ALTEMAR
Marine & Environmental Consultancy

Outline Construction Environmental Management Plan (CEMP) for a Proposed Residential Development at McCauley Place (Beaufort), Naas, Co. Kildare.

10th March 2026

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: McCauley Place.

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

Document Control Sheet			
Client	McCauley Place		
Project	Outline Construction Environmental Management Plan (CEMP) for a Proposed Residential Development at McCauley Place (Beaufort), Naas, Co. Kildare.		
Report	Outline Construction Environmental Management Plan (CEMP)		
Date	10th March 2026		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Gayle O'Farrell	28th April 2025
Planning	Bryan Deegan		13th May 2025
Planning 02	Bryan Deegan		10th March 2026

Contents

Executive Summary

This outline Construction Environmental Management Plan (CEMP) has been developed to detail the commitments and mitigation measures to be implemented by McCauley Place and it's appointed contractors during the proposed development at McCauley Place (Beaufort), Naas, Co. Kildare. This CEMP is being submitted in tandem, and should be read in conjunction, with the Appropriate Assessment Screening and Ecological Impact Assessment (EcIA) for the proposed development.

The purpose of the CEMP is to provide details of the proposed project, the proposed works, the phasing and methodologies, proposals for on how the proposed project is intending to use a comprehensive and integrated approach to protecting the sensitive receptors proximate to the proposed works, in addition to providing information on waste and traffic management.

This CEMP also outlines the potential impacts of the development, details the sensitive receptors, environmental controls, and the mitigation measures that will be implemented to minimise any potential impacts. The CEMP also details the specific requirements that need to be addressed during project stages and also includes the related roles and responsibilities of individuals involved in the project.

1. Introduction

Outline of CEMP

Altemar Ltd. has been commissioned by McCauley Place to prepare an outline Construction Environmental Management Plan (CEMP) for a proposed development at McCauley Place, Naas, Co. Kildare.

The purpose of the CEMP is to provide details of the proposed project, the proposed works, the phasing and methodologies, proposals for on how the proposed project is intending to use a comprehensive and integrated approach to protecting the sensitive receptors proximate to the proposed works, in addition to providing information on waste and traffic management.

This CEMP is subject to planning permission being granted for the development as per the drawings submitted. The CEMP is a live document subject to change based on the following:

1. Final planning permission granted and conditions
2. Compliance requirements of Kildare County Council
3. Concerns raised by residents affected by the works during the planning stage

The final CEMP prepared for the development will be submitted prior to commencement of the relevant phase on site and will be subject to periodic review as part of the management of the construction process.

Structure of the CEMP

This CEMP is based on measures to ensure legal compliance and established good management practice on-site and includes the following sections:

1. Introduction
2. Project Description
3. Analysis of the Potential Impacts
4. Mitigation Measures & Monitoring
5. Residual Impacts
6. Site Information
7. Construction Management
8. Emergency Procedures
9. Invasive Species
10. Conclusions

2. Project Description

Project outline and Site Context

The development comprises the construction of a residential development for older persons located at 13 & 18 Sallins Road, Beaufort Cottage and Beaufort, Sallins Road, Naas West, Naas, Co. Kildare.
Beaufort (house) is proposed to be retained and repurposed to facilitate a community room for the proposed residents and the demolition of the non-original fabric alterations and additions is proposed. Demolition of the three existing terraced cottages fronting Sallins Road is proposed.
The residential development will provide 44 no. 1 and 2-bedroom units across 3 interconnecting 4 storey blocks on a 0.48ha site. The development will also include a single storey rear garden pavilion, a single storey plant room, associated communal and public open spaces and 4 surface car parking spaces. Additional car parking (20 spaces) will be made available within the existing town centre car park located opposite the site. A pedestrian crossing is proposed at the front of the site, across Sallins Road.
Vehicular access is proposed from Sallins Road via a right of way from Father Murphy's Terrace along the southern boundary. A bridge is proposed across the Mill Lane stream connecting the rear of the site with the Luisne Gardens public open space.

As outlined in the EcIA, flora and fauna assessments were carried out on the subject site, and included bat emergent surveys. In summary, the terrestrial mammals that were observed onsite were bats. No signs of resident mammals of conservation importance such as badgers or otters were noted on site. No flora of conservation importance was noted on site. No invasive species were noted on site. A single Lesser Noctule (*Nyctalus leisleri)* bat and two Common Pipistrelle (*Pipistrellus pipistrellus*) bats were noted foraging onsite shortly after sunset around the riparian zone of the site The site is not proximate to Natura 2000 sites but is close to the Grand Canal pNHA (280m). There are no designated sites within the proposed area of works.

The AA Screening concluded that:
'Having taken into consideration the foul and surface water drainage from the proposed development, the distance between the proposed development to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites, and the dilution and settlement effect within the River Liffey via the direct pathway during construction, it is concluded that the proposed development would not give rise to any significant effects to designated sites. The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites.'

Landscape

The landscape strategy for the proposed development has been prepared by SLRA Landscape Architects. The landscape plan is shown in Figure 5.

Drainage

An Infrastructure Design Strategy Report has been prepared by Barrett Mahony Civil & Structural Consulting Engineers for the proposed development. It outlines the following drainage strategy:

'SURFACE WATER DESIGN STRATEGY

EXISTING SURFACE WATER INFRASTRUCTURE
With reference to Uisce Eireann records the subject site is not shown as being serviced by surface water drainage. We note that the existing houses along Sallins Road discharge surface water into the combined network which ultimately discharges to a 525mm diameter combined sewer which is located below the Sallins Road (R407) and running in a northerly direction from the site – see Appendix 1. The Uisce Eireann records do not include the route of the existing stream which has been added to the map as shown. With reference to Fig. 2.1, it is noted that the surrounding sites discharge surface water to the stream with sites to the west and north discharging directly.

PROPOSED SURFACE WATER DRAINAGE SYSTEM

It is proposed to provide the following aspects as part of the development surface water design:

- *2 of the 4 buildings on the site have will be provided with permeable paved finishes overlying a drainage board for interception storage and a blue roof storage facility for attenuation storage. Majority of the run-off from these buildings will be in effect attenuated at source.*
- *In the central courtyard area the hard paved areas will be formed with permeable paved surfaces with underlying gravel sub-bases with sufficient voids to provide attenuation storage for these areas and any run off from the roofs not directed to blue roof. These areas will be provided with perforated overflow pipes which will discharge to the private surface water network before ultimately being discharged to the public drainage on the Sallins Road (R407).*
- *Green area to the back of Beaufort house will be taken as a bioretention area with underlying gravel sub bases with sufficient voids to provide attenuation storage for these areas. Similar to the central plaza, areas of the roofs not directed to the blue roof will discharge to this biorentention area*
- *The remaining ground floor areas will be soft landscaped and, given the site's sloping topography towards the west, surface water runoff from these areas will continue to discharge naturally to the adjacent stream and will therefore not be directed into the surface water drainage network.*

By implementing various SuDS elements as part of the drainage strategy, biodiversity is improved along with water quality.

The proposed surface water drainage system is designed to comply with the 'Greater Dublin Strategic Drainage Study (GDSDS) Regional Drainage Policies Technical Document – Volume 2, New Developments, 2005' and the 'Greater Dublin Regional Code of Practice for Drainage Works, V6.0 2005'. CIRIA Design Manuals C753, C697 and C609 have also been used to design the surface water drainage system within the site.'

FOUL WATER DESIGN STRATEGY

EXISTING FOUL DRAINAGE SYSTEM

The existing private foul network within the site boundary currently serves beaufort house and the three other units that face onto the Sallins road. A series of manholes and ICs collect the foul drainage at the back of the units and discharges to the public sewer on the Sallins Road.

PROPOSED FOUL DRAINAGE SYSTEM

It is proposed to remove the existing private foul drainage network on the site and construct and entirely new network to suit the new development. Foul drainage from the proposed development shall be drained by a completely separate system to that of the surface water drainage system until the last manhole that will be combined with the surface water and drain by gravity to the combined sewer within the Sallins Road '

The proposed drainage layout plan is demonstrated in Figure 7.

Figure 1. *Proposed site outline*

Figure 2. *Proposed site outline and location*

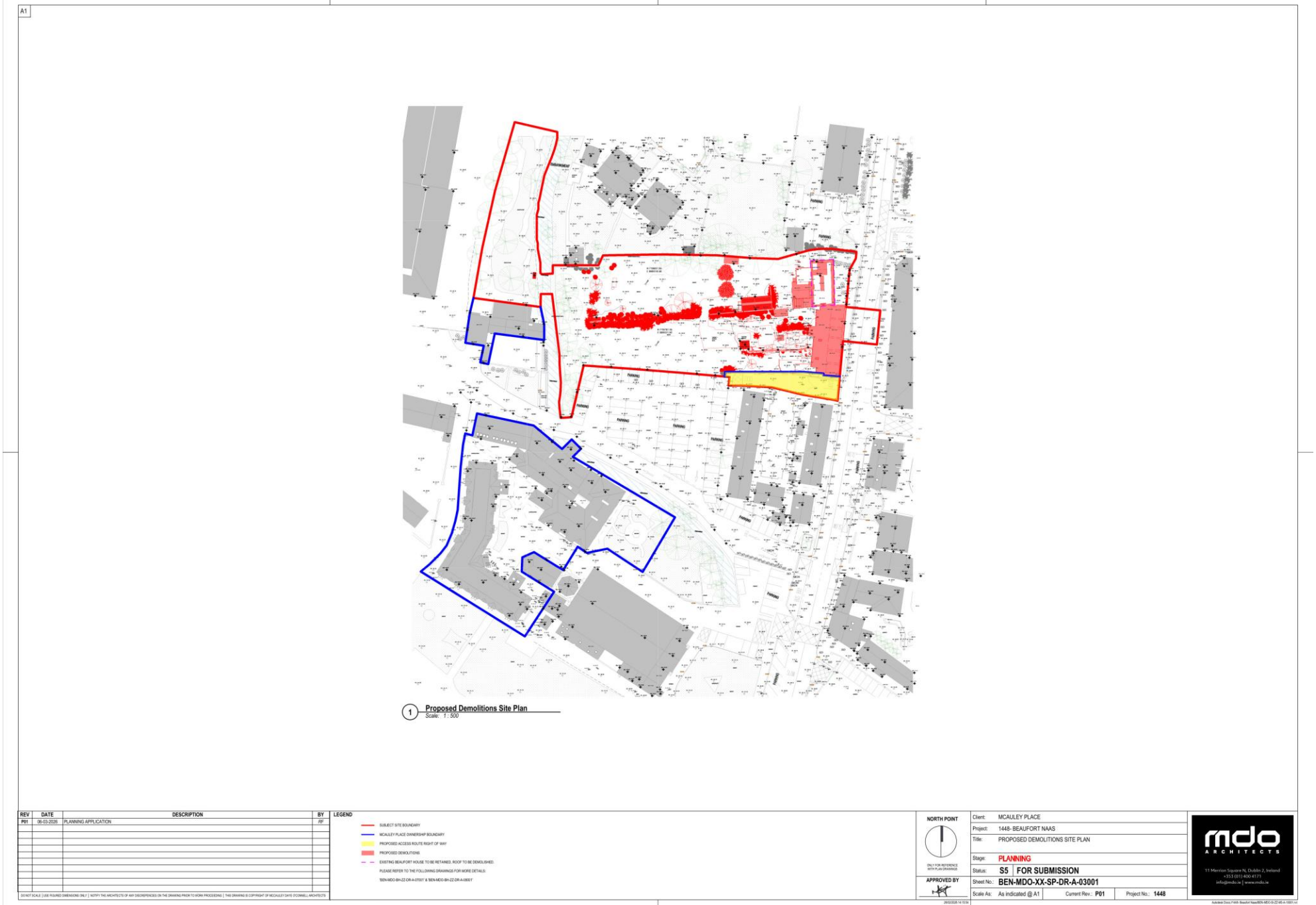


Figure 3. *Proposed demolition plan*

Figure 4. *Proposed site plan*

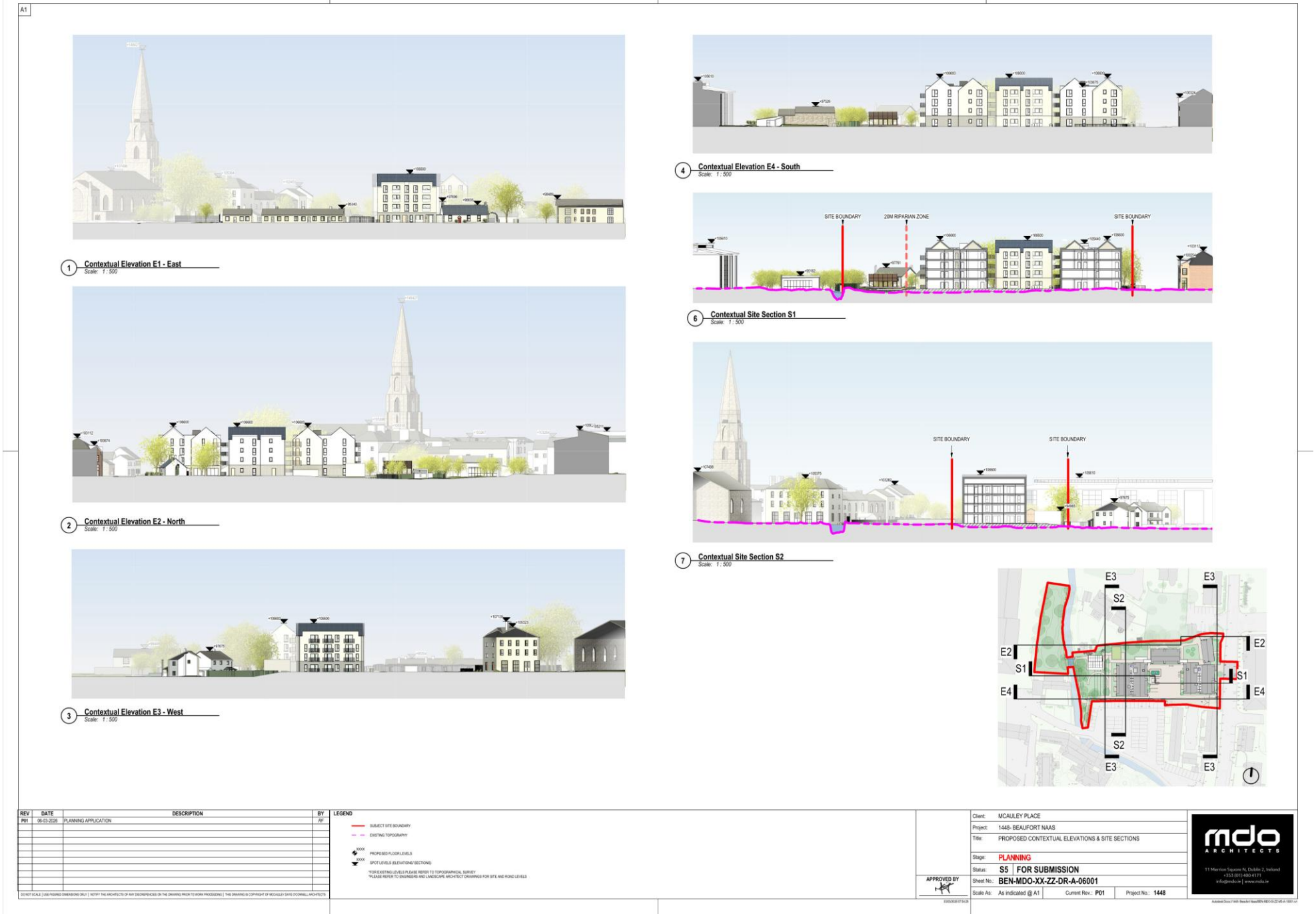
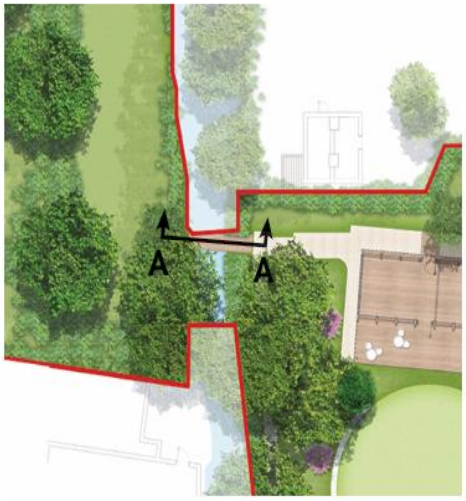


Figure 5. *Proposed elevations*

Figure 6. *Proposed landscape plan*

Bridge



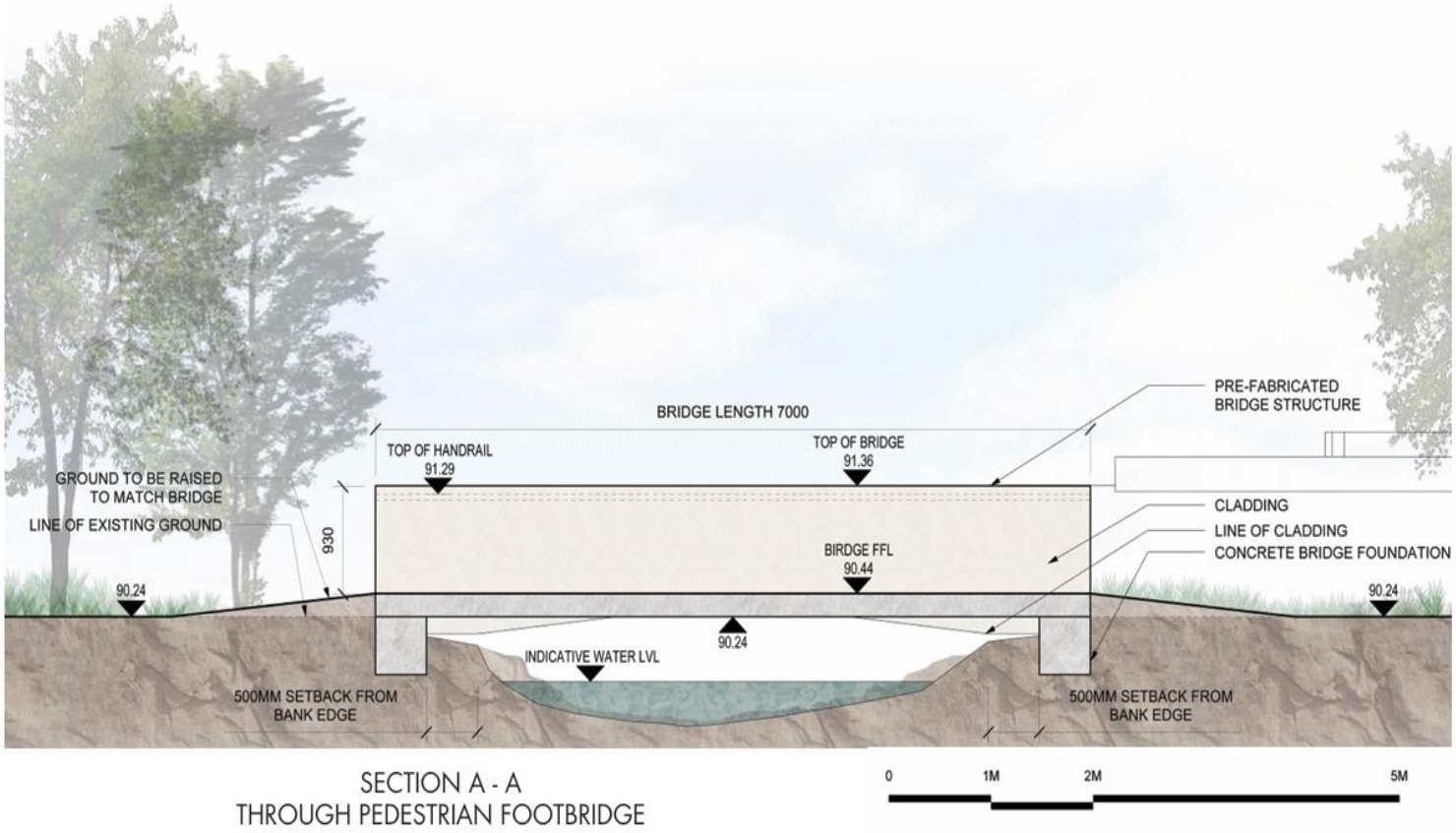


Figure 7. *Proposed bridge layout (single span with no instream works).*

***Figure 8**. Tree constraints plan*

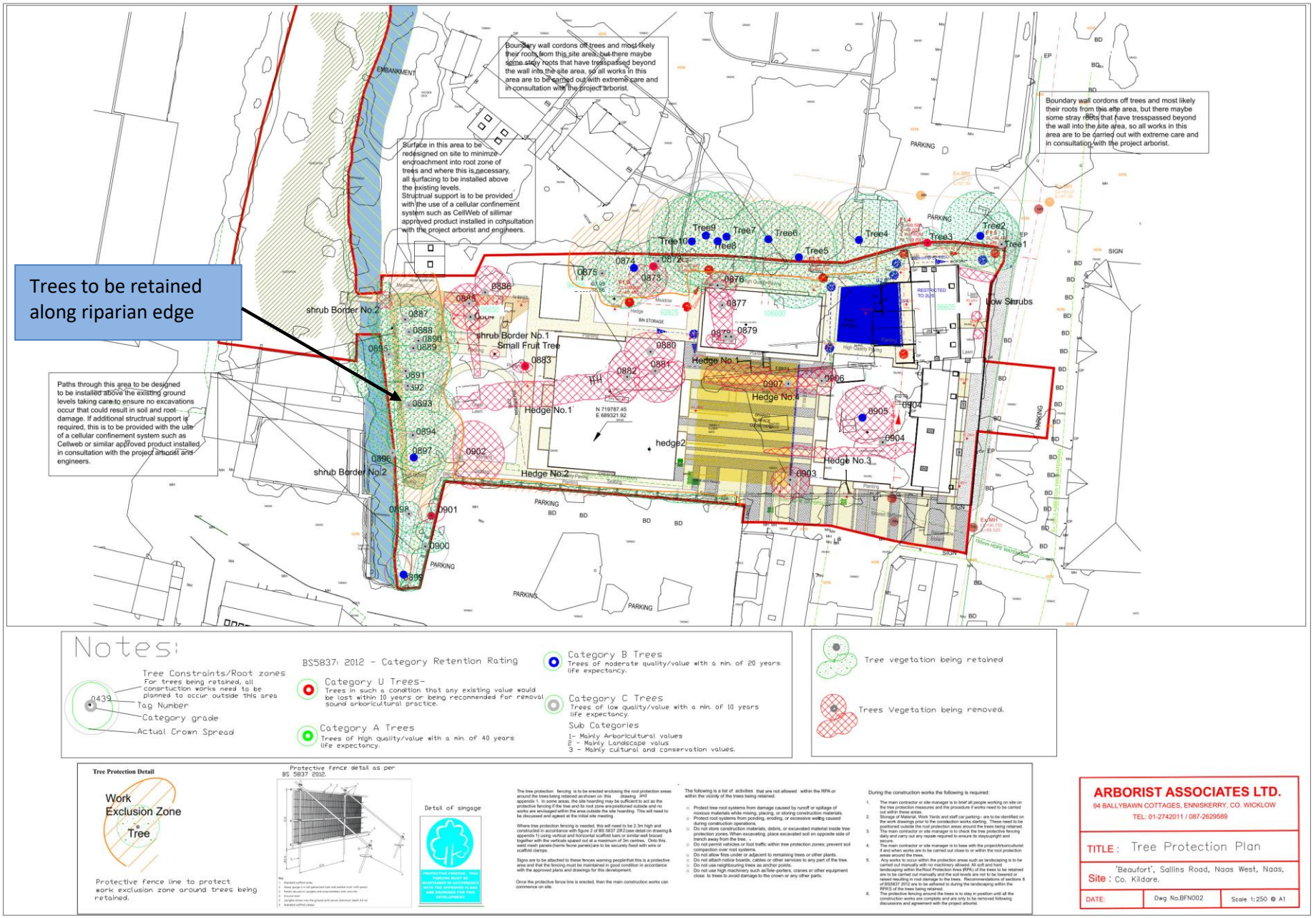


***Figure 9**. Tree protection and impacts plan*

Figure 10. *Proposed drainage layout plan*

Building Design

As outlined in the Design statement "*The proposal comprises 43 units, a garden house, and a community hall within the existing Beaufort House. It addresses the needs of senior citizens, both locally in Kildare and nationwide. Strategically nestled in the heart of Naas, McAuley Place delivers a new housing model that fosters a sustainable community. Aligned with national directives for compact growth, it also supports the Housing for All agenda by providing social and affordable housing alternatives for senior citizens.*
The project has been designed to meet the National Planning Framework, KCC Development Plan, and Naas Local Area Plan guidelines. Inspired by human-centric design principles, the proposal will set a benchmark for this type of development or model. By placing the needs of the residents at the forefront, we envision a residential development that will be both soughtafter and cherished. The proposal enriches the existing campus where senior citizens can live dignified lives."
"*The new development is designed to integrate with its surroundings while establishing a distinctive identity. The architectural design and materiality aim to ensure resilience and a timeless aesthetic. To ensure durability and weather resistance, the proposal incorporates high-quality materials with long life expectancy and low embodied carbon such as stone, brick, slate and metal balconies.*
The selection of materials will meet the new TGD-Part L requirements, ensuring the building's thermal comfort levels and reduced energy consumption. This not only contributes to the long-term sustainability of the development but also helps to reduce the overall cost of upkeep for McAuley Place or future residents."

In discussion with Barrett Mahony Engineers it was stated that "*no detail design has been carried out to date, however we expect the building will be constructed with reinforced concrete pad and strip foundations and with cast-insitu concrete ground floor level. The superstructure rising elements above ground floor level will be constructed in either cast-insitu reinforced concrete / precast / load-bearing masonry with either cast-insitu reinforced concrete / precast floor plates. The roof profiles will be formed with timber infills supported by steel frames*."

Construction Site Access

All construction traffic is expected to approach the site from the north, via the M7, using either the R445 or R407, in order to avoid entering the centre of Naas town. Peak soil and waste removal activities will be scheduled to avoid peak commuting hours as well as school opening and closing hours.

Sensitive Receptors

The sensitive receptors in the vicinity of the proposed development are summarised and the potential impact/mitigation are seen in Table 1. Satellite imagery of the site is seen in Figure 1.

Table 1. Sensitive Receptors and Potential Impact.

Sensitive Receptor	Location / Potential Impact
Biodiversity within and proximate to the proposed development site	Onsite works will involve demolition, ground clearance, re-profiling, groundworks, and construction, with potential for runoff, dust, light and noise impacts that could impact on local biodiversity and/or water quality with potential for downstream impacts. Mitigation will be put in place to protect biodiversity, onsite watercourses, and downstream conservation sites from significant impacts.
Residents in proximity of the proposed development	As seen in Figure 1 & 2, the proposed development is proximate to residential areas that would be sensitive to noise, dust and lighting impacts. Mitigation measures will be put in place to avoid significant impacts on the residents proximal to the proposed development during the construction phase of the project.
Terrestrial Fauna and flora	No terrestrial species of conservation importance have been recorded on site (NBDC records) or were observed on site during the site survey. The onsite works will involve demolition, ground clearance, re-profiling, groundworks, works proximate to a watercourse and construction with potential for runoff, dust, and lighting impacts. However, as no species of conservation importance or resting/ breeding places e.g. setts/ponds, were noted on site. Frogs were not observed on site, however given that the Mill Lane Stream passes through to the western portion of the site, there is a possibility that frogs are present on site. Mitigation is needed in the form of control of silt, petrochemicals, and dust during construction. A pre-construction survey should be carried out for mammals.
Birds	Clearance of the site will result in the loss of nesting habitat for breeding birds. Mitigation measures will be put in place to ensure potential nesting habitats are not cleared during bird nesting season. Additional foraging and nesting resources are to be provided.
Bats	Two relatively common bat species were noted foraging on site (Common Pipistrelle and Lesser Noctule). Mitigation is needed in the form of a pre-construction survey and control of light spill during construction.
Mammals	No protected terrestrial mammals were noted on site. Loss of habitat and habitat fragmentation may affect some common mammalian species.

3. Analysis of the Potential Impacts

This report has been prepared to outline the construction and operational phase measures in addition to detailing the potential impacts on sensitive receptors within the Zone of Influence (ZOI). The potential impacts on the ecology of the site in the absence of mitigation have been outlined in the EcIA.

Potential Impacts

This report has been prepared to outline the construction and operational phase measures in addition to detailing the potential impacts on sensitive receptors within the Zone of Influence (ZOI) in the absence of mitigation measures.

Construction Impacts

In the absence of mitigation, the overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora in addition to aquatic biodiversity. Direct negative effects will be manifested in terms of the removal of the site's internal habitats. The removal of these habitats will result in a loss of species of low biodiversity importance. However, the due to the substantial vegetation on site, the site forms a nesting resource for birds. There is also the potential for contaminants and pollutants to enter the Mill Lane Stream (a watercourse that traverses along the western portion of the application lands) and impact on downstream biodiversity.

Designated Conservation sites within 15km

The proposed development is not located within a designated conservation site. The nearest Natura 2000 sites to the proposed development are the Mouds Bog SAC (8.5km) and the Red Bog Kildare SAC (8.6 km). There is a direct hydrological connection to the Grand Canal pNHA during the construction phase of development via the onsite stream. There is also an indirect hydrological connection to the River Liffey via the onsite stream. Out of an abundance of caution, it is therefore considered that there is a weak indirect hydrological connection between the proposed development site and five Natura 2000 sites at Dublin Bay, namely South Dublin Bay SAC (32km), North Dublin Bay SAC (35km), South Dublin Bay and River Tolka Estuary SPA (32km), North Bull Island SPA (35km) and North-West Irish Sea SPA (37km). However, given the substantial distance to each of these sites (>30km), and the fact that the Mill lane stream joins the Grand Canal prior to the River Liffey, and thereafter runs through the Leixlip dam more than 19km from the subject site, any pollutants, dust or silt laden run off will be dispersed, diluted, and ultimately settle within the surface water drainage network, the Grand Canal, the River Liffey and Leixlip dam. Impacts in the absence of mitigation: Low adverse / International / Negative Impact / Not significant / short term. Mitigation is not needed to protect designated sites.

Biodiversity

The impact of the development during construction phase will be a loss of existing habitats and species on site. It would be expected that the flora and fauna associated with these habitats would also be displaced.

Terrestrial mammalian species

No protected terrestrial mammals were noted on site. Loss of habitat and habitat fragmentation may affect some common mammalian species.

Impacts: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre-construction survey for terrestrial mammals of conservation importance.

Flora

No protected flora was noted on site.

Potential Impacts in the absence of mitigation: Low adverse / site / Negative Impact / Not Significant / Short term.

Bat Fauna

The proposed development will change the local environment as new structures are to be erected and much of the existing vegetation (outside of the woodland) will be removed. Existing buildings and treelines are present on site and lighting is minimal. The proposed development would impact on bats greater than the baseline. Bats were seen to be foraging onsite. To ensure that no bat roosts will be lost due to this development, a pre-construction tree inspection will be necessary to determine the presence and location of potential bat roosts on site. The proposed

development should include a sensitive lighting strategy and does involve the retention of some hedgerows and treelines. However, onsite lighting would have potential for a reduction of bat foraging during construction. Lighting during construction could impact on foraging activity. In addition, an updated bat survey will be undertaken during the 2026 bat survey season prior to any works on site and the results will be submitted to Kildare County Council.

Potential Impacts in the absence of mitigation: Minor adverse / site / Negative Impact / Not significant / long term. Mitigation is required in the form of lighting onsite and a pre-construction assessment of the buildings and trees to be felled on site.

Aquatic Biodiversity

The Mill Lane Stream is a watercourse that traverses along the western portion of the subject site. No works are proposed to the watercourse. However, in the absence of mitigation measures there is potential for effects on this watercourse due to the potential for dust, pollution and contaminated surface water runoff to enter the watercourse and cause downstream impacts on biodiversity. It is worth noting that minimal works are proposed within the riparian corridor, the existing bank along the watercourse is to be retained and all trees along here are to be retained which will act as a natural vegetated buffer. In addition, pollution risks to the watercourse during the bridge installation works are considered minimal given that it is a prefabricated concrete structure. Moreover, a 500mm setback from the bank edge will be implemented for the concrete bridge foundations on each side of the river.

Out of an abundance of caution, it is considered that there is the potential for silt and contaminated runoff to enter this waterbody and transport pollutants to the Grand Canal and River Liffey.

Potential Impacts in the absence of mitigation: moderate adverse / local / Negative Impact / Not significant / long term. Petrochemical interception is required on site due to potential effects on the Mill Lane Stream. A pre-construction survey for frogs should be carried out.

Bird Fauna

No bird species of conservation importance have been noted on site. However, site clearance could impact on bird nesting.

Impacts: Low adverse / Local / Negative Impact / Not significant / short term. Mitigation is needed in the form of site clearance outside bird nesting season.

Operational Impacts

Once developed, the site would be seen as a stable ecological environment. Planting of native species will be important to re-establish nesting and foraging habitats lost. Proximate bat species will be sensitive to light spill.

Appropriate measures should be taken to prevent light spill, contaminated surface water run-off and dust entering into adjacent riparian habitats, and in particular the Mill Lane Stream needs to be protected due to the potential for downstream impacts on the watercourse. The new drainage networks will have to comply with SUDS requirements and standard petrochemical interception will be in place.

Designated Conservation sites within 15km

The proposed Project will comply with drainage requirements and the Water Pollution Acts. Standard compliance mitigation measures will be in place to prevent downstream impacts. No significant impacts on designated sites are likely during operation.

Impacts: Negligible / International / Neutral Impact / Not significant / Long-term. Standard mitigation will be required.

Biodiversity

Biodiversity value of the site will improve as landscaping matures.

Terrestrial mammalian species

No protected terrestrial mammals were noted in the vicinity of proposed works.

Potential Impacts in the absence of mitigation: Low adverse / local/ Negative Impact / Not significant / long term.

Flora

No protected flora was noted on site.

Potential Impacts in the absence of mitigation: Neutral / site / Not significant / long-term.

Bat Fauna

Foraging bats would be sensitive to light spill and lighting on site could potentially impact on foraging bats. It would be expected that bat foraging would be reduced on site.
Potential Impacts in the absence of mitigation: Low adverse / International /Negative Impact / Not significant / long term. Mitigation is required in relation to bat compliant lighting on site.

Aquatic Biodiversity
Standard measures will be in place in relation to surface water discharges. No additional mitigation is required.
Potential Impacts in the absence of mitigation: Low adverse / local / Negative Impact / Not significant / long term

Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk. As the landscaping elements improve with maturity it would be expected that the biodiversity value of the site to birds would increase.

Impacts: Low adverse / site / Negative Impact / Not significant / long term.

Riparian Corridor Construction Stage

As significant site clearance and demolition works are involved in the project and the presence of a watercourse on site, measures need to be put in place to ensure that runoff from the site during construction is contained and that silt is intercepted. A silt interception system will be prepared in consultation with the project ecologist. The purpose of this is to ensure that silt is removed from runoff prior to entering the stream throughout the construction process. The following measures will be carried out to ensure that the site runoff is suitably contained during construction:

a) The riparian buffer will be established, landscaped and marked out by silt fences under the supervision of the arborist and ecologist, prior to site clearance works on the remainder of the site.

b) Inland Fisheries Ireland will be consulted prior to commencement of bridge works. Works will commence with the placing of silt fences in the riparian corridor within Phase 1 of the project prior to works commencing on site. It is important that the bases of these are buried deeply in the soil as this area has the potential to be flooded and they could cause downstream impacts if not installed correctly.

c) Following the completion of this element of the project this area of the site will be closed off to machinery access excluding the bridge installation works.

Drainage on site outside the riparian corridor

a) Where necessary, as highlighted by the ecologist, drainage channels will be prepared on site, in the vicinity of future access roads. Within these channels silt fences/barriers will be placed and will consist of woven/terram style material of suitable density to remove the majority of silt from runoff. These will be maintained throughout the construction phase to ensure efficiency, prior to the installation of the permanent drainage network.

b) Silt fences will be placed along the edge of the riparian corridor (outside of future construction areas) to capture runoff from the site. These will also prevent machinery from entering the riparian corridor.

c) Mitigation measures including silt fences will be in place (in consultation with the project ecologist) to capture silt from runoff and prevent it from entering the stream.

d) Appropriate storage and settlement facilities will be provided on site when required. This would include the provision of silt and petrochemical interception.

e) Fuel, oils and Chemicals will be stored on an impervious base with a bund. Under LEED there will be a strategy put in place to prevent pollution of the watercourse. In most cases this will involve collecting the run-off and routing it to treatment by filtration, settlement or specialist techniques.

4. Mitigation Measures & Monitoring

Standard construction and operational controls will be incorporated into the proposed development project to minimise the potential negative impacts on the ecology within the Zone of Influence (ZoI), biodiversity, and local biodiversity within / proximate to the subject site. The mitigation measures outlined in Table 2 will be implemented. It should be noted that the measures in relation to the protection of the Mill Lane Stream will be robust.

5. Residual Impacts

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on the sensitive receptors through the application of standard construction and operational phase controls. The overall impact on the ecology of the proposed development will result in a long-term minor adverse not significant residual impact on the ecology of the area and locality overall.

Table 2. Sensitive Receptors/Impacts and mitigation measures.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
The onsite watercourse (Mill Lane Stream) The Grand Canal The River Liffey	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on aquatic and bird fauna. Disturbance.	Prior to works commencing on site an ecologist will be appointed to oversee and monitor the mitigation measures on site. The following mitigation will be implemented: **Construction** <u>Contamination of watercourses</u> • Appointment of an ecologist to oversee enabling works and the implementation of mitigation measures outlined. • Staging of project to reduce risks to watercourse from contamination • Earthwork operations will be carried out such that surfaces, as they are being raised, shall be designed with adequate drainage, falls and profile to control run-off and prevent ponding and flowing. • No discharges to the watercourse during construction. • Local watercourses and drains will be protected from dust, silt and contaminated surface water throughout the works. • Local silt traps established throughout site as discussed with the ecologist. • Mitigation measures on site include dust control, stockpiling away from watercourse and drains • Stockpiling of loose materials will be kept to a minimum of 20m from watercourses and drains. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses. • Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, ditches or the watercourse, excavations and other locations where it may cause pollution. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Any water-filled excavations, including the attenuation tank during construction, that require pumping will not directly discharge to the stream. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. • During the construction works silt traps will be put in place in the vicinity of all runoff channels the stream to prevent sediment entering the watercourse. • Planting in the vicinity of the stream crossings should be put in place as soon as possible to allow biodiversity corridors to establish. • On-site inspections will be carried out by project ecologist during enabling works and until drainage connection is complete. • Maintenance of any drainage structures (e.g. de-silting operations) must not result in the release of contaminated water to the surface water network. • No entry of solids or concrete to the associated drainage network during the connection of pipework

Sensitive Receptors	Potential Impacts	Designed-in Mitigation

		• The program for the felling of trees will be carried out in consultation with the project ecologist and arborist. The ecologist will be present for the felling of trees within 10m of drainage ditch.
		• Installation of the bridge will be supervised by the project ecologist.
		
		<u>Air & Dust</u>
		• The pro-active control of fugitive dust will ensure prevention of significant emissions arising, rather than a less effective attempt to control them once they have been released.
		• Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic.
		• Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and / or windy conditions.
		• Vehicles exiting the Site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads.
		• Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20kph, and on hard surfaced roads as site management dictates.
		• Public roads outside the Site will be regularly inspected for cleanliness and cleaned as necessary.
		• Material handling systems and Site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
		• During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.
		• Dust may enter the drainage ditch via air or surface water with potential downstream impacts. Mitigation measures will be carried out reduce dust emissions to a level that avoids the possibility of adverse effects on the onsite watercourse. The main activities that may give rise to dust emissions during construction include the following:
		  • Excavation of material;
		  • Materials handling and storage;
		  • Movement of vehicles (particularly HGV's) and mobile plant.
		  • Contaminated surface runoff
		  • Trucks leaving the site with excavated material will be covered so as to avoid dust emissions along the haulage routes.
		• Speed limits on site (15kmh) to reduce dust generation and mobilisation.
		• The stream is to be protected from dust on site. This may require additional measures in the vicinity of the bridge crossing if this road is used for machinery e.g. placing of terram/protective material over the stream.
		• Regular inspections of the site and boundary should be carried out to monitor dust, records and notes on these inspections should be logged.
		• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
		• Make the complaints log available to the local authority when asked.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book. • Road sweeping will be in place in adjacent roads when required or requested by the project ecologist. <u>Monitoring</u> • Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces within 100 m of site boundary, integrity of the silt control measures, with cleaning and / or repair to be provided if necessary. • Plan site layout so that machinery and dust causing activities are located away from receptors (Mill Lane stream), as far as is possible. • Fully enclose specific operations where there is a high potential for dust production and the site is active for an extensive period. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Cover, seed or fence stockpiles to prevent wind whipping. • Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. • Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions. • Maintain a vegetated strip and vehicle exclusion zone between the works and the onsite watercourse in consultation with the project ecologist. • Regular inspection of surface water run-off and any sediment control measures e.g. silt traps will be carried out during the Construction Phase. Regular auditing of construction / mitigation measures will be undertaken e.g. concrete pouring, refuelling in designated areas etc. • Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the Site and the suitable distance of topsoil piles from surface water drains will be maintained. <u>Measures Specific to Earthworks</u> • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once. • During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust. • Due to the proximity of the onsite watercourse an ecologist will oversee works in particular the excavation of material from the perimeter of the site.

Sensitive Receptors	Potential Impacts	Designed-in Mitigation
		• The Contractor will be required to consult with an ecologist prior to the beginning of works to identify any additional measures that may be appropriate and/or required. <u>Storage/Use of Materials, Plant & Equipment</u> • Materials, plant and equipment shall be stored in the proposed site compound location; • Plant and equipment will not be parked within 50m of the onsite watercourse at the end of the working day; • Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the nearby watercourse. • All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater; • Fuel may be stored in the designated bunded area or in fuel bowsers located in the proposed compound location. Fuel bowsers shall be double skinned and equipped with certificates of conformity or integrity tested, in good condition and have no signs of leaks or spillages; • Waters collected in drip trays must be assessed prior to discharge. If classified as contaminated, they shall be disposed by a permitted waste contractor in accordance with current waste management legal and regulatory requirements; All persons working will receive work specific induction in relation to material storage arrangements and actions to be taken in the event of an accidental spillage. Daily environmental toolbox talks / briefing sessions will be conducted for all persons working to outline the relevant environmental control measures and to identify any environment risk areas/works. **Operation** During the Operational Phase of the proposed Project there is limited potential for Site activities to impact on the geological and hydrogeological environment of the area. However, standard hydrocarbon interception will be put in place.
Bats (international Protection)	• Removal roosting/foraging habitat. • Lighting Impacts	• Lighting at all construction stages will be done sensitively on site with no direct lighting of treelines. • A pre-construction bat roosting inspection will be carried out on all buildings and trees on site, prior to the commencement of works. A derogation license will be applied for from NPWS if bats are found during the future inspection. All works will be carried out in compliance with NPWS conditions if bats or bat roosts are found during pre-commencement inspections. An updated bat survey will be undertaken for the 2026 survey season prior to any works. • 6 bat boxes will be installed along the riparian corridor and a bat roosting access at the Pavilion Roof.
Birds	• Destruction and/or disturbance to nests.	• "Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. • 10 bird boxes will be places on site as an enhancement measure. • Planting will provide suitable cover for nesting birds and encourage insect diversity that would sustain birds.

6. Site Information

a) Roles and Responsibilities

The roles and responsibilities of the personnel involved in the construction works are outlined in Table 4. However, it will be necessary that all personnel involved in the project are responsible for ensuring the requirements of the OCEMP are followed.

Table 4. Roles and responsibilities of the personnel involved in the development project

Role	Roles and responsibilities
Applicant	McCauley Place will have overall responsibility for the compliance with the CEMP. They will appoint staff and contractors to deliver the various elements of the development and oversee works carried out on site.
Contractor	Contractors will be hired to carry out all works on site. Works carried out will be overseen by McCauley Place and on a day to day basis by the site manager. All contractors on site are required to comply with all elements of the CEMP.
Site Manager	The Site Manager will be responsible for the day to day management of the site including compliance of all personnel with the CEMP, in addition to Health and Safety, Environmental and Quality elements. The Site Manager is responsible for ensuring that all people on-site are provided with relevant information concerning environmental protection. The Site Manager will be responsible for overseeing any environmental monitoring programmes, carrying out site environmental inspections and audits as necessary, and will co-ordinate the environmental monitoring programme. All records of incidents and environmental issues will be collated and maintained by the site manager. The Site Manager will also be responsible for reviewing all risk assessment method statements and ensuring an appropriate programme of tool box talks are developed and effectively communicated. The site manager will be responsible for overall waste management issues arising from the project. These would include: Implementation and monitoring of waste minimisation, segregation and safe disposal measures, Dissemination of waste reduction, and waste management procedures to all relevant personnel on site.
Monitoring	Noise and Dust specialists will be appointed to oversee mitigation measures on site and to act as liaison with Kildare City Council.
All Staff and Subcontractors	All staff and subcontractors have the responsibility to comply with the CEMP including environmental procedures on site to minimise environmental impacts, avoid pollution on-site, including noise and dust, and to respond quickly and effectively to an incident to avoid or limit environmental impacts. All incidents must be reported to the Site Manager immediately.

b) Training and Raising Awareness

As part of site induction for all personnel, a copy of the CEMP will be provided to and discussed with all onsite staff. This would include discussing the elements outlined in the CEMP including sensitive receptors on site and measures in place to mitigate impacts on these receptors.

As part of toolbox talks, relevant elements of the CEMP should be discussed particularly when working in areas with sensitive receptors, or where there is potential to impact biodiversity on site. Training records of all personnel on site should be reviewed and copies held centrally. This is particularly important for those operating excavators, other heavy machinery and with environmental certification to deal with incidents on site.

c) Reporting

The Site Manager / Project Manager is responsible for collating and maintaining all reporting. This would include all environmental and compliance documentation.

d) Environmental Targets and Objectives

Targets

- Zero pollution incidents;
- Segregation of site waste to include timber, general waste and other materials;
- Completion of environmental checklists as required;
- Fuel spill kit to be present on each site at all times;
- Maintain all waste licences and waste transfer notes for all waste movements including contractors;

Reporting Specific Objectives

- Environmental incidences to be reported to Site Manager without delay;
- The following documentation will be reported to McCauley Place on a 4 weekly basis:
    - Environmental incidents and nonconformities raised, including nature, status, corrective and preventive actions and potential for statutory intervention;
    - Key environmental issues raised by others;
    - Significant environmental incidents;
    - Complaints and the current status of those complaints;
    - Actions or interventions undertaken by enforcement organisations;

Site Specific Objectives

- Reduce waste, water and energy use on the project including within all of the site offices;
- Ensure that everyone comply with the environmental requirements in the contract;
- Seek ways to incorporate environmental opportunities within the design;
- Seek ways to reduce the carbon footprint of the contract;
- Reduce the amount of construction waste and excavated material generated which goes to landfill;
- Zero pollution incidents onsite;
- Recycle construction waste where possible;
- Maximise beneficial reuse of the materials: and
- Ensure that all waste documentation (waste transfer dockets, permits etc.) is available for inspection at the site office / in head office.

To ensure the CEMP remains 'fit for purpose' for the duration of the project it should be reviewed prior to commencement of the relevant phase of development and, if necessary, updated during the life of the project to ensure that it remains suitable to facilitate efficient and effective delivery of the project environmental commitments. The environmental review would consider past performance from inspections, audit report and monitoring data, plan actions required to mitigate forthcoming risks and disseminate best practice.

e) Environmental Complaints and Incidents

The site manager will develop and implement an appropriate queries / complaints procedure. Records will include full details of the concerns expressed and ensure that a formal assessment is commenced of the reported concern. The site manager will also discuss complaints with PI Hotels and Restaurants Ireland Ltd. and oversee an initial response to the person who has submitted the complaint/concern confirming its receipt.

An investigation to assess the issue of concern will be carried out and decisions made to see what corrective and/or preventive action, or further investigation is necessary. With overall responsibility for complaints, the site manager will respond within a reasonable timescale and maintain records of all correspondence. If significant corrective action and external stakeholder involvement is required, the site manager / project manager will oversee all elements of the process.

Complaints that may be received will be logged, assessed and appropriate action taken as soon as practical. The construction company will be actively seeking liaison with all parties throughout the construction periods. It will be critical to the success of the project that key issues are properly addressed from the outset to create a good working relationship and an integrated team approach to resolving potential issues before they arise.

In the event of spillages or other incident, steps will be taken to prevent environmental pollution, for example through protection of drains by use of drain covers or booms, use absorbent granules following and oil / chemical spill, and turning off equipment or other sources of noise or dust.

Once the situation has been rectified, full details about the incident and remedial actions undertaken will be provided to the corporation and relevant authorities and recorded in the site environmental register.

7. Construction Management

a) Work Hours

Working hours will be strictly in accordance with the granted planning conditions with no works on Sundays or Bank Holidays. If work is required outside of these hours, written approval will be sought by the contractor from the Local Authority. It is anticipated that normal working hours may be 7am to 7pm Monday to Friday and 8am to 2pm on a Saturday. Working outside these hours will be subject to agreement with the Local Authority. Deliveries of material to site will be planned to avoid high volume periods. There may be occasions where it is necessary to have deliveries within these times.

b) Site Storage

At no given time during the project will materials or other items be placed outside the hoarding line, unless otherwise agreed with KCC.

c) Noise

Noise Sensitive Locations

The site is proximate to residential areas located within a populated suburban environment. Steps will be taken to ensure that any noise arising will be adequately mitigated.

Baseline Noise Survey

Attended noise monitoring will be carried out at a number of locations. 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.

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.'

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:

- Liaison with neighbours;
- Noise monitoring;
- Hours of works;
- Selection of quiet plant; and
- Control of noise sources and screening.

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:

- Consideration of Alternatives;
- Information to be submitted by the contractor; and
- In-situ Noise Measurement.

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 monthly. 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:

- Hours of operation being correctly observed;
- 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; and
- Correct use of screening provided and opportunities for provision of additional screening.

d) Air and Dust

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:

- the specification of a site policy on dust;
- the identification of the site management responsibilities for dust;
- the development of documented systems for managing site practices and implementing management controls; and
- the development of means by which the performance of the dust management plan can be assessed.

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 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:

- 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 about construction activities, together with details of any remedial actions carried out;
- It is the responsibility of the contractor always to demonstrate full compliance with the dust control conditions herein;
- At all times, the procedures put in place will be strictly monitored and assessed; and
- Operations resulting in significant dust generation are not envisaged but where necessary the work areas will be sheeted off to control the spread of dust.

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 using 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.

Dust Control – Site Roads

Site roads (particularly unpaved and during groundworks) can be a significant source of fugitive dust from construction sites if control measures are not in place. However, effective control measures can easily be enforced. The most effective means of suppressing dust emissions from unpaved roads is to apply speed restrictions. Studies show that these measures can have a control efficiency ranging from 25 to 80%.

- A speed restriction will be applied as an effective control measure for dust for on-site vehicles;
- Damping down of the site will be carried out during periods of dry weather throughout the construction period. Research has found that the effect of watering is to reduce dust emissions by 50%. The bowser will operate during dry periods to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicular use. Damping down will be carried out at a level not to cause runoff to sensitive receptors; and
- Any hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.

Dust Control - Land Clearing / Earth Moving

Land clearing / earth-moving during periods of high winds and dry weather conditions can be a significant source of dust:

- During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.

Dust Control – Storage Piles

The location and moisture content of storage piles are important factors which determine their potential for dust emissions. It is expected that there will be minimal storage of soil on site:

- Overburden material will be protected from exposure to wind by storing the material in sheltered regions of the site;
- Regular watering will take place to ensure the moisture content is high enough to increase the stability of the soil and thus suppress dust.
- The regular watering of stockpiles has been found to have an 80% control efficiency.

Dust Control – Public Roads

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

- Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered with tarpaulin always to restrict the escape of dust;
- Public roads outside the site shall be regularly inspected for cleanliness, as a minimum daily, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.

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

e) Vibration

The following specific vibration mitigation and control measures shall be implemented during the construction phase:

- Choosing alternative, lower-impact equipment or methods wherever possible
- Sequencing operations so that vibration causing activities do not occur simultaneously
- Isolating the equipment causing the vibration on resilient mounts
- Keeping equipment well maintained.

f) Liaison

KCC'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 KCC. The construction company acknowledge that many parties will have an interest in this project throughout the duration of the contract. The construction phase will have a direct impact on the local environment, particularly concerning the following:

- Local residents and land owners
- Tenants and Residents Associations
- Planning Authority
- Other Statutory Authorities
- Building Control
- Environmental Health
- Utilities Providers

The project manager will be responsible for project strategic liaison whilst the construction manager will be responsible for day to day liaison and logistics for all the construction related activities.

Both will be permanently based on site with the construction manager as the first point of contact for all concerns, issues and complaints. A display Board will be erected outside the site, which as a minimum will identify key personnel contact addresses and telephone numbers.

Liaison meetings, progress photos, organised site visits are all methods by which the construction company are able to communicate how they intend to carry out the works and keep people informed.

g) Complaints

Complaints that may be received will be logged, assessed and appropriate action taken as soon as practical. The construction company will be actively seeking liaison with all relevant parties throughout the construction periods. It will be critical to the success of the project that key issues are properly addressed from the outset to create a good working relationship and an integrated team approach to resolving potential issues before they arise.

h) Delivery System

The key to efficient material/plant deliveries will be the effective management and co-ordination/timing of all deliveries. Deliveries will be co-ordinated to prevent queuing of vehicles adversely affecting traffic flow and to minimise disruption to local traffic. They will be timed and coordinated to avoid conflict with collection of waste, other deliveries and rush hour traffic. Large deliveries will be scheduled outside peak hours to minimise disruption. The construction company will consider out of hours deliveries and collections to facilitate the smooth continuation of works and minimise disruption. During the project procurement phase, the construction company will produce a schedule of deliveries, adopting a 'just in time' approach to avoid potential conflicts and unnecessary storage and handling.

i) Emergency Work

In the event of spillages or other incident, steps will be taken to prevent environmental pollution, for example through protection of drains by use of drain covers or booms, use absorbent granules following and oil / chemical spill and turning off equipment or other sources of noise or dust. Once the situation has been rectified, full details about the incident and remedial actions undertaken will be provided to the corporation and relevant authorities and recorded in the site environmental register.

j) Site Security

The site will be secured with hoarding on all open sides and accessible approaches. Hoardings will be painted timber hoarding circa 2.4m including supports and appropriate anchoring (Designed by Temporary Works Engineer), external lighting and Safety signage. Site hoarding will include Health and Safety warnings at appropriate intervals.

Site security will be provided by way of a monitored infrastructure systems such as site lighting and CCTV cameras, when deemed necessary

All personnel working on site will be required to have a valid Safe Pass card.

The Contractor will ensure the presence of site security staff at all times on the site.

k) Delivery of Materials

All deliveries will take place inside the site boundary.

l) Road Safety

The project team will organise the construction site so that vehicles and pedestrians are kept separate. Gatemen will ensure that the interface between deliveries and road traffic will be controlled at delivery gates.

The key message is: *construction site vehicle incidents can and should be prevented by the effective management of transport operations throughout the construction process.*

By creating a crane off-loading area within the site boundary all offloading will be possible within the site boundary which will minimize any risk to the public. The gate man will then assist in the entry and leaving from the site.

Key issues in dealing with traffic management on site are:

- Keeping pedestrians and vehicles apart
- Minimising vehicle movements
- People on site
- Turning vehicles
- Visibility
- Signs and instructions

Accidents occur from groundwork's to finishing works and managers, workers, visitors to sites and members of the public can all be at risk. Inadequate planning and control is the root cause of many construction vehicle accidents.

Keeping pedestrians and vehicles apart.
Most of construction transport accidents result from the inadequate separation of pedestrians and vehicles. This will be avoided by careful planning, particularly at the design stage, and by controlling vehicle operations during construction work.

The following actions will help to keep pedestrians and vehicles apart:

- Entrances and exits - The construction company will provide separate entry and exit gateways for pedestrians and vehicles with a gate man in attendance to interface with the traffic and public to facilitate safe access and egress of vehicles.
- Walkways - firm, level, well-drained pedestrian walkways will be provided.
- Crossings - where walkways cross roadways. The construction company will provide a clearly signed and lit crossing point where drivers and pedestrians can see each other clearly;
- Visibility - The construction company will make sure drivers driving out onto public roads can see both ways along the footway before they move on to it;
- Obstructions - The construction company will not block walkways so that pedestrians must step onto the vehicle
- Route; and Barriers - The construction company will install a barrier between the roadway and walkway.
- People on site - The construction company will take steps to make sure that all workers are fit and competent to operate the vehicles, machines and attachments they use on site by, for example:
    - Checks when recruiting drivers/operators or hiring contractors;
    - Training drivers and operators;
    - Managing the activities of visiting drivers.
    - People who direct vehicle movements will be trained and authorised to do so. Accidents can also occur when untrained or inexperienced workers drive construction vehicles without authority. Access to vehicles will be managed and people alerted to the risk.

The construction company will provide:

- Aids for drivers - Mirrors, CCTV cameras or reversing alarms will be provided that can help drivers can see movement all-round the vehicle;
- Gatemen will be appointed to control manoeuvres and who are trained in the task;
- Lighting - Site will be properly lit so that drivers and pedestrians on shared routes can see each other easily. Lighting may be needed after sunset or in bad weather;
- Clothing - Pedestrians on site will wear high visibility clothing.
- Signs and instructions
- The construction company will make sure that all drivers and pedestrians know and understand the routes and traffic rules on site. Use standard road signs where appropriate.
- The construction company will provide induction training for drivers, workers and visitors and send instructions out to visitors before their visit. The construction company will make sure that all the drivers and our supply chain personnel are competent and have relevant training and certification appropriate for their job.

m) Waste Management

This section of the CEMP sets out a basic structure for a Site Waste Management Plan and how the construction company will best use them to improve and manage our operations at all stages of site activity. PI Hotels and Restaurants Ireland Ltd. is committed to maintain the highest environmental standards.

All waste will be source separated into recyclable and general non-recyclable waste. In addition to general waste bins and recycling bins, there will also be bins provided for the storage of glass, batteries, and

printer cartridges. General waste and recycling waste shall be stored in secure designated external waste storage areas, located a short distance away from each of the buildings.

The waste management areas are to be located on flat ground and will allow flexibility for change in the future. These areas will allow for the correct and legally compliant segregation, storage, movement, handling, processing and off-site disposal of waste. Sufficient access and egress will be allowed to facilitate the movement of bins to the collection point.

The waste storage area will be adequately vented to prevent odours. The waste bins will be secure and subject to fire safety regulations and, where possible, lockable. Clearance of a minimum of 300mm will be provided around each bin to allow movement of the bins within the storage area.

Training and awareness

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

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 him/her 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 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.

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 waste management plan 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. A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

The construction company will:

- Promote good practice awareness as part of health and safety induction training for workers on site;
- Segregate different types of waste as they are generated using different skips where possible (given the space available). At a minimum there will be skips for wood, inert and mixed materials, although a skip for metals may generate some income;
- Complete waste transfer notes before any waste leaves the site;
- Ensure all waste carriers have a valid waste carrier's registration certificate; and
- Ensure all wastes are disposed of at a correctly licensed site.

It will be the subcontractor's responsibility to place their waste in the correct bins; our management team will continuously undertake checks to ensure compliance. The bins will be transferred to ground level when the respective waste compactors are called to site, emptied and returned to their respective floors/areas. Waste removal by the compactor will be undertaken outside of normal working hours.

n) Record Keeping

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 construction waste arisings on site.

A copy of the Waste Collection Permits, Certificates of Registration, Waste Facility Permits and IED or Waste Licences will be maintained on site always. The waste manager or delegate will record the following;

- Waste taken for reuse off-site;
- Waste taken for recycling;
- Waste taken for disposal; and
- Reclaimed waste materials brought on-site for reuse.

For each movement of waste on or 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 and to highlight the successes or failures against these targets.

8. Emergency Procedures

The risk of spilling fuel is at its greatest during refuelling of plant. All refuelling of major plant and equipment will take place on an impermeable surface within a designated area of the site compound, greater than 10m away from any drains. The vehicles and equipment will not be left unattended during refuelling. Spill kits and hydrocarbon absorbent packs will be stored in this area and operators will be fully trained in the use of this equipment.

Diesel pumps and similar equipment will be placed on drip trays to collect minor spillages or leaks. All equipment must be checked regularly.

Fuel, oil and chemical storage will be sited within a bund of adequate capacity. The bund must be located at least 10 metres away from drains, ditches, excavations and other locations where it may cause pollution.

All materials will be stored in accordance with the manufacturer's instructions. Epoxy mortars and chemical based materials/sealants will be stored in secure containers with relevant warnings shown on the storage unit. Spill kits will be located adjacent to storage areas and used in the event of spillages.

9. Invasive Species

No invasive species that could impact on the movement of soil on or off site were noted.

10. Conclusions

This OCEMP has been submitted to show McCauley Place's commitment to Environmental Management of the proposed project. This OCEMP has outlined the environmental principles that will be adopted to ensure that potential environmental impacts and health and safety issues associated with the construction processes are effectively managed, minimised and / or eliminated. The plan details the roles and responsibilities of the applicant, the site manager, project manager and site workers and how these controls are to be implemented. The OCEMP will require regular updating and monitoring throughout the construction period to ensure potential risks are adequately managed throughout the construction works.