 days	Tue 28/01/25	Tue 11/02/25
800		PAINTING	18 days	Tue 04/02/25	Thu 27/02/25
801		INITIAL CLEAN	4 days	Tue 25/02/25	Fri 28/02/25
802		CAULKING	4 days	Thu 27/02/25	Tue 04/03/25
803		PRE SNAG	3 days	Wed 05/03/25	Fri 07/03/25
804		**Block 126/127**	**44 days**	**Tue 19/11/24**	**Wed 29/01/25**
805		ERECT SCAFFOLD	2 days	Tue 19/11/24	Wed 20/11/24
806		ERECT TIMBER FRAME	7 days	Tue 26/11/24	Wed 04/12/24
807		TILE ROOF/ PV PANELS	2 days	Tue 03/12/24	Wed 04/12/24
808		WINDOWS	1 day	Thu 05/12/24	Thu 05/12/24
809		MASONRY	10 days	Fri 06/12/24	Thu 19/12/24
810		FACIA & SOFFIT	2 days	Fri 20/12/24	Thu 02/01/25
811		RENDER	3 days	Fri 03/01/25	Tue 07/01/25

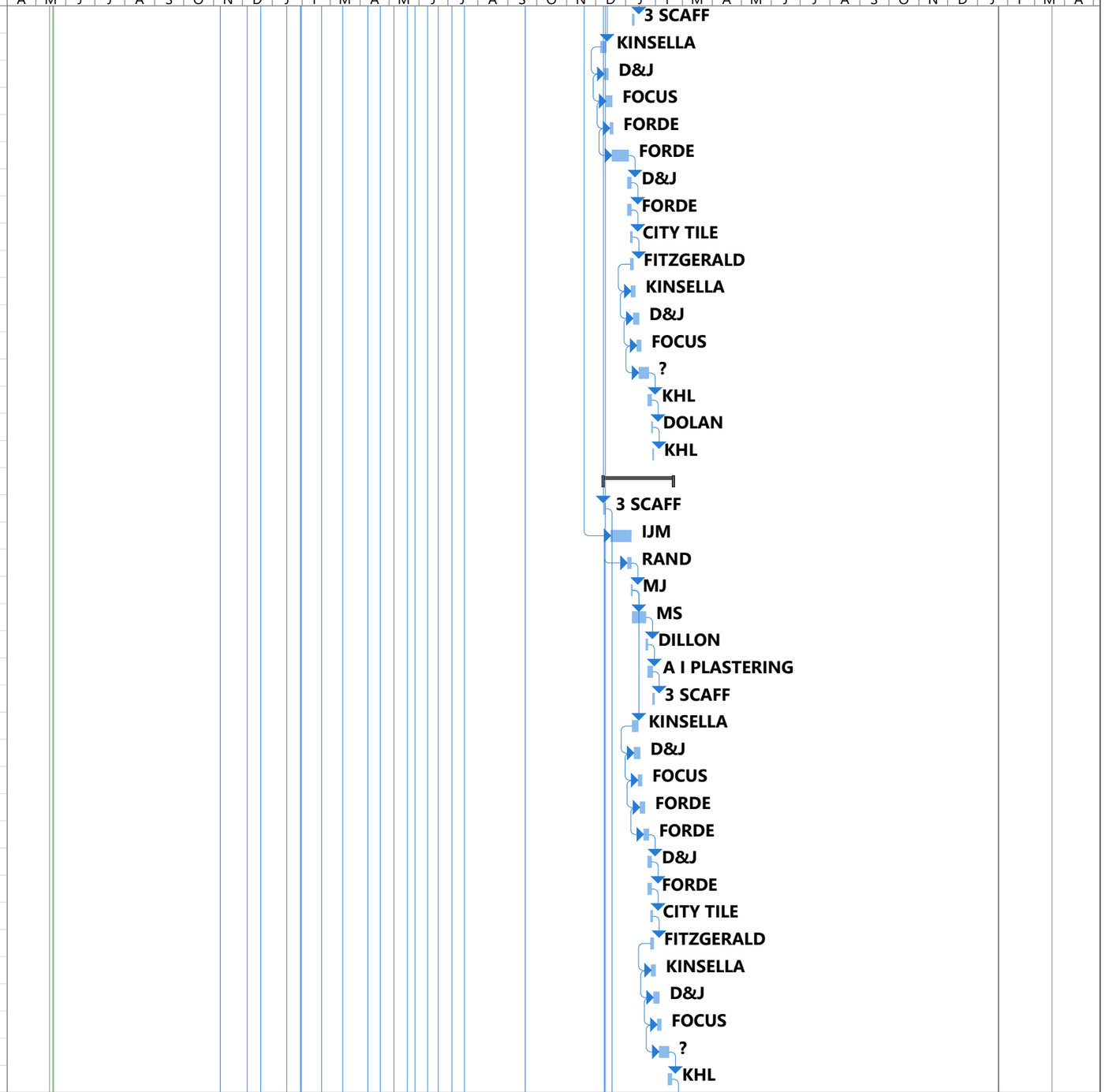


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
812		RELEASE SCAFFOLD	2 days	Wed 08/01/25	Thu 09/01/25
813		CARPENTRY 1ST FIX	4 days	Fri 06/12/24	Wed 11/12/24
814		PLUMB 1ST FIX	4 days	Tue 10/12/24	Fri 13/12/24
815		ELEC 1ST FIX	4 days	Thu 12/12/24	Tue 17/12/24
816		DRYWALL	3 days	Mon 16/12/24	Wed 18/12/24
817		TAPE JOINTING	5 days	Wed 18/12/24	Fri 03/01/25
818		INSTALL BOILERS & BATHS	2 days	Fri 03/01/25	Mon 06/01/25
819		SAND WALLS	2 days	Fri 03/01/25	Mon 06/01/25
820		TILER	2 days	Mon 06/01/25	Tue 07/01/25
821		KIT & ROBE	3 days	Mon 06/01/25	Wed 08/01/25
822		CARPENTRY 2ND FIX	4 days	Tue 07/01/25	Fri 10/01/25
823		PLUMB 2ND FIX	4 days	Thu 09/01/25	Tue 14/01/25
824		ELEC 2ND FIX	4 days	Mon 13/01/25	Thu 16/01/25
825		PAINTING	8 days	Wed 15/01/25	Fri 24/01/25
826		INITIAL CLEAN	2 days	Fri 24/01/25	Mon 27/01/25
827		CAULKING	1 day	Tue 28/01/25	Tue 28/01/25
828		PRE SNAG	1 day	Wed 29/01/25	Wed 29/01/25
829		**Block 122/123**	**45 days**	**Mon 09/12/24**	**Wed 19/02/25**
830		ERECT SCAFFOLD	2 days	Mon 09/12/24	Tue 10/12/24
831		ERECT TIMBER FRAME	7 days	Tue 17/12/24	Mon 06/01/25
832		TILE ROOF/ PV PANELS	2 days	Fri 03/01/25	Mon 06/01/25
833		WINDOWS	1 day	Tue 07/01/25	Tue 07/01/25
834		MASONRY	10 days	Wed 08/01/25	Tue 21/01/25
835		FACIA & SOFFIT	2 days	Wed 22/01/25	Thu 23/01/25
836		RENDER	3 days	Fri 24/01/25	Tue 28/01/25
837		RELEASE SCAFFOLD	2 days	Wed 29/01/25	Thu 30/01/25
838		CARPENTRY 1ST FIX	4 days	Wed 08/01/25	Mon 13/01/25
839		PLUMB 1ST FIX	4 days	Fri 10/01/25	Wed 15/01/25
840		ELEC 1ST FIX	4 days	Tue 14/01/25	Fri 17/01/25
841		DRYWALL	3 days	Thu 16/01/25	Mon 20/01/25
842		TAPE JOINTING	5 days	Mon 20/01/25	Fri 24/01/25
843		INSTALL BOILERS & BATHS	2 days	Fri 24/01/25	Mon 27/01/25
844		SAND WALLS	2 days	Fri 24/01/25	Mon 27/01/25
845		TILER	2 days	Mon 27/01/25	Tue 28/01/25
846		KIT & ROBE	3 days	Mon 27/01/25	Wed 29/01/25
847		CARPENTRY 2ND FIX	4 days	Tue 28/01/25	Fri 31/01/25
848		PLUMB 2ND FIX	4 days	Thu 30/01/25	Tue 04/02/25
849		ELEC 2ND FIX	4 days	Mon 03/02/25	Thu 06/02/25
850		PAINTING	8 days	Wed 05/02/25	Fri 14/02/25
851		INITIAL CLEAN	2 days	Fri 14/02/25	Mon 17/02/25

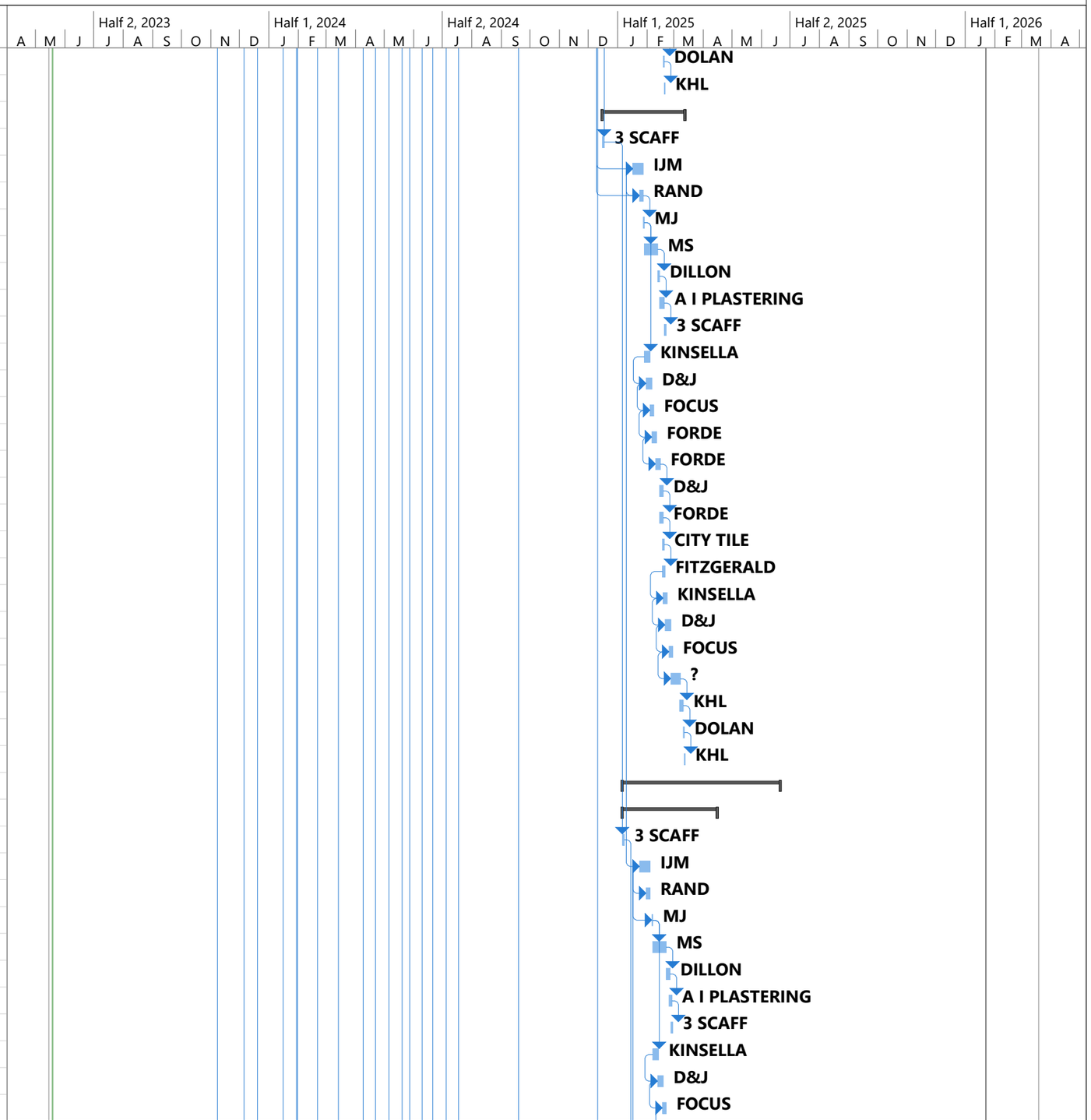


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
852		CAULKING	1 day	Tue 18/02/25	Tue 18/02/25
853		PRE SNAG	1 day	Wed 19/02/25	Wed 19/02/25
854		**Block 124/125**	**55 days**	**Mon 16/12/24**	**Wed 12/03/25**
855		ERECT SCAFFOLD	2 days	Mon 16/12/24	Tue 17/12/24
856		ERECT TIMBER FRAME	7 days	Fri 17/01/25	Mon 27/01/25
857		TILE ROOF/ PV PANELS	2 days	Fri 24/01/25	Mon 27/01/25
858		WINDOWS	1 day	Tue 28/01/25	Tue 28/01/25
859		MASONRY	10 days	Wed 29/01/25	Tue 11/02/25
860		FACIA & SOFFIT	2 days	Wed 12/02/25	Thu 13/02/25
861		RENDER	3 days	Fri 14/02/25	Tue 18/02/25
862		RELEASE SCAFFOLD	2 days	Wed 19/02/25	Thu 20/02/25
863		CARPENTRY 1ST FIX	4 days	Wed 29/01/25	Mon 03/02/25
864		PLUMB 1ST FIX	4 days	Fri 31/01/25	Wed 05/02/25
865		ELEC 1ST FIX	4 days	Tue 04/02/25	Fri 07/02/25
866		DRYWALL	3 days	Thu 06/02/25	Mon 10/02/25
867		TAPE JOINTING	5 days	Mon 10/02/25	Fri 14/02/25
868		INSTALL BOILERS & BATHS	2 days	Fri 14/02/25	Mon 17/02/25
869		SAND WALLS	2 days	Fri 14/02/25	Mon 17/02/25
870		TILER	2 days	Mon 17/02/25	Tue 18/02/25
871		KIT & ROBE	3 days	Mon 17/02/25	Wed 19/02/25
872		CARPENTRY 2ND FIX	4 days	Tue 18/02/25	Fri 21/02/25
873		PLUMB 2ND FIX	4 days	Thu 20/02/25	Tue 25/02/25
874		ELEC 2ND FIX	4 days	Mon 24/02/25	Thu 27/02/25
875		PAINTING	8 days	Wed 26/02/25	Fri 07/03/25
876		INITIAL CLEAN	2 days	Fri 07/03/25	Mon 10/03/25
877		CAULKING	1 day	Tue 11/03/25	Tue 11/03/25
878		PRE SNAG	1 day	Wed 12/03/25	Wed 12/03/25
879		**K2-C**	**120 days**	**Mon 06/01/25**	**Fri 20/06/25**
880		**Block 80/81**	**72 days**	**Mon 06/01/25**	**Tue 15/04/25**
881		ERECT SCAFFOLD	2 days	Mon 06/01/25	Tue 07/01/25
882		ERECT TIMBER FRAME	7 days	Fri 24/01/25	Mon 03/02/25
883		TILE ROOF/ PV PANELS	2 days	Fri 31/01/25	Mon 03/02/25
884		WINDOWS	1 day	Thu 06/02/25	Thu 06/02/25
885		MASONRY	10 days	Fri 07/02/25	Thu 20/02/25
886		FACIA & SOFFIT	2 days	Fri 21/02/25	Mon 24/02/25
887		RENDER	3 days	Mon 24/02/25	Wed 26/02/25
888		RELEASE SCAFFOLD	2 days	Wed 26/02/25	Thu 27/02/25
889		CARPENTRY 1ST FIX	4 days	Fri 07/02/25	Wed 12/02/25
890		PLUMB 1ST FIX	4 days	Wed 12/02/25	Mon 17/02/25
891		ELEC 1ST FIX	4 days	Mon 17/02/25	Thu 20/02/25

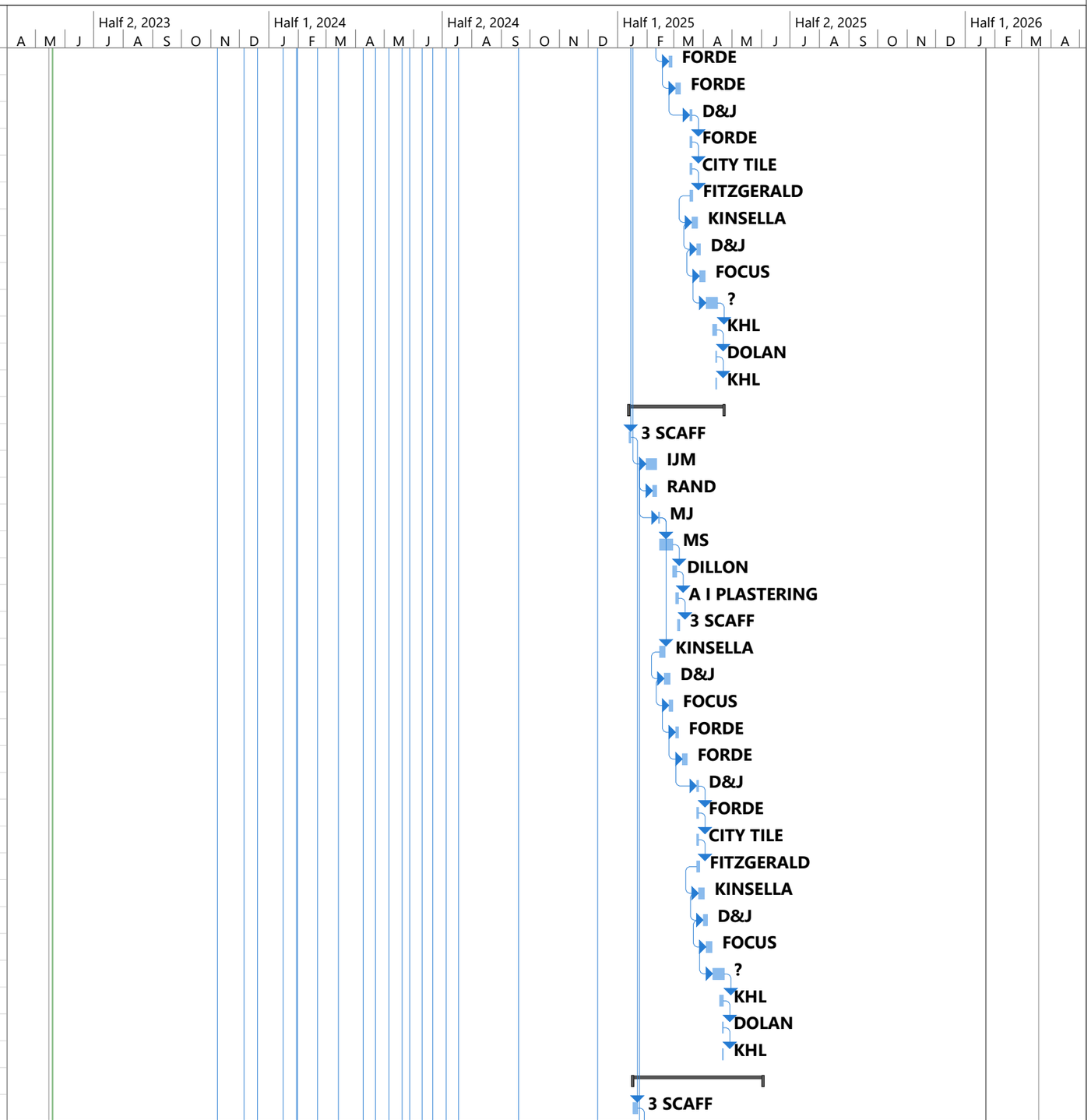


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
892		DRYWALL	3 days	Mon 24/02/25	Wed 26/02/25
893		TAPE JOINTING	5 days	Mon 03/03/25	Fri 07/03/25
894		INSTALL BOILERS & BATHS	2 days	Tue 18/03/25	Wed 19/03/25
895		SAND WALLS	2 days	Tue 18/03/25	Wed 19/03/25
896		TILER	2 days	Tue 18/03/25	Wed 19/03/25
897		KIT & ROBE	3 days	Tue 18/03/25	Thu 20/03/25
898		CARPENTRY 2ND FIX	4 days	Thu 20/03/25	Tue 25/03/25
899		PLUMB 2ND FIX	4 days	Tue 25/03/25	Fri 28/03/25
900		ELEC 2ND FIX	4 days	Fri 28/03/25	Wed 02/04/25
901		PAINTING	8 days	Fri 04/04/25	Tue 15/04/25
902		INITIAL CLEAN	2 days	Fri 11/04/25	Mon 14/04/25
903		CAULKING	1 day	Mon 14/04/25	Mon 14/04/25
904		PRE SNAG	1 day	Mon 14/04/25	Mon 14/04/25
905		**Block 82/83**	**72 days**	**Mon 13/01/25**	**Tue 22/04/25**
906		ERECT SCAFFOLD	2 days	Mon 13/01/25	Tue 14/01/25
907		ERECT TIMBER FRAME	7 days	Fri 31/01/25	Mon 10/02/25
908		TILE ROOF/ PV PANELS	2 days	Fri 07/02/25	Mon 10/02/25
909		WINDOWS	1 day	Thu 13/02/25	Thu 13/02/25
910		MASONRY	10 days	Fri 14/02/25	Thu 27/02/25
911		FACIA & SOFFIT	2 days	Fri 28/02/25	Mon 03/03/25
912		RENDER	3 days	Mon 03/03/25	Wed 05/03/25
913		RELEASE SCAFFOLD	2 days	Wed 05/03/25	Thu 06/03/25
914		CARPENTRY 1ST FIX	4 days	Fri 14/02/25	Wed 19/02/25
915		PLUMB 1ST FIX	4 days	Wed 19/02/25	Mon 24/02/25
916		ELEC 1ST FIX	4 days	Mon 24/02/25	Thu 27/02/25
917		DRYWALL	3 days	Mon 03/03/25	Wed 05/03/25
918		TAPE JOINTING	5 days	Mon 10/03/25	Fri 14/03/25
919		INSTALL BOILERS & BATHS	2 days	Tue 25/03/25	Wed 26/03/25
920		SAND WALLS	2 days	Tue 25/03/25	Wed 26/03/25
921		TILER	2 days	Tue 25/03/25	Wed 26/03/25
922		KIT & ROBE	3 days	Tue 25/03/25	Thu 27/03/25
923		CARPENTRY 2ND FIX	4 days	Thu 27/03/25	Tue 01/04/25
924		PLUMB 2ND FIX	4 days	Tue 01/04/25	Fri 04/04/25
925		ELEC 2ND FIX	4 days	Fri 04/04/25	Wed 09/04/25
926		PAINTING	8 days	Fri 11/04/25	Tue 22/04/25
927		INITIAL CLEAN	2 days	Fri 18/04/25	Mon 21/04/25
928		CAULKING	1 day	Mon 21/04/25	Mon 21/04/25
929		PRE SNAG	1 day	Mon 21/04/25	Mon 21/04/25
930		**Block 103 to 107**	**97 days**	**Fri 17/01/25**	**Mon 02/06/25**
931		ERECT SCAFFOLD	3 days	Fri 17/01/25	Tue 21/01/25

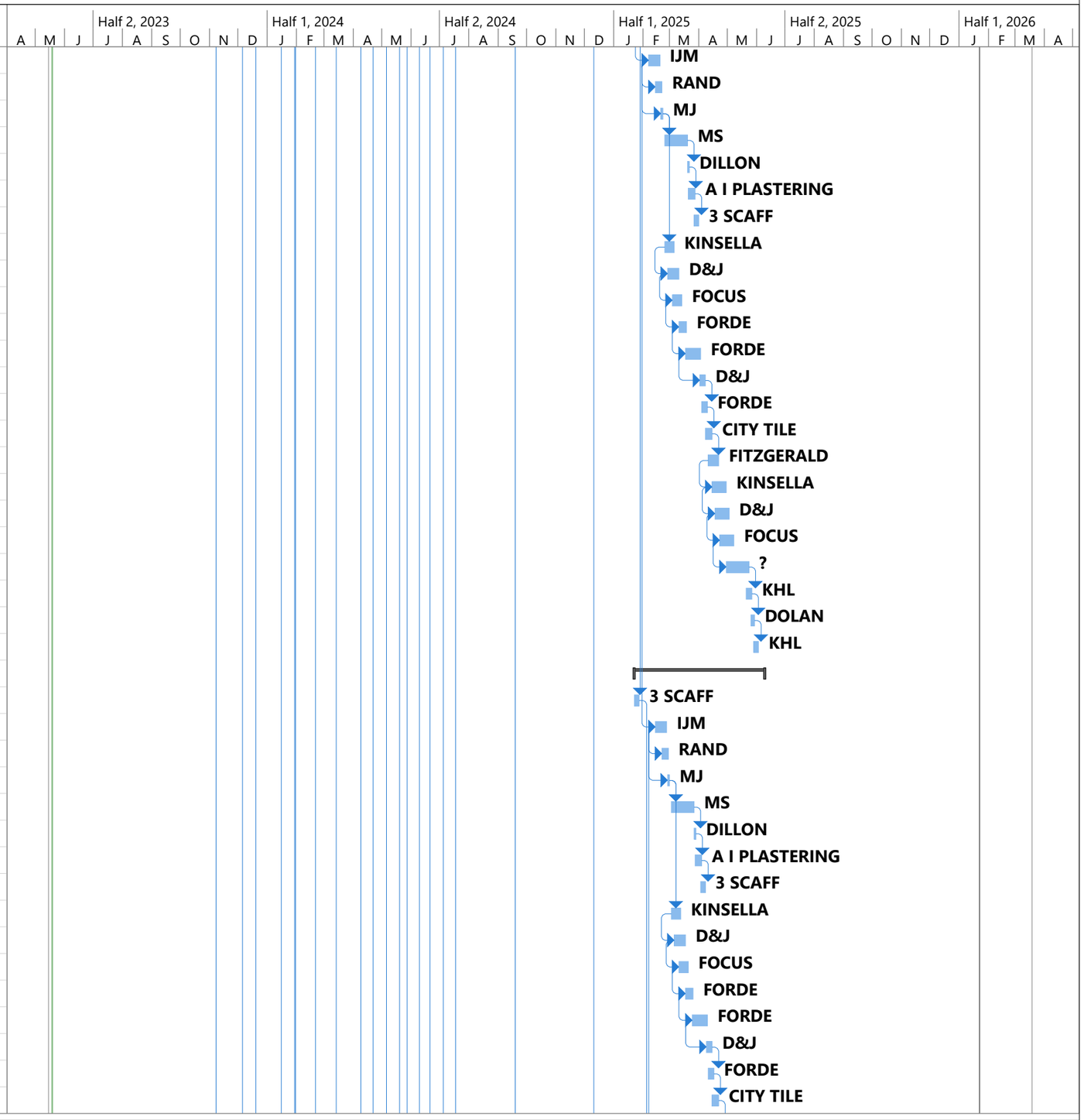


Project: Kelland Homes stage 1A master programme
Date: Fri 19/05/23

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
932		ERECT TIMBER FRAME	8 days	Fri 07/02/25	Tue 18/02/25
933		TILE ROOF/ PV PANELS	5 days	Fri 14/02/25	Thu 20/02/25
934		WINDOWS	2 days	Thu 20/02/25	Fri 21/02/25
935		MASONRY	18 days	Mon 24/02/25	Wed 19/03/25
936		FACIA & SOFFIT	2 days	Thu 20/03/25	Fri 21/03/25
937		RENDER	5 days	Fri 21/03/25	Thu 27/03/25
938		RELEASE SCAFFOLD	3 days	Thu 27/03/25	Mon 31/03/25
939		CARPENTRY 1ST FIX	8 days	Mon 24/02/25	Wed 05/03/25
940		PLUMB 1ST FIX	8 days	Thu 27/02/25	Mon 10/03/25
941		ELEC 1ST FIX	8 days	Tue 04/03/25	Thu 13/03/25
942		DRYWALL	6 days	Tue 11/03/25	Tue 18/03/25
943		TAPE JOINTING	12 days	Tue 18/03/25	Wed 02/04/25
944		INSTALL BOILERS & BATHS	4 days	Wed 02/04/25	Mon 07/04/25
945		SAND WALLS	4 days	Fri 04/04/25	Wed 09/04/25
946		TILER	5 days	Tue 08/04/25	Mon 14/04/25
947		KIT & ROBE	7 days	Fri 11/04/25	Mon 21/04/25
948		CARPENTRY 2ND FIX	11 days	Tue 15/04/25	Tue 29/04/25
949		PLUMB 2ND FIX	11 days	Fri 18/04/25	Fri 02/05/25
950		ELEC 2ND FIX	11 days	Wed 23/04/25	Wed 07/05/25
951		PAINTING	18 days	Wed 30/04/25	Fri 23/05/25
952		INITIAL CLEAN	4 days	Wed 21/05/25	Mon 26/05/25
953		CAULKING	4 days	Mon 26/05/25	Thu 29/05/25
954		PRE SNAG	3 days	Thu 29/05/25	Mon 02/06/25
955		**Block 98 to 102**	**98 days**	**Thu 23/01/25**	**Mon 09/06/25**
956		ERECT SCAFFOLD	3 days	Thu 23/01/25	Mon 27/01/25
957		ERECT TIMBER FRAME	8 days	Fri 14/02/25	Tue 25/02/25
958		TILE ROOF/ PV PANELS	5 days	Fri 21/02/25	Thu 27/02/25
959		WINDOWS	2 days	Thu 27/02/25	Fri 28/02/25
960		MASONRY	18 days	Mon 03/03/25	Wed 26/03/25
961		FACIA & SOFFIT	2 days	Thu 27/03/25	Fri 28/03/25
962		RENDER	5 days	Fri 28/03/25	Thu 03/04/25
963		RELEASE SCAFFOLD	3 days	Thu 03/04/25	Mon 07/04/25
964		CARPENTRY 1ST FIX	8 days	Mon 03/03/25	Wed 12/03/25
965		PLUMB 1ST FIX	8 days	Thu 06/03/25	Mon 17/03/25
966		ELEC 1ST FIX	8 days	Tue 11/03/25	Thu 20/03/25
967		DRYWALL	6 days	Tue 18/03/25	Tue 25/03/25
968		TAPE JOINTING	12 days	Tue 25/03/25	Wed 09/04/25
969		INSTALL BOILERS & BATHS	4 days	Wed 09/04/25	Mon 14/04/25
970		SAND WALLS	4 days	Fri 11/04/25	Wed 16/04/25
971		TILER	5 days	Tue 15/04/25	Mon 21/04/25



Project: Kelland Homes stage 1A master programme
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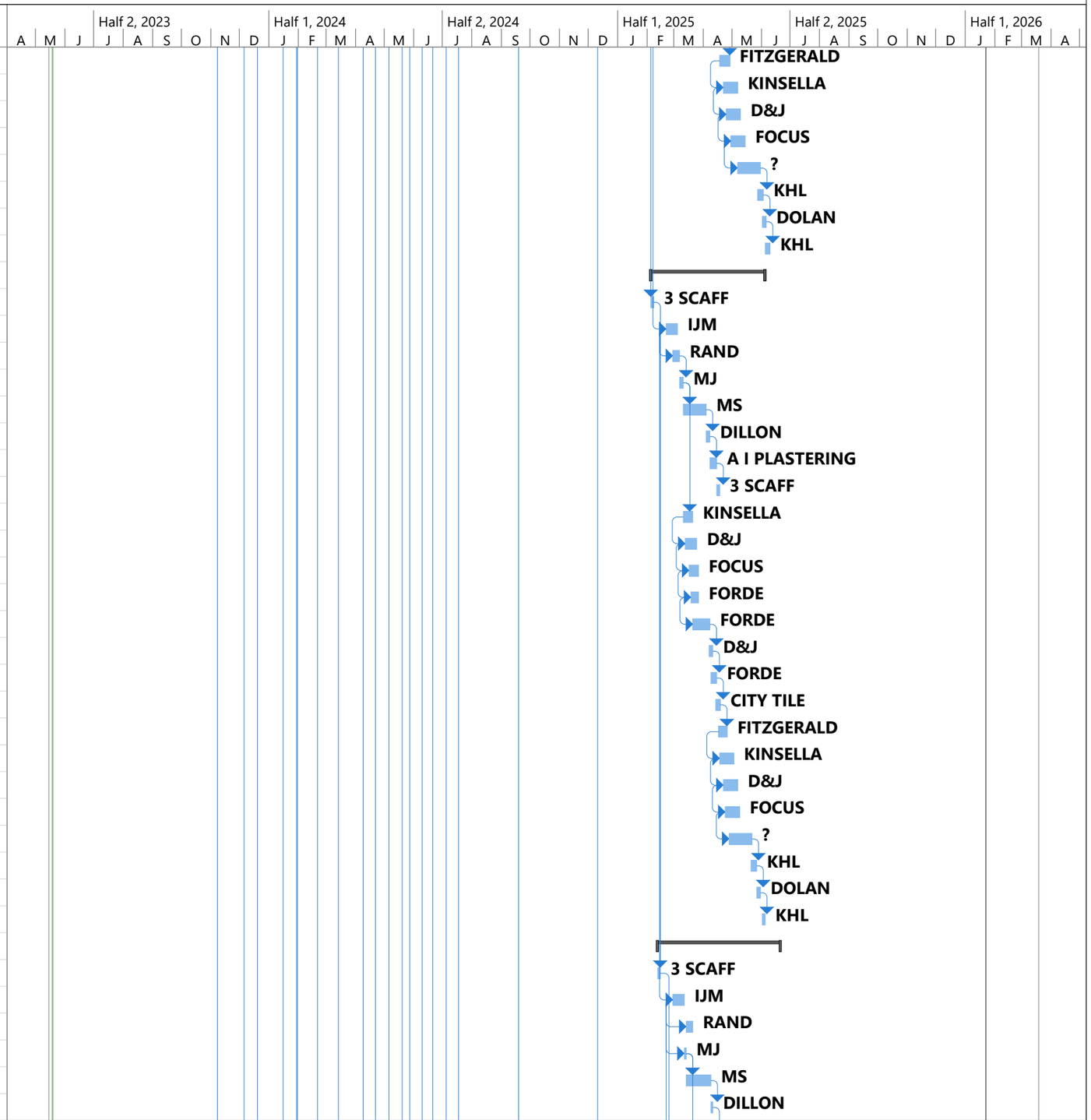
Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
972		KIT & ROBE	7 days	Fri 18/04/25	Mon 28/04/25
973		CARPENTRY 2ND FIX	11 days	Tue 22/04/25	Tue 06/05/25
974		PLUMB 2ND FIX	11 days	Fri 25/04/25	Fri 09/05/25
975		ELEC 2ND FIX	11 days	Wed 30/04/25	Wed 14/05/25
976		PAINTING	18 days	Wed 07/05/25	Fri 30/05/25
977		INITIAL CLEAN	4 days	Wed 28/05/25	Mon 02/06/25
978		CAULKING	4 days	Mon 02/06/25	Thu 05/06/25
979		PRE SNAG	3 days	Thu 05/06/25	Mon 09/06/25
980		**Block 84 to 88**	**86 days**	**Wed 05/02/25**	**Wed 04/06/25**
981		ERECT SCAFFOLD	3 days	Wed 05/02/25	Fri 07/02/25
982		ERECT TIMBER FRAME	8 days	Fri 21/02/25	Tue 04/03/25
983		TILE ROOF/ PV PANELS	5 days	Fri 28/02/25	Thu 06/03/25
984		WINDOWS	2 days	Fri 07/03/25	Mon 10/03/25
985		MASONRY	18 days	Tue 11/03/25	Thu 03/04/25
986		FACIA & SOFFIT	2 days	Fri 04/04/25	Mon 07/04/25
987		RENDER	5 days	Tue 08/04/25	Mon 14/04/25
988		RELEASE SCAFFOLD	3 days	Tue 15/04/25	Thu 17/04/25
989		CARPENTRY 1ST FIX	8 days	Tue 11/03/25	Thu 20/03/25
990		PLUMB 1ST FIX	8 days	Thu 13/03/25	Mon 24/03/25
991		ELEC 1ST FIX	8 days	Mon 17/03/25	Wed 26/03/25
992		DRYWALL	6 days	Wed 19/03/25	Wed 26/03/25
993		TAPE JOINTING	12 days	Fri 21/03/25	Mon 07/04/25
994		INSTALL BOILERS & BATHS	4 days	Mon 07/04/25	Thu 10/04/25
995		SAND WALLS	4 days	Wed 09/04/25	Mon 14/04/25
996		TILER	5 days	Mon 14/04/25	Fri 18/04/25
997		KIT & ROBE	7 days	Thu 17/04/25	Fri 25/04/25
998		CARPENTRY 2ND FIX	11 days	Fri 18/04/25	Fri 02/05/25
999		PLUMB 2ND FIX	11 days	Tue 22/04/25	Tue 06/05/25
1000		ELEC 2ND FIX	11 days	Thu 24/04/25	Thu 08/05/25
1001		PAINTING	18 days	Mon 28/04/25	Wed 21/05/25
1002		INITIAL CLEAN	4 days	Wed 21/05/25	Mon 26/05/25
1003		CAULKING	4 days	Tue 27/05/25	Fri 30/05/25
1004		PRE SNAG	3 days	Mon 02/06/25	Wed 04/06/25
1005		**Block 89 to 93**	**93 days**	**Wed 12/02/25**	**Fri 20/06/25**
1006		ERECT SCAFFOLD	3 days	Wed 12/02/25	Fri 14/02/25
1007		ERECT TIMBER FRAME	8 days	Fri 28/02/25	Tue 11/03/25
1008		TILE ROOF/ PV PANELS	5 days	Fri 14/03/25	Thu 20/03/25
1009		WINDOWS	2 days	Wed 12/03/25	Thu 13/03/25
1010		MASONRY	18 days	Fri 14/03/25	Tue 08/04/25
1011		FACIA & SOFFIT	2 days	Wed 09/04/25	Thu 10/04/25



Project: Kelland Homes stage 1A master programme
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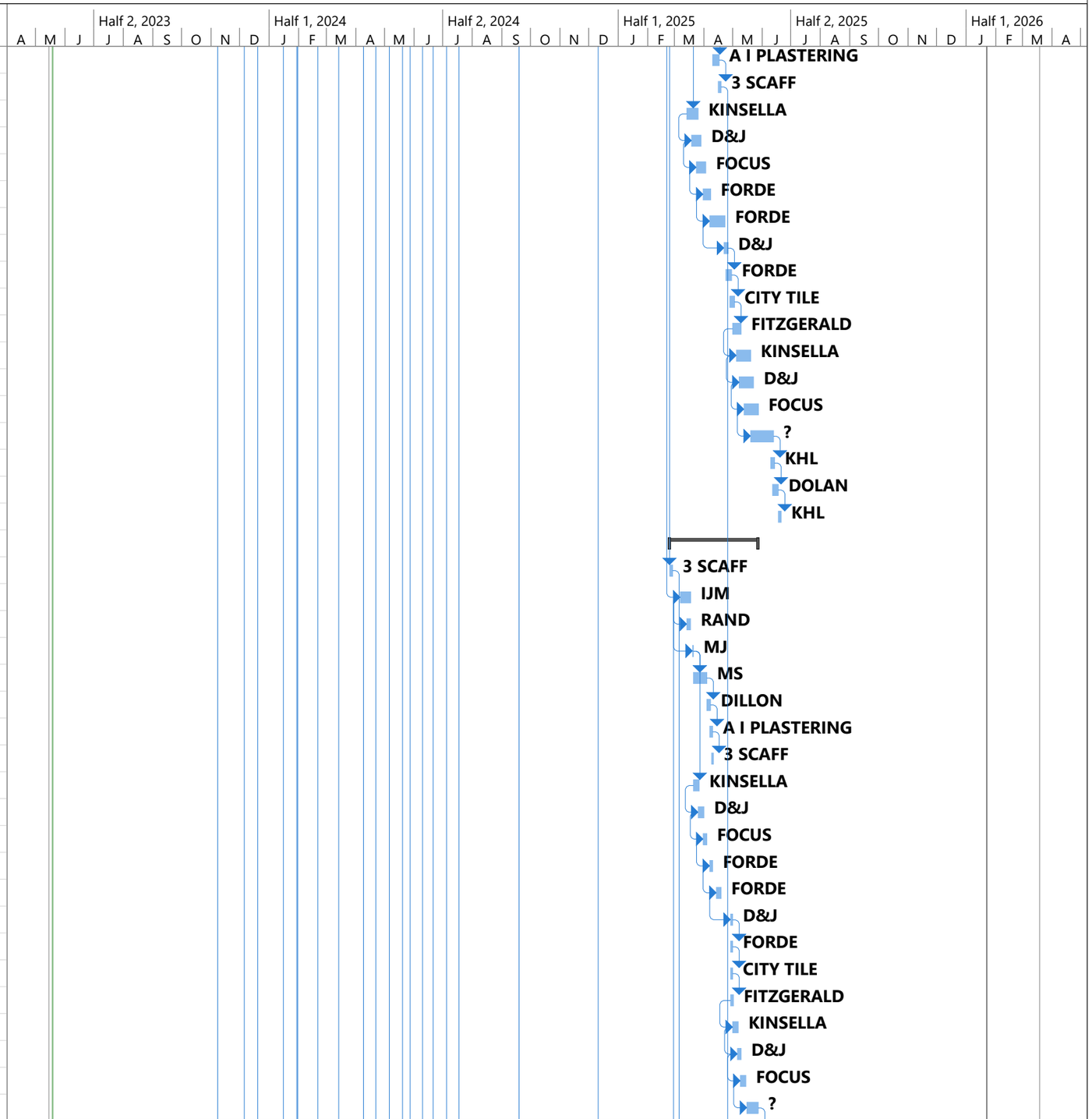
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
1012		RENDER	5 days	Thu 10/04/25	Wed 16/04/25
1013		RELEASE SCAFFOLD	3 days	Wed 16/04/25	Fri 18/04/25
1014		CARPENTRY 1ST FIX	8 days	Fri 14/03/25	Tue 25/03/25
1015		PLUMB 1ST FIX	8 days	Wed 19/03/25	Fri 28/03/25
1016		ELEC 1ST FIX	8 days	Mon 24/03/25	Wed 02/04/25
1017		DRYWALL	6 days	Mon 31/03/25	Mon 07/04/25
1018		TAPE JOINTING	12 days	Mon 07/04/25	Tue 22/04/25
1019		INSTALL BOILERS & BATHS	4 days	Tue 22/04/25	Fri 25/04/25
1020		SAND WALLS	4 days	Thu 24/04/25	Tue 29/04/25
1021		TILER	5 days	Mon 28/04/25	Fri 02/05/25
1022		KIT & ROBE	7 days	Thu 01/05/25	Fri 09/05/25
1023		CARPENTRY 2ND FIX	11 days	Mon 05/05/25	Mon 19/05/25
1024		PLUMB 2ND FIX	11 days	Thu 08/05/25	Thu 22/05/25
1025		ELEC 2ND FIX	11 days	Tue 13/05/25	Tue 27/05/25
1026		PAINTING	18 days	Tue 20/05/25	Thu 12/06/25
1027		INITIAL CLEAN	4 days	Tue 10/06/25	Fri 13/06/25
1028		CAULKING	4 days	Thu 12/06/25	Tue 17/06/25
1029		PRE SNAG	3 days	Wed 18/06/25	Fri 20/06/25
1030		**Block 96/97**	**67 days**	**Mon 24/02/25**	**Tue 27/05/25**
1031		ERECT SCAFFOLD	3 days	Mon 24/02/25	Wed 26/02/25
1032		ERECT TIMBER FRAME	7 days	Fri 07/03/25	Mon 17/03/25
1033		TILE ROOF/ PV PANELS	2 days	Fri 14/03/25	Mon 17/03/25
1034		WINDOWS	1 day	Thu 20/03/25	Thu 20/03/25
1035		MASONRY	10 days	Fri 21/03/25	Thu 03/04/25
1036		FACIA & SOFFIT	2 days	Fri 04/04/25	Mon 07/04/25
1037		RENDER	3 days	Mon 07/04/25	Wed 09/04/25
1038		RELEASE SCAFFOLD	2 days	Wed 09/04/25	Thu 10/04/25
1039		CARPENTRY 1ST FIX	4 days	Fri 21/03/25	Wed 26/03/25
1040		PLUMB 1ST FIX	4 days	Wed 26/03/25	Mon 31/03/25
1041		ELEC 1ST FIX	4 days	Mon 31/03/25	Thu 03/04/25
1042		DRYWALL	3 days	Mon 07/04/25	Wed 09/04/25
1043		TAPE JOINTING	5 days	Mon 14/04/25	Fri 18/04/25
1044		INSTALL BOILERS & BATHS	2 days	Tue 29/04/25	Wed 30/04/25
1045		SAND WALLS	2 days	Tue 29/04/25	Wed 30/04/25
1046		TILER	2 days	Tue 29/04/25	Wed 30/04/25
1047		KIT & ROBE	3 days	Tue 29/04/25	Thu 01/05/25
1048		CARPENTRY 2ND FIX	4 days	Thu 01/05/25	Tue 06/05/25
1049		PLUMB 2ND FIX	4 days	Tue 06/05/25	Fri 09/05/25
1050		ELEC 2ND FIX	4 days	Fri 09/05/25	Wed 14/05/25
1051		PAINTING	8 days	Fri 16/05/25	Tue 27/05/25



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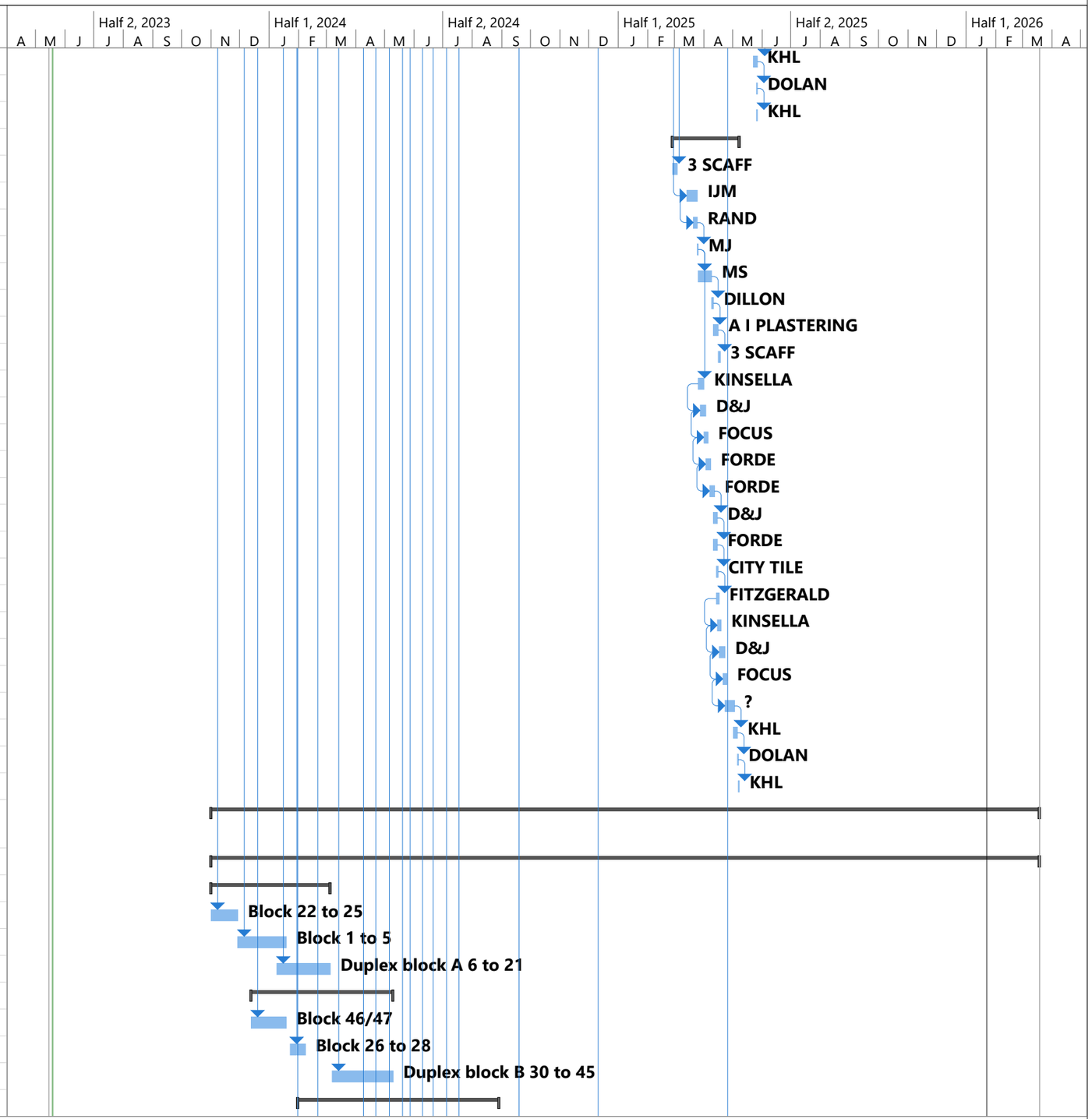
Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
1052		INITIAL CLEAN	2 days	Fri 23/05/25	Mon 26/05/25
1053		CAULKING	1 day	Mon 26/05/25	Mon 26/05/25
1054		PRE SNAG	1 day	Mon 26/05/25	Mon 26/05/25
1055		**Block 94/95**	**50 days**	**Thu 27/02/25**	**Wed 07/05/25**
1056		ERECT SCAFFOLD	3 days	Thu 27/02/25	Mon 03/03/25
1057		ERECT TIMBER FRAME	7 days	Fri 14/03/25	Mon 24/03/25
1058		TILE ROOF/ PV PANELS	2 days	Fri 21/03/25	Mon 24/03/25
1059		WINDOWS	1 day	Tue 25/03/25	Tue 25/03/25
1060		MASONRY	10 days	Wed 26/03/25	Tue 08/04/25
1061		FACIA & SOFFIT	2 days	Wed 09/04/25	Thu 10/04/25
1062		RENDER	3 days	Fri 11/04/25	Tue 15/04/25
1063		RELEASE SCAFFOLD	2 days	Wed 16/04/25	Thu 17/04/25
1064		CARPENTRY 1ST FIX	4 days	Wed 26/03/25	Mon 31/03/25
1065		PLUMB 1ST FIX	4 days	Fri 28/03/25	Wed 02/04/25
1066		ELEC 1ST FIX	4 days	Tue 01/04/25	Fri 04/04/25
1067		DRYWALL	3 days	Thu 03/04/25	Mon 07/04/25
1068		TAPE JOINTING	5 days	Mon 07/04/25	Fri 11/04/25
1069		INSTALL BOILERS & BATHS	2 days	Fri 11/04/25	Mon 14/04/25
1070		SAND WALLS	2 days	Fri 11/04/25	Mon 14/04/25
1071		TILER	2 days	Mon 14/04/25	Tue 15/04/25
1072		KIT & ROBE	3 days	Mon 14/04/25	Wed 16/04/25
1073		CARPENTRY 2ND FIX	4 days	Tue 15/04/25	Fri 18/04/25
1074		PLUMB 2ND FIX	4 days	Thu 17/04/25	Tue 22/04/25
1075		ELEC 2ND FIX	4 days	Mon 21/04/25	Thu 24/04/25
1076		PAINTING	8 days	Wed 23/04/25	Fri 02/05/25
1077		INITIAL CLEAN	2 days	Fri 02/05/25	Mon 05/05/25
1078		CAULKING	1 day	Tue 06/05/25	Tue 06/05/25
1079		PRE SNAG	1 day	Wed 07/05/25	Wed 07/05/25
1080		**Ground work finishes and landscaping**	**578 days**	**Wed 01/11/23**	**Wed 18/03/26**
1081		**K1**	**578 days**	**Wed 01/11/23**	**Wed 18/03/26**
1082		**K1-A**	**82 days**	**Wed 01/11/23**	**Mon 04/03/24**
1083		Block 22 to 25	20 days	Wed 01/11/23	Tue 28/11/23
1084		Block 1 to 5	30 days	Wed 29/11/23	Thu 18/01/24
1085		Duplex block A 6 to 21	40 days	Tue 09/01/24	Mon 04/03/24
1086		**K1-B**	**94 days**	**Wed 13/12/23**	**Thu 09/05/24**
1087		Block 46/47	20 days	Wed 13/12/23	Thu 18/01/24
1088		Block 26 to 28	12 days	Tue 23/01/24	Wed 07/02/24
1089		Duplex block B 30 to 45	40 days	Thu 07/03/24	Thu 09/05/24
1090		**KI-C**	**135 days**	**Wed 31/01/24**	**Wed 28/08/24**



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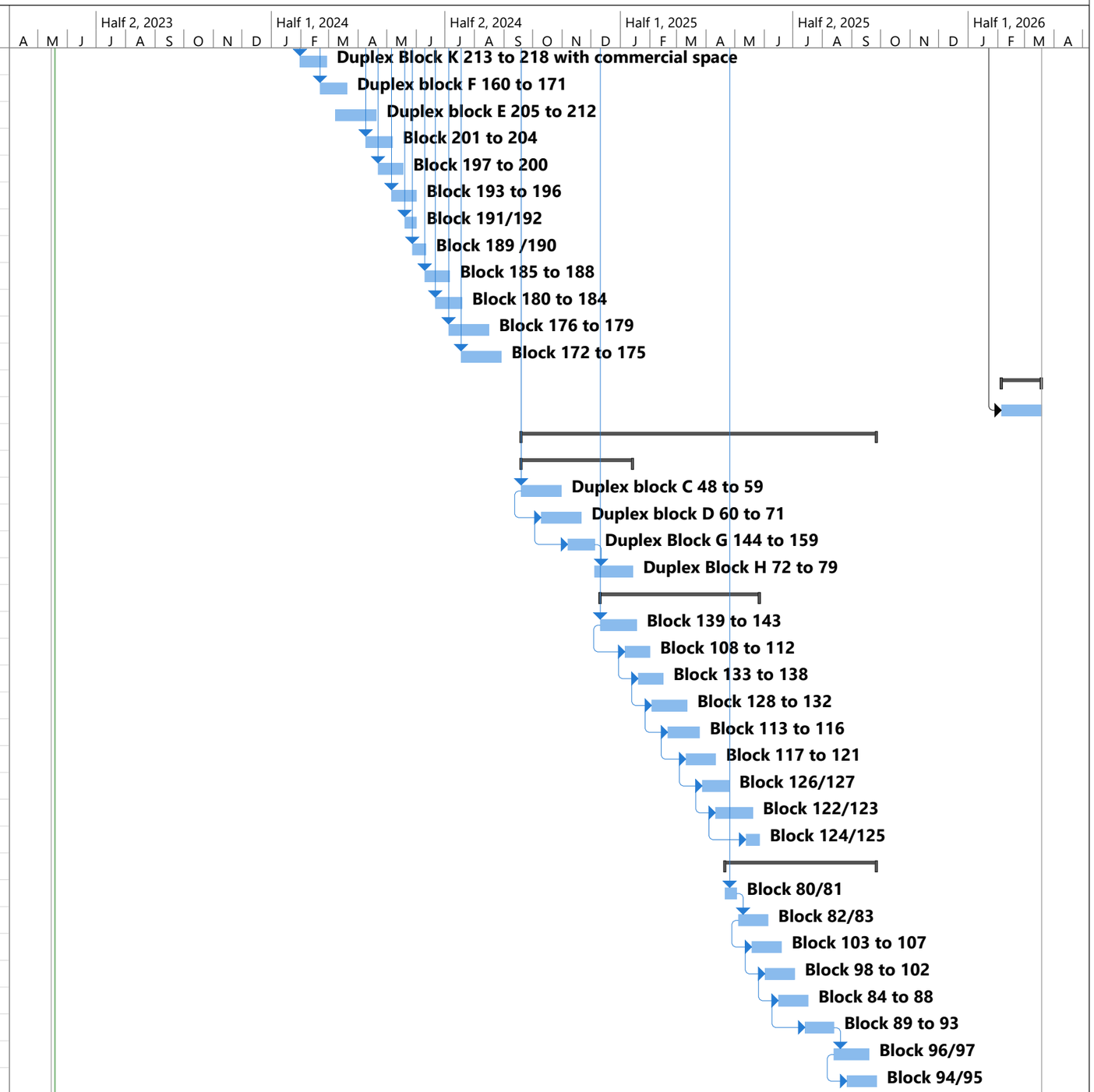
Kelland Homes (Stage 1A) K1 & K2 master programme

ID	Task Mode	Task Name	Duration	Start	Finish
1091		Duplex Block K 213 to 218 wit	20 days	Wed 31/01/24	Tue 27/02/24
1092		Duplex block F 160 to 171	20 days	Wed 21/02/24	Tue 19/03/24
1093		Duplex block E 205 to 212	25 days	Fri 08/03/24	Fri 19/04/24
1094		Block 201 to 204	20 days	Tue 09/04/24	Mon 06/05/24
1095		Block 197 to 200	20 days	Mon 22/04/24	Fri 17/05/24
1096		Block 193 to 196	20 days	Mon 06/05/24	Fri 31/05/24
1097		Block 191/192	10 days	Mon 20/05/24	Fri 31/05/24
1098		Block 189 /190	10 days	Tue 28/05/24	Mon 10/06/24
1099		Block 185 to 188	20 days	Mon 10/06/24	Fri 05/07/24
1100		Block 180 to 184	20 days	Fri 21/06/24	Thu 18/07/24
1101		Block 176 to 179	20 days	Fri 05/07/24	Thu 15/08/24
1102		Block 172 to 175	20 days	Thu 18/07/24	Wed 28/08/24
1103		**KI-D**	**30 days**	**Thu 05/02/26**	**Wed 18/03/26**
1104		Apartment A with commercial	30 days	Thu 05/02/26	Wed 18/03/26
1105		**K2**	**247 days**	**Thu 19/09/24**	**Fri 26/09/25**
1106		**K2-A**	**75 days**	**Thu 19/09/24**	**Mon 13/01/25**
1107		Duplex block C 48 to 59	30 days	Thu 19/09/24	Wed 30/10/24
1108		Duplex block D 60 to 71	30 days	Thu 10/10/24	Wed 20/11/24
1109		Duplex Block G 144 to 159	20 days	Thu 07/11/24	Wed 04/12/24
1110		Duplex Block H 72 to 79	20 days	Thu 05/12/24	Mon 13/01/25
1111		**K2-B**	**111 days**	**Wed 11/12/24**	**Mon 26/05/25**
1112		Block 139 to 143	20 days	Wed 11/12/24	Fri 17/01/25
1113		Block 108 to 112	20 days	Mon 06/01/25	Fri 31/01/25
1114		Block 133 to 138	20 days	Mon 20/01/25	Fri 14/02/25
1115		Block 128 to 132	27 days	Mon 03/02/25	Tue 11/03/25
1116		Block 113 to 116	23 days	Thu 20/02/25	Mon 24/03/25
1117		Block 117 to 121	23 days	Tue 11/03/25	Thu 10/04/25
1118		Block 126/127	20 days	Fri 28/03/25	Thu 24/04/25
1119		Block 122/123	27 days	Fri 11/04/25	Mon 19/05/25
1120		Block 124/125	10 days	Tue 13/05/25	Mon 26/05/25
1121		**K2-C**	**103 days**	**Mon 21/04/25**	**Fri 26/09/25**
1122		Block 80/81	10 days	Mon 21/04/25	Fri 02/05/25
1123		Block 82/83	23 days	Mon 05/05/25	Wed 04/06/25
1124		Block 103 to 107	23 days	Mon 19/05/25	Wed 18/06/25
1125		Block 98 to 102	23 days	Mon 02/06/25	Wed 02/07/25
1126		Block 84 to 88	23 days	Mon 16/06/25	Wed 16/07/25
1127		Block 89 to 93	10 days	Mon 14/07/25	Tue 12/08/25
1128		Block 96/97	27 days	Wed 13/08/25	Thu 18/09/25
1129		Block 94/95	23 days	Wed 27/08/25	Fri 26/09/25



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APPENDIX 3:
CONSTRUCTION DEMOLITION WASTE MANAGEMENT PLAN

PINNACLE
CONSULTING ENGINEERS

Construction Demolition Waste Management Plan

Clonburris SDZ

Prepared for:

Kelland Homes Ltd.

Kelland Homes

STRUCTURAL • CIVIL • DUE DILIGENCE • ENGINEERING MASTERPLANNING
FLOOD MANAGEMENT • INFRASTRUCTURE DESIGN
PRE-DEVELOPMENT ENGINEERING • BIM • TRANSPORTATION

CONTACT DETAILS

Name	Position	Email	Telephone	Mobile
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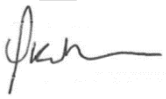
APPROVALS

	Name	Signature	Position	Date
Prepared by	Ronan Kearns		Associate Transport Planner	15/06/22
Reviewed by	James Mayer		Director	15/06/22
Approved by	James Mayer		Director	15/06/22

VERSIONS

Number	By	Date	Context
1	Ronan Kearns	27/04/22	Draft
2	Ronan Kearns	05/05/22	Updated draft
3	Ronan Kearns	10/06/22	Updated with client comments
4	Ronan Kearns	15/06/22	Issued for planning

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1 INTRODUCTION

1.1 Introduction

This Construction Demolition Waste Management Plan has been prepared on behalf of Kelland Homes for lands being developed in the Clonburris SDZ.

The purpose of this Construction & Development Wate Management Plan (C&D WMP) is to ensure that waste arisings during the construction and demolition phase will be managed and disposed of in a way that ensures the provisions of the Waste Management Acts 1996 - 2008 and associated Regulations 1 and the Southern Region Waste Management Plan are complied with. It will also ensure that optimum levels of waste reduction, re-use and recycling are achieved.

1.2 Background

Compliance with this Waste Management Plan will ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible.

This Waste Management Plan also provides guidance on the appropriate collection and transport of waste from the site to prevent issues associated with litter or more serious environmental pollution (e.g., contamination of soil and/or water).

This Waste Management Plan will have regard to national guidelines and policies:

- Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Project 2021
- Construction and Demolition Waste Management – a handbook for Contractors and Site Managers – CIF/FAS (2002)
- CIRIA document 133 Waste Minimisation in Construction
- The Quality Protocol for the Production of Aggregates from Inert Waste
- A Resource Opportunity – Waste Management Policy in Ireland
- The guidelines outline the issues that need to be addressed at the pre-planning stage of a development, through to completion and are considered to define best practice for C&D projects in Ireland and describe how C&D projects are to be undertaken such that environmental impacts and risks are minimised and maximum levels of waste recycling are achieved.

This CDWMP will include

- Predicted C&D wastes and procedures to prevent, minimise, recycle and reuse wastes.
- Waste disposal/recycling of C&D wastes at the site.
- Provision of training for waste manager and site crew.
- Details of proposed record keeping system.
- Details of waste audit procedures and plan.
- Details of consultation with relevant bodies i.e., waste recycling companies, Local Councils, etc

This Outline Construction Traffic Management Plan (CTMP) has been prepared in consultation with Applicants and their contractors. It is as a key construction contract document, the implementation of which aims to reduce possible impacts which may occur during the construction of the proposed development.

The applicant is responsible for ensuring construction activities are managed in accordance with the final CTMP. This Outline CTMP will shape the final plan but is subject to change/revision.

Objectives and measures are also included for the management, design and construction of the project to control the traffic impacts of construction insofar as it may affect the environment, local residents and the public in the vicinity of the construction works.

1.3 Implementation

Key to the implementation of this CTMP is the dedication of the on-site construction manager who will regularly liaise with and update the Client's resident representative and associated team on all

environmental and construction programming issues relating to the site. All site personnel are charged with following good practice and encouraged to provide feedback and suggestions for improvements. All site personnel are also required to ensure compliance with the requirements of the site's CTMP.

1.4 Scope

The objective of this CTMP is to ensure that the residual impacts to the public road network during the construction phase of the project which have been identified in the application documentation are minimised and that transport related activities are carried out as safely as possible and with minimum disruption to other road users.

The CTMP has also been prepared for the purpose of identifying appropriate and safe methods of access for construction traffic to the proposed development. This CTMP describes the traffic management for the transportation of construction materials, equipment and personnel along the public road network to facilitate the construction of the proposed development. Light vehicles, such as cars and vans, will be used by site operatives travelling to and from the site. Heavy Construction Vehicles (HCV) will be required to deliver general construction materials, such as concrete, to the site.

This CTMP remains a live document that will be reviewed by the contractor and expanded upon, where necessary, throughout the construction phase of the project. However, this version is considered to be wholly relevant for the expected works.

1.5 Consultation

The Applicant, and their connected companies, has a number of active construction sites. It has engaged in detail consultation with their incumbent contractors to review and sense check the measures contained in this outline CTMP.

While the measures contained in this CTMP are subject to detailed design and the appointment of a main contractor, all the pertinent issues have been reviewed by a number of contractors to ensure holistic approach has been taken with regard to the proposed CTMP measures.

2 CONSTRUCTION & DEMOLITION WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Government issued a Policy Statement in September 1998, known as Changing Our Ways, which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. The target for C&D waste in this Strategy was to recycle at least 50% of C&D waste within a five-year period (by 2003), with a progressive increase to at least 85% over fifteen years (by 2013).

In response to the "Changing Our Ways" report, a task force (Task Force B4) representing the waste sector of the already established Forum for the Construction Industry, released a report titled 'Recycling of Construction and Demolition Waste' concerning the development and implementation of a voluntary construction industry programme to meet the governments objectives for the recovery of construction and demolition waste.

The National Construction and Demolition Waste Council (NCDWC) was launched in June 2002, as one of the recommendations of the Forum for the Construction Industry, in the Task Force B4 final report. The NCDWC subsequently produced Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects in July 2006 in conjunction with the Department of the Environment, Heritage and Local Government. There are threshold criteria set out in the Guidelines to determine whether a C&D WMP is required. The development requires a C&D WMP under the following criterion:

- New developments with an aggregate floor area in excess of 1,250 m2.
- Demolition/renovation/refurbishment projects generating in excess of 100m3 in volume, of C&D waste

The Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion. These Guidelines have been followed in the preparation of this document and include the following elements:

- Predicted demolition & construction wastes and procedures to prevent, minimise, recycle and reuse wastes.
- Waste disposal/recycling of C&D wastes at the site.
- Provision of training for waste manager and site crew.
- Details of proposed record keeping system.
- Details of waste audit procedures and plan.
- Details of consultation with relevant bodies, i.e., waste recycling companies and South Dublin County Council, etc.

Other guidelines followed in the preparation of this report include the "Construction and Demolition Waste Management – a handbook for Contractors and Site Managers" published by FÁS and the Construction Industry Federation (2002).

Comprehensive reports regarding the quantities of C&D waste produced in Ireland have been compiled by the Environmental Protection Agency (EPA). National Waste (Database) Reports detailing, among other things, C&D generation and the level of recycling, recovery and disposal of this material, provide estimates based on information from waste companies and contractors.

2.2 Regional Level

The proposed development is located in the Eastern Midlands Waste Region which covers the following councils: -

- Dublin City Council.
- Dun Laoghaire Rathdown County Council.
- Fingal County Council.
- South Dublin County Council.

- Kildare County Council.
- Louth County Council.
- Laois County Council.
- Longford County Council.
- Offaly County Council.
- Westmeath County Council.
- Meath County Council; and
- Wicklow County Council.

The Eastern Midlands Region Waste Management plan was published in 2015 and covers the period 2015-2021.

2.3 South Dublin County Council Policy

2.3.1 Introduction

South Dublin County Council Construction and Demolition Waste Management Plan Pre-Planning Guidance During Pre-Planning consultation, the attention of the applicants is drawn to the following:

1. Applicant must note that the Construction Management Plan Report and Project Construction and Demolition Waste Management Plan report are two different standalone reports.
2. A Project Construction and Demolition Waste Management Plan should accompany a planning application for major development, otherwise it will be sought as Additional Information.
3. In the preparation of the Waste Management plans for development proposed that involves Demolition and Construction, applicants must familiarise themselves with, and ensure that such plans are consistent with the document: “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects” published in July 2006 by the Department of the Environment, Community and Local Government.
4. A Project Construction and Demolition Waste Management plan for a proposal must provide the information recommended in sections 3.2,3.3 and 3.4 of the document “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects” from the Department of the Environment, Community and Local Government that can be viewed / downloaded from17 http://www.dccae.gov. i.e.,/en-ie/environment/topics/waste/producer-responsibility-initiative/Pages/Construction-and-Demolition- (CD)-waste.aspx. Th e plan must also comply with the Example of an Indicative Project Construction and Demolition Waste Plan for a Development / Redevelopment Project C& D Waste Management Plan provided in Appendix 3 of the Best Practice Guidelines. A Project Construction and Demolition Waste Management plan lacking the details in these examples will be rejected.
5. As the condition for preparation of Project Construction and Demolition Waste Management plan is based on thresholds stated in Section 3 of the Guidelines, Applicants must provide: • Areas covered by the development • Th e volume of C & D waste generated during demolition / renovation / refurbishment projects • Th e volume of construction and demolition waste provided during civil engineering projects excluding waste materials used for development works on the sites.
6. Waste, arising from any development site must be kept to a minimum, segregated where appropriate, and disposed in accordance with the Waste Management Regulations 2007, as amended. Transport of such waste must be by an authorised waste permit holder. Waste disposal records must be maintained and made available, for inspection by Authorised Persons appointed under the Waste Management Act 1996, as amended. A Waste Transfer Form shall accompany the transportation of all hazardous waste arising from construction works.
7. Th e Council would have serious concerns about contaminated land or groundwater arising from a development project. Where the applicant believes contaminated land may be involved, the advice of the Council’s Waste Management Section should be sought on how to carry out an Environmental Risk Assessment leading to the remediation of site. Th e Council’s principal

aim in dealing with contaminated land and groundwater related issues is to secure the protection of human health, water bodies (including groundwater) and the wider environment. Th e waste management Section will advise on the scope of work required for environmental risk assessment consistent with EPA code of practice. It is important that the report of the environmental risk assessment accompanies any application. A developer seeking permission to develop land where there may be an issue of contamination would have to fully satisfy the Council that all risks arising can be addressed. To address any issue of contaminated land it would be the applicant's must to provide

i. A full site characterisation and assessment, (ii) A corrective action feasibility plan and

ii. A corrective action and implementation plan with aftercare

Further useful information is available from https://www.epa.ie/pubs/advice/waste/contaminatedland/contaminatedland/Guidance_on_the_Management_of_Contaminated_Land_and_Groundwater_at_EPA_ Licensed_Sites_FINAL.pdf

2.3.2 Consultation with South Dublin County Council

Once demolition and construction contractors have been appointed and prior to removal of any C&D waste materials offsite, details of the proposed destination of each waste stream will be provided to South Dublin County Council.

South Dublin County Council will also be consulted, as required, throughout the demolition, excavation and construction phases in order to ensure that all available waste reduction, reuse and recycling opportunities are identified and utilised and that compliant waste management practices are carried out.

2.3.3 Consultation with Recycling/Salvage Companies

The appointed waste contractor for the main waste streams managed by the demolition and construction contractors will be audited to ensure that relevant and up-to-date waste collection permits and facility registrations/permits/licences are held. In addition, information will be obtained regarding the feasibility of recycling each material, the costs of recycling/reclamation, the means by which the wastes will be collected and transported off-site, and the recycling/reclamation process each material will undergo off site.

2.4 Legislative Requirements

One of the guiding principles of European waste legislation, which has in turn been incorporated into the Waste Management Act 1996 and subsequent Irish legislation, is the principle of "duty of care". This implies that the waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal). Following on from this is the concept of "polluter pays" whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect management of waste produced, including the actions of any contractors engaged (e.g., for collection and transport of waste).

It is therefore imperative that the owners/managers of the site and any contractors engaged, undertake on and off-site management of waste in accordance with all legal requirements.

Waste contractors are typically engaged to transport waste off-site. Each contractor must comply with the provisions of the Waste Management Act 1996 (amended 2001) and associated Regulations. This includes the requirement that a contractor handle, transport and dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities. A collection permit to transport waste must be held by the relevant contractor, which is typically issued by the local authority where the majority of the contractors business takes place.

Waste receiving facilities must also be appropriately licensed/permitted. Operators of such facilities cannot legally receive any waste, unless in possession of a waste permit granted by the relevant local authority under the Waste Management (Facility Permit & Registration) Regulations 2007 or a waste licence granted by the EPA. The permit/licence held will specify the type and quantity of waste that can be received, stored, sorted, recycled and/or disposed of at the specified site.

2.5 Regional Waste Management Service Providers and Facilities

Various private waste contractors offer waste collection services across the Eastern Midlands Waste Region. Details of waste collection permits (granted, pending and withdrawn) for the Region are contained within the Eastern Midlands Region Waste Management Plan.

The Eastern Midlands Region Waste Management Plan also sets out licensed waste management facilities and landfill sites across the region.

2.6 Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Projects

2.6.1 RAMP Thresholds

The proposed development is defined as a Tier 2 development based on Text Box 2: RAMP Thresholds of the EPA – RAMP Best Practice Guidelines.

Tier 2 developments are defined as follows:

Larger scale projects, including Strategic Infrastructure Developments, Strategic Housing Developments, infrastructure projects (road, rail, gas, energy) or any project above the thresholds presented in Text Box 1, require a bespoke RAMP which follows the requirements set out in Sections 4 and 5 of these guidelines and meet the minimum content requirements set out in Appendix C

2.6.2 Template Resource and Waste Management Plan

The recommended structure and content of the Tier 2 RAMP are listed below and set out in detail in Appendix C with content areas cross-referenced to specific sections of these guidelines.

The plan is set out across seven sections to document project targets and commitments, design decisions made to manage resources and the framework for resource and waste planning in advance of construction.

1. Introduction.
2. Project Description.
3. Roles and Responsibilities.
4. Design Approach.
5. Key Materials, Quantities.
6. Site Management.
7. Site Infrastructure.

It is anticipated that some sections will be largely completed during the design phase as the information required will be readily available at that point (e.g., commitments, target setting, project description, design approach and designing out waste strategies).

3 DESCRIPTION OF PROJECT

3.1 Development Description

Kelland Homes Ltd. intends to apply for permission for development on a site area of 6.3Ha, on lands within the townland of Cappagh, Dublin 22.

The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). The proposed development is located within the Clonburris Strategic Development Zone (SDZ), within the development areas of (I) Clonburris Southeast (i.e. CSES1 & CSE-S2) and (ii) part of Clonburris Urban Centre (i.e. CUC- 54), as identified in the Clonburris SDZ Planning Scheme 2019.

The proposed development consists of the construction of 294 no. dwellings, creche and retail / commercial unit, which are comprised of: 118 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses, 104 no. 2 & 3 bfd duplex units accommodated in 10 no. 3 storey buildings, 72 no. f' & 2 bedroom apartments in 2 no. 4 & 6 storey buildings, 1 no. 2 storey creche (c.520.2m2), 1 no. 2 storey retail /commercial unit (c.152.1m2).

Access to the development will by via the permitted road network (under Ref. SDZ20A/0021) which provides access from the Ninth Lock Road to the east and the R113 (Fonthill Road) to the west. The proposed development will connect into the permitted Infrastructural works as approved under the Clonburris Strategic Development Zona Planning Scl1ame (2019) and permitted under Ref. SDZ20A/0021, with the proposed development connecting into the permitted surface water drainage attenuation systems i.e., 1 no. pond, 3 no. modular underground storage systems and 1 no. detention basin combined with modular underground systems.

The proposed wastewater infrastructure will connect into a permitted foul pumping station and pipe network within proposed road corridors to facilitate drainage connections to future wastewater drainage infrastructure within the adjoining SOZ lands (Including future Irish Water pumping station permitted under SDZ21A/0006).

The proposed development also provides for all associated site development works above and below ground, public & communal open spaces, hard & soft landscaping and boundary treatments, surface car parking (401 no. spaces), bicycle parking (797 no. spaces), bin & bicycle storage, public lighting, plant (ME), utility services & 4 no. ESB sub-stations.

This application is being made in accordance with the Clonburris Strategic Development Zone Planning Scheme 2019 and relates to a proposed development within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015.

The proposed site access points are illustrated in Figure 9 below. The South Link Street will provide access to the development. The South Link Street will be constructed separately and is not part of the current planning application.

The proposed site access points are illustrated in Figure 1 below.

Figure 1 Proposed Access

Construction traffic will access the site via the R113 roundabout. Access to the site for staff who chose to wall ort cycle to work will be co located with the vehicular access.

4 ROLES AND RESPONSIBILITIES

Nature of Project: The demolition of existing derelict building and associated structures on site and the construction of 286 No. residential units and associated facilities and infrastructure.

Scope of Project (subject to change):

- Site clearance
- Excavation and pouring of concrete strip foundations.
- Blockwork rising walls
- Underground drainage
- Cast insitu ground floor slabs and rising elements
- Blockwork and brickwork rising elements
- Pre-cast floors stairs and balconies
- Aluminium windows and curtain walling.
- Fit out of houses, duplexes and apartments.

Contract Period: 36 Months

Recycling Co-Ordinators: Dave Rushton

Recycling Contractor: Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd

Waste Handling Facility: Concrete, Soil and C& D general waste- Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd

Position	Name	Contract Details
Client	Kelland Homes Ltd.	01 – 463 0630
Contractors Manager	Gary Byrne	087 261 0398
Waster Manager on Site	Dave Rushton	085 803 7859
Site Manager	Dave Rushton	085 803 7859

Table 1 Key Contacts

5 DESIGN APPROACH

5.1 Waste Management Goal

This project aims to recycle, reuse or salvage the maximum as practically possible.

5.2 Diversion and Waste Prevention

Waste Materials fall into three categories for management, these are:

- Re-use
- Recycle
- Re-used

If surplus materials can be used in the permanent works they are classified as materials,

which have been re-used. If they are surplus to requirements and need to be removed from

site and they can be removed and used in their present form, they can be removed from site

for re-use.

5.3 Recycling

If the surplus material cannot be re-used in its present form but could be used in a different form, it is sent for recycling such as 50x50 timber to make chipboard.

Waste will be minimized on-site by careful ordering of materials and scheduling of deliveries as required for use.

Any surplus materials which can be re-used will be stacked and stored for removal from site and re-use on other projects in their current form including undamaged timbers, clean unbroken blocks etc.

Recycling and waste bins are to be kept clean and clearly marked in order to avoid contamination of materials.

As subcontractors commence works on site their waste will be reviewed and a separate skip will be provided should it be deemed appropriate e.g., Drylining plasterboard

All waste will be removed from site by the noted above companies and brought to the nearest waste facility.

All C & D waste will be segregated at the waste facility for recycling and a breakdown of this waste will be provided from each company.

5.4 Waste Collection

A designated storage & waste will be established on site where the skips will be located, and a clear area provided for storage of materials suitable for re-use.

Appropriately sized portable skips will be positioned in work areas for removal to the large skips. These skips will be clearly labelled to reduce cross contamination of waste

Canteens complete with bins for general waste and recyclable waste will be established on-site. Eating elsewhere will be prohibited in all other areas to prevent generation of food waste in other areas of the site.

The authorized waste collector will be Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05. Advanced Waste will remove these skips to Thorntons Recycling at the following locations:

- Killeen Road, Killeen Road, Cherry Orchard, Ballyfermot, Dublin 10, or
- JFK Industrial Estate, Bluebell, Dublin 12.

Thorntons will process the waste and segregate it into different material classes as per Table 3 as appropriate with the sorting and recovery facilities outlined in Table 8.

5.5 Communication Measures

Pre-contract meetings will be held with subcontractors. As part of the agenda of these meetings project goals and requirements will be explained to ensure subcontractors fully understand their role in the achieving the least waste from the site. Waste prevention and recycling measures and expected waste materials for each individual contractor will be discussed and methodology of waste segregation and disposal agreed

A copy of the construction waste management plan will be issued to all subcontractors

The Site Manger/Assistant Manager will provide on-site briefing via induction on appropriate separation, handling, recycling, re-use and return methods to be used by all parties and at appropriate stages of the project where applicable. Toolbox talks will be carried out regularly on waste issues and all subcontractors will be expected to attend. This will ensure that everyone feels they are included and that their participation is meaningful.

Clear signage will be provided on skips indicating the type of waste permitted.

The Site Manager will monitor the effectiveness and accuracy during the routine site inspections

6 KEY MATERIALS, QUANTITIES, WASTE ARISING & PROPOSALS FOR MANAGING WASTE

6.1 Introduction

Waste will be segregated on site. The C&D WSA will have skips and receptacles for all recyclable wastes. The appointed waste contractor will collect and transfer the recyclable wastes as receptacles are filled. The non-recyclable waste will be transferred to landfill. Numerous waste contractors in the South County Dublin region carry out this operation.

6.2 Bedrock, Blocks and Concrete

Most of the waste C&D material will be clean, inert material and it is proposed to reuse it for construction purposes where possible.

Following a desktop study, it is unlikely that bedrock will be encountered during excavations.

6.3 Topsoil/ Subsoil

Topsoil and subsoil will be excavated to facilitate construction of the foundations and installation of underground services for the new build. Excess inert soils and subsoils excavated that are not required for use as fill on site will be disposed of or re-used offsite.

If the total amount of soil to be removed from the site will exceed 1,000 tonnes, the soil will be removed and disposed of by contractors licensed under the Waste Management Act of 1996 (as amended 2001), the Waste Management (Facility Permit & Registration) Regulations of 2007 and the Waste Management (Collection Permit) Regulations of 2007. The issuing of such a permit to contractors allows the contractor to use such fill material for landscaping and land reclamation, subject to conditions defined in the Permit.

The site manager will investigate whether nearby construction sites may require fill material, to both minimise the costs of transport and to reuse as much material as possible.

A site investigation will be carried out to determine the state of the soil/subsoil. . If the site investigation establishes that some soil/subsoil excavated at the site was deemed to be contaminated appropriate measures will be taken to manage its excavation and removal as necessary.

During the construction phase the contaminated soil/subsoil (i.e. non- hazardous or hazardous) will be stored separately to the inert soil/subsoil, sampled and tested. The material will be appropriately classified as non-hazardous or hazardous in accordance with Council Decision 2003/33/EC, which establishes the criteria for the acceptance of waste at landfills, prior to being transported to an appropriately licensed facility by permitted contractors.

6.4 Soil , Stone & Made Ground – By Products

Classification of soil and stone, where appropriate, as a by- product, brings significant economic benefits as the material can be appropriately handled outside of waste legislation. The environmental benefits are also considerable, as the process facilitates the circular economy.

All such classification will be carried out in accordance with the EPA issued ‘Guidance on Soil and Stone By-Products in the Context of Article 27 of the European Communities (Waste Directive) Regulations 2011’ (June 2019)

Such notifications must be by the material producer or one who makes the notification with the express written consent of the material producer. The guidance calls for all notifications to ensure each and all by-product conditions are met, namely:

- Further use of the soil and stone is certain;
- The soil and stone can be used directly without any further processing other than normal industrial practice;
- The soil and stone are produced as an integral part of a production process; and,
- Further use is lawful in that the soil and stone fulfil all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health

By-product decisions must be notified to the Agency using the online notification form.

Any article 27 notifications being notified to the Agency that relate to soil and stone material are required to have the following three templates signed and uploaded to the online notification form prior to notification:

1. Material Producer's Declaration;
2. Declaration of Soil and Stone Suitability - Civil, and
3. Declaration of Soil and Stone Suitability - Environmental.

The next option (beneficial reuse) may be appropriate for the excavated material pending environmental testing to classify the material as hazardous or non-hazardous in accordance with the EPA Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous publication. Clean inert material may be used as fill material in other construction projects or engineering fill for waste licensed sites. Beneficial reuse of surplus excavation material as engineering fill may be subject to further testing to determine if materials meet the specific engineering standards for their proposed end-use.

Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Article 27. Similarly, if any soils/stones are imported onto the site from another construction site as a by-product, this will also be done in accordance with Article 27. It is not envisaged that article 27 will be used to import material onto this site.

If the material is deemed to be a waste, then removal and reuse/recovery/disposal of the material will be carried out in accordance with the Waste Management Acts 1996 – 2011 as amended, the Waste Management (Collection Permit) Regulations 2007 as amended and the Waste Management (Facility Permit & Registration) Regulations 2007 as amended. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.

In the event that contaminated material is encountered and subsequently classified as hazardous, this material will be stored separately to any non-hazardous material. It will require off-site treatment at a suitable facility or disposal abroad via Trans frontier Shipment of Wastes (TFS).

6.5 Tarmacadam

It is anticipated that the tarmacadam to be excavated at the site contains bitumen based materials and will be non-hazardous, however, historically (typically pre early 1980's) tar was manufactured using coal-tar pitch which is considered hazardous. Waste facilities may accept the waste tarmacadam without testing where the waste producer can confirm the age of the tar. However, if this is unclear, then coal-tar analysis may be required to confirm the presence/absence of hazardous substances. If the presence of coal-tar is confirmed, then the tarmac will require disposal as a hazardous waste.

6.6 Silt & Sludge

During the construction phase, silt and petrochemical interception should be carried out on runoff and pumped water from site works, where required. Sludge and silt will then be collected by a suitably licensed contractor and removed offsite.

6.7 Plastic

As plastic is now considered a highly recyclable material, much of the plastic generated during construction, primarily from packaging and material off-cuts, will be diverted from landfill and recycled. All recyclable plastic will be segregated at source and stored in a dedicated skip.

6.8 Cardboard

Cardboard packaging can also be recycled. Cardboard will be flattened and placed in a covered skip, to prevent it getting wet.

6.9 Timber

It is expected there will be timber waste generated from demolition activities, material off-cuts, damaged pieces and wooden pallets used for deliveries to site. Timber that is uncontaminated, i.e. free from

paints, preservatives, glues etc., will be stored on site in a designated area for collection and recycling by a nominated waste contractor.

6.10 Metal

Steel is highly recyclable; there are numerous companies that will accept these materials. A segregated skip will be available for storage of metals on site pending recycling.

6.11 Plasterboard

There are currently a number of recycling services for plasterboard in Ireland. The Waste Manager will ensure that oversupply of plasterboard in the material deliveries is kept to a minimum. Excess plasterboard will be stored in a separate skip, pending collection for recycling.

6.12 Glass

A designated skip will be provided for any broken or other waste glass, which can then be recycled. The Waste Manager will liaise with the nominated waste contractor to establish any specific segregation requirements for waste glass (e.g. by colour or type).

6.13 Hazardous Materials

During actual construction activities, on-site storage of any hazardous wastes produced will be minimised, with off-site removal organised on a regular basis. Storage of all hazardous wastes on site will be undertaken so as to minimise exposure to on-site personnel (and the public) and to also minimise potential for environmental impacts. Hazardous wastes will be recovered wherever possible and failing this, disposed of appropriately and measures put in place to stop it occurring again.

6.14 Fuel/Oils

As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in a dedicated, secure area of the site. Provided that these requirements are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

6.15 Asbestos

Removal of asbestos or ACMs will be carried out by a suitably qualified contractor and ACM's will only be removed from site by a suitably permitted/licenced waste contractor in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010. All material will be taken to a suitably licensed or permitted facility.

6.16 Non-Recyclable Waste

There will be a general skip or other receptacle provided for non-hazardous C&D waste not suitable for reuse or recycling. This skip will include general wet waste (mixed food waste and food packaging), polystyrene, contaminated cardboard, contaminated plastic etc. Prior to removal, the receptacle will be examined by the Waste Manager (or delegate) to determine those recyclable materials have not been placed in there. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly.

6.17 Waste Management System

All information will be entered in a waste management system to be maintained on site. The main waste stream arisings, including surplus materials, which are likely to be generated during the project are illustrated in Table 2.

Waste Type	European Waste Classification Code	Waste Classification
Concrete, bricks, tiles, ceramics	**17 01**	

Concrete [Foundations, floor slabs (in-situ & hollowcore), beams & columns]	17 01 01	Non-hazardous
Concrete (blocks / bricks)	17 01 01	Non-hazardous
Clay Bricks (walls)	17 01 02	Non-hazardous
Mixtures of, or separate fractions of concrete, bricks and ceramics (other than those mentioned in 17 01 06) (toilets / bathrooms)	17 01 07	Non-hazardous
Wood, Glass, Plastic	**17 02**	
Wood	17 02 01	Non-hazardous
Glass	17 02 02	Non-hazardous
Plastic	17 02 03	Non-hazardous
Metals (Including Their Alloys)	**17 04**	
Copper, bronze, brass (sheeting, pipes, handles)	17 04 01	Non-hazardous
Aluminum (roller shutters, flashings)	17 04 02	Non-hazardous
Lead (flashings)	17 04 03	Non-hazardous
Iron & steel (reinforcement, roof beams, roof trusses, radiators, pipes)	17 04 05	Non-hazardous
Cables other than those mentioned in 17 04 10	17 04 11	Non-hazardous
Soil (including excavated soil from contaminated sites), stones and dredged spoil	**17 05**	
Soil and Stones other than those mentioned in 17 05 03	17 05 04	Non-hazardous

Insulation Materials and Asbestos-Containing Construction Materials	**17 06**	
Insulation materials containing asbestos*	17 06 01*	Hazardous*
Insulation materials other than those mentioned in 17 06 01 and 17 06 03 (underfloor, cavity & roof insulation)	17 06 04	Non-hazardous
Construction materials containing asbestos*	17 06 05*	Hazardous*
Gypsum-Based Construction Material	**17 08**	
Gypsum-based construction materials other than those mentioned in 17 08 01	17 08 02	Non-hazardous
Insulation materials containing asbestos*	17 06 01*	Hazardous*
Insulation materials other than those mentioned in 17 06 01 and 17 06 03 (underfloor, cavity & roof insulation)	17 06 04	Non-hazardous
Construction materials containing asbestos*	17 06 05*	Hazardous*

Table 2 Main Waste Types and Associated EWC Code

Note:

1 The selected European Waste Classification (EWC) codes provided are provisional only. In a number of instances more than one EWC may be considered appropriate. Care should be taken to ensure that the waste collectors permit includes all EWC codes specified in the appropriate documentation. In addition, there will be a requirement for a technically competent person to assess waste as it arises and to decide as to the classification of the material in accordance with the Hazardous Waste List.

2 For the purposes of this plan it is assumed that all of the soil and stone waste arising from the project will be categorised as inert. Analysis may be required prior to acceptance at certain facilities to demonstrate this assessment.

* Waste marked with an asterisk is considered as a hazardous waste pursuant to Directive 91/689/EEC on Hazardous Waste, European Waste Catalogue and

Hazardous Waste List (Valid from 01/01/20002) EPA, Ireland.

6.18 Areas

The areas subject to development are illustrated below. No known structurers are on site. Construction works will commence with site clearance and other associated ground works.

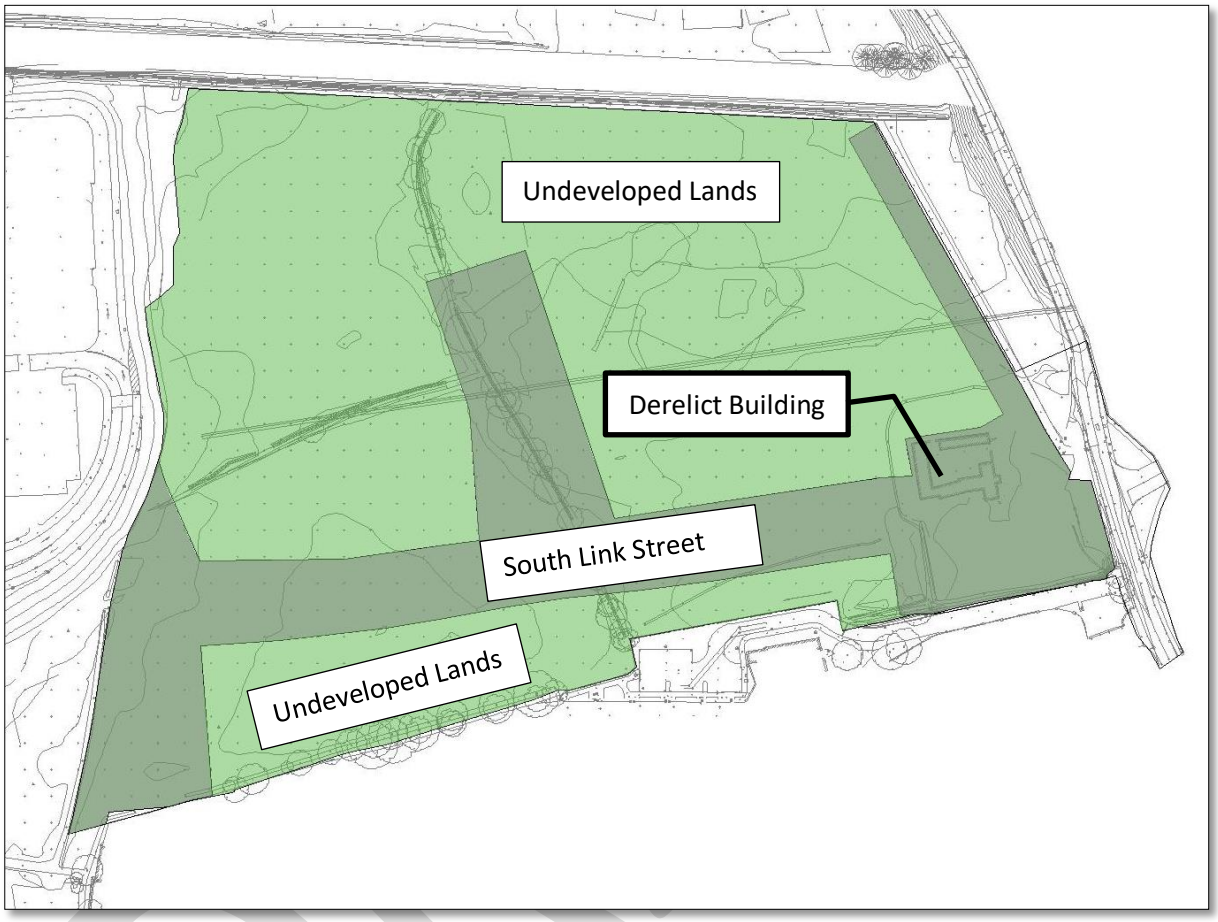

Figure 2 Areas

The area shown for the South Link Street is excluded from this report.

6.19 Predicted Waste Arising

At this stage of the development the figures provided should be considered as provisional only; however, they do provide an indication as to achievable recycling rates. At a minimum, the contractor will be obliged to aim for an overall recycling rate of 83%, in accordance with the Waste Management Plan for the Dublin Region, 2005 - 2010.

During the construction phase, it is estimated that the quantities of C&D wastes/material surpluses will arise as in Table 6.

6.20 Demolition Waste

No demolition is expected on site.

6.21 Construction Waste Generation

The EPA has produced figures for the C&D waste recorded in the National Waste Database. This included a percentage breakdown of waste showing the percentage of each waste type in the C&D stream.

The US EPA has also produced figures for the characterisation of building-related C&D waste. Figures for the C&D waste generated per m2 in the building industry, for mixed use developments from this study have been used as a waste range per m2 for this site.

Table 4 shows the breakdown of the C&D waste types (from Irish EPA figures) produced on a typical site.

Waste Type	%
Soil & Stones	83%
Concrete, Bricks, Tiles, Ceramics, Plasterboard	13%
Asphalt, Tar and Tar products	1%
Metals	1%
Other	2%
Total Waste	100%

Table 3 Construction Waste Generated on a Typical Irish Construction Site

Waste Type	Waste Tonnes
Soil & Stones*	61180.6
Concrete, Bricks, Tiles, Ceramics, Plasterboard	9582.5
Asphalt, Tar and Tar products	737.1
Metals	737.1
Other	1474.2
Total Waste	73711.5

Table 4 Total Waste*

*Excludes cut/fill and estimated topsoil

Waste Type	Waste	Reuse/Offsite		Recycle		Disposal	
Waste Types	**Tonnes**	**%**	**Tonnes**	**%**	**Tonnes**	**%**	**Tonnes**
Soil & Stones	111520.6	85%	94792.49	0%	0.0	15%	16728.1
Concrete, Bricks, Tiles, Ceramics, Plasterboard	9582.5	20%	1916.50	75%	7186.9	5%	479.1
Asphalt, Tar and Tar products	737.1	0%	0.00	25%	184.3	75%	552.8
Metals	737.1	5%	36.86	80%	589.7	15%	110.6
Other	1474.2	10%	147.42	40%	589.7	50%	737.1
Total	124051.5		96893.27		8550.5		18607.7

Table 5 On and Off-Site Reuse, Recycle and Recovery Target Rates for Construction Waste

Based on a 3d terrain model, it is expected that 4,761 cu. m of soil will be imported onto the site.

Any potentially contaminated material encountered will be classified and disposed of in accordance with Council Decision 2003/33/EC 10, which establishes criteria for the acceptance of waste at landfills. This is carried out by sampling and analysing the excavated material for a full waste acceptance criteria suite.

7 SITE MANAGEMENT

7.1 Waste Management Packages

The following table outlines the material type, its disposal method and handling procedure. Quantity of materials will be updated upon appointment of a Main Contractor.

Material	Collection By	Disposal Method	Handling Procedure
Planter clearing debris	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted and recycled at: Thorntons Recycling	Mixed skip
Clean dimensional and palette wood	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted, recycled or land filled at: Thorntons Recycling	Wood skip
Plywood, OSB, particle board	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted, recycled or land filled at: Thorntons Recycling	Wood skip
Painted or treated wood	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted, recycled or land filled at: Thorntons Recycling	Wood skip
Metals	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted and recycled at: Thorntons Recycling	Mixed skip
Gypsum drywall	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Recycles at: Thorntons Recycling Facility	Keep separate all demolished walls in a designated area.
Insulation	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted and placed in land fill at: Thorntons Recycling	Mixed skip

Flooring	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted and placed in land fill at: Thorntons Recycling	Mixed skip
Carpet and pad	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Sorted and recycled at: Thorntons Recycling	Mixed skip
Glass	Advance Waste Recycling Ltd Glenowlen, Church Rd, Saggart, Co.Dublin – licence No – NWCPO-14-11395-05	Glass Bottles: Recycle at: Thorntons Recycling	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container
Plastics	Advance Waste Recycl Ltd Glenowlen, Church R Saggart, Co.Dublin licence No – NWCPO-1 11395-05	Plastic Bottles: Recycle at: Thorntons Recycling Reuse, landfill	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/ Cardboard" container
Beverage Containers	Advance Waste Recycl Ltd Glenowlen, Church R Saggart, Co.Dublin licence No – NWCPO-1 11395-05	Recycle at: Recycle at: Thorntons Recycling	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/ Cardboard" container
Cardboard	Advance Waste Recycl Ltd Glenowlen, Church R Saggart, Co.Dublin licence No – NWCPO-1 11395-05	Recycle at: Recycle at: Thorntons Recycling	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/ Cardboard" container

Table 6 Waste Management Packages

7.2 Tracking and Documentation Procedures for Off Site Waste

At the time of writing, the Main Contractor is yet to be appointment. Therefore, the waste stream destinations illustrated below is for information only. Upon appointment of the Main Contractor, the final destination of the Waste Stream Destinations will be confirmed with South Dublin County Council.

All waste will be weighed and documented. Waste will be weighed on a site weighbridge if available and also independently by the contractor (either by weighing mechanism on the truck or at the receiving facility). These records will be kept on site (both hard and soft copies).

All movement of waste and the use of waste contractors will be undertaken in accordance with the Waste Management Act 1996, Waste Management (Facility Permit & Registration) Regulations 2007, and the Waste Management (Collection Permit) Regulations 2007. This includes the requirement for all waste contractors to have a waste collection permit issued by local authority where the majority of the contractors business takes place. The Waste Manager will maintain a copy of all waste collection permits.

If the waste is being transported to another site, a copy of the waste permit or EPA Waste Licence for that site must be provided to the waste manager. If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) document must be obtained from South Dublin County Council (as the relevant authority on behalf of all local authorities in Ireland) and kept on site along with details of the final destination (permits, licences, etc.). A receipt from the final destination of the material will be kept as part of the on-site waste management records.

In all instances, the contractor will look for proof from the waste facility that they have received it.

Waste destination streams are for information only and subject to review upon appointment of Main Contractor. Permit/licence numbers to be checked prior to appointment of waste contractor.

Waste	EWC Code	Collected by	Sorting Facility	Recovery Facility	
MSW Municipal Waste	20 03 01	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Mixed Dry Recyclables	20 03 01	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Compost / Organic	20 01 08	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Glass	20 01 02	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Bulky Waste	20 03 07	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd

Timber	17 02 01	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
C&D Waste	17 09 04	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Plastic	17 02 03	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Plasterboard	17 08 / 17 08 02	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd
Metal	17 04/17 04 01/17 04 03/17 04 05/17 04 11	Advanced Waste NWCPO-14-11395	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd	Thortons Recycling - Cappogue WFP-FG-17-0001-04 and Killeen Rd

Table 7 Waste Stream Destinations

The above table is for illustrative purposes only. The destination of waste packages will be at the discretion of the Main Contactor.

7.3 Audit Procedure

7.3.1 Responsibility for Waste Audit

The appointed RM will be responsible for conducting ongoing resource audits at the site during the project construction phase. These audits will cover work practices, record keeping and off-site tracking as follows:

1. The RM will undertake periodic audits and inspections of work practices to assess compliance with the RWMP. The audit protocol will be risk based and focus on key issues of concern but will include as a minimum:
    - Adequacy of site signage and need for any repairs or upgrades.
    - Adequacy of storage infrastructure and need for any repairs or upgrades.
    - Compliance with resource segregation protocols and observed contamination in any resource streams.
    - Assessment of observed Contractor and Sub-contractor work practices for compliance with the RWMP.

2. The RM will undertake a review of all records of wastes and resources generated on-site and transported off-site periodically through the project. If waste movements are not accounted for, the reasons for this are to be established to understand why the record keeping system has not been maintained and implement corrective actions if needed.
3. The resource records will be compared with established targets for the site (e.g. reuse of resource target or recycling of waste target).

The appointed waste manager will be responsible for conducting a waste audit at the site during the C&D phase of the development.

7.3.2 Review of Records and Identification of Corrective Actions

A review of all the records for the waste generated and transported off-site should be undertaken mid-way through the project. If waste movements are not accounted for, the reasons for this should be established in order to see if and why the record keeping system has not been maintained. The waste records will be compared with the established recovery/reuse/recycling targets for the site.

Each material type will be examined, in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved.

Waste management costs will also be reviewed.

Upon completion of the C & D phase, a final report will be prepared, summarising the outcomes of waste management processes adopted and the total recycling/reuse/recovery figures for the development.

7.4 Records

7.4.1 Introduction

Records will be kept for all waste material which leaves the site, either for reuse on another site, recycling or disposal. A recording system will be put in place to record the C&D waste arising's on site. A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will be maintained on site at all times.

The waste manager or delegate will record the following.

1. Waste taken for reuse off-site.
2. Waste taken for recycling.
3. Waste taken for recovery.
4. Waste taken for disposal; and
5. Reclaimed waste materials brought on-site for reuse.

For each movement of waste off-site, a signed docket will be obtained by the Waste Manager from the contractor, detailing the weight and type of the material and the source and destination of the material. This will be carried out for each material type. This system will also be linked with the delivery records. In this way, the percentage of C&D waste generated for each material can be determined.

The system will allow the comparison of these figures with the targets established for the recovery, reuse and recycling of C&D waste presented earlier and to highlight the successes or failures against these targets.

7.4.2 Track and Trace

The RM is required to maintain records for all resource material which is used on site and leaves the site, either for reuse, recycling, energy recovery, backfilling or other recovery or disposal on third party sites.

A recording system must be put in place to record residual waste and resources generated on site and a sample recording table is provided in Appendix D. This table can be employed as a daily log to update resource movements off-site on a given day and compiled into a database as part of the RWMP files. The type of information to be recorded in the site tracking system is described below.

1. For each movement of resource off-site, a signed docket/invoice will be obtained by the RM from the haulier/contractor detailing the following:
    - A description of the resource stream.
    - List of Waste (Low) Code for each stream (where applicable).
    - Validated quantity of material moved off-site by the haulier/contractor (typically reported in tonnes).
2. The name and authorisation of the haulier to transport the material – in the case of a 'waste' this requires a valid Waste Collection Permit (WCP). In the case of by-product or other materials that are not a waste, no WCP is required. In both cases the vehicle registration number should also be recorded for each load of material removed from site.
3. The name and authorisation of the destination site for the resource – again for a 'waste' this requires a valid Cert of Registration (COR; See Appendix F), Waste Permit or Waste Licence and in the case of by-product the relevant by-product determination.
4. The waste contractors must be required to provide details of end-use or waste treatment in waste reports.
5. This recording will be carried out for each resource type and the system will also be linked with the delivery records. In this way, the percentage of residual resource generated for each material can be determined.
6. The system will allow the comparison of these figures with the targets established for the prevention, reuse and recovery of resources to highlight successes or failures against these targets.

It is the obligation of the RM to ensure that all resources taken off-site are in line with the relevant legislation and the key area relates to ensuring that hauliers and recovery/disposal sites have the appropriate authorisations. Some key considerations include:

- Checking the expiry date of the authorisation relative to the duration of the works and whether any review of the permit is required over that period (e.g. WCPs have a maximum life of five years and review applications need to be lodged before expiry). Checking that the waste consent i.e. permit/licence has the authorisation 'COR holders, Waste Facility Permit holders and Waste Licence holders' for the resource stream proposed (e.g. Waste Permits and Waste Licences only permit an operator to accept specific waste streams).
- Authorisation for the resource management operation proposed (e.g. Waste Permits and Waste Licences only permit an operator specific recovery or disposal codes).
- Check that any waste acceptance limits expressed in the permit/licence for material acceptance are known and that on site sampling has indicated that the residual resource complies with these limits (for example a licensed soil recovery facility can only accept uncontaminated material which meets the limits set out in the EPA Soil Trigger Level Guidance for Soil Recovery Site10 and cannot accept contaminated soils).

7.4.3 Complaints

A complaints form will be made available to any member of the public who wishes to report any incident relating to demolition and construction waste arising from the development.

Kelland Homes will investigate the complaint and provide a reply in a timely manner. A sample complaints form is included as an appendix to this report.

7.5 Training

7.5.1 Introduction

Training of site personnel will be the responsibility of the Contractor's RM and, as such, waste management training is recommended. This can be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

All project personnel (including sub-contractors and other parties working on site) are to receive an environmental induction before commencing work on the project that will include a module on resource management and the RWMP. As a minimum the following will be included in the induction:

- Scope and content of the RWMP.
- Project commitments and targets.
- List of anticipated resources and wastes and volumes to be generated.
- Procedures for the proper identification and segregation of resources and wastes.
- Temporary storage and the location of the WSAs.
- Clear instruction on hazardous wastes will be incorporated into the training programme and the particular dangers of each hazardous waste.

The environmental induction shall be provided and delivered by the Contractor and be tailored to suit the tasks and responsibilities of site personnel from management and supervisory level through to site operatives.

Toolbox talks on resource management should be provided on a continuous basis. Regular toolbox talks shall ensure site staff are aware of the resource management practices associated with their work and the appropriate control measures that are required to carry out their work in compliance with the RWMP.

A member of the construction team will be appointed as the project waste manager to ensure commitment, operational efficiency and accountability during the C&D phases of the project.

7.5.2 Waste Manager Training and Responsibilities

The nominated waste manager will be given responsibility and authority to select a waste team if required, i.e., members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site. The waste manager will have overall responsibility to oversee, record and provide feedback to the client on everyday waste management at the site. Authority will be given to the waste manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.

The waste manager will be trained in how to set up and maintain a record keeping system, how to perform an audit and how to establish targets for waste management on site. The waste manager will also be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on site and be knowledgeable in how to implement this C&D WMP.

7.5.3 Site Crew Training

Training of site crew is the responsibility of the waste manager and, as such, a waste training program should be organised. A basic awareness course will be held for all site crew to outline the C&D WMP and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

This basic course will describe the materials to be segregated, the storage methods and the location of the Waste Storage Areas (WSAs). A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

8 SITE INFRASTRUCTURE

8.1 Introduction

This section of the RWMP relates to on-site signage, separation, and storage (covered area for storage of material to be used on site, dedicated skips, etc.) for handling and managing waste and resources.

1. Prior to construction, the site layout should be reviewed to ensure that the proposed Waste Storage Areas (WSAs) have adequate space for storage and handling.
2. WSAs may include stockpiles (for soil and stone, aggregates, etc.), skips (for metals, wood, glass, etc.) or secure containers for hazardous materials. All WSAs should be assessed as fit for purpose and should be suitably contained, bunded or defined as required.
3. The WSA should be set out to reduce any potential for impact on sensitive human (e.g. residential) or natural (water courses, ecological sites, etc.) and a suitable buffer, e.g., receptor should be applied to mitigate any impact.
4. Labelling and signage shall be used on site to inform personnel of key WSA requirements and restrictions, with clear signage provided on all WSAs.
5. Signage is also required to provide information to assist good resource practice across the site.

In relation to resource storage, the Waste Management Act 1996, as amended, allows for the temporary storage of resources defined as ‘waste’ at the site where it was produced. The Act defines the phrase ‘the temporary storage of waste’ limiting it to having a six-month duration. Appropriate measures to prevent environmental impact, e.g. run-off, should be implemented as needed

Appendix A – Complaints Form

Complaint Form

Name of site:	
Name of Complainant:	
Complainant contact details:	
Time & Date of Complaint:	
Nature of Complaint:	
Likely cause of Complaint:	
Weather Conditions:	
Investigation & Follow up:	

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APPENDIX 4:
CONSTRUCTION MANAGEMENT PLAN

Construction Management Plan

Project:

Clonburris

Cappagh

Dublin 22

Rev0 Prepared: 18.05.2023

1. Introduction

The proposed development, on a site area of 6.2Ha, on lands within the townland of Cappagh, Dublin 22. The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). The proposed development is located within the Clonburris Strategic Development Zone (SDZ), specifically within the development areas of (i) Clonburris South East (i.e. CSE-S1 & CSE-S2) and (ii) part of Clonburris Urban Centre (i.e. CUC-S4), as identified in the Clonburris SDZ Planning Scheme 2019.

The proposed development consists of the construction of 256 no. dwellings, crèche and 2 no. retail / commercial units, which are comprised of:

- 111 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses,
- 100 no. 2 & 3 bed duplex units accommodated in 8 no. 3 storey buildings,
- 45 no. 1, 2 & 3 bedroom apartments/duplex units in Block A (3-6 storeys) & Block K (4 storeys), 1 no. ground floor commercial / retail unit (c.333sq.m) & 1 no. 2 storey creche (c.487sq.m), both in Block A, and 1 no. 2 storey retail /commercial unit in Block K (c.152sq.m).

The proposed development also provides for all associated site development works above and below ground, public & communal open spaces, hard & soft landscaping and boundary treatments, surface car parking, bicycle parking, bin & bicycle storage, public lighting, plant (M&E), utility services & 4 no. ESB sub-stations.

This application is being made in accordance with the Clonburris Strategic Development Zone Planning Scheme 2019 and relates to a proposed development within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015. The site has an area of 6.3 Ha. It is proposed to develop this site based on the following schedule of accommodation

Proposed Land Uses	
Land Use	Size
Houses	118
Duplex	104
Apartments	72
Total	**294**

Table 1 Proposed Land Uses

Kelland Homes will act as the PSCS for the project. The proposed site access points are illustrated in Figure 1 below. The South Link Street will provide access to the development. The South Link Street will be constructed separately and is not part of the current planning application

The proposed site access points are illustrated in Figure 1 below

Figure 2: aerial image of site

Primary vehicular access to the development will be via the R113. Pedestrian access will coincide with the vehicular accesses. Additional green links will be provided.

Scope of Project (subject to change):

- Excavation and pouring of concrete strip foundations.
- Blockwork rising walls
- Underground drainage
- Cast insitu ground floor slabs and rising elements
- Blockwork and brickwork rising elements
- Pre-cast floors stairs and balconies
- Aluminium windows and curtain walling.
- Fit out of houses, duplexes and apartments

Prior to the commencement of development Kelland Homes Ltd will submit for the written agreement of the Planning Authority a detailed phasing program (appendix 1) for the approved development that fully accords with the requirements of the Planning Authority.

Prior to the commencement of development, a Construction and Demolition Resource Waste Management Plan (RWMP) as set out in the Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for C&D Projects (2021) including demonstration of proposals to adhere to best practice and protocols will be forwarded to the Planning Authority – this is a separate document.
The RWMP will include specific proposals as to how the RWMP will be measured and monitored for effectiveness; these details shall be placed on the file and retained as part of the public record. The RWMP will be submitted to the planning authority for written agreement prior to the commencement of development.
All records (including for waste and all resources) pursuant to the agreed RWMP shall be made available for inspection at the site office at all times.

Given the proximity to Casement Aerodrome, operation of cranes shall be coordinated with Air Corps Air Traffic Services, no later than 28 days before use, contactable at airspaceandobstacles@defenceforces.ie or 01-4037681
Due to the proximity to Casement Aerodrome, we shall implement adequate bird control measures during the construction phase to mitigate the effects of birds on Air Corps flight operations.
Given the proximity to Casement Aerodrome this area may be subject to a high level of noise from aircraft operating in the vicinity of the aerodrome.
Given the proximity of the development to Casement Aerodrome, should negative effects become apparent on air or ATC operations as a result of the photovoltaic cells, then we shall take measures necessary to mitigate these effects to an acceptable level, without delay.

The houses and apartments of this development are constructed, as appropriate, using the Glazing and Ventilation specified in the Acoustic Design Statement they have submitted, to ensure the required noise mitigation and minimise the potential for adverse effects to the occupants. It must be ensured that these mitigation measures include all relevant noise sensitive properties, where the proximity to the adjacent rail line may have adverse effects on the occupants of the properties.

No heavy / noisy construction equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc) shall be operated on or adjacent to the construction site before 07:00 hours on weekdays and 09:00 hours on Saturdays nor after 19:00 hours on weekdays and 13:00 hours on Saturdays, nor at any time on Sundays, Bank Holidays or Public Holidays.
Noise levels arising from construction activities shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give rise to a noise nuisance affecting a person in any premises in the neighbourhood.
During the construction phase of the development, Best Practicable Means shall be employed to minimise air blown dust being emitted from the site. This shall include covering skips and slack-heaps, netting of scaffolding, daily washing down of pavements or other public areas, and any other precautions necessary to prevent dust nuisances.
A suitable location for the storage of refuse shall be provided during the construction and operational phase of the development so as to prevent a public health nuisance.
Noise due to the normal operation of the proposed development, expressed as Laeq over 15 minutes at the façade of a noise sensitive location, shall not exceed the daytime background level by more than 10 dB(A).
Clearly audible or impulsive tones at noise sensitive locations during evening and night shall be avoided irrespective of the noise level.
Signage or lighting to be used on site during the construction of the development must not be intrusive to any light sensitive location including residential properties in close proximity to the development.
We shall ensure that the development shall be operated so that there will be no emissions of malodours, gas, dust, fumes or other deleterious materials on site as would give reasonable cause for annoyance to any person in any residence, adjoining unit or public place in the vicinity.

The Construction Management Plan (CMP) is subject to periodic review and has been developed for the fitout of the section of the building. The CMP is subject to change based on the following:

1. Compliance requirements with South Dublin County Council
2. Requirements by other state bodies
3. Concerns raised by residents, businesses and others affected by the works

The final CMP prepared for the project will be subject to periodic review as part of the management of the construction process.

2.0 Working Hours

It is envisaged that working hours during the course of the construction process will be primarily standard working hours for the construction industry and working hours normally permitted by South Dublin County Council:

1. Mon-Fri - 8am – 6pm
2. Sat – 9am - 1pm.
3. No working on Bank holidays and Sundays.

No works are envisaged to be carried out on Sundays, should the need to work Sundays and or Bank Holidays be required a written submission will be made to South Dublin County Council for permission to do so.

3.0 Site Security

Kelland Homes will ensure the maintenance and cleaning of the site perimeter boundary (fencing / hoarding min 2m in height) during the project works.

At the main pedestrian entrance point to the site, signs will be in place clearly outlining the site safety rules and access points. All operatives will attend a site-specific safety induction course upon commencement on site and complete the induction register to confirm attendance. Safety Inductions will take place on a daily basis. No personnel will be authorised to work or gain access to the site without attending the site specific induction or visitor induction. The induction office will be located within the office compound area.

Personnel visiting the site for a short duration will formally receive a verbal description of the site hazards, emergency escapes, and assembly points and visitors will be accompanied by a person familiar with the site at all times.

All deliveries to site must be pre-booked and deliveries must be accompanied into the site works by the designated flagman. Netwatch or similar CCTV Security system will be implemented on site. Kelland Homes will conduct ongoing inspections of access/egress routes which may be affected by the construction works.

4.0 Noise & Dust Control

A Construction Noise Management Plan will be put in place for the construction process, when required a third-party consultant will be engaged to prepare this report and monitor activity and noise levels generated. The Noise Management Plan will address the following areas:

The Construction and Demolition Good Practice Guide for Construction Sites (link below) will be complied with during the project.

https://www.dublincity.ie/residential/environment/air-quality-monitoring-and-noise-controlunit/good-practice-guide-construction-and-demolition

1. Locality

Identify those who may be affected by noise, including particularly sensitive locations (hospitals/schools) and determine ambient noise levels (noise maps or noise monitoring)

	Low	Medium	High
Expected duration of work			
Less than 6 months	N/A		
6 months to 12 months		N/A	
Over 12 months			1
Proximity of nearest sensitive receptors			
Greater than 50 metres from site	N/A		
Between 25m and 50m		N/A	
Less than 25 metres			1
Hospital or school within 100 metres			N/A
Day time ambient noise levels			
High ambient noise levels (>65dB(A))	N/A		
Medium ambient noise levels (55-65dB(A)		1	
Low ambient noise levels (<55dB(A)			N/A
Working Hours			
M-F: 8am - 6pm; Sat 9am to 1pm	1		
Some extended evening or weekend work		N/A	
Some night time working, including likelihood of concrete power floating at night			N/A
SUBTOTAL A	1	1	2

2. Work information

	Low	Medium	High
Location of works			
Majority within existing building	N/A		
Majority External			1
External Demolition			
Limited to two weeks	N/A		
Between 2 weeks and 3 months		1	
Over three months			N/A
Ground Works			
Basement level planned			
Non-percussive methods only	1		
Percussive methods for less than 3 months		N/A	
Percussive methods for more than 3 months			N/A
Piling			
Limited to one week	N/A		
Bored Piling Only		1	
Impact or vibratory piling			N/A
Vibration generating activities			
Limited to less than 1 week	N/A		
Between 1 week and 1 month		1	
Greater than 1 month			N/A
SUBTOTAL B	1	3	1

	Low	Medium	High
Risk Assessment A	1	1	2
Risk Assessment B	1	3	1
Total	2	4	3

The column in total risk assessment with the most ticks indicates the risk category that should be employed for the site.

Total Risk level for this project is **Medium**.

Refer to **Appendix of this document** with General Conditions relating to Noise, Dust & Vibration Control Measures to be implemented.

4.1 Noise Sensitive Locations

The site is bounded by an established residential area. Steps will be taken to ensure that any noise arising will be adequately mitigated. It should be noted that as part of the scheme design due consideration has been given to the issue of noise and physical and operational measures have been proposed in order to mitigate potential noise impacts associated with the site.

4.2 Baseline Noise Survey

A baseline noise monitoring programme will be completed prior to construction works commencing. Attended noise monitoring will be carried out at a number of locations yet to be determined. Survey details, procedures and results of this aspect of the baseline noise monitoring programme will be in general in accordance with ISO 1996: Part 2: 2007 2

4.3 Assessment of Noise Effects

Consideration will also be given to advice in relation to establishing significant construction noise effects as set out in BS5228. During the construction and demolition phases, the development shall comply with British Standard 5228 'Noise Control on Construction and open sites Part 1. Code of practice for basic information and procedures for noise control.'

4.4 Best Practice Guidelines for the control of Construction Noise

BS 5228 include guidance on the various aspects of construction site noise mitigation, including, but not limited to:

1. Liaison with neighbours
2. Noise monitoring
3. Hours of works
4. Selection of quiet plant
5. Control of noise sources and screening

The following noise control measures will be implemented on site:

1. All mobile and stationary plant are subject to regular maintenance and inspection to ensure that they remain in good working order;
2. Competent and trained plant and equipment operators will continue to be used at all times;
3. No item of plant or equipment will be allowed to operate where any part of its housing that is designed for sound proofing is absent or not fully in place;
4. Noise monitoring will be periodically conducted to ensure compliance with OH&S requirements;
5. Noise management and control will feature as a regular topic in site Toolbox Meetings to ensure all workers are aware of the need to minimise noise disruption;
6. Consultation with all parties that could be potentially affected by noise will be initiated as identified;
7. Each item of plant used on the project is operated in compliance with the noise limits quoted in the relevant European Commission Directive 2000/14/EC [S.I. No. 632 of 2001] as amended by S.I. 241 of 2006 and all subsequent amendments thereof, and will adopt the recommendations set out in BS 5228 – 1:2009+A1 2014 Code of practice for noise and vibration control on open sites: Part1 Noise with regard to noise mitigation options;
8. Works will be completed within designated times as noted in planning conditions;
9. Noisy stationary equipment such as generator and compressors shall be sited away from sensitive site boundaries as far as practicable.

10. Where reasonable practicable, noisy plant or activities shall be replaced by less noisy alternatives if noise breaches and/or complaints occur;
11. Proper use of plant with respect to minimising noise emissions and regular maintenance will be required;
12. All vehicles and mechanical plant will be fitted with effective exhaust silencers and will be maintained in good efficient order;
13. Where noisy plant is required to operate in works areas next to sensitive buildings acoustic low noise plant options will be used wherever practicable;
14. The use of inherently quiet plant is required where appropriate – all compressors and generators will be "sound reduced" or "super silent" models fitted with properly lined and sealed acoustic covers, which will be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers;
15. All compressors, generators and pumps shall be silenced models fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use;
16. All pneumatic percussive tools such as pneumatic hammers shall be fitted with dampers, mufflers or silencers of the type recommended by the manufacturer;
17. All plant, equipment, and noise control measures applied, shall be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable;
18. Any plant, equipment or items fitted with noise control equipment found to be defective shall not be operated until repaired / replaced;
19. Machines in intermittent use shall be shut down in the intervening periods between works or throttled down to a minimum during periods when not in use;
20. Static noise emitting equipment operating continuously may be housed within suitable acoustic enclosure, where appropriate;
21. Site activities may be staggered when working in proximity to any receptor, such as concrete cutting or pneumatic breaking should where possible. This proposed method of working will provide effective noise management of site activities to ensure that any receptor is not exposed to unacceptably high levels of noise over extended periods;
22. Excessive revving of all vehicles shall be avoided.
23. Unnecessary dropping of heavy items onto ground surfaces shall not be permitted.
24. The dragging of materials such as steel covers, plant or excavated materials along ground surfaces shall not be permitted.
25. The use of acoustic screens to attenuate noise at source from high noise activities shall be implemented as deemed necessary.
26. The construction contractors shall be informed of the live continuous noise monitoring systems and their mode of operation and shall be included on the text / email alert list to ensure that noise generated by their activities are appropriately managed.
27. A nominated person from the project team will be appointed to liaise with local residents and businesses regarding noise nuisance events as required, and
28. Ongoing meetings with the Clients Representative and the Contractor shall occur to discuss environmental mitigation measures

4.5 The introduction of New Noise Sources Onto the development lands

The potential of any item of plant to generate noise will be assessed prior to the item being brought onto the site.
o Consideration of Alternatives
o Information to be submitted by the contractor
o In-situ Noise Measurement

4.6 Noise Control Audits

Noise control audits will be conducted at regular intervals through the construction phase of the development. In the first instance it is envisaged that such audits will take place on a monthly basis. This subject to review and the frequency of audits may be increased if deemed necessary.
The purpose of the audits will be to ensure that all appropriate steps are being taken to control construction noise emissions. To this end, consideration will be given to issues such as the following:
o Hours of operation being correctly observed
o Opportunities for noise control 'at source'
o Optimum siting of plant items
o Plant items being left to run unnecessarily
o Correct use of proprietary noise control measures
o Materials handling
o Poor maintenance
o Correct use of screening provided and opportunities for provision of additional screening

5.0 Dust Management Plan Overview

The objective of dust control at the site is to ensure that no significant nuisance occurs at nearby sensitive receptors. In order to develop a workable and transparent dust control strategy, the following management plan has been formulated by drawing on best practice guidance from Ireland, the UK and the USA.
Effective site management regarding dust emissions will be ensured by the formulation of a dust management plan (DMP) for the site.

The key features of the DMP are:
o the specification of a site policy on dust;
o the identification of the site management responsibilities for dust;
o the development of documented systems for managing site practices and implementing management controls;
o the development of means by which the performance of the dust management plan can be assessed.

5.1 Dust Site Management

The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design and effective control strategies.
At the planning stage, the siting of construction activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. In addition, good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures quickly before the potential for nuisance occurs:

1. During working hours, technical staff shall be on site and available to monitor dust control methods as appropriate;
2. Complaint registers will be kept on site detailing all telephone calls and letters of complaint received in connection with construction activities, together with details of any remedial actions carried out;
3. It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions herein;
4. At all times, the procedures put in place will be strictly monitored and assessed.

The dust minimisation measures shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are highlighted below.

5.2 Dust Control – Public Roads

Spillage and blow-off of debris, aggregates and fine material onto public roads should be reduced to a minimum by employing the following measures.

1. Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust;
2. Public roads outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
3. If practicable, a wheel wash facility will be employed at the exit of the site so that traffic leaving the site compound will not generate dust or cause the build-up of aggregates and fine material in the public domain.

5.3 Dust Management Summary

The pro-active control of fugitive dust will ensure that the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released, will contribute towards the achievement of no dust nuisance occurring during the construction phase. The key features with respect to control of dust will be:

The specification of a site policy on dust and the identification of the site management responsibilities for dust issues;

1. The development of a documented system for managing site practices with regard to dust control;
2. The development of a means by which the performance of the dust minimisation plan can be monitored and assessed;
3. The specification of the measures to be taken to control dust emissions before it occurs and effective measures to deal with any complaints received.

6.0 Vibration Management

Kelland Homes will review the results of Environmental vibration monitoring periodically and take action as appropriate where required. Below is a list of vibration mitigation measures that will be considered during the project

4. Breaking out concrete / rock elements using low vibration generating plant tools.
5. Choosing alternative, lower-impact equipment or methods wherever possible.
6. Scheduling the use of vibration-causing equipment, such as pneumatic breakers and jackhammers, at the least sensitive time of day.
7. Routing, operating or locating high vibration sources as far away from sensitive areas as Possible.
8. Operations shall be sequenced so that vibration causing activities do not occur simultaneously at any one location or in proximity to a receptor.
9. Keeping equipment well maintained in particular the dampening mechanisms associated with pneumatic breakers.

7.0 Roads

Details will also be included in the Construction Stage Health & Safety Plan to be completed, prior to construction commencing, when appointments have been made under Safety and Health legislation.
The Construction Stage Health and Safety Plan will be reviewed and updated as is necessary during the course of the construction phase of the development. Traffic Management Plans (TMP's) will also be reviewed periodically as the development progresses.
A road sweeper will be employed where necessary during the course of the construction process.

When excavated material is transported on adjoining roads between interconnected phases, the contractor/applicant shall have a road sweeper on site all times to ensure the public road and footpaths are clear of mud and debris.

8.0 Site Set up – Construction Start/Completion

The development will be securely fenced off. Hoarding/temporary fencing will be erected to delineate all site works from public areas located adjacent to the development.

South Dublin County Council's relevant departments will be contacted and liaised with prior to the commencement. Where necessary Road Opening Licence applications will be submitted for approval from South Dublin County Council.

9.0 Traffic Management Plans (TMP's)

Kelland Homes acknowledges that there will be an impact of the local areas as a result of the project and will contact the surrounding residents and business owners prior to commencing works and we liaise with them regarding our program of works and site access requirements. This will enable an open line of communication to ensure cooperation between all parties throughout the construction of the Project and allow prompt resolution of any issues which may arise.

Further Kelland Homes will make allowances and commitments for Traffic Management resources to ensure the safe and efficient entry and exit of vehicles from site, including in the vicinity of site.

Adequate signage will be erected to indicate the construction site entrances as per the traffic management scheme as shown in the images on the following page. A separate traffic management document has been prepared (attached appendix 2) and revised during the project.

When excavated material is transported on adjoining roads, there will be a road sweeper on site all times to ensure the public road and footpaths are clear of mud and debris.

Tracked vehicles or cranes will not be allowed to travel on finished public roads without prior written permission of the construction manager and only with use of the timber mats or other approved precautions to prevent damage to the roads.

The major construction items include excavation and construction of attenuation tank, site wide drainage, housing and roads. It is anticipated that the peak of HGV movements to and from the site will be during excavation works and construction of the foundations and reducing of site levels. The peak LGV movements to and from the site will be during the construction. It is anticipated that the construction traffic impact on the surrounding local road network to the proposed development site will be minimal.

Haulage vehicle movements should be fully coordinated to comply with the requirements of the Layout and requirements herein.

1. At no time should construction associated vehicles be stopped or parked along the routes.
2. Haulage vehicles should not travel in convoys of greater than two vehicles at any time.
3. Haulage vehicles should be always spaced by a minimum of 250m.
4. Strictly at no time should haulage vehicles be parked or stopped at the entrance to the site.
5. All loading of excess material will occur within the site boundary.
6. All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access.

The site entrance gateway will be segregated by means of a hard physical barrier so as to segregate vehicles from pedestrians. Kelland Homes will prepare, revise, maintain and implement a Traffic Management Plan which will be monitored by site management to ensure compliance.

The increase in traffic as a result of construction will be minor and can be readily accommodated within the existing road network.

Construction vehicle movements will be minimized through:

1. Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods;
2. Use of precast/prefabricated materials where possible;
3. ‘Cut’ material generated by the construction works will be re-used on site where possible, through various accommodation works;
4. Adequate storage space on site will be provided;
5. A strategy will be developed to minimise construction material quantities as much as possible;

6. Construction staff vehicle movements will also be minimised by promoting the use of public transport.
7. Movement of vehicles in and out of the site will be wherever possible not during peak traffic times (07.30-09.00 and 16.00-18.00)

Public Transport

Construction staff will be encouraged to use public transport as means to travel to and from the site. All staff will be made aware of the public transport available highlighting the location of the various public transport services in the vicinity of the construction site.

Public Roads

Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment. All entrances and temporary roads will be continuously maintained for emergency vehicle access.

The following measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

1. A regular program of site tidying will be established to ensure a safe and orderly site;
2. Scaffolding will have debris netting attached where required to prevent materials and equipment being scattered by the wind;
3. Food waste will be strictly controlled on all parts of the site;
4. Mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate.
5. In the event of any waste escaping the site, it will be collected immediately and removed.

10.0 Project C&D Waste Management Plan

The management of all waste materials including contaminated material will be carried out as required under the Waste Management Act and associated environmental regulations.

See also separate biodiversity management plan (appendix 3) and waste management plan (appendix 4).

10.1 Watching Brief

Operatives should look out for any suspicious/unusual signs such as:

1. **Discoloured soil/made ground**: material which appears different from the surrounding material (e.g area of black material)
2. **Irradiance/Oily Sheen on Water**
3. **Odours from material:** areas which emit a strong smell (eg diesel, rotten eggs, almond)

4. **Waste material:** area where relative percentage or type of waste material changes significantly
5. **Asbestos containing materials**

Should any of the above be signs be encountered the operative shall notify the works supervisor and the Discovery Strategy shall be implemented.

10.2 Discovery Strategy

The discovery and management of potentially impacted soils should be dealt with on a case-by-case basis in order to address the specific nature of the ground conditions uncovered. The management options can be dictated by the location of the excavation site.

1. Suspend all works in the immediate area;
2. Do not disturb contamination further;
3. Avoid any contact with the material and/or vapours and assume as hazardous until proven otherwise;
4. Contractor assesses the requirement for any additional health and safety or environmental management control measures (source pathway receptor assessment);
5. Control measures, if required, are implemented;
6. Works supervisor to contact the designated environmental engineer;
7. Environmental engineer to carry out an in-situ assessment of material to be carried out via visual inspection and/or sampling and analysis to delineate and characterise the material;
8. Required assessments/sampling etc. are carried out and findings are discussed with the Contractor;
9. Management strategy for material formulated which is appropriate with in situ assessment results;
10. Site Specific method statement to be produced for removal and disposal of contaminated material to be authored.
11. Works proceed, and Client's Consultant provides a copy of the Method Statement to the relevant authority;

10.3 Wastes arising/proposals for minimisation/reuse/recycling:

Wastes arising from the project are as above for the Construction Phase. C&D waste will arise on the project on the construction and excavation and unavoidable construction waste / material surpluses /damaged materials. The Procurement Manager shall ensure that materials are ordered so that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.

Proposals for minimisation include:

1. Ensuring materials are ordered on an "as needed" basis to prevent over supply to the site
2. Purchasing coverings, panelling or other materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site.

3. Ensuring the correct storage and handling of construction materials to minimise generation of damaged materials /waste e.g. keeping deliveries packaged until they are ready to be used
4. Ensuring the correct sequencing of operations
5. Assigning individual responsibility (through appropriate contractual arrangements) to sub-contractors for the purchase of raw materials and for the management of wastes arising from their activities, thereby ensuring that available resources are not expended in an extravagant manner at the expense of the main contractor.

Proposals for Recycling of waste include:

1. Waste timber can be recycled where the waste is suitable for shredding
2. Timber can also be sent for reprocessing as medium density fireboard
3. Waste Concrete can be utilised as fill material where the required specifications can be met
4. Excavation clay and C&D waste-derived aggregates are considered suitable for certain on-site construction applications.

It is our intention to engage a specialist waste service contractor who will process the requisite authorisations, for the collection and movement of the waste off site, and to bring the material to a facility which currently holds a waste licence/permit.

10.4 Assignment of Responsibilities:

The Site Manager will have overall responsibility for the implementation of the project C&D waste management plan. The Site Manager will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan. At the operational level the site manager/site foreman as well as the appropriate personnel from each subcontractor on site shall be assigned the direct responsibility to ensure that the operations stated in the project C&D waste management plan are performed on an on-going basis.
Copies of the Project C&D Waste management plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the project C&D waste management plan and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation, selective demolition and material reuse techniques apply, each member of the development management team will be given instructions on how to comply with the Project C&D waste management plan.

10.5 Waste Auditing:

The C&D Waste Manager shall arrange for full details of all movements and treatment of construction and demolition waste discards to be recorded during the construction stage of the project. Each consignment of C&D waste taken from the site will be subject to documentation, and we will ensure full traceability of the material to its final destination.

Details of the inputs of materials to the construction site and the outputs of wastage arising from the project will be investigated and recorded in a waste Audit, which will identify the amount, nature and composition of the waste generated on the site. The waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices inherently contribute to the production of construction and demolition waste. The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit report. The total cost of C&D waste management will be measured and will take account of the purchase cost of material (including imported soil), handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc. Final Details of the quantities and types of C&D Waste arising from the project will be reviewed for future projects waste management procedures to minimise waste generated and disposal costs.