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TARMAC TRADING LTD

Nosterfield Quarry

Construction Environmental Management Plan

March 2024

DATE ISSUED: March 2024
JOB NUMBER: NT16388
REPORT NUMBER: 0003
VERSION: V1.2
STATUS: Final

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1 INTRODUCTION

1.1 Terms of reference

1.1.1 This Construction Environmental Management Plan (CEMP) relates to mineral workings in the Oaklands extension to Nosterfield Quarry, North Yorkshire.

1.1.2 This document has been prepared by Wardell Armstong LLP on behalf of Tarmac Trading Ltd and submitted to North Yorkshire Council as a requirement to discharge a pre-commencement condition.

1.1.3 Planning permission was granted for a lateral extension to allow the extraction of an additional 1 million tonnes of sand and gravel and the rephasing of 471,000 tonnes of permitted reserves under the plant site. Condition 25 of the planning permission states

“Prior to the commencement of development (including demolition, ground works, vegetation clearance) a Construction Environmental Management Plan (CEMP) will be submitted to the Local Planning Authority for approval in writing. The CEMP will include the following:

- a) The identification of stages of works and working hours;*
- b) Details of community engagement arrangements;*
- c) Details of all plant and machinery to be used during demolition and construction stage;*
- d) A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan*
- e) Details of external lighting;*
- f) Details of noise and air quality monitoring and compliance arrangements for impacts on SPA/Ramsar/SSSI;*
- g) Details of the roles and responsibilities in regard to biodiversity e.g., details of an ecological clerk, details of times when specialist ecologists are required on site, risk assessments, practical measures including use of fences exclusion barriers and warning signs*
- h) Details of measures to remove/prevent re-colonisation of non-native species; and*
- i) Identification of “biodiversity protection zones”.*
- j) The location and timing of sensitive works to avoid harm to biodiversity features e.g., bird breeding season.*

k) Habitat protection measures including objectives, extent and location of protective measures, timetable for implementation”.

1.1.4 The CEMP will be adhered to and implemented throughout the construction phases, strictly in accordance with the approved details. The CEMP will remain an active document throughout the construction phases and will be subject to review and be updated, where considered necessary, to ensure that construction operations meet relevant emerging industry best practice standards, as well as reflecting any changing conditions found on the site.

2 SITE CONTEXT AND DEVELOPMENT

2.1.1 Nosterfield Quarry is located to the north of the village of Nosterfield, south of Bedale in North Yorkshire and approximately 4km west of the A1(M). Access to the quarry is via the B6267 onto a purpose-built and surfaced haul road.

2.1.2 The unworked parts of the site largely comprise a number of irregular agricultural fields, with trees and hedgerows forming the internal field boundaries. There are a small number of individual trees which are located in the field to the south of Fox Covert Wood. A large field drain, the Ings Goit, traverses the fields east to west and runs parallel to the field boundaries. The site boundary includes the haul road and the existing plant site, which will remain operational during the working of the Oaklands extension.

2.1.3 The scheme extends the permitted life of the quarry, over and above the current permission end date of 2024, by seven years to 2031.

3 GENERAL SITE MANAGEMENT

3.1 Programme of works

3.1.1 The extension will be worked over three phases as a continuation on from the end of extraction in the Langwith extension. These will be worked in accordance with the timescales detailed below. These timescales are dependent on actual output which itself is dependent on market demand, so will be periodically updated to reflect any changes in the future.

Table 1: Phasing timescales		
Phase	Description	Timescale
Phase 11	The remainder of the Langwith extension	To early 2024
Phase 12	The Oaklands extension	2024 - 2027
Phase 13	The plant site	2027 - 2030
Final restoration		2030-2031

3.2 Work activities

3.2.1 The activities that will take place in order to prepare for the extraction of minerals during any phase at the site will include the following:

- Removal of any fences, walls, rubble, or other physical features within the area of mineral extraction;
- Checking of and removal of any vegetation, such as hedges and trees, including those adjacent to Ings Goit and Flasks Lake during the relevant phases;
- Stripping of top and sub-soils resting above the sand and gravel within the phase area. The soils will be stripped using a 360° tracked excavator. Stripping operations will only be carried out during periods of suitably dry weather, generally between April and October. Maintaining the vegetation cover for as long as possible prior to stripping is advantageous so that soils can be removed in the direst conditions possible. Top and sub-soil will be removed separately with due care;
- Handling and storage of all soils in mounds to the north and western areas of the site boundary using an articulated dump truck and crawler dozer. The movement of soils will not be undertaken during periods of sustained rainfall;
- Creation of the backfilled land bridge between the Oaklands fields and the central plant area. Processing silts extracted during the operational phase will be used to form the land bridge;
- Implementation of drainage measures, including the diversion of the Ings Goit into and out of the lakes system;
- Erection of security fencing and warning signs along the site boundaries; and
- Associated vehicle movements in order to carry out the above activities.

3.3 Plant And machinery used for site preparation

3.3.1 The following plant and machinery will be used for site preparation:

- 360° tracked excavator (e.g. CAT 330D) x1;
- Articulated dump truck (e.g. Volvo A30) x2; and

- Crawler dozer (e.g. Komatsu D65) x1.

3.3.2 The excavator will be used for soil stripping and removal of any other physical features within the site. When stripping soil, the excavator will be equipped with a flat-bottomed bucket which will ensure greater sensitivity and control of soil removal.

3.3.3 The articulated dump trucks will be used for the careful movement of soils to their designated storage areas.

3.3.4 The crawler dozer will also be used for the movement of soils and for moving other material to be removed from the site.

3.3.5 All equipment will be routed in order to avoid compaction of soils.

3.3.6 From time to time, it may prove necessary to use machinery other than those listed above for specific operations, including for the removal of trees, stumps and hedgerows.

3.4 Working hours

3.4.1 The working hours for the site preparation activities are the same as those that will be adhered to during the operational phase:

- 07:00-18:00 Monday to Friday;
- 07:00-12:00 Saturday; and
- No workings on Sunday or Public Holidays.

3.4.2 Essential repairs and maintenance may be required outside of these hours.

3.5 Site Access

3.5.1 Access to the site is unchanged, and will continue to be from the main quarry entrance onto the B667.

3.5.2 The access will be maintained in a safe manner which will include the repair of any damage to the existing adopted highway.

3.5.3 All vehicles will comply with the 20mph speed limit currently in place along the haul roads.

3.6 Vehicle Movements

3.6.1 No more than 120 vehicles will enter or leave the site in any one day (60 in/60 out).

- 3.6.2 All vehicles used during the construction phase will travel towards and from the A1(M) along the B6267 other than when they are required to travel to or from local destinations.
- 3.6.3 All vehicle movements leaving the site will be recorded to ensure that any loads are securely sheeted. Wheels will be kept clean to ensure that no dust, dirt or mud is deposited on the public highway.
- 3.6.4 All vehicles will continue to be required to use the weighbridge within the existing plant area. The records will contain the vehicles' weight, registration number and the time and date of movement.

3.7 Oil and fuel

- 3.7.1 Any oil, fuel, lubricant, paint or solvent at the site will be stored so as to prevent such materials contaminating topsoils or subsoils, or from reaching any watercourse.
- 3.7.2 The materials will be stored in secure designated storage areas and in accordance with the appropriate regulatory requirements. This includes storing materials in fully sealed, impermeable enclosures (without drains) and with a capacity not less than 110% of that of the contents so as to contain their contents in the event of spillage. If multiple tanks are stored in one enclosure, the enclosure itself will have a capacity of not less than 110% of the largest tank within it. All filling points, vents and sight glasses will also be within sealed impermeable enclosures.
- 3.7.3 Minor spills contained within a small area in which there are no drains or run-offs to water courses will be cleared up with oil absorbent materials and disposed of into correctly designated bins. If the bins are full, an oil salvage contractor will be contacted to empty the contents. All bins will be taken to a licensed facility.
- 3.7.4 Medium spills of a quantity such that pollution of drains, land or water is a possibility will be contained with manufactured or earth booms. The spillage will be cleared up using existing facilities or other spill management services provided by a specialist contractor.
- 3.7.5 Major spills which enter controlled waters, sewers or contaminates surrounding land will be managed by a specialist contractor. Urgent action to contain the spillage will be taken by shutting off drains and other outlets together with the construction of temporary bunds to contain and absorb the spill.

3.7.6 In the event of a major spill, the Environment Agency will be contacted. If chemical burns or a fire occurs the Fire Brigade will be contacted.

3.7.7 Oil spill kits will be provided and training on their use given to all construction personnel. Spill kits will be located at the site offices and with all mobile pieces of equipment and machinery. The spill kits will contain the following items:

- Absorbent granules, wipes, and socks;
- Drain covers;
- Plastic bags for used spill kit materials;
- Plastic bunds or trays;
- Relevant and up-to-date material safety data sheets; and
- Shovels and brooms.

3.8 Lighting

3.8.1 No additional lighting will be used during the construction period over and above that currently used on site.

3.8.2 Any lighting considered necessary during construction activities will ensure that illumination would be sufficient for the safety of construction area personnel. Lighting will be directional and used with care to minimise potential for light spillage beyond the working area.

3.8.3 Any lighting will be switched off when not required and only operate when access to the working area is required. Nighttime working (if undertaken at winter) will be minimised during the construction phases.

3.8.4 Further details on available lighting can be seen in the approved Lighting Scheme (Wardell Armstrong LLP, January 2024), in support of the discharge of Condition 14.

4 CONSTRUCTION MANAGEMENT

4.1 Roles and Responsibilities

4.1.1 The responsible persons are detailed below.

Contact name	Position
Paul Younger	Operations manager
Andrew Henderson	Section manager, Site first aider, out of hours support
John Riley	Operations director
Steve Carter	Senior operations manager

Contact name	Position
Iain Smith	Health and safety manager
Victoria Cooper	Health and Safety advisor
Shaun Davidson	Managing director
John Riley	Law compliance officer
Eversheds	Company solicitors
NHS	Glebe House Surgery, Bedale
Peter D'Arcy	Environmental health officer
Wardell Armstrong LLP	Ecological clerk of works
Biffa	Waste clean up and collection
Oil Salvage	Oil clean up and collection
Thriplow Sweepers	Road sweeping
OHES Environmental	Spill management

4.1.2 All staff will be responsible for understanding and implementing procedures relevant to their role. They will conduct their work with a view to reducing the environmental impact of the development and to raise any environmental concerns with the Site Manager.

4.1.3 As contact names change over time this list will be updated and retained on site with the site manager.

4.2 Ecological clerk of works

4.2.1 The Ecological Clerk of Works (ECoW) will be a suitably qualified ecologist who holds a CSCS card and has experience of ECoW provision. Their role will involve direct monitoring of activities on site which could influence ecological receptors, and as directed by the controls and recommendations placed in the Ecology Chapter of the Environmental Statement. At a minimum, this will involve:

- Monitoring compliance with this ecological requirements of this CEMP and ES chapter and reporting any breaches to the site manager, who will have the authority to recommend stopping works and undertake remedial actions, if necessary, to prevent or limit ecological damage;
- Provide ecological advice and support during works;
- To provide technical advice on the implementation of this management plan, including changes to legislative requirements and best practice;
- Carry out responsibilities set out by this CEMP, and by any future updates;
- Provide Toolbox Talks on specific environmental sensitivities and construction considerations to appointed staff, where required;

- To be an on ground ecological presence when required during construction via site monitoring and engagement with the project team; and
- To monitor the mitigation measures and develop or adapt these measures and the CEMP as appropriate.

4.2.2 The ECoW will be required to be present on the site during the following occurrences within the construction phases:

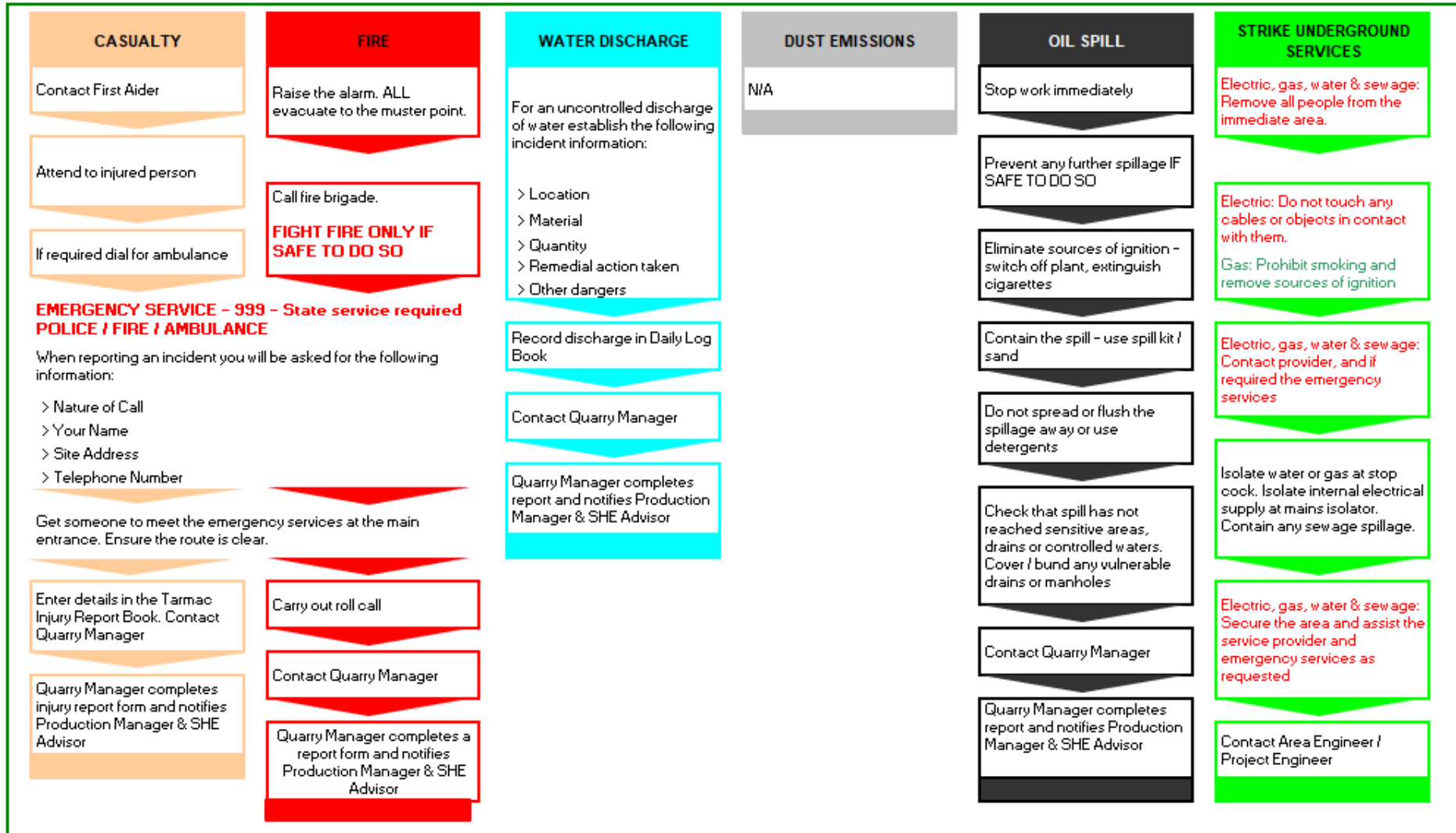
- For all pre-construction checks, including for nesting birds and badger; and
- During the identification and demarcations of all biodiversity protections zones.

4.2.3 A schedule of the works where an ECoW is required to be present is shown below.

Work survey	Date	ECoW required	Comments
Invasive species survey	Prior to start of works.	Yes. To delineate areas of Himalayan balsam and supervise its removal.	In collaboration with a specialist team.
Badger survey	Prior to start of works.	Yes. ECoW or specialist ecologist.	Site staff to remain vigilant for setts during works.
Otter and water vole surveys	Prior to start of works	Yes. ECoW or specialist ecologist.	Site staff to remain vigilant for holts and burrows during works.
Bat - tree climb and inspect surveys	May to September. Three months prior to the removal of T10.	Yes. Specialist ecologist.	No seasonal constraints.
Bat - tree emergence and re-entry surveys	Upon receipt of a bat licence (if required).	Yes. Specialist ecologist.	During optimal bat survey season.
Bat - installation of bat boxes	Prior to start of works.	Yes. ECoW or specialist ecologist.	Woodland edge or mature trees with good connectivity.
Nesting bird checks	Within 48 hours of the onset of vegetation removal between March and April.	Yes. ECoW or specialist ecologist.	Only required during bird nesting season.
Fencing for boundaries, biodiversity protection and root protection areas	Prior to the start of works.	Yes. ECoW and arboriculturist (if necessary).	ECoW to inform site manager where fencing is to be located and ensure it is placed correctly. Fencing to allow passage of mammals where needed. Fencing to conform to British standards.

4.3 Emergency response

- 4.3.1 In the event of an emergency and the emergency services are needed, the following procedures should be carried out. If it is determined necessary, the appointed person will call the emergency services on 999.
- 4.3.2 Other numbers available include:
- Glebe House Surgery, 19 Firby Road, Bedale, DL8 2AT – 01677 422616
 - The Friarage Hospital, Northallerton, DL6 1JG – 10609 779911
 - Local Police (Bedale), 12A Wycar, Bedale, DL8 1EP – 101 or 999
- 4.3.3 The appointed person will be the duty weighbridge clerk. If this person is not available, then the person reporting the incident should take control of the situation. The appointed person will call the emergency services ten minutes after the initial call to confirm attendance has been arranged.
- 4.3.4 The appointed person must inform the site manager. If an incident is out of office hours, the site manager or other management must be notified as soon as possible.
- 4.3.5 A first aider must be directed to the accident/incident site either by radio or verbally as soon as possible. The following instructions should be read to the emergency services:
- **Address:** "Tarmac, Nosterfield Quarry, Well, Bedale, North Yorkshire, DL8 2QZ".
 - Telephone Number: "01677 470209".
 - **Directions:** "From the South, leave the A1 at Junction 50, from the North leave the A1 at Junction 51 onto the A6055. Follow road until the Sinderby Roundabout head west onto the B6267 Masham road, after approx. 4 miles look for the Nosterfield Quarry Sign to the right approx. 200 meters before entering Nosterfield Village. Someone will be at the entrance to direct the vehicle".
- 4.3.6 The site manager will ensure that someone is stationed at the quarry entrance with vehicle to direct the emergency vehicle, with radio, if possible. All access routes will be kept clear of operational vehicle movements or parked vehicles.
- 4.3.7 The incident site must not be disturbed until an investigation has been carried out.



4.4 Legislation, regulations and other requirements

- 4.4.1 The construction phases of the development will comply with all relevant legislation, regulations, and quality standards. All necessary consents will also be obtained to carry out need construction works.
- 4.4.2 The site manager will be responsible for ensuring that the construction phase complies with all applicable environmental legislation, regulation and other requirements.
- 4.4.3 The most up-to-date version of the decision notice, alongside approved details of approved schemes and programmes, together with all approved plans, will be kept available at the office at all times throughout the life of the works at the quarry, including during the construction phase. This will be made known and available to managing and supervisor staff.

4.5 Training and Awareness

- 4.5.1 An environmental communication and training plan will be made known prior to any works. It will include requirements for all employees, sub-contractors, suppliers and other visitors to be trained about environmental management and will promote environmental awareness throughout the project.
- 4.5.2 Training will be provided in the form of tool box talks as part of a weekly team safety brief covering a range of environmental topics.
- 4.5.3 Appropriate personnel will receive training in order to ensure project work is carried out with due regard to environmental protection and to minimise the environmental impact of the proposed development.
- 4.5.4 All site operatives, including contractor and sub-contractor staff working in areas affected by protected species or in the vicinity of retained habitats, will receive a briefing by the ECoW. This will include details of the legal protection afforded to each species, habitat and relevant procedures should signs, and animals be discovered during works.

5 COMMUNICATION

5.1 General Communication

- 5.1.1 Site communication will be coordinated by the site manager. Communication methods will include, but are not limited to, site inductions, specific works package

talks, task briefings, toolbox talks, regulator site briefings, information posters and statutory notices.

5.1.2 Environmental management will also be communicated to all relevant parties by use of this CEMP and other relevant documents approved as part of the planning permission.

5.2 Contractor communication

5.2.1 Communication between the contractors will take the form of telephone, electronic communication and site meetings. Minutes will be taken for all meetings and would include attendance records that will be distributed to the relevant personnel, as required.

5.2.2 The site manager will convene site meetings with all contractors to communicate, discuss and consult any change in conditions, working practices, health, safety and environmental arrangements, where necessary. The meetings will include any hazards or residual risks that have been identified in conjunction with the implemented environmental protection measures. Each contractor will nominate an appropriate person to attend these meetings.

5.3 Community engagement arrangements

5.3.1 Tarmac will engage in community liaison activities, including local community meetings, where required.

5.3.2 A notice board will be erected at the site entrance, or additional details will be added to an existing notice, to provide basic project details and key contact numbers to members of the public. All public communications will be made by Tarmac.

5.3.3 Media approaches will be re-directed to Tarmac's communications team on 0844 736 199 and pr@tarmac.com. The site office will also hold contact cards with details of the communication team to provide to members of the public if requested.

6 ENVIRONMENTAL CONSIDERATIONS

6.1 Dust and Air Quality Monitoring

6.1.1 It should be ensured that any dust on the site does not impact any environmental designations in the surrounding area of the site. However, to ensure that any assets are not harmed, appropriate monitoring shall be carried out.

6.1.2 Monitoring will be carried out in the form of visual checks made daily by the Site Manager, or his appointed deputy, of all operations which may give rise to dust in the vicinity of the development or the site boundaries. A record of the observations, including weather conditions and any actions taken will be made in the site log and will be kept available for inspection by the local authority in the site office.

6.1.3 Additional measures to ensure dust is controlled include the following:

- Complying with low drop heights
- Complying with speed limits
- Ensuring that any exposed materials are dampened regularly
- Ensuring that the site access road is kept in a clean state
- Discontinue any soil movements during periods of high wind

6.1.4 Where the ECoW considers that a potential negative effect from air quality impacts may occur or be occurring, related works to the dust sources will be halted until a suitable measure can be established. The ECoW will identify 'trigger points' for taking action and outline what those actions may be if different to the above.

6.2 Noise Monitoring

6.2.1 Monitoring of any noise impacts on nearby ecological receptors will be carried out in the event of any complaints been made known, or at the request of the Local Planning Authority, by the ECoW at the site boundaries nearest to receptors. In such cases, a log will be collected of all noise monitoring results, and monitoring shall take place at the start, middle, and end of the working day. All noise generating sources would be used to identify the source of the issue.

6.2.2 Specialist training to the ECoW for the use of noise monitoring equipment shall be carried out by an appropriate person, if required.

6.2.3 The ECoW will use their experience and professional judgement to assess any instances of ecological disturbance from noise. This would also be in the form of a visual assessment, including on birds, and will follow the below procedure:

- Stop works if fleeing and there is a clear link to the construction works.
- Stop works if fleeing and there is no clear external influence to cause the behaviour.
- Not stop works if fleeing is clearly cause by weather conditions.

- Not stop works if fleeing is clearly a response to the presence of a natural predator.
- 6.2.4 If noise is considered to have the potential to cause significant impacts outside of the site boundary, the related operations shall cease until emissions are controlled. In the unlikely event that noise emissions are identified as an issue by the ECoW, the Site Manager will review the mitigation measures and monitoring techniques.
- 6.2.5 The ECoW should also be informed of the noise levels stated in the extant planning permission for residential receptors as an indication of permitted limits. The ECoW shall be made aware of all noise mitigation measures active on the site at the time of monitoring, and when any new measures are introduced as the construction phases progress.
- 6.2.6 Meteorological data regarding wind speed and direction shall be checked at the beginning of the day. Noise is likely to be worse in weather conditions that are windy.
- 6.2.7 Informal noise monitoring for increased noise will be carried out by staff, and any noticeable irregularities reported to the Site Manager and ECoW.

6.3 Non-native invasive species

- 6.3.1 Schedule 9 invasive Himalayan balsam *Impatiens glandulifera* was present in areas adjacent to Ings Goit and within drainage ditches at the centre of the site.
- 6.3.2 Construction activities have the potential to cause the spread of this invasive species, either through contact with live plants bearing mature seed pods or through excavation and deposition of spoil contaminated with viable seeds.
- 6.3.3 A specialist contractor will provide a detailed methodology for removal of the plants themselves and any surrounding soils which may be contaminated with seeds. This is likely to involve separating the soils (containing seeds) from other non-contaminated soils and uprooting the plants themselves. A brief description of possible treatment methods are outlined below and may include:
- Spraying: The plants are sprayed with herbicide, with glyphosate being the most effective if applied during July to September (other herbicides can also be effective). The area needs to be monitored for re-growth and re-sprayed if necessary;
 - Digging/removal: The plants and roots are simply dug up and disposed of. It may be necessary to respray or physically remove any re-growth, and a period of monitoring will be necessary;

- **Bund Method:** All the infected soil within the working area is excavated and placed into a bund to allow treatment to of the infected material to occur concurrently with construction. If the plants are growing at the time they will be treated with glyphosate and time allowed for it to take effect (c. two weeks) before proceeding. The depot to which excavation will be required will depend on the depth of penetration of rhizomes, which in turn depends on time and method of infestation; at least 2m is likely. The bund will be within or adjacent to the infected area but at least 7m from the working area and at least 50m from any watercourse. If the ground onto which the bund is spread has no sign of invasive species, then the bund will be placed on a root barrier membrane layer. The growth on the bund is then treated with herbicide as above. Once treated the soil can be used in reinstatement of the previously infested area provided follow up monitoring occurs of both the reinstated area and former bund area to detect any regrowth which can then be similarly treated with herbicide;
- **On-site burial:** If there is the option of burial to 5m depth within or adjacent to the infested site then this option can be used. If plants are growing at the time they will be sprayed with glyphosate and time allowed for it to take effect (c. two weeks) before excavation takes place. The material will be buried to at least 5m depth and a root barrier membrane placed over the top before in-filling. If material is to be stockpiled prior to burial, then it will be at least 7m from the working area and 50m from watercourses. If the ground onto which it is stockpiled has no sign of invasive weeds, then the bund will be placed on a root barrier membrane layer. Regrowth will be treated with herbicide; and
- **Off-site disposal:** This is the last resort option as moving material away from the infested area always carries risk of spreading the infestation. In this case, off-site disposal could mean burial away from the infested area but still within the planning application boundary if a suitable site for burial is available. This would then follow the method described above. If this is not available, then disposal in a licenced landfill site will take place. If plants are growing at the time they will be sprayed with glyphosate and time allowed for it to take effect (c. two weeks) before excavation takes place. Skips or trailers will be lined and covered with membrane to create a temporary 'cell' within which infected material is sealed during transit.

6.3.4 Prior to the commencement of site works the following measures are recommended, these may be reviewed upon a programme of works by the specialist contractor:

- A Toolbox Talk will be given to all site personnel who will be working in these areas, so they are aware of the risks and their responsibilities;
- Any infested areas will be clearly marked out on site. This will be informed by the ECoW;
- Where these areas are within the site boundary and there is potential for spread within the working and/or operational area then suitable control measures will be mutually agreed with the employer to prevent them from spreading;
- Areas that must be disturbed will be cleared of infested material as far as reasonably possible under supervision of the ECoW. An assessment will be made as to whether it is better to retain the infested material on-site for reinstatement of works within the infested area coupled with treatment or whether disposal offsite is more appropriate (to be informed by specialist contractor);
- On leaving areas of the site known to contain infested material, any machinery or vehicles that have been used will be thoroughly cleaned (e.g. jet washed) within a designated area. This area will be as close as possible to the infested area on which the machinery / vehicles have been working to avoid the spread of the species. Runoff will be contained to avoid spreading plant material. This area will be monitored in the spring for any growth and a spraying programme implemented if necessary. Any machinery used in clearing infested areas will be similarly cleaned;
- Infested spoil will only be placed on top of a fabric / membrane in an approved, fenced area. Once the infested material is removed from these areas, they will be monitored for re-growth, particularly during the growing season and, if necessary, treated with an appropriate herbicide;
- No stockpiling of potentially infested material will take place within 10m of a watercourse;
- All haulage lorries, dumpers, bags or skips carrying infested material will have the material covered during transit;
- Where infested material is to be removed from site this will have accompanying waste transfer documentation, for disposal in a licensed landfill site;

- Where application of herbicide is required as part of the control this would only be undertaken by suitably qualified individuals (i.e. NPTC certified) and after obtaining all relevant permissions and consents from Natural England;
- Any areas of invasive species growth, treatment areas, bunds created for management of invasive species or buried invasive species will be demarcated on site constraint maps which will be provided to Natural England; and
- No earthworks or movement of soils should be undertaken in the vicinity of the known locations of invasive species, and site staff should remain vigilant for the presence of such species in all future operations on site. Any potential issues should be reported immediately to the appointed ECoW and Site Manager.

6.4 Badgers

- 6.4.1 Two disused outlier setts have been recorded within the site boundary (Sett 3 and Sett 4). Although neither will be directly impacted by the proposals, extraction and earthmoving works may take place within 30m of them.
- 6.4.2 Prior to works commencing, the ECoW will carry out a precautionary check for mammal burrows exceeding 100mm. In the event that active setts are identified, a Natural England Mitigation Licence will be obtained, and a method statement will be produced to accompany the licence application which will detail the process for sett closure (to include a pre-work survey, exclusion, monitoring and sett closure) to ensure the safety and welfare of badger that may occupy the area.
- 6.4.3 Staff are to remain vigilant for the presence of new mammal holes throughout the duration of quarrying. Any holes greater than 100mm in diameter should be checked by the ECoW or a suitably qualified ecologist.
- 6.4.4 During site clearance and quarrying operations as a precaution, no excavations will be left open overnight unless there is a means of escape for mammals. This is normally achieved by leaving a plank for them to walk up or a willow sloping elevation on one wall of the excavation. It should be noted that, as badgers are nocturnal, it is not expected that they would be present onsite during working hours.

6.5 Otter and Water Vole

- 6.5.1 A pre-works check for the presence of otter and water vole along Ings Goit will be carried out prior to the commencement. This will check for field signs of otter and water vole, including burrows, holts, latrines, feeding stations, prints, and slides.

6.5.2 Should otter holts or water vole burrows be found within 50m of the proposed development a Natural England Mitigation Licence will be obtained, and appropriate mitigation/compensation provided.

6.6 Roosting bats

6.6.1 Due to the age of the previous climbed inspection surveys, any trees with features suitable for roosting bats will require an update climbed inspection before their removal. This survey will be carried out by a suitably experience ecologist with appropriate qualification for aerial ascent and rescue and a Natural England Level II Class Licence for Bats, and will confirm the presence / likely absence of a bat roost.

6.6.2 All trees to be removed will be marked with a coloured spray (red) to indicate (on the ground) which are to be removed. Root protection areas of all retained trees within close proximity to quarrying works will be fenced prior to any climbed inspection works or tree removal being undertaken.

6.6.3 All suitable rooting features (SRF) and cavities will be fully inspected and only if features can be fully inspected will the tree be felled within 48 hours of inspection.

6.6.4 Where a tree cannot be fully inspected, activity surveys will be carried out in-line with the Bat Conservation Trust Guidelines (Collins, 2016).

6.6.5 In June 2022 a soprano pipistrelle *Pipistrellus pygmaeus* roost was recorded in T10 during a dusk emergence survey. As bat roosts are protected under the Conservation of Habitats and Species Regulations (2017, as amended) and the Wildlife and Countryside Act 1980 (as amended), a Mitigation Licence will be required prior to the commencement of works, including any works which could kill, injure or disturb bats occupying the roost or obstruct, damage or destroy the identified roosts.

6.6.6 The mitigation licence will allow for a derogation from the protection otherwise afforded by the relevant legislation subject to a number of mitigation measures being secured as conditions of the licence to ensure that impacts are minimised, and the favourable conservation status of bats can be maintained.

6.6.7 The mitigation licence will detail specific requirements for minimising harm to bats during removal of the roost, which are anticipated to include:

- Timing the tree felling works to avoid the hibernation period for bats (November to March, inclusive);

- Removing features that are suitable for roosting bats under the direct supervision of a licenced Ecologist;
- The above process normally involves 'soft felling' of the limb within which the roost cavity is contained, lowering the severed limb to the ground using ropes or mechanical means and then leaving the limb undisturbed for at least 24 hours so that any bats present can exit the cavity and disperse;
- Installation of a proportionate number of tree-mounted bat boxes to compensate for the loss of the roost will be undertaken in accordance with the bat mitigation licence. Locations of such bat boxes are to be detailed following update bat surveys which are used to inform the mitigation licence. The boxes will be a self-cleaning design, and will be installed along a woodland edge or on a large tree, close to connecting habitat.

6.6.8 Prior to the licence being obtained, update emergence/re-entry surveys to update the classification of the roost will be required. These must be carried out within three months of the licence application being submitted.

6.7 Bat foraging

6.7.1 In order to prevent indirect impacts on local foraging and commuting bats, no night working will occur. If site lighting is required, a sensitive lighting scheme will be adhered to. This would involve using low-level lighting and minimising light spill onto important bat foraging / commuting habitat, such as the peripheral boundary features (i.e. woodland, hedgerows and waterbodies) and by directing the lighting in a downwards direction away from sensitive features, such as hedgerows and woodland.

6.7.2 23 bat boxes will be installed around the woodland edge or retained linear hedgerows with trees as compensation for the loss of a foraging corridor through the centre of the site.

6.7.3 The boxes will be installed prior to commencement of vegetation clearance.

6.7.4 Boxes will be of 'woodcrete' construction (where possible), be 'self-cleaning' and should be left in situ for at least 10 years.

6.8 Nesting birds

6.8.1 Where possible, vegetation clearance will be undertaken outside of the bird nesting season (taken to be March to August, inclusive). Where clearance work is unavoidable during the nesting season, habitats will be checked for the presence of nesting birds

within 48 hours of the onset of works. All work will be completed by a suitably qualified ECoW.

- 6.8.2 Whenever there is removal of nesting habitat during the breeding season, a rapid vantage point assessment will be carried out to check for signs of nesting birds (i.e. birds flying to and from the nest, birds carrying food, alarm calling) before a hand-search for nests is undertaken. In more open habitats, such as arable fields, a transect will be walked across the site in a zig-zag pattern to check for nesting activity.
- 6.8.3 Should active nests be recorded onsite, they will be protected from works by the establishment of a suitable protective buffer zone, defined by the ecologist/ECoW. This will be no less than 5m in radius from the nest and will be specified for individual nests based upon the sensitivity of the species recorded and the nature of the nearby works (e.g. Schedule 1 bird species will require a more extensive buffer zone).
- 6.8.4 The ECoW will be responsible for confirming that vegetation clearance can continue once any nesting attempts are complete and any nests are no longer active.
- 6.8.5 The Site Manager will be briefed on the findings of the nesting bird checks/weekly walkovers and the 48 hour duration period in which the habitats must be cleared following nesting bird checks.

6.9 Biodiversity protection zones

- 6.9.1 Biodiversity Protection Zones (BPZ) are to be used as a means of reducing risks to sensitive receptors on the site. These are a physical delineation of the area surrounding the receptor that cannot be entered by any site personnel or machinery.
- 6.9.2 Areas of retained woodland, such as Fox Covert, and any mature trees will be protected by a BPZ delineated by fencing. The fencing will be installed prior to the onset of quarrying. Fencing will be of a suitable design to ensure the passage of mammals (e.g. badgers).
- 6.9.3 A buffer of >15m will be retained around the periphery of Fox Covert, in line with standard Natural England/Forestry Commission guidance relating to Ancient Woodland.
- 6.9.4 Tree Root Protection Areas (RPAs) are to be marked out for all retained trees on the ground prior to works commencing and fenced in accordance with the British Standard 5837:2012 to ensure the trees are not damaged and the soil supporting their root systems are not compacted during the proposed works.

6.9.5 Inspection and supervision of the fencing is also recommended to ensure compliance with the protection of retained trees.

6.10 Drainage strategy

6.10.1 The measures to be adopted have been informed by the submitted and completed FRA, site visits, discussion with Tarmac operational staff with extensive knowledge of site water management/drainage and previous hydrological assessments. A Flood Risk Assessment (FRA) was prepared by Hafren Water in February 2023 in support of the application (ref: 2916/FRA), which was approved as part of the Planning Permission.

6.10.2 The permitted mineral extraction within the Oaklands Extension Area essentially represents a continuation of operations which have been undertaken at Nosterfield Quarry since 1995. The water management and drainage measures which will be applied at Oaklands are therefore well-established and proven to be effective in ensuring drainage and pollution prevention.

6.10.3 The 'progressive' nature of the mineral extraction is such that components of the drainage system will be created throughout the working life of the quarry. However, provision will be such that drainage within the Oaklands Extension Area will be integrated into the existing system and ensure effective water management for the lifetime of the active mineral extraction phase of works.

6.10.4 On implementation of the measures detailed herein surface water drainage, water quality and pollution risk will be managed effectively throughout the duration of mineral extraction.

6.10.5 This plan may be subject to change as the project progresses.

Current Drainage Strategy

6.10.6 The baseline conditions, which have informed drainage at the Oaklands extension Area, are the current situation. Current provision is therefore firstly presented, followed by how this will be modified as working within the extension area progresses.

6.10.7 Four interconnected waterbodies exist at Nosterfield Quarry; Kiln Lake, Lingham Water, Flask Lake and Langwith Lake. The waterbodies were all created by mineral extraction.

6.10.8 The Ings Goit watercourse is integrated into the water environment at the site; it enters Langwith Lake in the west and egresses it via an outfall constructed on its southeastern boundary.

- 6.10.9 Ditches, pipework and sluices control water movement and lake elevations within the current site. The configuration of the current water management system is shown on *Drawing 3594/PC24D/01*.
- 6.10.10 Water is abstracted from Lingham Water and used for mineral processing. Effluent water from the plant is discharged within the site, where the entrained silt is being used to create part of the restoration landform.
- 6.10.11 Active water management is not necessary to support existing operations, or the proposed extension.

Future Drainage Strategy

- 6.10.12 Mineral extraction will be undertaken exclusively by electric-powered dredger. Extraction will commence from Langwith Lake and proceed westwards. Extraction will join Langwith Lake with 'proto'-Oaklands Water, thereby creating one large waterbody. However, the two areas will subsequently be divided by the deposition of silt derived from the mineral processing plant, resulting in an embankment between Langwith Water and Oaklands Water. Post-restoration drainage is shown on *Drawing 3594/PC24d/02*.
- 6.10.13 The majority of Ings Goit watercourse will be incorporated into Oaklands Water. However, a reach of the watercourse to the south of the woodland will be retained. This will be utilised within the restoration to convey water from the newly isolated Oaklands Water to Langwith Water. The watercourse will enter the Oaklands Water and egress via a weir control point, to be installed on the northeastern bank of the lake.
- 6.10.14 The method of working will be such that there will be no change to the throughflow of water from the Ings Goit, consequently downstream flow rates will be unaffected.
- 6.10.15 There is no drainage issue associated with the incorporation of the Ings Goit into Langwith Water.
- 6.10.16 Drainage provision is solely associated with the maintenance of flow through the Ings Goit/lake system. Water levels within all of the lakes are, and will continue to be, regulated by the use of adjustable weirs.
- 6.10.17 The weirs regulate lake water levels such that there will be no change to the current situation regarding the 'drainability' of their surrounds. There are no instances of drainage issues associated with the existing, long-established, waterbodies.

6.10.18 During mineral extraction Oaklands will comprise a waterbody, therefore drainage issues, per se, do not pertain.

6.11 Pollution prevention plan

6.11.1 Safeguarding of water quality has been managed effectively at Nosterfield since the commencement of mineral extraction in 1995. The measures, which have been developed over time, will continue to be applied during mineral extraction within the Oaklands extension area.

6.11.2 Specific measures which will be applied are:

- Oil sorbent booms will be installed at appropriate locations;
- Chemicals and fuels will continue to be handled and stored in accordance with best practice;
- In the event of a spillage of potential contaminants, outflow from Langwith Lake will be prohibited by the operation of the outflow weir; and
- Spill response kits will be deployed at key locations around the site and personnel trained in their use.

6.11.3 More information regarding the handling of spills and prevention measures can be seen in Section 3.7 'Oil and Fuel' of this document, as well as on the supporting Tarmac company-wide poster 'Oil/Fuel Spills Emergency Procedure 2023' (Appendix 1).

6.11.4 Site-specific and company-wide policies are also currently in place at Nosterfield Quarry to safeguard water quality. There are two site-specific protocols which apply, relating to water discharge and oil spills are provided above in the 'Emergency Response' section of this document.

6.12 Management of water safeguarding performance specification and implementation

6.12.1 The surface water management mechanisms used on-site will be designed to conform with the relevant regulations. The actions detailed in *Table 3594/DCON/T1* (Appendix 2) should be undertaken by site personnel.

6.13 Flood alert

6.13.1 The flood response measures appropriate to the site works are detailed below.

Table 4: Flood responses			
Alert Level	Definition	Action	Responsibility
Flooding alert	Flooding is possible – be prepared	Weather forecast to be closely monitored.	Site Manager
		Plan for evacuation if priority levels change	
Flood warnings	Flooding is expected - immediate action required	Plan to remove all personnel, equipment and materials from site immediately	Site Manager
Severe flood warning	Severe flooding danger to life	Vacate site until threat level reduced	Contract Manager

APPENDICES

Appendix 1 Oil Spills Emergency Procedure 2023



OIL / FUEL SPILLS EMERGENCY PROCEDURE 2023

ALL SPILLS MUST BE REPORTED

MINOR SPILL

This means a spillage which is contained within a small area in which there are no drains or run-offs to water courses.

- Clear up spillage using oil absorbent materials (i.e.. sand, granules)
- Dispose of into correct designated blue bins. If full speak to Oil Salvage to empty, reorder through ARCO
- Bins to be taken to a licensed facility.

MEDIUM SPILL

This means a spillage of such quantity that pollution of drains, land or water courses is a possibility.

- Stem the source of spillage. Shut off drains/ taps etc.
- Contain the spillage with booms, dust, earth, etc.
- Clear up spillage either by using Company facilities if applicable or call OHES Environmental for 24/7 Spill management on 0333 333 1123 quote Tarmac account 16-1013

MAJOR SPILL

This means a substantial spillage which enters controlled waters, sewers or contaminates surrounding land. Contact OHES Environmental as above for emergency assistance

- In the event of serious risk of fire or chemical burns notify the fire brigade by dialing 999
- Take urgent action to contain spillage by shutting off drains and other outlets and block off final discharge to any water course.
- Construct bunds of sand to contain and absorb.
- Alert the EA of issue

EMERGENCY SITE CONTACT NUMBER 01677 470209

Appendix 2 Water Quality and Pollution Control Measures

3594/CSWMP/T1 - Water Quality and Pollution Control Measures – to be completed by the site manager

Development: Nosterfield Quarry - Oaklands

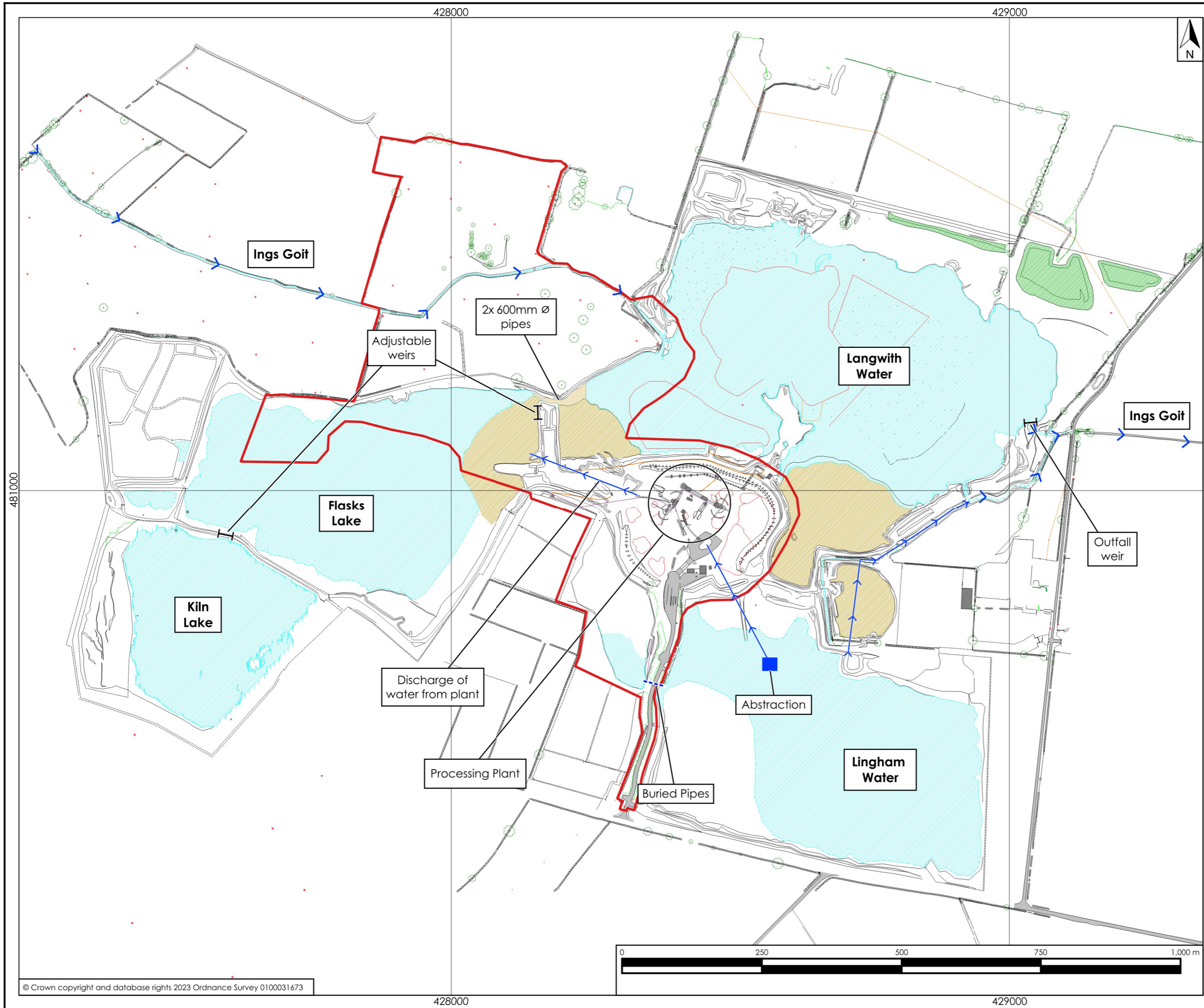
Design review by:

Date of review:

Item containing potential hazard	Potential hazard	Resulting harm	Mitigation measures	Actions to be carried out by (Initials)
Programming of works	The order of construction may damage waterbodies and components by silt deposition	System may not function as designed	Massive silt settlement capacity exists within the existing waterbodies. All 'effluent' water leaving the Oaklands extraction area will flow through Langwith Lake	
Skills of operatives, lessons	Lack of understanding of water issues and components can lead to failure in operation	System may not function as designed	Toolbox Talks to be provided as necessary to ensure operatives aware of required water safeguarding measures	
Potential erosion of watercourse	Site discharges surface water to the lngs Goit. Risk to watercourse from high volume wash-off in intense rainfall	Increase of flood risk in watercourse	Egress of water from Nosterfield waterbodies regulated by management of the downstream weir/penstock	
Pollution control to watercourse from sediment	Damage to existing watercourse through sediment wash-off	Pollution of watercourse	Surface water conveyed through massive waterbodies before discharge - significant silt settlement capacity	
Pollution control to watercourse from general contaminants	Pollution damage to watercourse	Pollution of watercourse	Location of stockpiles, stores of materials, waste, fuel and refuelling optimised. Robust site-specific and company-wide emergency response procedures in place	
Pollution control to watercourse from hydrocarbon contaminants	Pollution damage to watercourse	Pollution of watercourse	No operations within existing watercourse. Response measures as above	
Flooding from watercourse into site	Flood water damage to works and threat to employees	Risk to site operatives during construction works	Watercourse to be regularly inspected for potential blockage from natural debris, be aware of flood warnings	

DRAWINGS

Drawing 3594-PC24D-01
Current Water Management and Drainage



Key
 Oaklands Permitted Area

Scale correct at A3

Client Tarmac Ltd.

Title Current Water Management and drainage

Project Nosterfield Quarry (Oaklands)

Drawing 2916/PC24D/01 Version 1

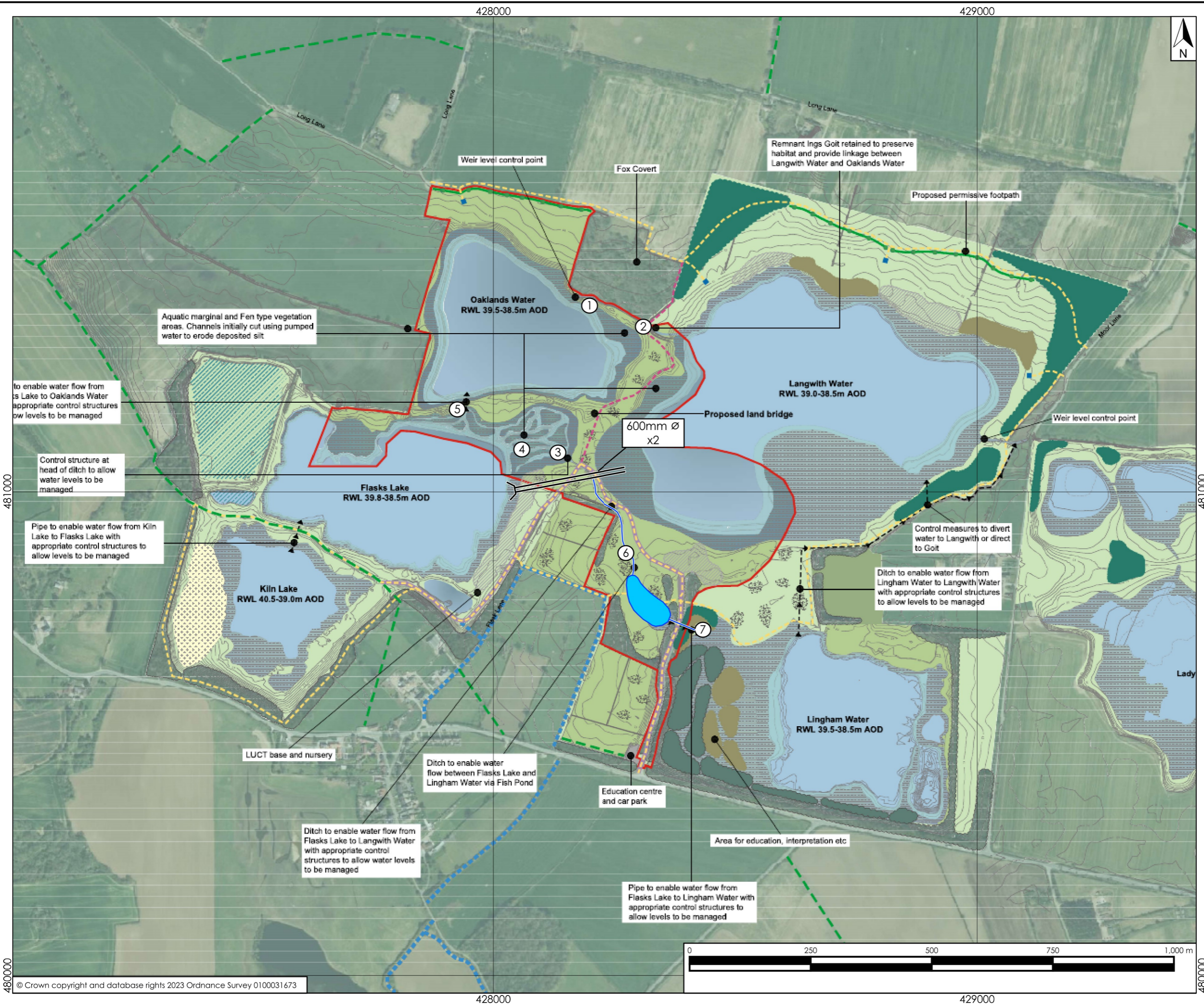
Date Jan 2024 Scale 1:6,500

hafrenwater
 environmental water management

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Drawing 3594-PC24D-02
Post-restoration Drainage



Key
 Oaklands Permitted Area

Scale correct at A3

Client Tarmac Ltd.

Title Proposed Restoration

Project Nosterfield Quarry (Oaklands)

Drawing 2916/PC24D/02 Version 1

Date Jan 2024 Scale 1:7,500

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